GETTING STARTED

Welcome to Mixcraft 10, a powerful recording DAW software offering the tools and performance power to create professional music and video projects... easily!

ABOUT THE MANUAL

This manual was written to provide a full walkthrough of the steps that an artist may encounter when using Mixcraft. It manual provides a range of step-by-step instructions and explanations of all of Mixcraft's features. We'll also throw in some helpful tips "outside-the-box" tips along the way.

Blue underlined text indicates links to other sections of this manual. Italicized text usually means we're referring to an onscreen control or dialog text or a key on your computer's QWERTY keyboard.

CHECKING FOR UPDATES

Acoustica periodically provides updates to software. You can easily obtain these updates through Acoustica's website. To check for updates, go to the *Help* menu at the top of the screen and choose *Check For Update...*

ADDITIONAL HELP

We’ve made a heck of an effort to include as much Mixcraft 10 information as possible in this manual, but if you get stumped, we encourage you to check out the **Mixcraft Knowledge Base** or **contact Acoustica Tech Support**.

Additionally, the **Mixcraft User Forums** contain tons of useful archived information and support not only from the Acoustica tech support staff, but seasoned Mixcraft users.

Welcome to the Acoustica family... we hope you’ll enjoy Mixcraft 10 and make some great music (and video) along the way!

AUDIO HARDWARE SETUP

In order to record audio, your computer will need to be set up for audio input with appropriate recording hardware.

CHOOSING COMPUTER AUDIO HARDWARE

Dedicated audio interfaces for music production are designed to handle high-quality recording and playback of multiple audio channels. Many audio interfaces include high-quality onboard mic preamps and instrument inputs as well as MIDI input and output. Generally speaking, these are the best choice for a small- or medium-sized music studio as they include everything you'll need for recording with a computer.

AUDIO INTERFACE TYPES

We recommend an interface that uses a USB connection; as of this writing, Firewire and PCIe audio hardware have largely been phased out (anyone wanna buy my FireStudio Project for cheap?!?). Thunderbolt is a high-speed connection used in some high-end audio hardware, but at the time of writing, it's mainly a Mac thing and hasn't gained a foothold in the Windows world.

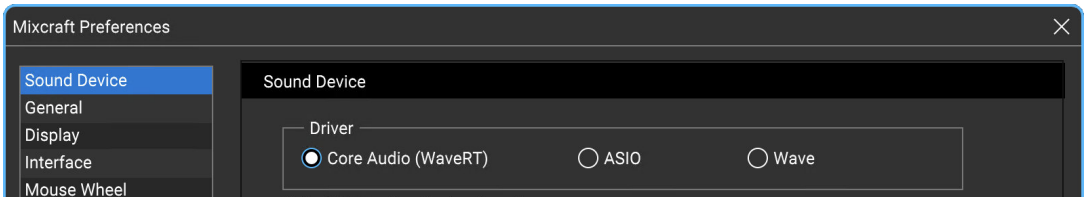
CHOOSING AN AUDIO DRIVER

The audio driver is the "go-between" software that allows audio hardware to communicate with Mixcraft. Mixcraft supports three types of audio drivers:

- ASIO
- WaveRT
- Wave

If you are playing virtual instruments or want to monitor recordings as they're made, you'll need to use a low latency setting along with audio hardware and a computer that are up to the task. ASIO drivers offer the best performance, followed by WaveRT. If no other drivers are supported, choose Wave.

SETTING AUDIO DRIVER TYPE AND LATENCY



When Mixcraft is first launched, it's important to ensure that the audio latency is optimally set. Ideally, using a very low latency setting is best, as it results in little or no audible delay when playing virtual instruments or recording using software monitoring.

Your computer's processor speed and amount of RAM, as well as your audio system or sound card all affect audio playback and recording performance. Optimally adjusting your sound device will be a balancing act between latency versus gapping or breaks in continuous sound. If you are recording audio using Mixcraft's built-in monitoring or playing virtual instruments, you'll need to adjust your latency response properly. Audio driver and latency settings as set as follows:

1. Click *File > Preferences...* or the gear icon in the top menu strip.

2. Click on the *Sound Device* tab.

3. Wave RT is the default audio driver. If you have a slower computer, you may need to increase the latency setting.

4. If you're using Windows 7 or 8, you may be able to click *WaveRT Exclusive Mode*. Depending on your computer's speed and power, this mode will allow down to three milliseconds of latency. In this mode, other programs will lose audio capability when

Mixcraft is running. You may need to restart other programs to get their audio back. WaveRT exclusive mode is the best way to use every last ounce of computing power.

5. If you don’t have WaveRT, the next best option is ASIO. If it’s grayed out, go to your sound device or sound card manufacturer’s website and install the latest drivers. Click on the ASIO Device flip menu and choose the sound device or sound card you wish to use. You can adjust the settings of the ASIO device by clicking “Open Mixer.” Each ASIO driver is implemented differently; consult the manual or help for your sound device in order to optimize the latency setting. Ensure that *Default Output (Playback)* is set to the correct device so you’ll hear audio properly.

6. If you don’t have Vista or an ASIO option enabled, select *Wave*. To reduce latency, decrease the *Number Of Buffers* and reduce the *Buffer Size*. The *Latency* field will update - this will entail a bit of trial and error as adjustments are made. Click *OK*, then check the quality of audio playback. A setting of 100 milliseconds or less is tolerable; lower settings of 20 milliseconds or less are preferred.

WINDOWS AUDIO DEVICE FORMATS

Type	Notes
WaveRT	The default option. Latency down to 20 milliseconds.
WaveRT Exclusive	Takes over the computer’s audio, but will work down to three milliseconds of latency. This option is available when WaveRT is selected. Audio from other programs and Windows will not work at the same time that you are in this mode.
ASIO	Best for playback and recording synchronization. Must have a supported ASIO driver for your sound device.
Wave	Only use if absolutely necessary.

COMPUTER SPEED CONSIDERATION

If you have a slower computer and experience audible breaks in audio recording or playback, you may need to increase the latency setting. Alternatively, you may need to purchase a higher-performance sound card or audio system designed with music recording and playback in mind. Changing the latency will depend on what type of audio driver is used. See the *Choosing An Audio Driver Type* section on the previous page for more information. Another effective speed enhancement is to defragment your hard drive or purchase a new hard drive. (Old hard drives can get slow with age.)

Notice the CPU meter on the lower right corner of Mixcraft. This indicates the amount of CPU resources used by Mixcraft compared to the entire computer’s CPU usage.

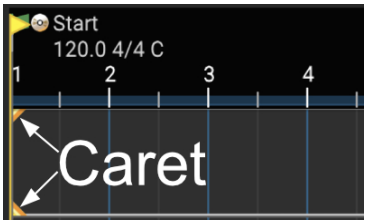
QUICK START

“I don’t wanna read this big ol’ manual now, I wanna rock!” (or thereabouts). Don’t worry, we’ve got ya covered. In the sections that follow, we’ll show how to play audio clips from Mixcraft’s huge included library, record audio and MIDI tracks, and add effects.

LOAD AND PLAY AN AUDIO CLIP

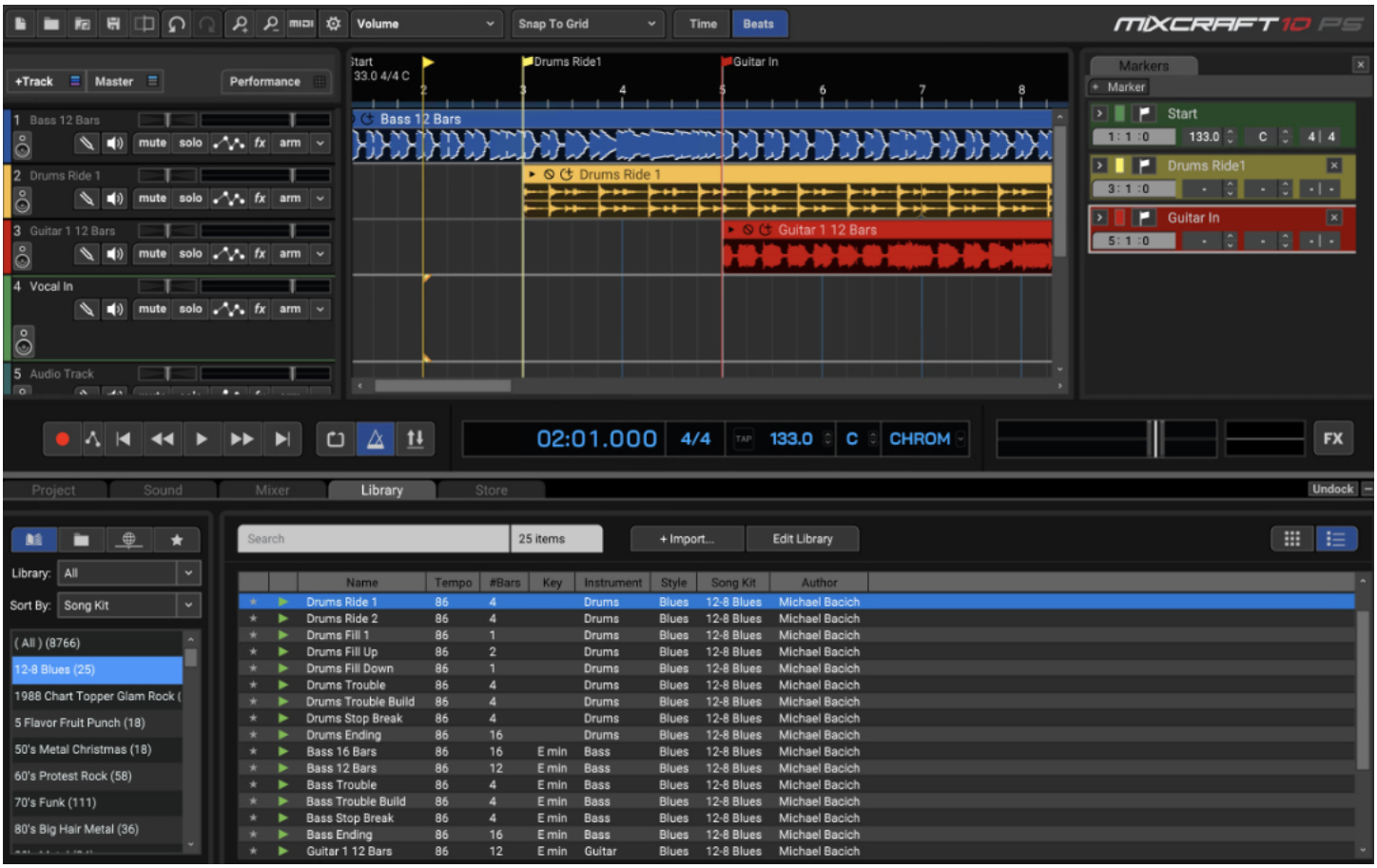
To launch Mixcraft, double-click the Mixcraft 10 icon on the desktop. We'll begin by dragging an audio clip of a bass line into the Main Window - that's the big gray grid where clips of audio, MIDI, and video playback are.

Click the *Library* tab at the bottom of the arrange window, then click the *Library* pop-menu and select *Loops*. Now click the *Sort By* pop-up menu and select *Song Kit*. You'll see a list of song styles below; select *12-8 Blues*. In the list of loops on the right, you'll see *Bass 12 Bars*. Click and drag this to bar 1 of *Audio Track* in the empty gray grid (beneath the word *Start)*. While hovering a loop over the grid in the Track View window, you'll notice two tiny yellow triangles; this is called the Caret.



The Caret indicates where clips will land when the mouse button is released. It also indicates where playback or recording begins. Once you've dropped the audio into place, a dialog box will open and ask: *"Use Best Sounding Project Tempo, Key & Time Signature?"* We'll explain exactly what this means later on, but for now, click *Yes*.

Once you've dropped a loop into the main grid, it creates a "Clip." Clips are the rectangular audio, MIDI, or video "building blocks" in the main grid. The Main Grid window should look something like this:



Click the green play arrow button in the transport section to hear the bass clip play; click a second time to stop playback, or press the space bar to start or stop playback.

If the clip begins playing somewhere in the middle, click the mouse near the number 1 in the timeline (the numbered line at the top of the Main Grid window). This will relocate the Caret, thereby changing the playback start.

Try dragging different types of loops into the Main Grid on separate audio tracks. Mixcraft will automatically match the tempo and key signature of the audio, making it super easy to create music! If you run out of audio tracks, create more by clicking *+Track>Insert Audio track* at the top of the Track List.

If you'd like a section to loop during playback, drag the mouse in the timeline at the top to create a purple highlight area, then click the Loop button in the transport area. The button will turn blue, indicating that loop mode is active. Click it again to disable looping. (Pressing the *L* button also toggles looping.)

Right On Track

You may notice that Mixcraft won't allow you to drop the loop on a track with a little keyboard icon; that's because these are MIDI tracks. Make sure to drag audio loops to audio tracks, i.e. tracks with a little speaker icon. Mixcraft actually has a number of different track types optimized for different purposes, but while we're in "quick startville," we'll just concern ourselves with audio tracks, that play digitized audio, and MIDI tracks, that play note on/off messages.

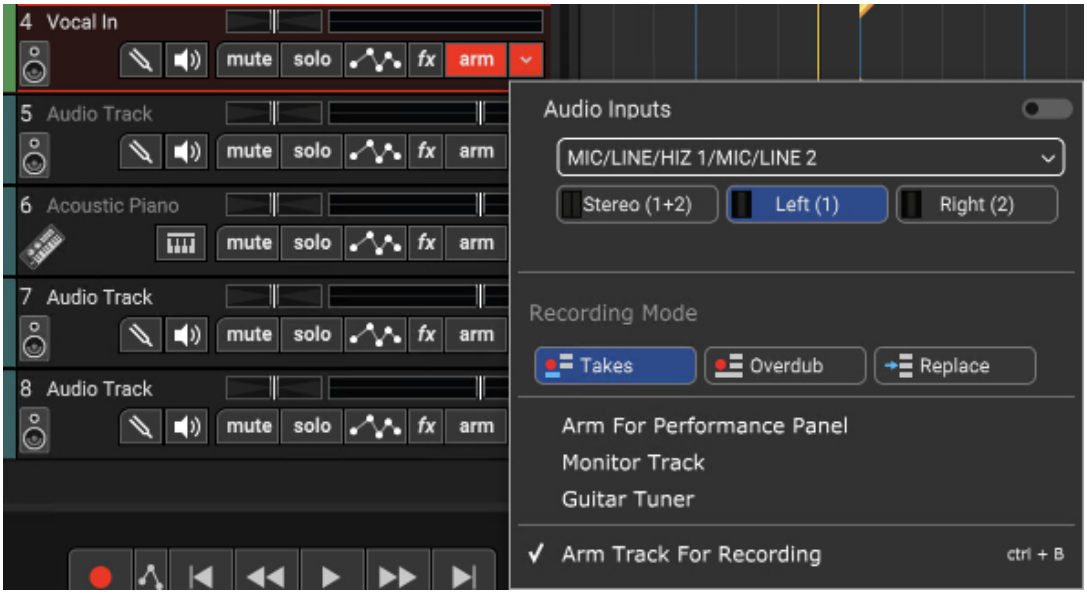
Jargon Alert: The ">" Sign

*Throughout this manual, when you see something like **+Track>Insert Audio**, the ">" sign usually refers to a sequence of actions. Think of it as a shorthand for, "click this>then this> then this."*

RECORDING AN AUDIO TRACK

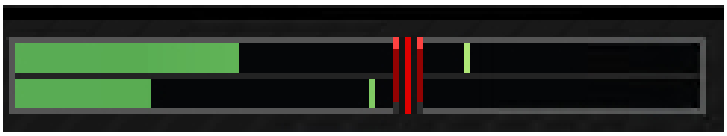
Select a blank audio track in the Track List at the left side of the screen. Existing blank audio tracks will already be named *Audio Track* and have a loudspeaker icon beneath the name. If there aren't any blank audio tracks in the Track List, create new ones by clicking the *+Track* button at the top of the Track List and selecting *Insert Audio Track*.

Click on the audio track you'd like to record on; the track will highlight. Now choose the recording input source by clicking the down arrow to the right of the *Arm* button. Depending on your audio hardware, this list may appear differently, but the idea is to select the hardware input you'll be plugging a mic or instrument into. In the example below, we've chosen the left channel (i.e. input 1) of a two-channel audio device.



If you're recording a mono signal, click the sound device followed by *Left* or *Right* depending on where you've plugged into the audio device. If you're recording in stereo with simultaneous left and right inputs, select *Stereo*. Pay close attention to this setting, because it's easy to accidentally record mono input sources (e.g., lead vocals, bass guitar, etc.) as a stereo file if you've set this incorrectly. It won't hurt anything, but you'll unnecessarily waste hard drive space.

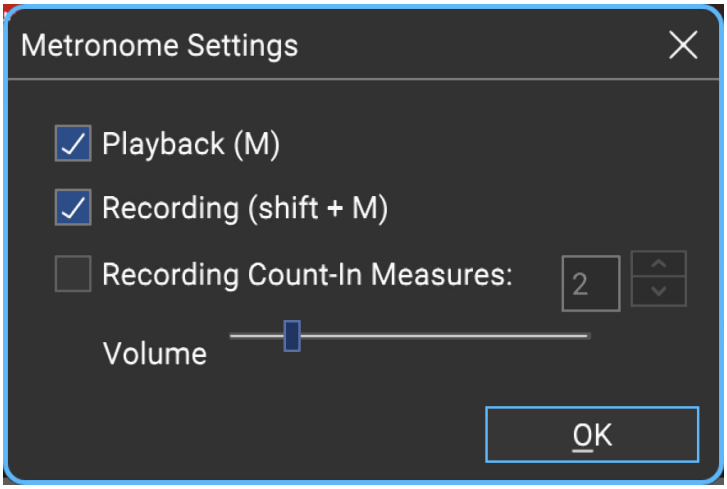
After selecting the input, click the track's *Arm* button. The *Arm* button will turn red, letting you know Mixcraft is ready to record. Now send some audio through the input to verify that the correct input was chosen. You should see the meters moving on- screen on the recording track.



When a track is armed, the volume slider turns into a red recording input level adjuster. Move the slider to adjust the recording input level. If peaks send the meter into the red, back off the level. Ideally, the input signal should nominally sit in the green-to-yellow area.

Important Note: If you're using an audio device with an ASIO driver (you can check in *File>Preferences>Sound Device*), the volume slider disappears when the track is armed for recording. This is because ASIO recording drivers do not support input level adjustment in software. To set the proper recording input level, you'll need to use either the input level on your audio hardware, or if it doesn't have one, you should be able to set the recording level using the output level control on an external preamp or channel strip.

In order to record in time with a project's tempo, you'll most likely want to record with a metronome. To turn on the metronome, click the metronome button in the middle of the transport. It looks like, well, a metronome.



Check the *Recording* box. This means the metronome will click during recording. Checking the *Playback* box makes it click during playback, but we can leave this off for now. If it's not already checked, check the *Recording Count-In Measures* box. Upon pressing the Record button, this gives a "countdown" before recording begins. The number selector lets you choose the length of the countdown - 1 bar usually provides enough time. Hit *OK* when you're done. Once you've configured the metronome, you can quickly toggle it on and off by pressing the *M* key on the computer keyboard.

Almost there! Let Mixcraft know where to begin recording by positioning the Caret in the grid. This can be done by either clicking on the timeline at the top of the main window or by clicking anywhere in the Main Grid. We recommend positioning the Caret on an exact number in the timeline (e.g., 1, 2, 3). Setting the *Snap* setting at the top of the screen to *Snap To Grid* will simplify positioning the Caret.

Now it's time to grab that microphone or guitar and let it rip. If you want to monitor the recording source during recording, click the little speaker icon (directly to the left of the Mute button).

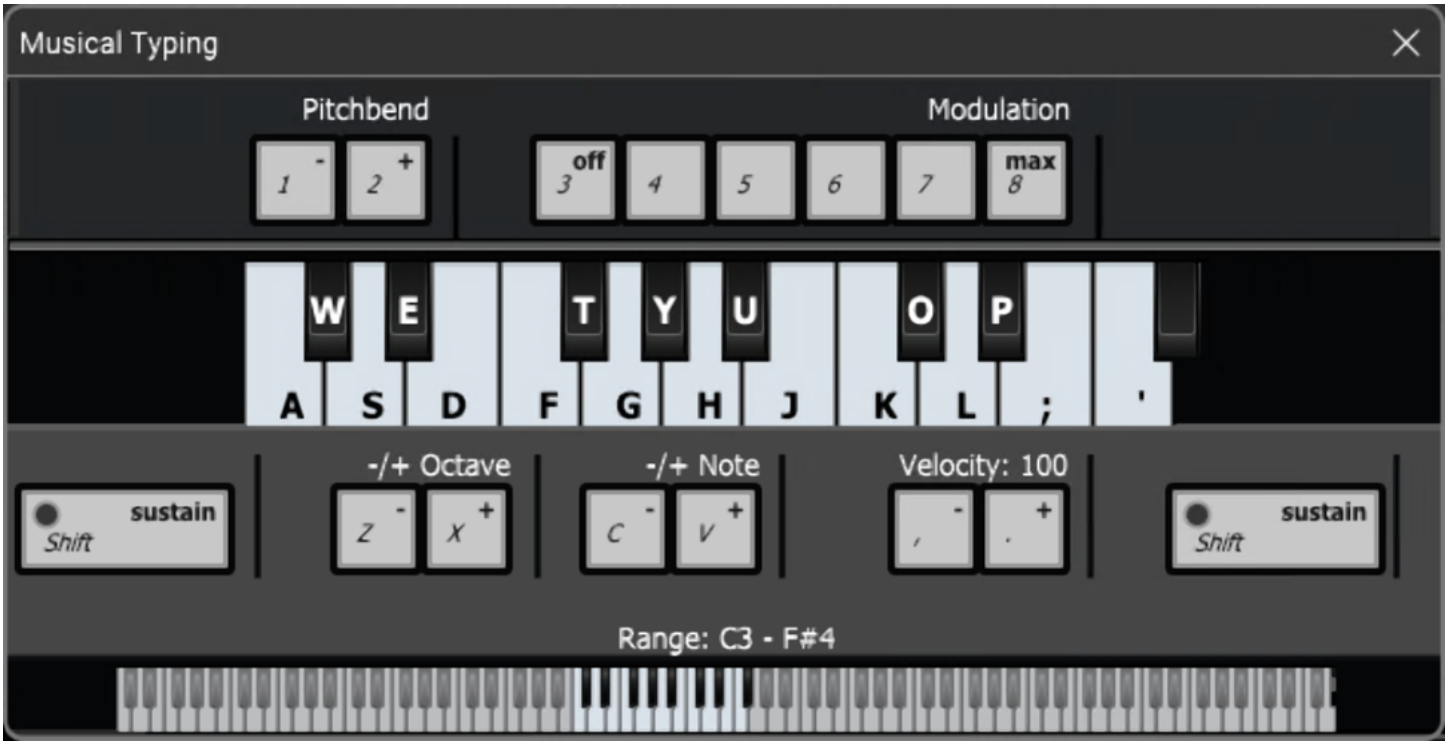
Here we go. Click the red *Record* button in the transport (the one with the red dot), wait four clicks for the recording to begin, and record something! When you're done, click the Record button again to stop (you'll notice the red circle turns into a square while recording), or just press the space bar. It should look something like this:

Congratulations, you've made your first Mixcraft audio recording!

RECORDING A MIDI TRACK

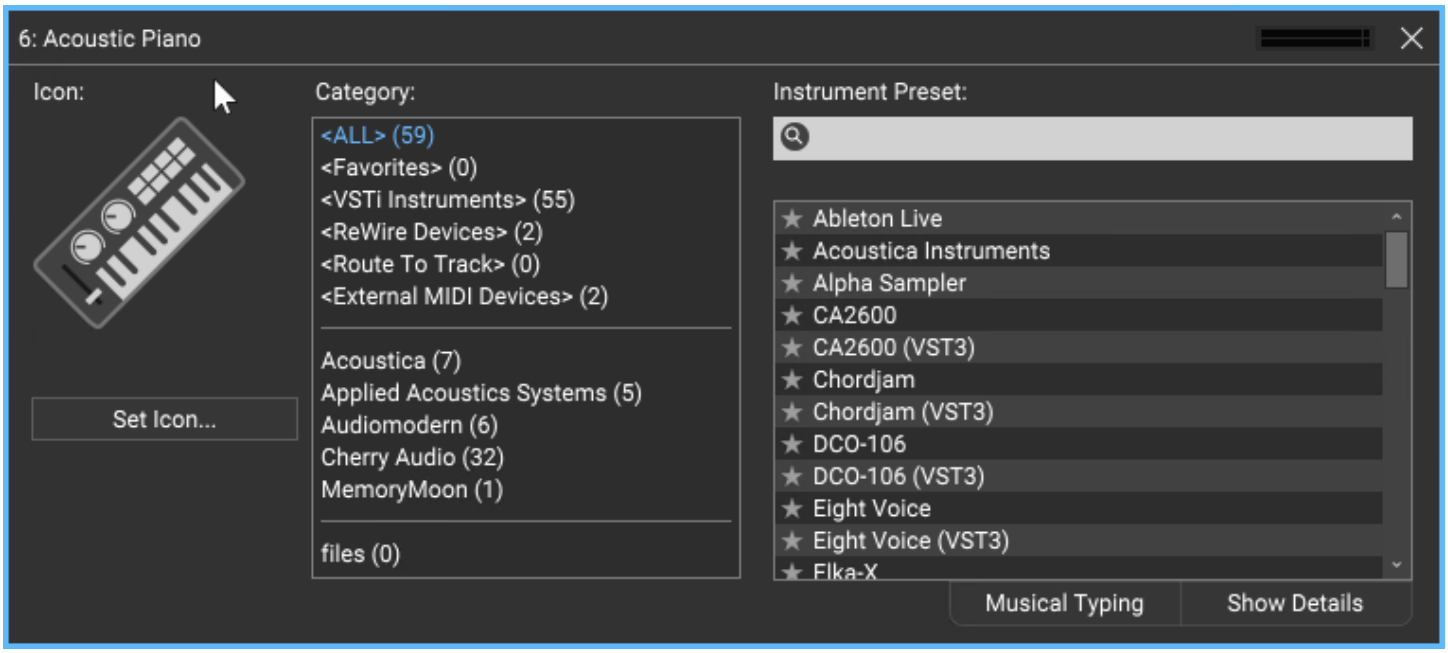
Unlike an Audio Clip, which contains digitized sound data, a MIDI Clip contains no actual audio data. Think of a MIDI Clip as a sort of computerized player piano ... a MIDI Clip primarily contains on/off messages saying, “hey computer instrument, please play these notes at this time!”

There are a number of ways to create MIDI clips, but the most common way is to plug in a USB MIDI controller keyboard, press the Record button, and tickle the ivories (plastics?). If you have a USB MIDI controller, plug it into an available USB port on your computer. If you don’t have a USB keyboard controller, you can input notes direct from the computer’s keyboard using *Musical Typing*. This can be toggled on and off by going to the *View* menu at the top and selecting *Musical Typing*, or by using the key shortcut [CTRL]+[ALT]+K. Musical typing uses the computer’s QWERTY keyboard to play musical notes. When activated, the layout shows the mini music keyboard below including octave, transpose, velocity, and other relevant parameters. For more information, check out the “Musical Typing Keyboard (MTK)” section.



Now that we’re playing some kind of keyboard, we’ll select one of Mixcraft’s built-in Virtual Instruments. A Virtual Instrument is like having a keyboard instrument that lives inside the computer. Nifty, right?

First, create a new virtual instrument track. Click the *+Track* button at the top left, and select *Insert Virtual Instrument Track*. Now click the track's piano keyboard icon. This opens a dialog box where instruments can be selected:

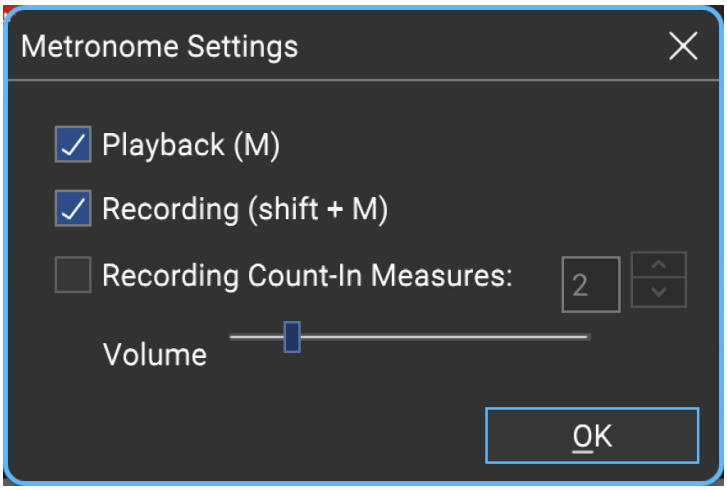


We'll go with our old friend *Acoustic Piano*, but feel free to scroll through the list and choose something saucy, like *Space Walk*. Once you've made your selection, click on the red *X* in the upper right corner.

There's Already A Piano, Man

New MIDI Tracks default to an acoustic piano sound, so you really don't need to select an instrument to play MIDI notes, but we thought you might want to know so you wouldn't be stuck with all piano, all the time!

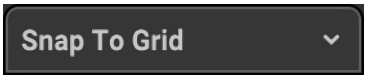
Before we record a MIDI performance, let's turn on Mixcraft's metronome. This lets you play in time with the project's tempo. To turn on the metronome, click the metronome button in the middle of the transport:



Check the *Recording* box to make the metronome click during recording. Checking the *Playback* box makes it click during playback, but we can leave this off for now. If it's not already checked, check the *Recording Count-In Measures* box.

Upon pressing the *Record* button, this gives a "countdown" before recording begins. The number selector lets you choose the length of the countdown. Unless your computer and MIDI keyboard are really far away from each other, choosing 1 bar should provide enough time to get those fingers poised. Hit *OK* when you're done. Once you've configured when the metronome plays, you can quickly toggle it on and off by pressing the *M* key on the computer keyboard.

We're almost there! Let Mixcraft know where to begin recording by positioning the Caret in the grid. This can be done by either clicking on the timeline at the top of the main window or by clicking anywhere in the Main Grid. We recommend positioning the Caret exactly on a number (e.g., 1, 2, 3).



To simplify positioning the Caret, make sure *Snap To Grid* is selected in the *Snap* menu at the top of the screen.

Make sure the track is armed for recording - if it's not red, click on it. Now click the red *Record* button in the transport (that's the one with the red dot), wait four clicks for the

recording to begin, and lay down the rock. When you're done, click the *Record* button again to stop (you'll notice the red circle turns into a square while recording), or just hit the space bar. You should see something like this:

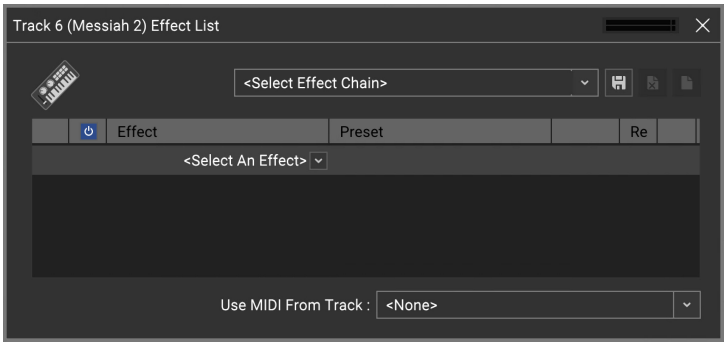
To create more MIDI tracks, select empty tracks in the Track List on the left of the screen and add more instruments as described above.

ADDING AN EFFECT TO AN AUDIO CLIP OR VIRTUAL INSTRUMENT TRACK

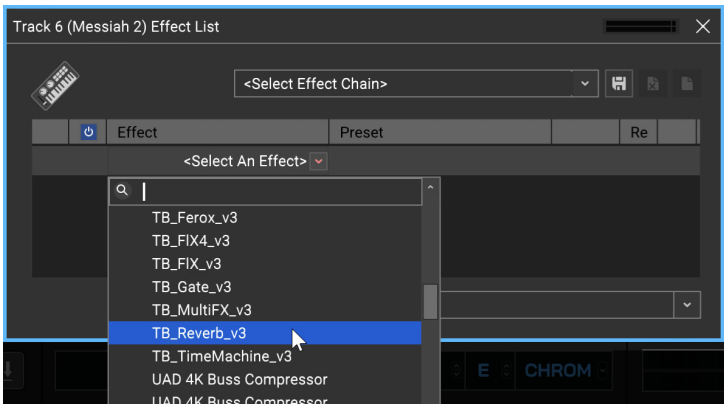
Mixcraft 10 includes a large suite of real-time audio effects that can be applied to audio clips or virtual instruments. These are usually referred to as “plug-ins.”

To add a plug-in effect, click on an Audio Track or Virtual Instrument track (if it’s an audio track, make sure it has associated audio clips in the grid). Now click the track’s *fx* button.

The *fx* button will turn blue to indicate that you’re in effects select mode and the dialog window opens:

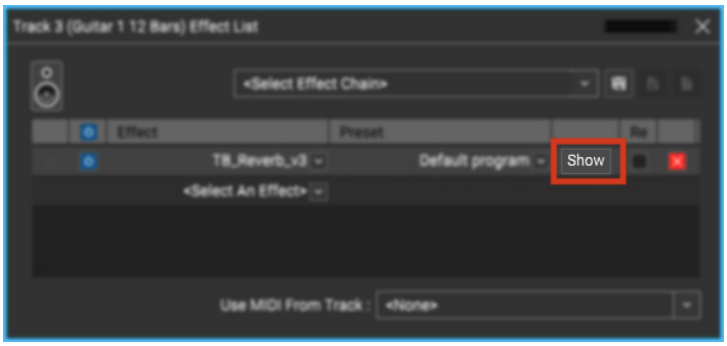


Click *<Select An Effect>*. A drop-down menu will display a whole gaggle of effects; choose one that sounds fun. For this example, we’ll choose *TB Reverb*. Once an effect is selected, the *fx* button turns purple.



At this point, you could just click the *X* at the right of the menu bar and be off on your reverbin’ way, but most likely you’ll want to change the default settings. Mixcraft plug-

ins include factory preset settings - to try out the factory preset settings, click on the downward arrow in the *Preset* list.



To edit the plug-in settings, click the *Show* button to view a plug-in's user interface.

This opens up the TB Reverb user interface where you can set its parameters to your liking. Pressing the Play button in the transport lets you hear parameter changes in real-time. (We recommend using *Loop* Mode for more convenient previewing.)

REGISTRATION

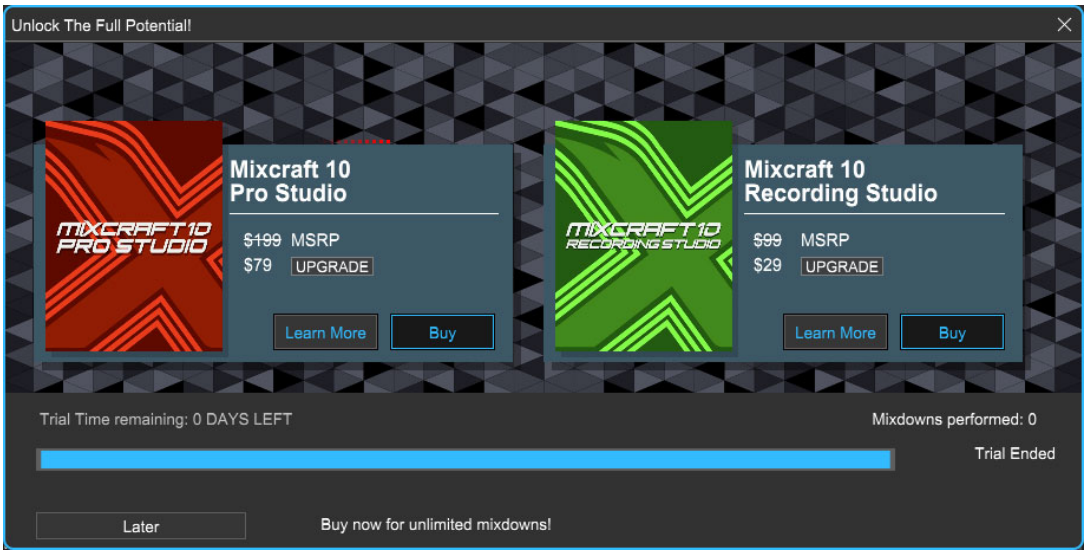
When Mixcraft is purchased, you'll automatically be registered. Once installed and launched for the first time, you'll see the Mixcraft login window where you'll need to enter your email address and Acoustica account password.

Your computer only needs to be online the first time you launch - after that you can unplug the internet, smash your modem with a ball peen hammer, discontinue service with your ISP provider, etc... Mixcraft will keep on tickin', we promise!

With that said, from time to time, Mixcraft will perform automatic updates, occasionally we might throw free sound and loop material your way, AND you'll have access to the awesome built-in Mixcraft store where you can easily make in-app purchases of virtual instruments, loop collections, and more, so we recommend keeping your computer online - we predict this internet thing is gonna be pretty popular! (See the **Store Tab** section for more information.)

MIXCRAFT RECORDING STUDIO DEMO

If you've downloaded and installed the *Mixcraft Recording Studio* demo, it will run in trial mode for 14 days, so you'll want to register as soon as possible for full functionality.



Following the 14-day trial period, you'll see the window above where you can click *Buy* to purchase full versions of Mi*xcraft 10 Recording Studio* or *Mixcraft 10 Pro Studio*.

You can also click the *Buy Now* button at any time during the trial period to display the online purchase window and immediately upgrade Mixcraft to full functionality.

THANK YOU FOR CHOOSING MIXCRAFT 10!

Your support and patronage help us to continually improve Mixcraft. Enjoy! - The Acoustica Team

MIXCRAFT MAIN WINDOW REFERENCE

Think of this section as *what* you'll come across when using Mixcraft. Later chapters will explain *how* to accomplish tasks in Mixcraft in detail. Blue italicized text indicates clickable links that jump to sections with further information.

MAIN WINDOW

This is where you'll spend most of your time in Mixcraft. We'll explain each of its sections below.

MENUS

Basic menus for accessing many Mixcraft functions.

TRACK HEADER

Button shortcuts atop the Track List allow the creation of new tracks, enabling the Master Track, and viewing and hiding the Performance Panel.

MAIN WINDOW TOOLBAR

The Main Window Toolbar contains button shortcuts for many frequently used functions and parameters. Here, we'll go over its functions, buttons, and tools.

NEW PROJECT

Opens a new project.

LOAD PROJECT

Loads an existing project.

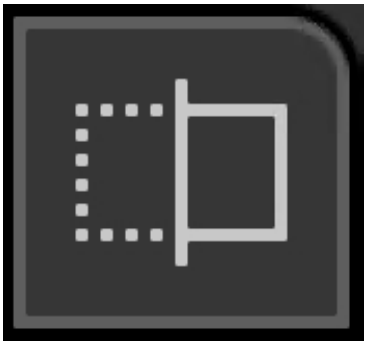
ADD SOUND

Adds audio or MIDI files to a project on the currently selected track at the current Caret position.

SAVE PROJECT

Saves the current project.

MIX DOWN TO AUDIO FILE



Mixes the current project to a WAV or MP3 file.

UNDO

Cancels the last operation. The same as pressing [CTRL]+Z.

REDO

Restores the last operation. The same as pressing [CTRL]+Y.

ZOOM IN

Widens the horizontal view of the Main Clip Grid (i.e. clips become larger).

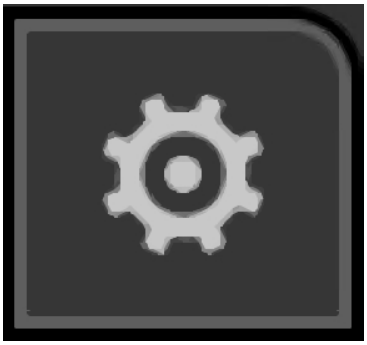
ZOOM OUT

Shrinks the horizontal view of the Main Clip Grid (i.e. clips appear smaller).

MIDI LEARN

Toggles MIDI Learn mode for hardware controller assignment (See **Using Generic MIDI Controllers and Control Surfaces**).

PREFERENCES

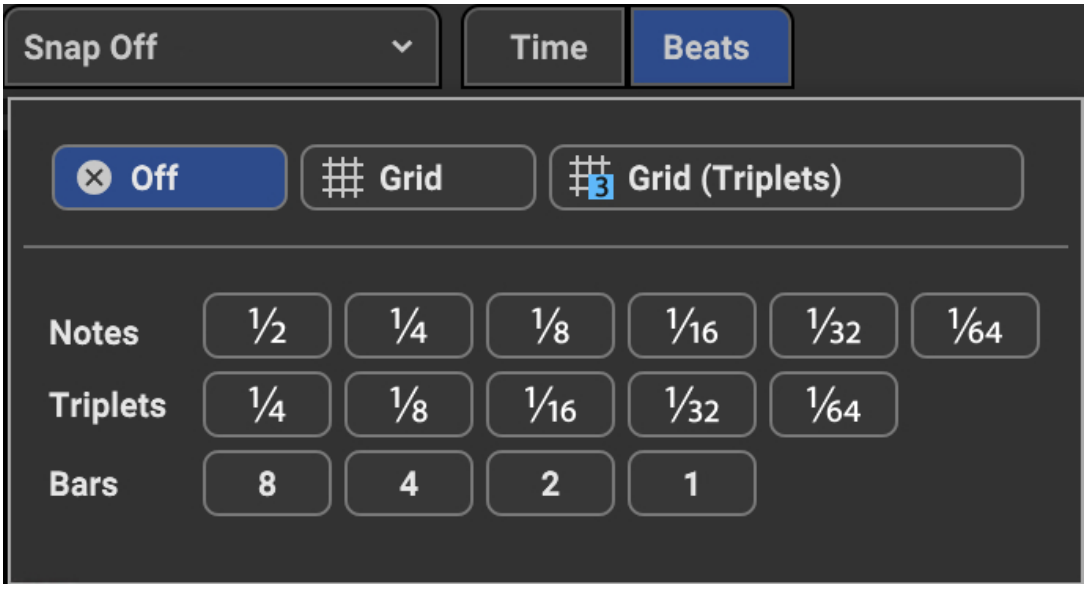


Opens Mixcraft's *Preferences* window.

CLIP AUTOMATION VIEW

This pop-up shows the type of clip automation currently displayed. For more information about clip automation, see the “Clip Automation” section in **Automation and Controller Mapping**.

SNAP SETTING



The Snap setting acts as a quantize control for the placement of all elements in the Main Clip Grid including the playhead, markers, and clips, as well as moving, cutting, pasting, etc. Snap simplifies the process of keeping clips and markers exactly on bar and beat lines. To set the Snap resolution, click on the Snap setting drop-down and select a time division setting.

The characters on the right side are shortcut keys for quickly changing the Snap setting. These work only from the numbers directly above your computer’s QWERTY keyboard; they won’t work from the 10-key numeric keypad. The tilde (*Off* shortcut) is located next to the number *1* key at the top of your keyboard. Tilda Swinton, on the other hand, is currently at the hairdresser in Beverly Hills getting her hair bleached.

Note: Holding down the [SHIFT]key temporarily bypasses the *Snap* setting, allowing clips to be position freely.

How the Snap Setting Affects the Clip Grid

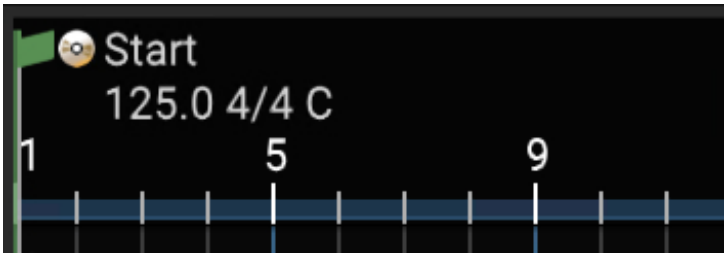
You may have noticed that Mixcraft’s horizontal view size is zoomed, and the Main Clip Grid increment lines become finer (closer zoom) or coarser (farther zoom). The *Snap To*

Grid setting conforms Snap to the light gray “sub” grid lines in the Main Clip Grid. You may find *Snap To Grid* works best in most situations. Use the *Snap To Grid (Triplets)* option if you’re working on music with a “three” feel.

TIME/BEATS

The *Time* and *Beats* buttons determine if the timeline at the top of the main window counts and displays in minutes and seconds, or in measures and beats. This can also be switched using the *View>Timeline Mode* menu.

TIMELINE

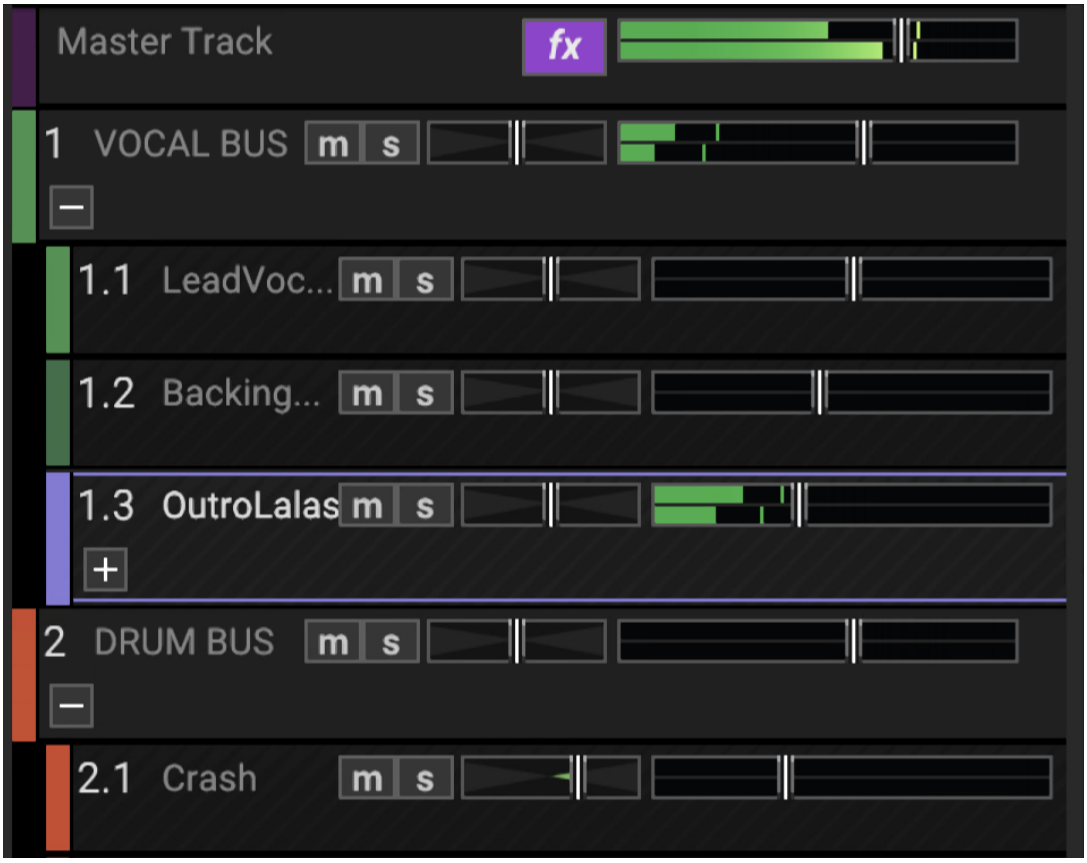


The Timeline indicates the song position, represented either in minutes and seconds (*Time* mode), or in bars numbers, and divisions (*Beats* mode). The area above the ruler is where in/out points, tempo, time signature, key, and song markers are displayed.

TRACKS

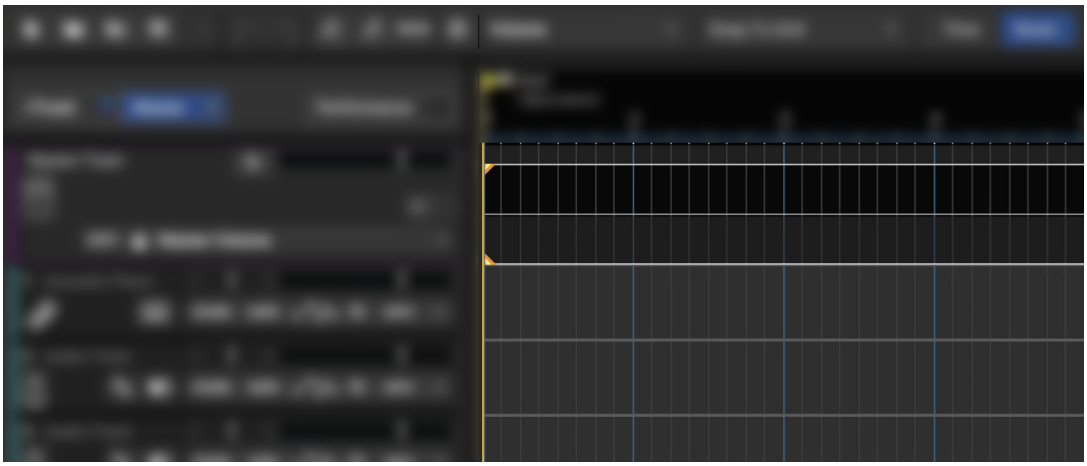
The Tracks area displays important info and parameters for individual audio, MIDI, and video tracks. In addition to standard audio and virtual tracks, Mixcraft includes a number of other specialized tracks types for various tasks. For a full description of all track types and how to use them, see the **Tracks and Types** section.

TRACK LIST



Refers to the entire list of all audio, MIDI, and video tracks comprising a Mixcraft project.

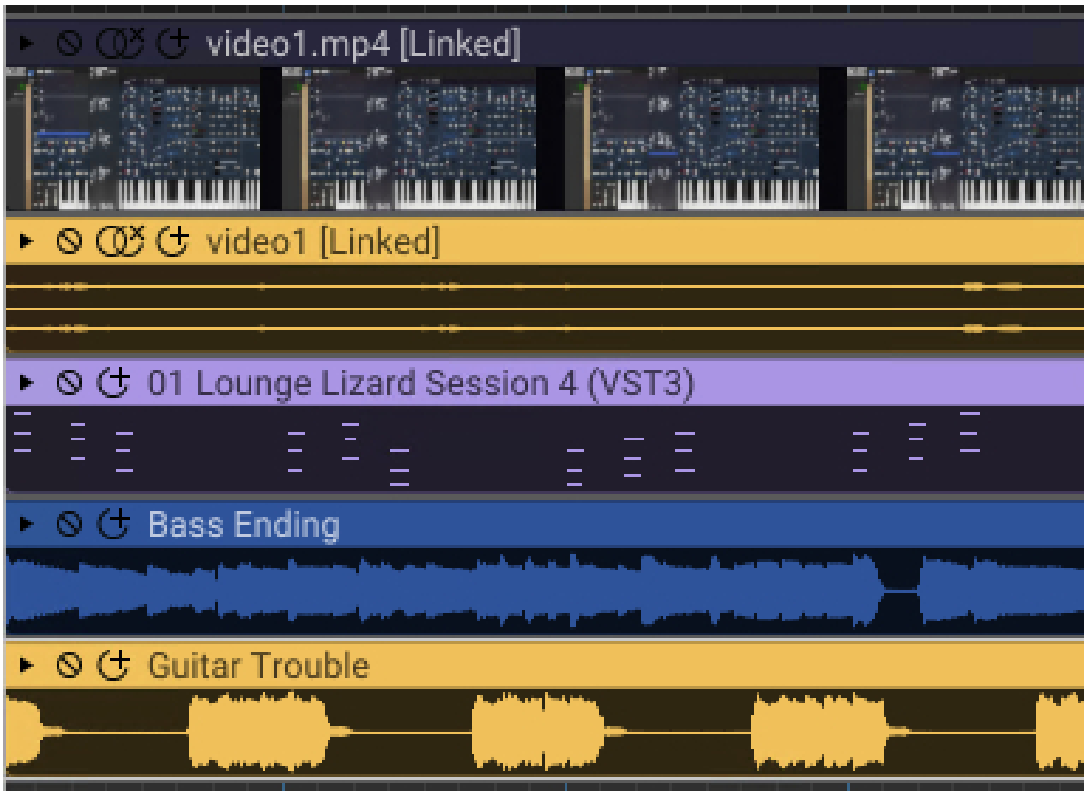
MAIN CLIP GRID



The playback and recording area where audio, MIDI, and video clips can be created and moved. This is where (most) of the action happens, baby.

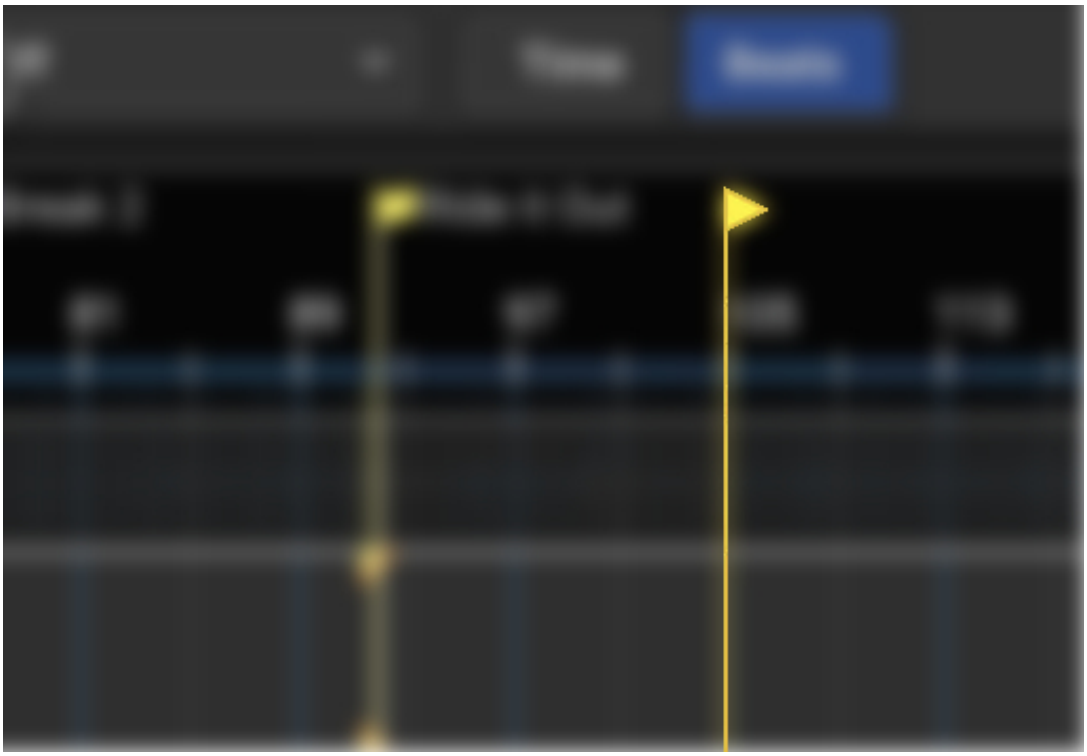
Tip: The Main Clip Grid view can be zoomed in and out by spinning the mouse wheel. (The mouse wheel's behavior can be defined in *File>Preferences>Mouse Wheel*.)

AUDIO/MIDI/VIDEO CLIPS



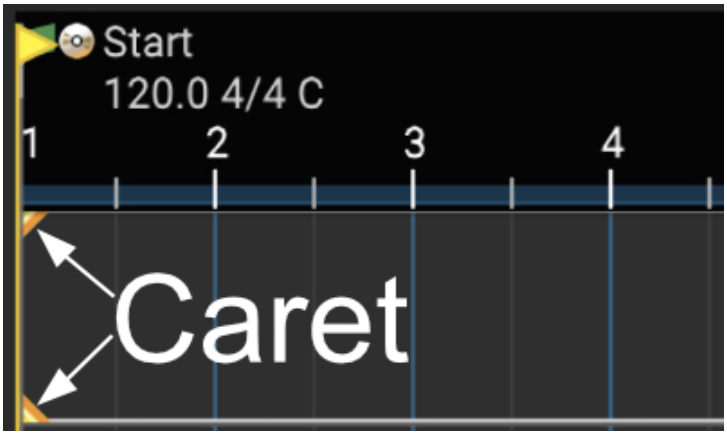
Clips are the “building blocks” of projects. Depending on the clip type, they may contain audio, MIDI, video, or text. Following are operations that are common to all clip types. Learn more in the **Clips and the Main Clip** Grid section.

PLAYHEAD



The playhead is a vertical line with a yellow “flag” at the top indicating the current playback time, or where playback will occur when play or record is initiated. Clicking anywhere in the Timeline moves the playhead to the clicked position.

CARET



The Caret refers to the two small yellow triangles indicating the precise point on a track in the Main Clip Grid where edits happen, and where playback or recording begins. The Caret location is set by clicking in the Main Clip Grid. The Caret will obey the current Snap Setting.

New sounds and recordings are added at the Caret position. After adding a new sound, the Caret moves to the end of the sound. The Caret is also the point at which selected

sounds will be split. The Caret can be moved by clicking the mouse or by using the keyboard direction arrows. The Caret is not susceptible to being eaten by wascally wabbits.

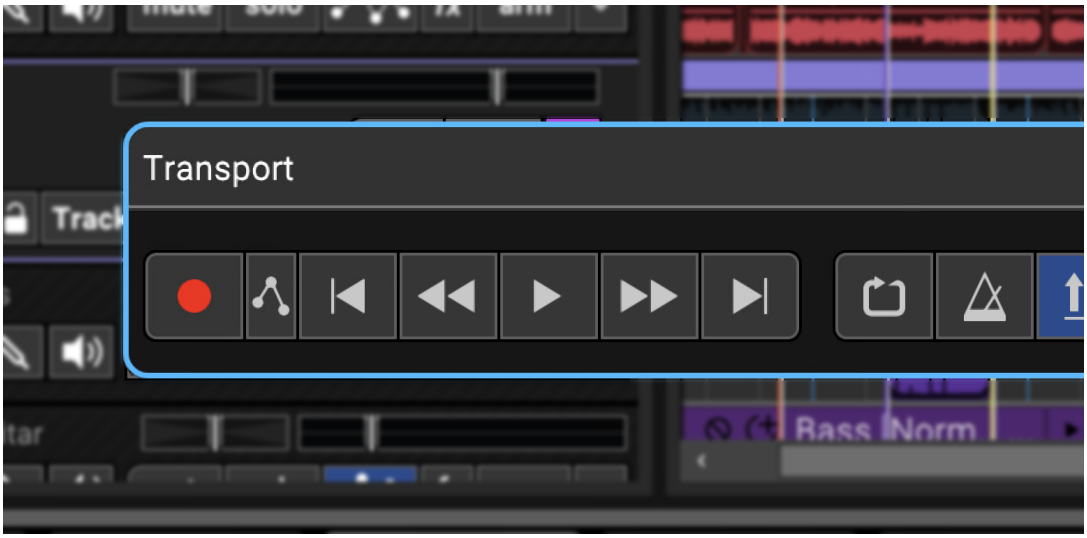
TRANSPORT BAR

Standard tape deck-style controls for playback, recording, loop mode, and punch-in/punch-out. The large middle display shows the song tempo, time signature, song key, and the current position of the playhead. To the right are the master level meter, volume slider, and master effects (*FX*) bypass button.

MOVING AND UNDOCKING THE TRANSPORT BAR

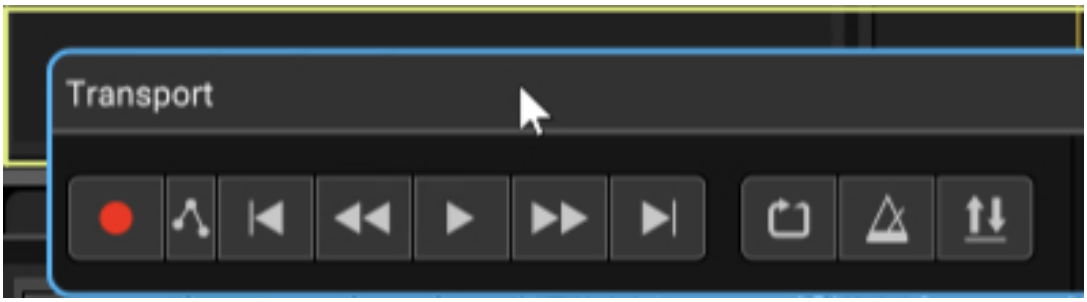
The Transport Bar appears at the bottom of the Mixcraft Main Window by default, but it can be relocated to the top or bottom of the screen, or undocked and freely moved around.

• **To move the Transport Bar**, click and drag the small horizontal handles on either side. To move it to the top of the Main Window, slide it up near the top of the window; when you see a yellow outline around the top menus, release the mouse, and Transport Bar will snap into place. The Transport Bar can be moved back to its bottom location in the same way.



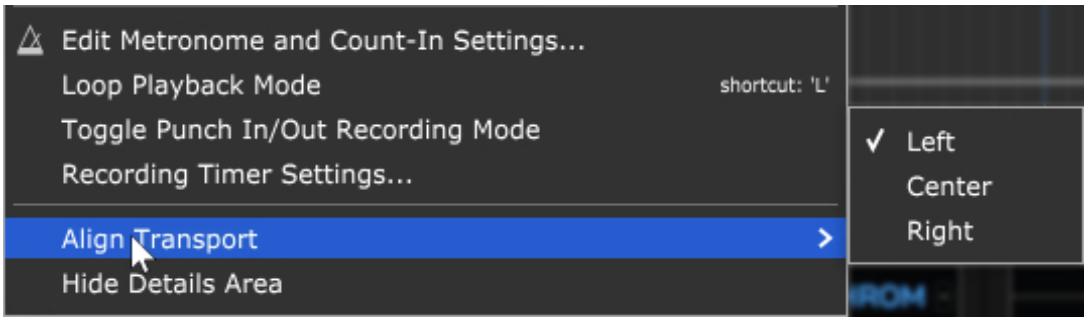
• **To undock the Transport Bar** and place it anywhere, click and drag the small horizontal handles on either side and release the mouse anywhere on the screen. The undocked Transport Bar can be moved at any time by clicking and dragging its blue top bar.

The Transport Bar can be returned to its most recent top or bottom “docked” position, either by clicking the *X* in its right corner, or moving it near the top or bottom of the screen (you’ll see a yellow outline when it’s ready to pop into place).



The *Lock* button prevents the Transport Bar from popping into place when enabled in order to prevent accidental docking. (BTW, "Unlokken With Dokken" is a three-CD greatest hits collection spanning all three years and two smash hit singles of legendary metal band, Dokken.)

ALIGNING THE TRANSPORT



By default, the Transport Bar is centered in the middle of the Main Window when docked. To reposition it, right-click anywhere in the Transport Bar and select *Left*, *Center*, or *Right*. This menu will have no effect on that two-inch 24-track tape machine languishing in the corner of your studio.

TABS

These show additional project information and parameters. Tabs pop up and occupy the bottom half of the screen when clicked.

If the Sound Tab is selected, the following editors are available:

Audio Clips	Loop Editor
Virtual Instruments Clips (MIDI)	Piano Roll

Step Edit

Score Edit

BOTTOM STATUS BAR

The first section at the bottom displays the current audio settings. MIDI IN and MIDI OUT display red dots when external MIDI data is being received or sent. The CPU section shows how much computer CPU Mixcraft is currently using and if saving, loading, or freezing is occurring. Finally, the little diagonal bars in the corner are handles for resizing the Mixcraft window.

GUITAR TUNER

Each audio track features a built-in tuner. Though we refer to it as a “guitar tuner,” it will work with any monophonic instrument signal (i.e., one-note-at-a-time). Those of you using drifty, old analog synthesizers should find it quite handy.

To toggle the tuner on or off, simply click the tuning fork icon. The tuning fork icon turns blue, and the track’s volume slider/level meter turns into a display for the tuner. When the tuner detects an audio signal, it displays the closest note. When the signal is in tune, the “tuning cursor” appears in the middle and highlight in white.

The tuner can also be turned on or off by right-clicking on the track and selecting *Guitar Tuner* or clicking the main window menu *Track>Guitar Tuner*.

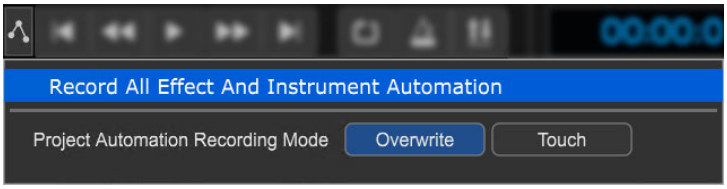
TRANSPORT

- **Record**

Click the recording button to start recording. Hotkey is [R]

- **Automation Recording Options**

Opens a menu where automation recording can be enabled, and Overwrite or Touch options can be specified. Please see the **Automation and Controller Mapping** section for full information.



- **Rewind to Start**

Resets the playhead to the start of the project. Hotkey is [HOME].

- **Rewind**

Rewinds the playhead by a measure or so. Hotkey is [CTRL] + , (comma).

- **Play/Stop**

Starts playback at the current playhead position. Visible when playback is stopped.

Stops playback at the current playhead position. Visible during playback. Hotkey for play and stop is [SPACE BAR].

- **Fast Forward**

Fast forward the playhead by a measure or so. Hotkey is [CTRL] + . (period)

- **Fast Forward to End**

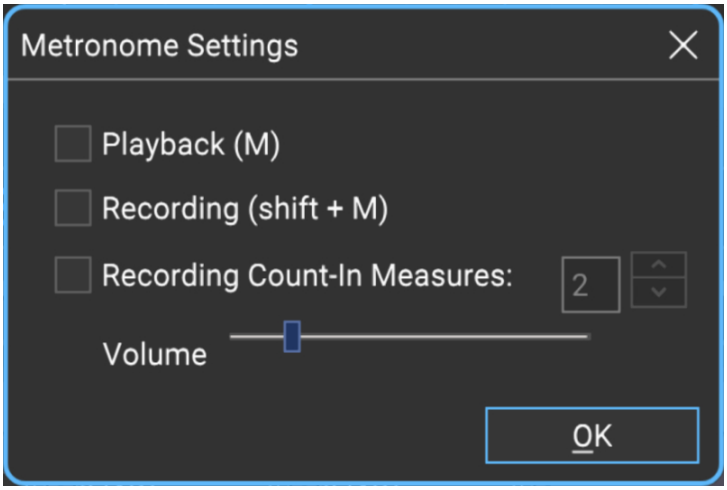
Moves the playhead to the end of the project. Hotkey is [END] key

- **Loop Mode**

Toggles loop mode for recording or playback. Hotkey is [L]

- **Metronome**

Mixcraft's metronome clicks at the project tempo. It can be set to click during playback, recording, or both. Click the metronome button to open the *Metronome Settings* dialogue:



The metronome hotkey is [M].

- **Punch In/Out**

Punch In/Out lets you record at a specific time section. These modes can work together or separately. To loop a region, click the *Loop* mode button in the Transport, then drag the *Loop Start* and *Loop End* markers in the Timeline to set a loop area.

Punch In/Out recording lets you place markers that define where the recording starts and ends. See "Punch In/Out" in the **Recording Audio** chapter for more information.

RECORDING TIMER

Mixcraft includes a *Recording Timer*. This allows recording for a specified duration. To use the Recording Timer, select M*ix>Recording Timer Settings* from the Main Window menus and enter the number of minutes to record. (If you only want to record 30 seconds, enter 0.5)

To disable the recording timer, select *Mix>Recording Timer Settings* again and uncheck it in the menu.

PLAYBACK TIME READOUT/DISPLAY

Displays the current playback indicator time or measure and beat position. It also shows the current tempo, time signature, and key signature.

PROJECT TIME SIGNATURE, TAP, TEMPO, AND KEY

PROJECT TIME SIGNATURE

The time signature affects *Snap* behavior if *Snap* is set to *Snap To...* a number of bars. For example, if the time signature is 3/4 and the software is snapping to the measure, it would mean that the software is snapping every three beats, instead of four beats for 4/4 time. The metronome will play based on the current time signature.

The numerator of the time signature indicates the number of beats per measure and the denominator indicates what type of note receives a beat.

PROJECT TEMPO AND TAP BUTTON

All sounds that have a tempo and are set to *Adjust To Project Tempo* mode will conform to the project tempo. For example, if a sound has a tempo of 200 bpm and the project has a tempo of 100 bpm, the sound will play back two times as fast and be 1/2 the normal duration. In addition to affecting any tempo-adjusted sounds, the project tempo also determines the metronome rate.

Project tempo can be set by clicking the mouse on the *Tap* button next to the tempo display.

PROJECT KEY AND SCALE

All sounds that have a key and are set to *Adjust To Project Key* mode will conform to the set project key and scale. For example, if a sound has a key of A and the project's key is B, the sound will play back two semitones or half steps higher than normal in order to be in tune with the key of B.

One of the following scales can also be chosen:

Chromatic
Major
Minor
Pentatonic Major

Pentatonic Minor
Dorian
Mixolydian
Harmonic Minor
Blues

MASTER VOLUME AND OUTPUT METER

The master volume adjusts the level of the entire mix. Move the slider left or right to set the desired volume. Master Volume also has an integrated master-level VU meter.

Alternatively, you can right-click on the Transport and select *Master Volume>Set Master Volume* followed by choosing a level % or specifying an exact value. This menu can also be accessed by selecting *Mix>Set Master Volume* in the Main Windows menus.

PLAYBACK

Checking this box makes the metronome click during playback. Pressing the *M* key on your computer's keyboard toggles it on and off.

RECORDING

Checking this box makes the metronome click during recording. Pressing [SHIFT]+M key will toggle it on and off.

RECORDING COUNT-IN MEASURES

Upon pressing the Record button, this gives a countdown prior to recording. The number selector lets you choose the length of the countdown length in measures.

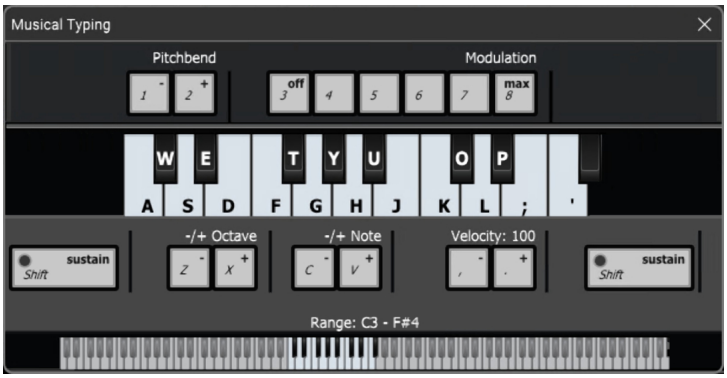
METRONOME PREFERENCES

Metronome sounds and volume can be customized by selecting *Preference>Metronome* in the Main Window menus.

PLAY EVERY X BEATS

The metronome can be configured to play on specific beats by creating a Marker and specifying this in the *Edit Marker* window. See the **Markers** chapter for more information on this.

MUSICAL TYPING KEYBOARD



The *Musical Typing Keyboard* allows virtual instruments to be played using your computer's QWERTY keyboard. Enable it by clicking *View>Musical Typing* in the main screen drop-down menus, or with the keyboard shortcut [CTRL]+[ALT]+K.

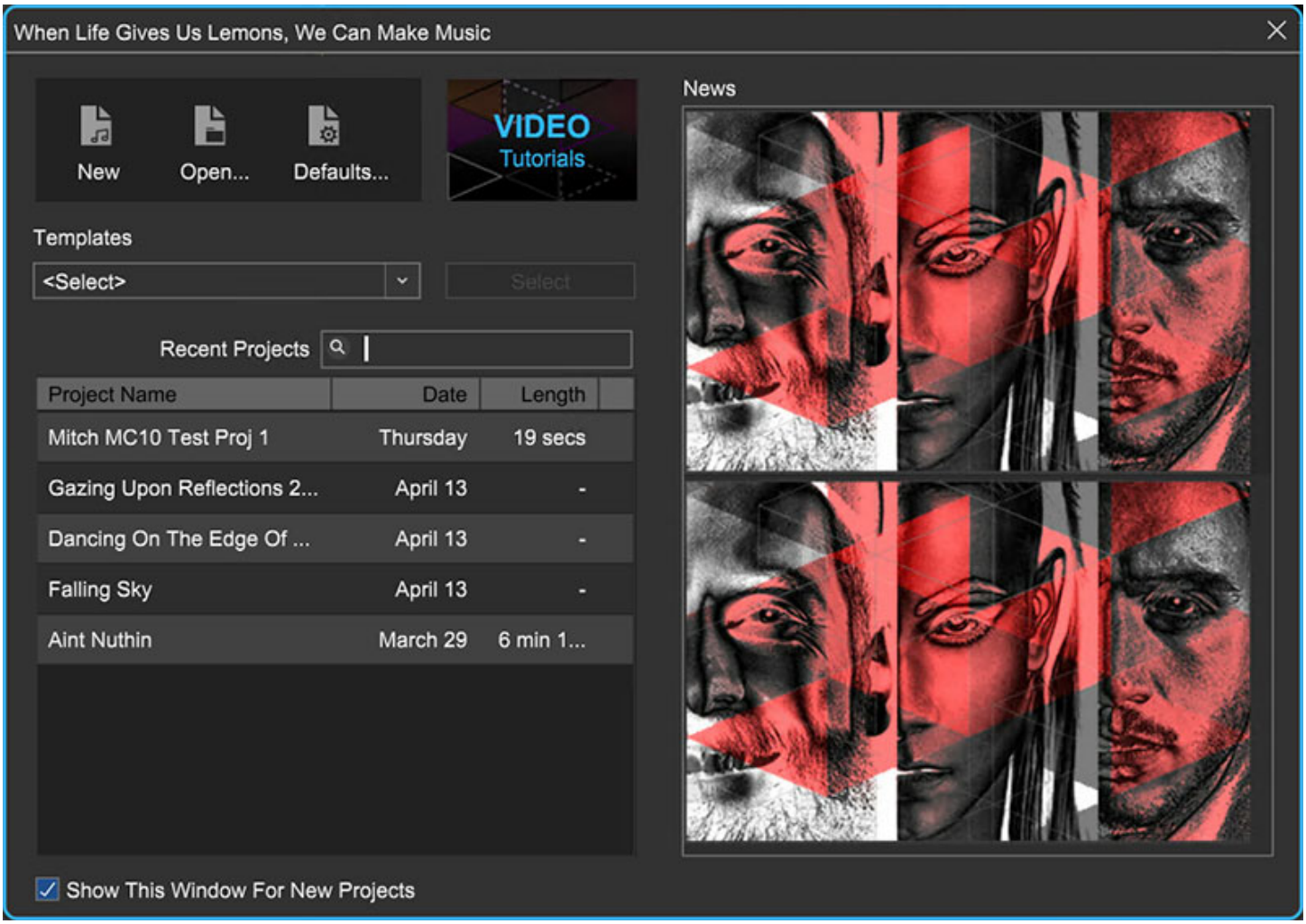
When activated, the *Musical Typing Keyboard* displays on onscreen a music keyboard corresponding to the computer keyboard, as well as octave, transpose, velocity, and other relevant parameters. Learn more about the *Musical Typing Keyboard* in the **Musical Typing Keyboard (MTK)** chapter.

EFFECTS

Effects can be added to any track type (excluding video and text tracks). To add effects to a track, click the *FX* button in a track header. Mixcraft features a large array of effects including echo, delay, chorus, EQ, distortion, and more. Learn more in the **Using Effects** section.

LOADING AND SAVING PROJECTS

NEW PROJECT WINDOW



The *New Project* window is Mixcraft's "launch control" area. It combines a number of handy functions used when starting a new song project. The *New Project Settings* window is displayed when Mixcraft is launched. It lets you specify preset settings for new projects, or open a default project file.

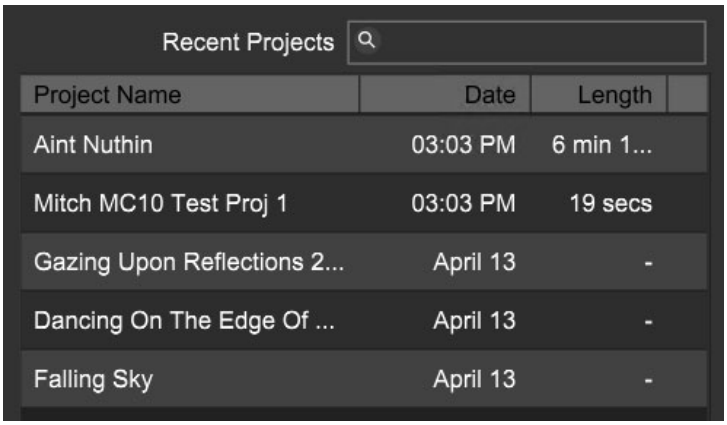
By default, the *New Project* Window opens when Mixcraft is launched, or when *File>New Project* is selected. It can be disabled by unclicking the *Show This Window For New Projects* checkbox, or in preferences at *File>Preferences>Project>Show Start Project Dialog On New Projects.*

• Document Icons

- **New**
  Creates a new project with properties defined by *New Projects Defaults* settings.
- **Open**
  Opens a File Explorer window where an existing project can be opened.
- **Defaults**
  Opens the *New Projects Defaults* dialog (see below).

• Video Tutorials

Automatically launches your default web browser and directs to **acoustica/mixcraft/videos**. Here you can view helpful Mixcraft-related tutorial and tips videos.



• Recent Projects Search

The *Recent Projects* dialog allows easy searching for projects - just type the name (or part of it) and projects will appear below.

• Recent Projects List

Displays most recent projects. To open a project, simply click on it.

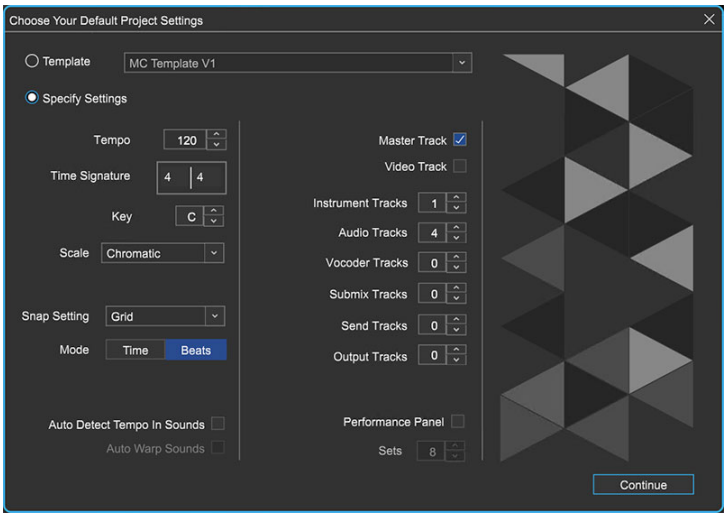
Project list display order can be sorted by name, date last opened, or length by clicking on the column headers.

• News

The right side of the *New Project* window contains Acoustica- and Mixcraft-related news, including sales and new videos. These launch in the default internet browser when clicked.

PROJECT DEFAULT SETTINGS

Closely related to the *New Project* window, the *Project Default Settings* window is where all initial project settings, such as tempo, key, number of specific track types and more can be defined. This "personalized project template" makes song creation even easier.



All parameters in the *Project Default Settings* window remember their current setting, even when new projects are initiated. If you make a change to one of the settings, Mixcraft remembers it the next time the *Project Default Settings* window is opened.

TEMPLATE

If the *Template* radio button is selected, an existing Mixcraft template file is used to specify initial project settings.

The template file can be selected using the popup menu to the right. Either click in the field and select a template or click *Browse...* andnavigate Windows Explorer to the location of a Mixcraft template file, then double-click the template file to open it.

SPECIFY SETTINGS

When the *Specify Settings* radio button is selected, you’re able to quickly and easily set parameters when beginning a new project.

- **Tempo**

Specifies the tempo of the new project. Either click the tempo number and enter a

number on the keyboard, or use the up/down arrows to specify the tempo.

• Time Signature
Click on the numerator or denominator and enter the desired numbers to specify the time signature.

• Key
Click the letter *C* to change the key signature or use the up/down arrows to specify the project key.

• Scale
Allows selection of a predetermined scale for MIDI clips to conform to.

• Snap Setting
This sets the *Snap* setting in the new project.

• Mode
Selects between *Time* and *Beats* mode in the timeline ruler and position displays.

• Auto Detect Tempo In Sounds
Tempo of clips containing audio content will be tempo-locked to the project.

- **Auto Warp Sounds**
  Checking this box will automatically autowarp imported audio content over 30 seconds in length. (*Auto Detect Tempo In Sounds* must be enabled.)

• Master Track
Checking this box enables the master track at the top of the track list.

• Video Track
With this box checked, the first track in a project will be a video track (a project can only have one video track).

• Instrument Tracks
Defines the number of virtual instrument tracks automatically created by Mixcraft. Either click the number and enter a number on the keyboard, or use the up/down arrows to specify a number.

• **Audio Tracks**
Defines the number of audio tracks automatically created. Either click and enter a number on the keyboard, or specify a number with the up/down arrows.

• **Vocoder Tracks**
Defines the number of vocoder tracks automatically created by Mixcraft. Either click the number and enter a number on the keyboard, or use the up/ down arrows to specify a number. Note that a vocoder track is actually a submix track containing an audio track (for vocoder control input) and an instrument track (containing a string synth instrument and an Acoustica Vocoder plug-in).

• **Submix Tracks**
Defines the number of submix tracks automatically created. Either click and enter a number on the keyboard, or specify a number with the up/down arrows.

• **Send Tracks**
Defines the number of send tracks automatically created. Either click and enter a number on the keyboard, or specify a number with the up/down arrows.

• **Output Tracks**
Defines the number of output tracks automatically created. Either click and enter a number on the keyboard, or specify a number with the up/down arrows.

• **Performance Panel**
Checking this box opens the Performance Panel in the new project. Use the *Sets* box to define the number of empty Performance Panel sets.

• **Continue**
The Continue button opens a new project with the currently defined *Project Default Settings.*

SAVING A PROJECT

Select *Save or Save As...* from the *File* menu, navigate to the folder where you'd like the current project's folder to reside, type in a name, and click the *Save* button. Mixcraft automatically creates a folder with the name you typed. The Mixcraft project file and all associated audio files will save to the project folder.

If the project has already been saved in an earlier version, the *Save* command will simply overwrite the existing project file with the same file name. If you'd like to save different iterations of a project, we recommend adding numbers or dates at the end of the project file name.

Projects can also be saved by clicking the *Save* button on the top toolbar - it's the icon that looks like a floppy disk. (If you still have a box of floppy discs in the closet, stop what you're doing and throw them away right now - whatever gadget you still have that took them doesn't work any more anyway.)

Save your work often. You never know when the power might shut off!

MIXING DOWN A PROJECT INTO AN AUDIO FILE
MIX DOWN TO STEMS

To save the project as an MP3, WAV, OGG or WMA file, use the *File>Mix Down To C*ommand in the Main Window menus. Tracks can also be saved en masse as individual audio files using the *File>Mix Down To Stems* function. For more information, see **Mixing Down To Audio And Video Files**.

SAVING AS A MIDI FILE

If you want to export a project's MIDI content to a Standard MIDI file, select *File> Save As MIDI File...* from the Main Window menus. Alternatively, you can choose *File>Save As....*, click the *Type* field and select *MIDI File Type 1*.

Audio tracks will be skipped, as they do not contain MIDI data.

BACKING UP PROJECTS

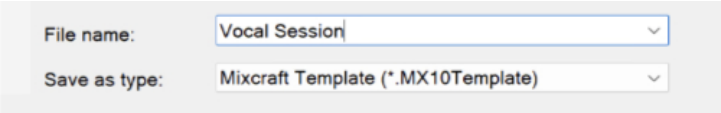
A backup of the project is made each time it is saved. Backup files are automatically saved in the backup sub-folder located in the project folder.

Saving Projects With Templates

If a new project is started by loading a template and you hit the Save button (or the File menu equivalent), Mixcraft will save the file as a new project - it won't overwrite the template file.

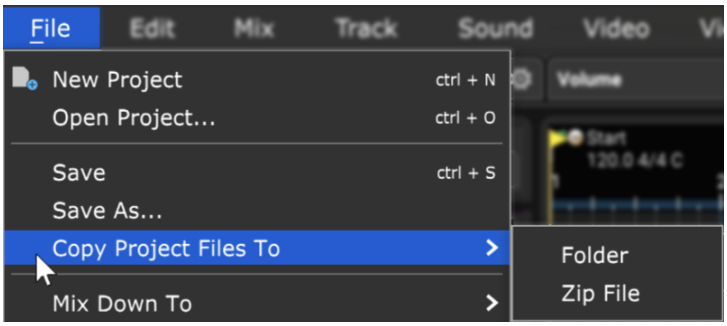
PROJECT TEMPLATES

A template is a special project that stores track names, track images, volume settings, armed states, and other track settings. Project templates can be a big time saver because they let you set initial project parameters to your liking.



To save a project template, select *File>Save As...* in the Main Window menus, then select *Mixcraft Template* from the *Save as type:* drop-down menu. Type in a file name, select a destination folder and click *Save*. Mixcraft project templates are stored as .mx10template files.

COPY PROJECT FILES TO



A project and all sounds, videos and/or recordings used within it can be easily saved to a single folder or zip file. This is handy for organizing projects and backups as well as sharing with other Mixcraft users.

To copy the project and its sounds, save the project, then click *File>Copy Project Files To* in the Main Window menus, followed by clicking *Folder* or *Zip File*.

COPY TO A FOLDER

Pick a folder to copy the project and files to and click *OK*. You can optionally create a new folder by clicking the (you guessed it) *New Folder* button.

COPY TO A ZIP FILE

Enter a name for the zip file and click *Save*. All project files will be automatically added to the compressed zip file. Audio and video files do not necessarily compress well (i.e. they won't be corrupted, but their file size won't shrink much), but this is still a great way to quickly create a single file archive for sharing/emailing/uploading.

TRACKS AND TYPES

The Track List is found at the left side of Mixcraft's main interface window. Each track contains controls for volume, panning, muting, soloing, and more. There are a number of track types, each with its own purpose and variations in its controls. You can play or record as many tracks as you like (until your computer starts billowing smoke). The exception is that a project can only have one Video and one Master track. First, we'll go over some common controls for most track types, then get into specifics for each track type.

The table below shows Mixcraft's various track types and their basic functionality, followed by an in-depth explanation of each.

Track Type	Details
Audio	Record audio or remix loops.
Instrument	Edit or record MIDI data.
Video	Add and edit video files or still images.
Video Text Track	Add and edit video static and scrolling text to videos.
Master	Shape the master volume and effects - this is where effects are inserted into the main output bus.
Submix	Nests and combines audio and instrument tracks.
Send	Share effects between multiple tracks.

Output	Additional output busses in addition to the Master Track. These are used to route audio to physical outputs with multiple-out audio hardware.
Rewire	Controls a third-party Rewire application.
Vocoder	Creates a Submix track with control and instrument tracks preconfigured for Acoustica Vocoder.
Instrument Mix	Mix additional audio channels from virtual instruments with multiple output busses; this is automatically created when a virtual instrument with multiple output channel is added.

ADDING/MOVING/SIZING/DELETING TRACKS

Drag, right-click, or use key shortcuts to add, delete, move, and duplicate tracks.

MOVING TRACKS

Tracks can be moved by clicking and dragging them vertically within the Track List.

RESIZING VERTICAL TRACK HEIGHT

To resize a single track vertically, move the mouse to the bottom of a track and drag it up or down. When the mouse is in the correct location for resizing, the cursor will become an up/down cursor.

Height can be adjust for all tracks simultaneously either by selecting *Track>Properties>Track Height* and choosing a size, or by clicking in the track area and using [CTRL]+Alt+Mouse wheel.

DELETING TRACKS

Click on a track to select it. Then click *Track>Delete Track*, or right-click on the track and choose *Delete Track*. All sounds on the track will also be deleted.

CUSTOMIZING TRACK APPEARANCE

Change the color, icon, name, or size of tracks.

NAME

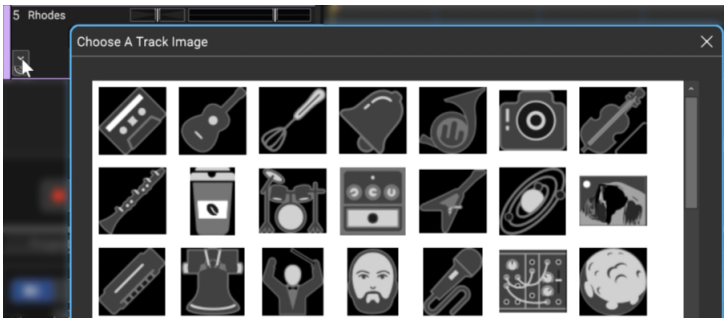
The default name for newly created tracks will be “Audio Track,” for audio tracks, or “Instrument Track,” for MIDI tracks. Tracks can be renamed by clicking the current name and typing. Hit the *Enter* key or click in another area of the window to finish.

IMAGE

Each track can have its own icon beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:

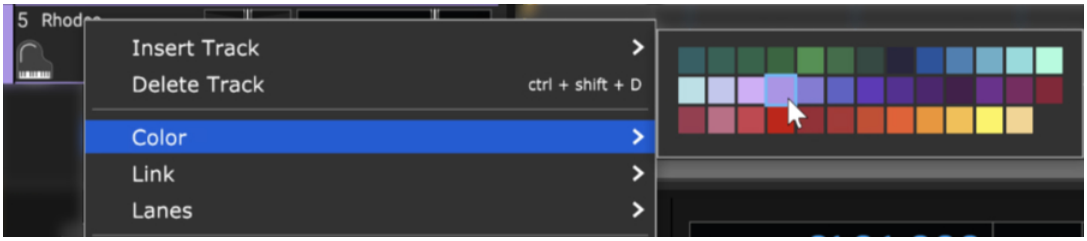


To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus or (more easily) by right-clicking a track and choosing *Color*. This affects the track's highlight color and all clips on the track.



ADDITIONAL RIGHT-CLICK FUNCTIONS

We apologize for sticking these all the way at the end, but here are some convenient things you can do by right-clicking the track header.

MIX TO NEW AUDIO TRACK

Mixes all Virtual Instrument or audio clips on the selected track to a single, continuous audio clip and places it on a newly created track beneath the current track. This has a couple of practical uses:

- **Convert MIDI Virtual Instrument To An Audio Wave**

This is useful if you're handing off files to ~~some chump~~ another user who doesn't have virtual instruments you've used in a project.

- **Permanently Embed Insert Effects Or Instruments In An Audio File Again**

This is useful if you're handing off a project to another user who doesn't have effects plug-ins you've used.

- **Long-Term Archiving**

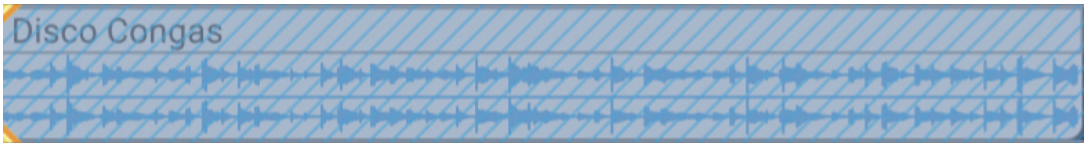
Instrument or effects plug-ins can become obsolete or incompatible with current operating systems/format changes, etc. Converting to "pure" audio files can act as insurance to guarantee projects remain playable for years to come.

DUPLICATE

Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-

in setup, etc. Also useful if you'd like to try some wild edits and want to retain an unadulterated version.

FREEZE



Freeze is similar to *Mix To New Audio Track*; it creates a new audio file with instruments or effects “burned in” to the file. Unlike *Mix To New Audio Track*, it does not make a new track; the audio is created in the background and plays back on the existing track. Because instruments and effects are part of the newly created audio file, Mixcraft disables instrument and effects plugs upon playback, thus freeing up computer processor resources. If you’re using an older or underpowered computer, *Freeze* can be tremendously helpful (check out the CPU percentage meter while playing back projects for reference). Conversely, if you’re using a fast, modern computer, you probably won’t need *Freeze*.

As shown above, frozen tracks turn blue with diagonal lines; this makes it easy to keep track of which tracks are frozen.

Frozen tracks can be unfrozen, that is, converted back to standard tracks with instrument and plug-ins active, by reselecting the *Freeze* command (which will say *Unfreeze*).

COMMON TRACK CONTROLS AND COMMANDS

Most of the following controls and commands are shared by all track types.

VOLUME + INPUT/OUTPUT METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

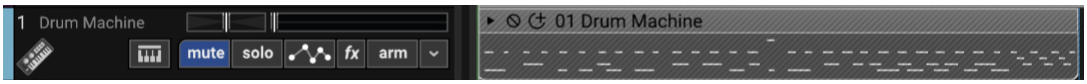
The horizontal volume fader contains an integrated level meter. In standard playback mode, this displays the output level as the track plays. If the track is in record arm mode (*The arm* button will be red), the meter functions as an input level meter.

PAN

The track's pan control is the small horizontal slider to the left of the track volume control. Adjust the pan control by clicking and dragging it to the left or right. Pan is adjustable from 100% left to 100% right. The pan controls default to the center position - this means that the sound is equally balanced between the left and right channels. Track panning can also be set in the main window drop-down menu *Track>Properties>Set Pan>Set Exact Value* ... This menu is also accessible by right-clicking a track.

Tip: For finer and more accurate pan adjustment, hold down [ALT], [SHIFT], or [CTRL] while dragging the pan slider.

MUTE



Tracks can be temporarily silenced by clicking the track *Mute* button. Once muted, the solo button turns blue, and all clips on the track turn gray with diagonal lines. Tracks may also be muted using the shortcut [CTRL]+M, or by right-clicking the track and selecting *Properties>Mute*. If multiple tracks are selected, all selected tracks are muted simultaneously.

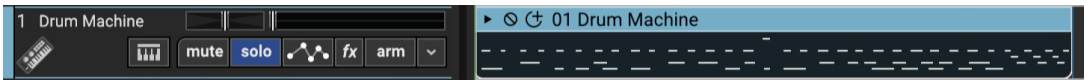
If multiple tracks are muted, [CTRL]-clicking an unmuted track unmutes all others and mutes the clicked track (sort of a mute “solo” function). If multiple tracks are muted and one of them is [CTRL]-clicked, **all** are unmuted.

Mute and Solo Button [CTRL] + Click Shortcuts

If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

SOLO

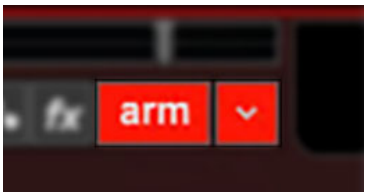
To hear a single track's audio, click the *Solo* button. Multiple tracks may be soloed. For example, to hear how the bass and guitar sound together without drums, solo the bass and guitar tracks. Once soloed, the track's solo button turns blue and all other tracks turn gray with diagonal lines. If multiple tracks are selected, all selected tracks are soloed simultaneously.



The currently selected track can also be soloed using the shortcut [CTRL]+L, or by right-clicking the track and selecting *Properties>Solo*.

If multiple tracks are soloed, [CTRL]-clicking a non-soloed track disables solo on all other tracks and soloes the clicked track. If multiple tracks are soloed and one of them is [CTRL]-clicked, solo is disabled for all tracks.

ARM BUTTON AND MENU (DOWNWARD ARROW)



Clicking the *Arm* button readies an audio or MIDI track for recording. (the button turns bright red). If nothing else is armed, the currently selected track is automatically be armed for the duration of the recording. More than one track can be armed for simultaneously recording to multiple audio or MIDI tracks.

Clicking the downward arrow to the right of the *Arm* button opens a menu where recording parameters are specified. This menu will look a little different for audio tracks or MIDI tracks - check out the **Audio Track** or **Virtual Instrument/MIDI Track** sections for detailed information.

SELECTING A TRACK

Clicking on a track header will select it. The tracker header outline changes to the currently selected track color; the default color varies depending on the track type, but its color can be changed (see "Track Color" section below).

MULTIPLE TRACK SELECTION

[CTRL]+click will select multiple tracks simultaneously, [SHIFT]+click selects all tracks between any two selected tracks. Selecting multiple tracks is handy for moving or deleting multiple tracks. Additionally, *Volume*, *Pan*, *Mute*, *Solo*, *Arm,* and other operations apply to all selected tracks.

Note: When multiple tracks are selected, *Volume* and *Pan* changes are relative. As an example, changing a volume level on one track won't cause all selected tracks to jump to the same volume; instead, selected tracks maintain their volume settings r*elative to each other* but move up and down as a group. The same applies to *Pan* settings.

LINKING TRACKS

Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo, and send controls. It's particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display "chain" icons next to the track name, and each Link group will have uniquely colored color bars at the far left of the track.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**

Choose *Track> Link>Link Selected Tracks* from the main menus, or right-click one of the selected tracks and and choose *Link>Link Selected Tracks* to link currently selected tracks.

- **Unlink All**

This disables linking for **all** tracks in the current Link group (one track within the group must currently be seleted before unlinking).

- **Unlink**

This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

ADDING/MOVING/SIZING/DELETING TRACKS

Drag, right-click, or use key shortcuts to add, delete, move, and duplicate tracks.

MOVING TRACKS

Tracks can be moved by clicking and dragging them vertically within the Track List.

RESIZING TRACKS

Tracks can be resized vertically. Track height can be increased for easier editing, or decreased to fit more tracks on the screen simultaneously. To resize a track vertically, move the mouse to the bottom of a track and drag it up or down. When the mouse is

in the correct location for resizing, the cursor will become an up/down cursor. Alternatively, you can click *Track>Properties>Track Height* and choose a size of small, normal, large, or Super Big Gulp X-Treme™. [CONTROL]+ ~ (that's a tilde, the squiggle at the top left of your keyboard) is a handy keyboard shortcut for cycling through track heights.

RESIZE ALL TRACKS

You can resize all tracks at once by clicking on *View>All Tracks Height* and choosing a new size. To resize all tracks to a specific size, hold down the [SHIFT] key, click on the bottom of a track, and drag it up or down. All tracks will resize upon mouse release.

DELETING TRACKS

Click on a track to select it. Then click *Track>Delete Track*, or right-click on the track and choose *Delete Track*. All sounds on the track will also be deleted.

CUSTOMIZING TRACK APPEARANCE

Change the color, icon, name, or size of tracks.

NAME

The default name for newly created tracks will be “Audio Track,” for audio tracks, or “Instrument Track,” for MIDI tracks. Tracks can be renamed by clicking the current name and typing. Hit the *Enter* key or click in another area of the window to finish.

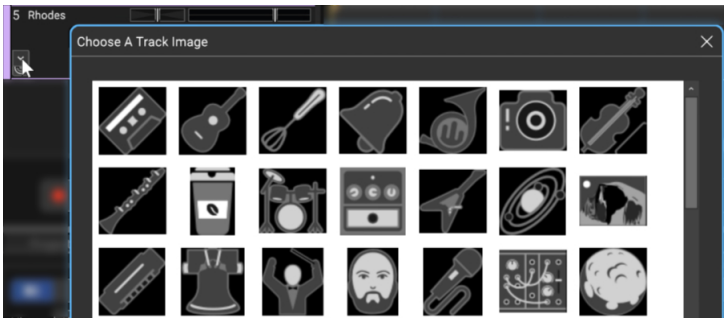
IMAGE

Each track can have its own icon beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose*

Image... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

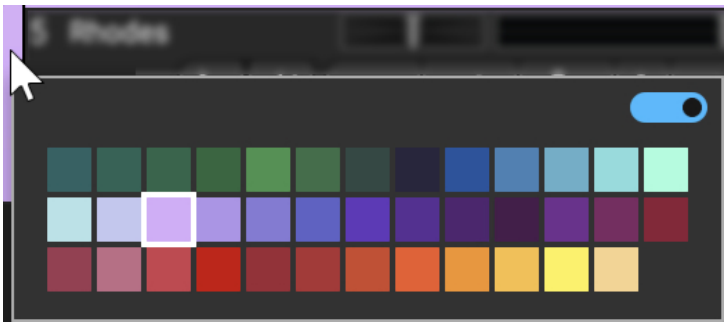
The *Choose A Track Image* window opens:



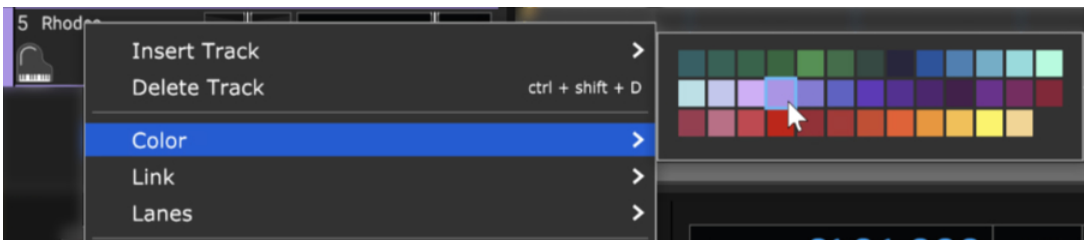
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

TRACK COLOR



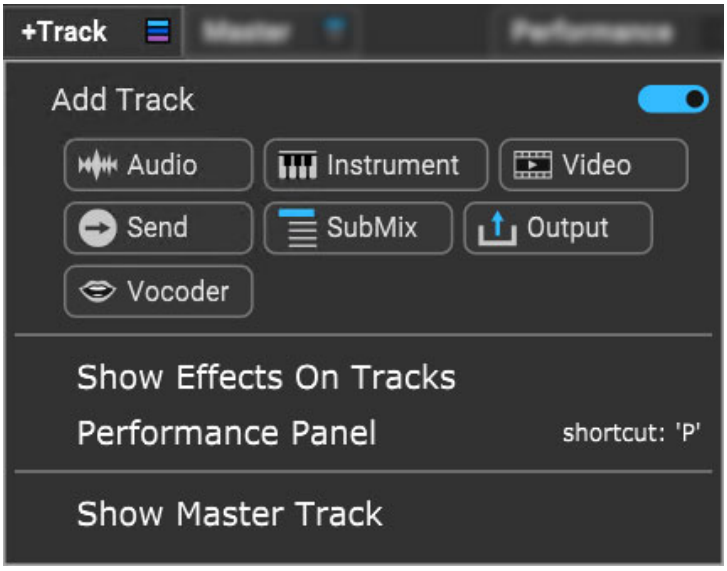
Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing *Color*, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.



ADDING A NEW TRACK

There are several ways to add tracks:

Click the *+Track* button at the top of the track list or click in an empty area of the track list (below existing tracks) to open the following menu:

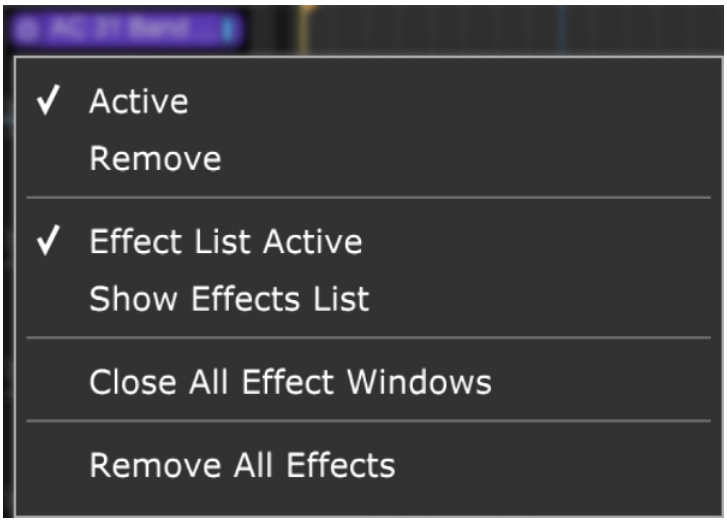


- **Menu Persist Switch**
  The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it. If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.
- **Add Track**
  Creates a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track beneath the bottom-most track.

- **Show Effects On Tracks**
  Displays current track insert effects to the right of the track controls. Effects can

easily be added by clicking the + sign.

Right-clicking the purple effect button opens the following submenu:



- **Purple Effect Button Submenu**
  - **Active**-Click to enable or disable the effect
  - **Remove**-Click to delete the effect.
  - **Effect List Is Active**- Click to enable or disable all insert effects for the track.
  - **Edit Effects List...**- Opens the Effects List window, allowing for more extensive effects-related editing. For more info, please the **Adding Effects** sub-section in **Using Effects**.
  - **Close All Effect Windows**- Hides the UI's of all currently open effects windows.
  - **Remove All Effects**- Deletes all current effects for the track.

- **Performance Panel**
  Hides or displays the clip Performance Panel to the right of the track list. For more information, check out the **Perfomance Panel** section.

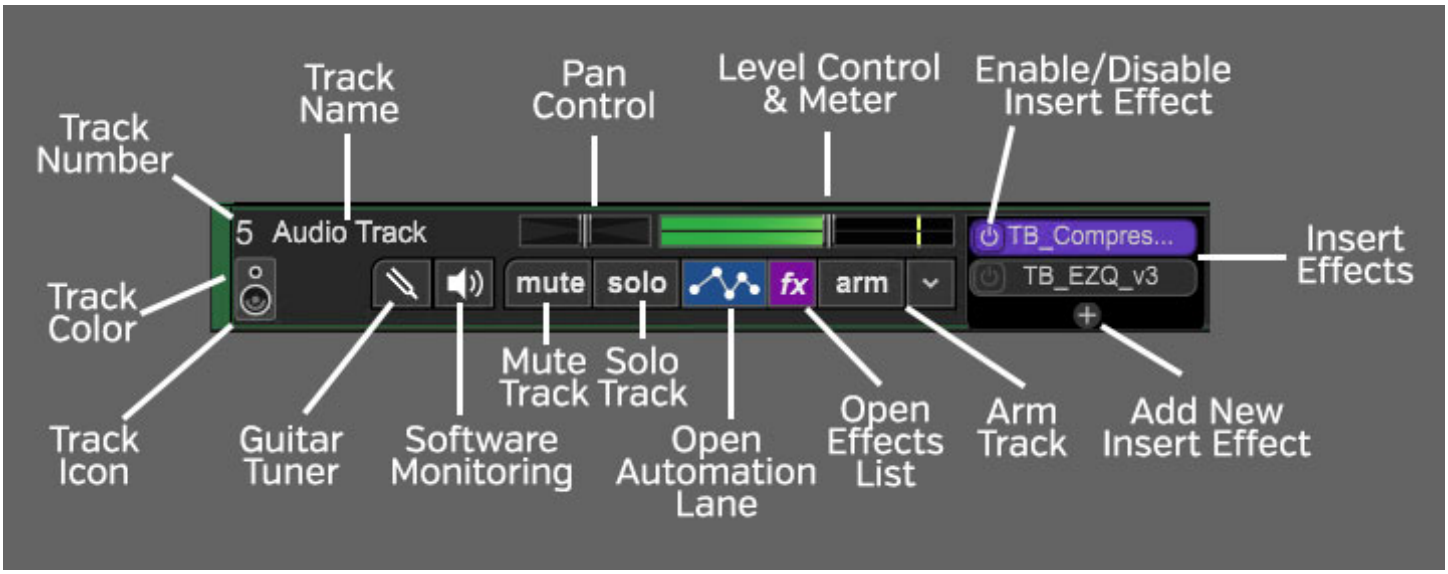
- **Show Master Track**
  Hides or displays the Master Track. For more information, please see the **Master Track** section below.

Tracks can also be added to the bottom of the track list by clicking *Track>Add Track* in the Main Window top menu, or inserted *above* the currently selected track by clicking *Track>Insert Track* in the Main Window top menu.

AUDIO TRACK

Audio tracks are used to record and play back audio. Audio clips can be recorded by the user or loaded from pre-existing libraries (such as Mixcraft's super-duper library of samples, loops, and sound effects). Head on over to the **Audio Clips** section for more information.

AUDIO TRACK HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. Default names are generally the type of track (*Audio*, *Video*, etc.), or in the case of Virtual Instrument tracks, the name of the virtual instrument. Tracks can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or thwacking the [RETURN] or [ENTER] key.

PAN

The track's pan control is the small horizontal slider to the left of the track volume control. Adjust the pan control by clicking and dragging it to the left or right. Pan is adjustable from 100% left to 100% right. The pan controls default to the center position - this means that the sound is equally balanced between the left and right channels. Track panning can also be set in the main window drop-down menu *Track>Properties>Set Pan>Set Exact Value* ... This menu is also accessible by right-clicking a track.

Tip: For finer and more accurate pan adjustment, hold down [ALT], [SHIFT], or [CTRL] while dragging the pan slider.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter. In standard playback mode, this displays the output level as the track plays. If the track is in record arm mode (*The arm* button will be red), the meter functions as an input level meter.

INSERT EFFECTS - ADD/ENABLE/DISABLE

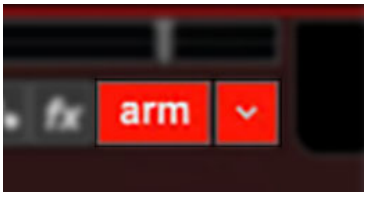
The track effects slots make it easy to load and access insert effects without opening the Effects List window - effects can be added by simple clicking the *+* sign and choosing an

effect. Effects can also be enabled and disabled by clicking the "power" switch on the left side of the button.

If you don't see the track effects slots, their visibility can be toggled by clicking *Track>Show Effects On Tracks*, right-clicking on the track header and choosing *Show Effects On Tracks*, or by hovering over the right edge of a track header - the mouse pointer will turn into double-horizontal arrows that can be dragged to the right.

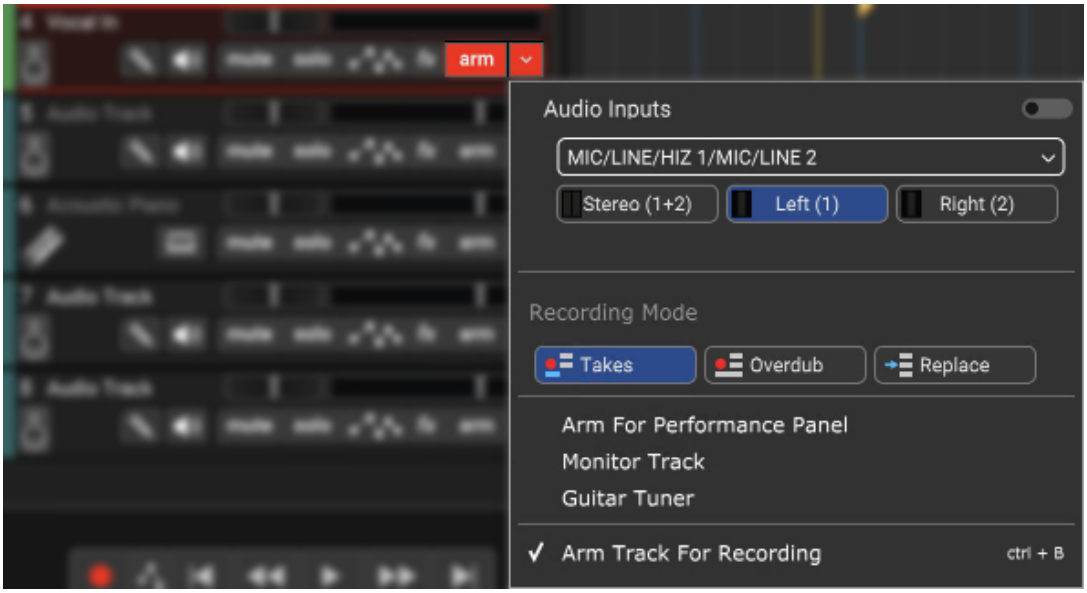
For more information about using effects, check out the cleverly named **Using Effects** section.

ARM BUTTON AND AUDIO INPUTS MENU (DOWNWARD ARROW)



Clicking the *Arm* button readies a track for recording. (the button turns bright red). If nothing else is armed, the currently selected track is automatically be armed for the duration of the recording. More than one track can be armed for simultaneously recording to multiple audio tracks.

Clicking the downward arrow to the right of the *Arm* button opens the Audio Inputs menu where record input parameters are specified:



- **Menu Persist Switch**
  The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.
  If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.
- **Audio Device Selection Popup Menu**
  Click in the top box in the Audio Inputs Menu to select the hardware audio device input for recording. You'll see a list of all available inputs from the connected audio device(s).

  • **Inputs Select**
  If you're recording a mono signal, click the sound device followed by *Left* or *Right* depending on where you've plugged into your device. If you're recording in stereo with left and right inputs, select *Stereo*. Pay close attention to this setting, because it's easy to unnecessarily record mono input sources (e.g., lead vocals, bass guitar, etc.) as a stereo file if you've set this incorrectly. It won't hurt anything, but you'll unnecessarily use twice as much hard drive space.
  After selecting the input, feed some audio to the input to verify that the correct input was chosen. You should see the meters moving onscreen in the recording track.
- **Recording Mode**
  The *Takes*, *Overdub*, and *Replace* buttons define how Mixcraft handles recorded audio, specifically, when audio clips already exist in the location you're recording to. Please see **Recording** Mode in the Recording Audio Tracks section for full information on how these work.
- **Monitor Track**
  Enables software monitoring. Software monitoring allows performers to hear incoming audio, mixed with existing project audio during recording. For full information, please see **Software Monitoring** in the Recording Audio Tracks section.
- **Guitar Tuner**
  Enables or disables the tracks's guitar tuner function (see Guitar Tuner section below).

- **Arm For Performance Panel**
  This readies Performance Panel slots for direct recording (instead of the main clip grid). For full information, please see the **Performance Panel** section.
- **Arm Track For Recording**
  Enables track arming (see *Arm Button* section above).

FX LIST

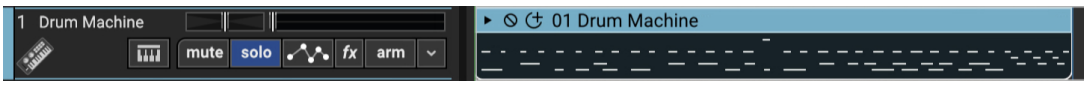
Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

OPEN AUTOMATION LANE (SQUIGGLY LINE ICON)

Opens a track automation lane for the track directly beneath the main track. This defaults to *Track Volume*. For full information on using track automation, see the **Automation and Controller Mapping** section.

SOLO

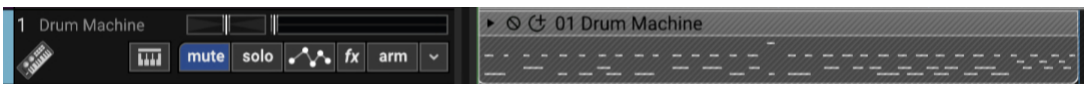
To hear a single track's audio, click the *Solo* button. Multiple tracks may be soloed. For example, to hear how the bass and guitar sound together without drums, solo the bass and guitar tracks. Once soloed, the track's solo button turns blue and all other tracks turn gray with diagonal lines. If multiple tracks are selected, all selected tracks are soloed simultaneously.



The currently selected track can also be soloed using the shortcut [CTRL]+L, or by right-clicking the track and selecting *Properties>Solo*.

If multiple tracks are soloed, [CTRL]-clicking a non-soloed track disables solo on all other tracks and soloes the clicked track. If multiple tracks are soloed and one of them is [CTRL]-clicked, solo is disabled for all tracks.

MUTE



Tracks can be temporarily silenced by clicking the track *Mute* button. The button turns blue, and all clips on the track turn gray with diagonal lines. Tracks may also be muted using the shortcut [CTRL]+M, or by right-clicking the track and selecting *Properties>Mute*. If multiple tracks are selected, all selected tracks are muted simultaneously.

If multiple tracks are muted, [CTRL]-clicking an unmuted track unmutes all others and mutes the clicked track (sort of a mute “solo” function). If multiple tracks are muted and one of them is [CTRL]-clicked, **all** are unmuted.

Mute and Solo Button [CTRL] + Click Shortcuts

If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

SOFTWARE MONITORING (SPEAKER ICON)

Enables software monitoring. Software monitoring allows performers to hear incoming audio, mixed with existing project audio during recording. For full information, please see **Software Monitoring** in the Recording Audio Tracks section.

GUITAR TUNER (TUNING FORK ICON)

Each audio track features a built-in tuner. Though we refer to it as a “guitar tuner,” it will work with any monophonic instrument signal (i.e., one-note-at-a-time). Those of you using drifty, old analog synthesizers should find it quite handy.

To toggle the tuner on or off, simply click the tuning fork icon. The tuning fork icon turns blue, and the track’s volume slider/level meter turns into a display for the tuner. When

the tuner detects an audio signal, it displays the closest note. When the signal is in tune, the “tuning cursor” appears in the middle and highlight in white.

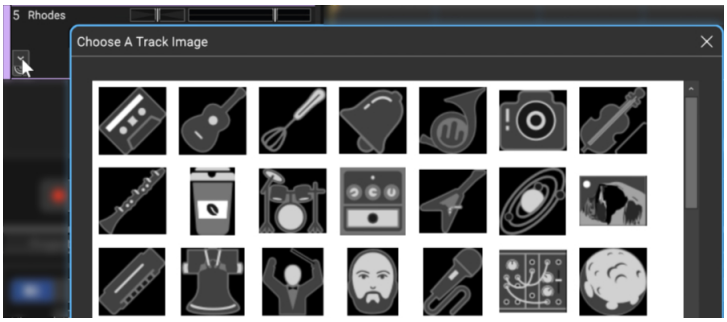
The tuner can also be turned on or off by right-clicking on the track and selecting *Guitar Tuner* or clicking the main window menu *Track>Guitar Tuner*.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:

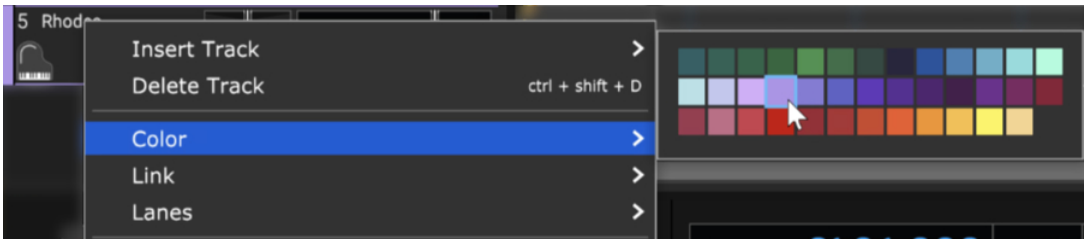


To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.



RECORDING AUDIO TRACKS

RECORD ARMING

Arming a track simply means you're preparing it for recording. You'll want to make sure the correct audio hardware input is selected and the recording level is optimally set, however Mixcraft will display the input level regardless of track arming status.

To arm a track, click its *Arm* button; the button will turn red letting you know that the magic is about to happen. You can also arm the current track with the key shortcut [CTRL]+B.

Note: If you're using Core Audio/Wave RT or Wave audio drivers, the track volume fader turns red as shown in the picture on the previous page. If you're using the ASIO audio driver, the track volume fader disappears. This is normal, and we'll explain why a little later.

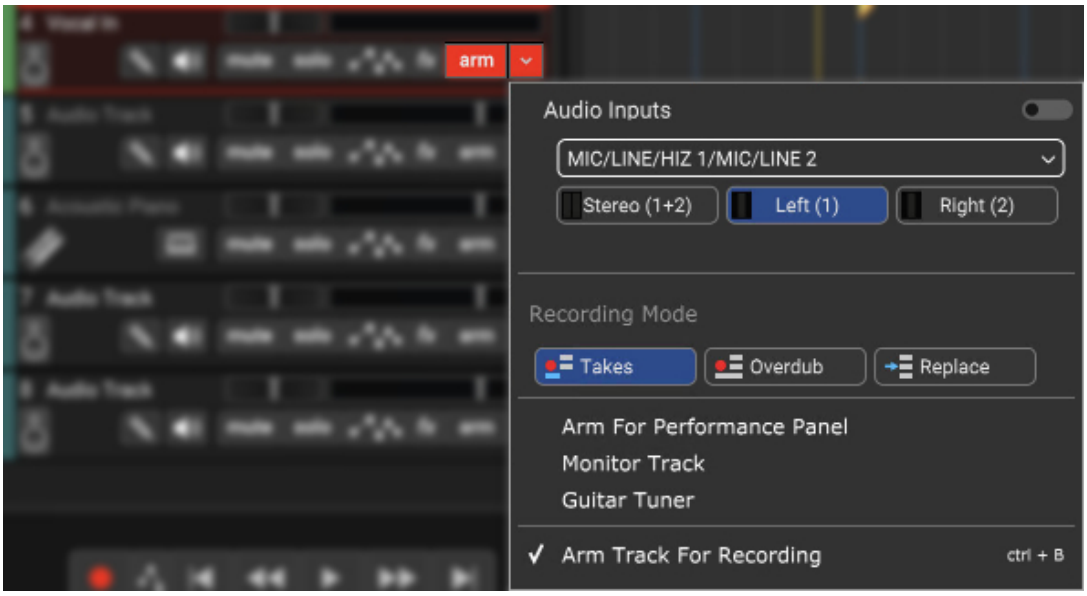
CHOOSING RECORDING INPUT

Mixcraft allows recording from multiple sound cards and different inputs simultaneously. Many audio interfaces allow the recording of multiple inputs simultaneously.

To select the hardware audio device input for recording, click the selector arrow on the right side of the *Arm* button. You'll see a list of all available inputs from your audio

device(s).

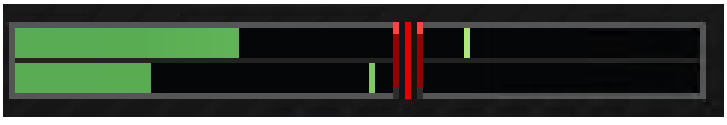
Select the device, followed by the input that you'd like to arm for recording.



If you're recording a mono signal, click the sound device followed by *Left* or *Right* depending on where you've plugged into your device. If you're recording in stereo with left and right inputs, select *Stereo*. Pay close attention to this setting, because it's easy to unnecessarily record mono input sources (e.g., lead vocals, bass guitar, etc.) as a stereo file if you've set this incorrectly. It won't hurt anything, but you'll unnecessarily use twice as much hard drive space.

After selecting the input, feed some audio to the input to verify that the correct input was chosen. You should see the meters moving onscreen in the recording track.

SETTING THE RECORD INPUT LEVEL



When using Core Audio/Wave RT or Wave audio drivers the volume slider turns into a red recording level adjuster when the track is armed. Move the slider to adjust the recording

input level. If peaks send the meter into the red, back off the level. Ideally, the input signal should nominally sit in the yellow area.

As mentioned above, unlike previous versions of Mixcraft, the meters will always display signal input level, regardless of whether the track is armed or not.

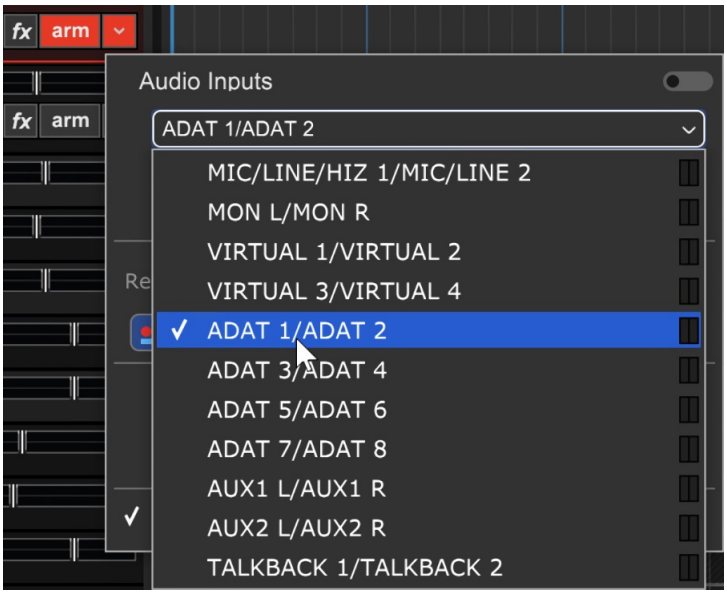
Important Note: If you're using an audio device with an ASIO driver (you can check in *File>Preferences>Sound Device*), the volume slider disappears when the track is armed for recording. This is because ASIO recording drivers do not support input level adjustment in software. To set the proper recording input level, you'll need to use either the input level on your audio hardware or if it doesn't have one, the output level control on an external preamp or channel strip. If you don't have any of these, stand further away from the microphone. (Kidding!)

RECORDING MULTIPLE TRACKS SIMULTANEOUSLY

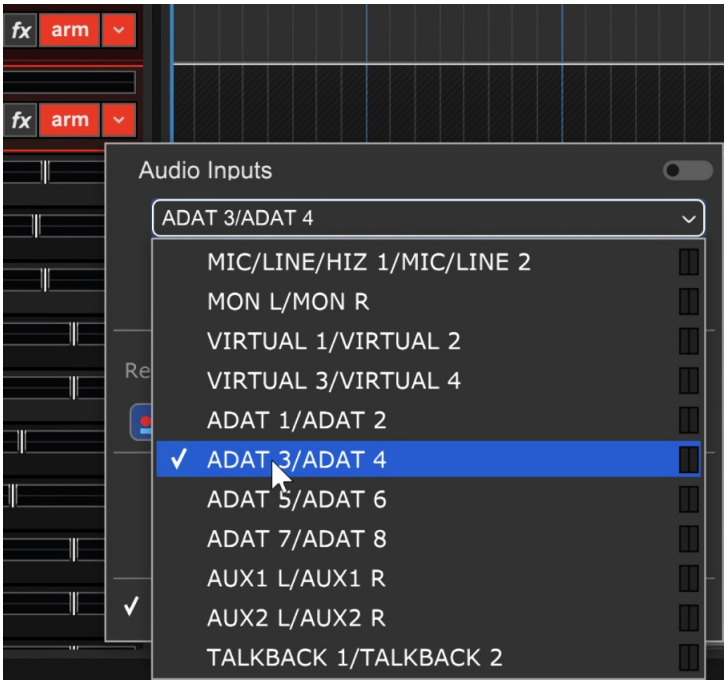
Multiple tracks can be armed simultaneously if your sound device supports it. In this way, you can record an entire band in real-time, with each input recording to a separate track, allowing far greater flexibility at mix time. Remember that you'll need to set the record inputs individually for each track.

In this example, we're using an audio interface and would like to record one mono track through the left channel input. To choose an input, click the *Arm* arrow for track 1 and choose *Left(1).* Next, select the input you would like to record from. In this case, ADAT1/ADAT2 is our input and because we selected *Left(1) ADAT1* is the mono input that will be recorded. If you wanted to record a stereo input, you would select Stereo(1+2).

On the second track, we'll record a second mono input. We click the *Arm* arrow on track 2, select *Right(4),* and *ADAT3/ADAT4.* The signal coming in on *ADAT4* of our interface will be recorded. If we wanted to record a stereo audio track, we could have selected *Stereo(3+4).*



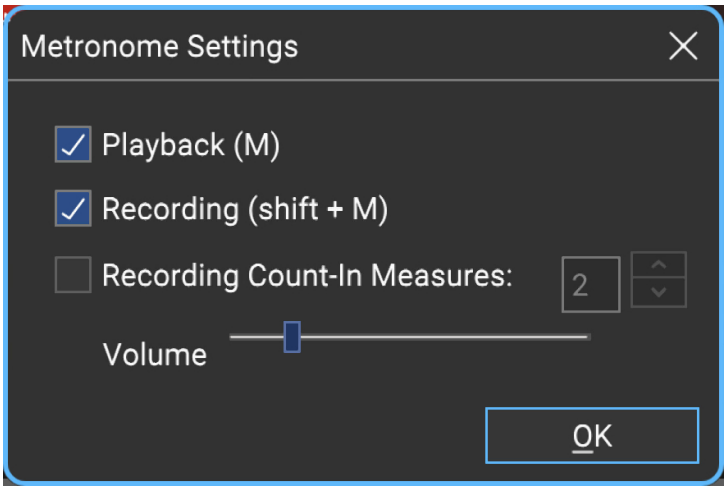
Both tracks are now armed for recording.



SETTING UP THE METRONOME

The metronome lets you play in time with the project's tempo during recording. To turn on the metronome, click the metronome button in the middle of the transport.

This opens the *Metronome Settings* dialog:



Check the *Recording box*. This makes the metronome clicks during recording. Checking the *Playback* box makes it click during playback, but we can leave this off for now. If it's not already checked, check the *Recording Count-In Measures* box.

SETTING TEMPO

The tempo is displayed in beats-per-minute in the transport bar. To adjust the tempo, hover the mouse and use the arrows either on the left to adjust in 1 BPM increments, or use the arrows on the right to adjust in 1/10th of BPM increments. To enter an exact tempo, click on the numbers and enter the desired tempo.

RECORD AN AUDIO CLIP

Once a track (or multiple tracks) is armed, you're ready to record clips.

1. Position the Caret for recording by clicking on the track.
2. Click the *Record* button on the transport control to start recording.
3. To stop recording, click the *Record* button again, or press the [Space Bar].

SOFTWARE MONITORING

"I need more me!," said every musician who ever lived, to every sound engineer who ever lived.

Some sound devices let you listen to the input recording in real-time, or very close to it, during recording. This is known as **software monitoring**. To enable software monitoring for a track, click the speaker icon. The speaker icon turns blue to indicate that software monitoring is enabled for the track.

We recommend using headphones in order to avoid feedback when recording with a microphone. Closed-ear headphones also help to prevent the click track from bleeding into mics during recording - there's nothing worse than the sound of "bleep-bleep-bleep" as the final chord of a difficult acoustic guitar performance fades.

One caveat when using software monitoring is that **audio hardware must be set to a low latency, otherwise, the monitored audio will have an audible delay**. For the lowest latency and best audio performance, use the ASIO audio driver, if available.

Check in *File>Preferences>Sound Device* to see if ASIO is available; you may need to download and install drivers from the manufacturer of your audio hardware. The downside to reducing buffer size is, depending on your sound card and computer speed, you may hear gaps or clicks in the audio. Learn more about setting up sound devices in "Important Sound Setup Information."

HEARING EFFECTS DURING RECORDING

If effects are added, they'll be audible when software monitoring is on. This is often desirable, e.g., adding reverb when tracking a vocalist, or when tracking electric guitar with Mixcraft's *Voxengo Boogex Amp Simulator*. **Though you'll hear the effects during recording, they will not be recorded into the track**. In other words, Mixcraft will record audio dry, with no effects. The exception to this is if you're using the Record Effect function in Mixcraft Pro Studio (more on this in the **Using Effects** section).

Saving Time With a Multi-Input Recording Template

A project with the correct inputs and armed tracks for multiple-input recording can be set up and saved as a project template. This is handy if you're recording an entire band - the next time you record the band, simply load the template and all inputs will be ready to go!

(Provided all instruments and inputs are plugged into the same input - keep notes!)

LANES

Lanes allow multiple tracks of audio (or MIDI) to occur on the same channel and are created automatically when looping is enabled in *Takes* or *Overdub* recording mode.

ADDING LANES

Empty lanes can be manually added by right-clicking in the Main Clip Grid and selecting *Lanes>Add* (or with the shortcut [ALT]+L). If multiple tracks are selected, extra lanes will be added to **all** selected tracks.

DELETING LANES

A track’s bottom-most lane can be deleted by right-clicking and selecting *Lanes>Delete*. To delete unused lanes, right-click and select *Lanes>Delete Empty Lanes* (or with the shortcut [ALT]+K).

MUTING LANES

All clips on any lane can be muted or unmuted by right-clicking on an empty part of a lane and clicking *Lanes>Mute All* or *Lanes>Unmute All*.

DENNY LAINE

Not only was Denny Laine the unsung rhythm guitarist and bassist in Wings in the 70s, he was also a member of The Moody Blues in the 60s, and sang their hit "Go Now," before they got all cosmic and groovy. It's funny that a guy named Denny Laine was in a band with the guy who sang "Penny Lane." Very strange...

RECORDING MODE

There are three recording modes:

- Takes
- Overdub
- Replace

To choose a recording mode, click the down arrow next to the track *Arm* button and select the appropriate *Recording Mode*:

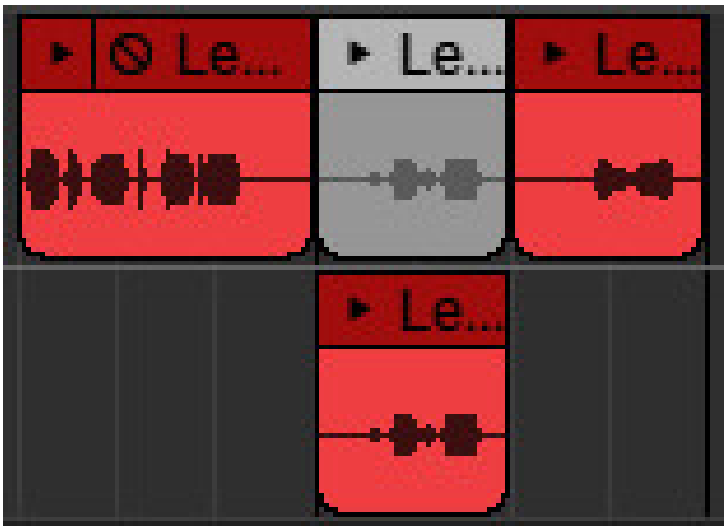
Recording Mode can also be selected by right-clicking in the track header or by clicking *Track>Recording Mode* in the Main Window menus. ***Recording Mode*****can be set independently for each track in a project.**

The default *Recording Mode* for audio and MIDI can be independently set in *Preferences > Recording* in the Main Window menus.

- **Takes**

Takes mode is very useful for laying down multiple performances without starting and stopping each time. It's generally used in conjunction with Loop Mode wherein a section is looped and each cycle records a new "take" (see *Loop Recording* below). Mixcraft automatically creates recording Lanes to accommodate each pass.

As new takes are recorded, the clips of previous recording passes are automatically muted. Audio tracks default to Takes mode. The resulting Clips on Lanes can be freely moved to their own audio tracks.



When Takes mode is used in conjunction with a punch in/out, it creates a clip on a new lane in the punch area but only mutes the portion of the audio clips in the punch area.

- **Overdub**

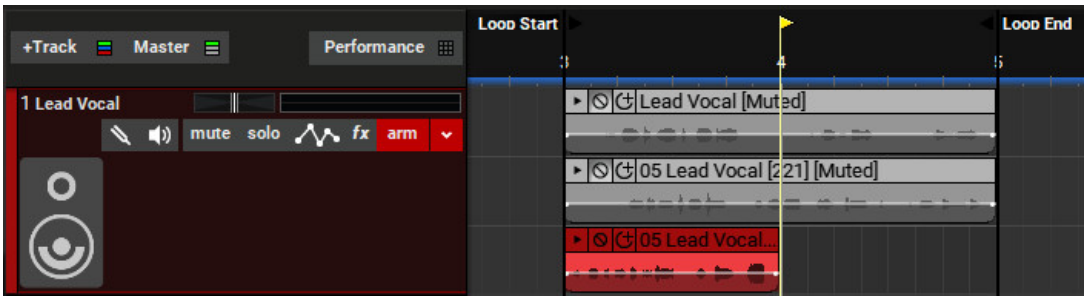
In this mode, all previous clips are heard during recording. This works well for quickly stacking parts. Each new recording is placed on a new lane.

- **Replace**

In this mode, existing audio is replaced by new recordings. New lanes are not created.

- **Loop Recording**

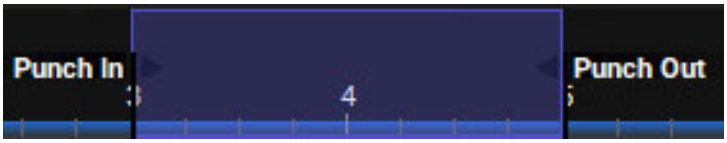
Loop recording allows the recording of multiple takes or overdubs without stopping the transport.



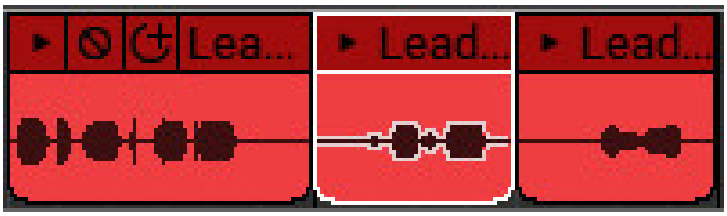
To create a loop, click the *Loop* mode button in the Transport, then drag the *Loop Start* and *Loop End* markers in the Timeline to set a loop area. Loop regions can also be set by drawing a purple region in the Timeline or an empty area of the clip grid, then double-clicking the Loop button. Be aware of the *Snap* setting when setting Loop points- it's usually a good idea to set it to *Snap to the Grid*.

- **Punch In/Out**

Punch In/Out recording lets you place markers that define where to start and end recording. To mark a region for punch in/out recording, click the *Punch In/Out* button. The punch region can be set by grabbing the *Punch In* and *Punch Out* handles in the Timeline and moving them. A faster way to set the punch area is by dragging a purple highlight region in the Timeline or an empty area of the Clip Grid and double-clicking the *Punch In/Out* button.



After setting up a punch area, press record, and the new recording will be created within the punch start and end region.


Lea...
Lead...
Lead...

TRACK RIGHT-CLICK COMMANDS - AUDIO TRACK

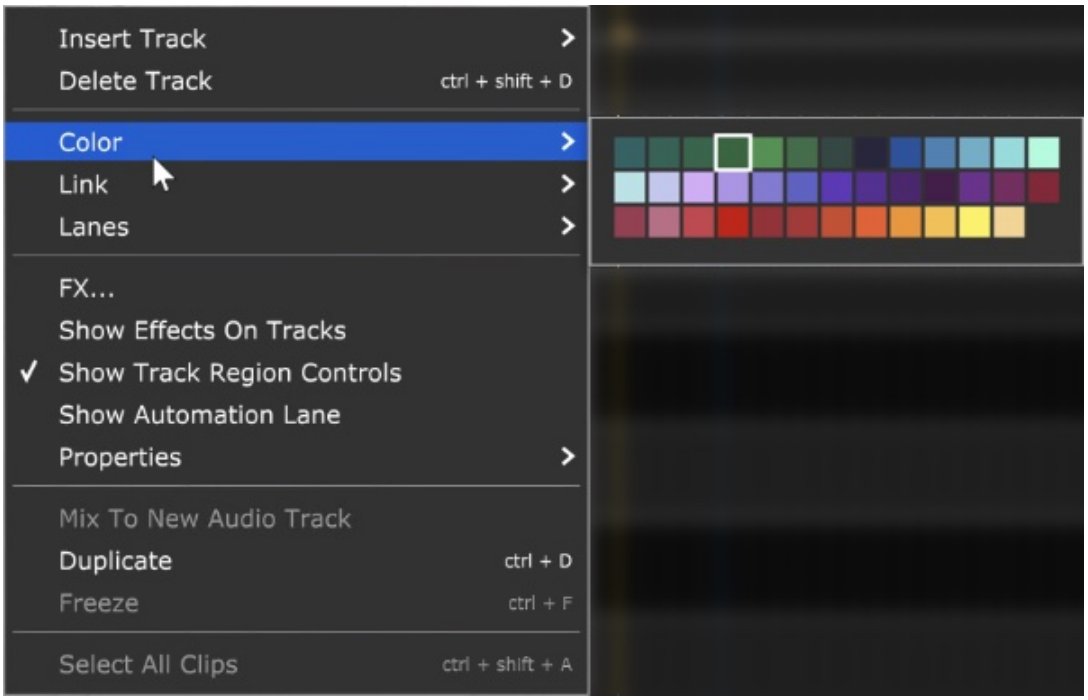
- **Insert Track**

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

- **Delete Track**

Removes the current track.

- **Color**



Changes the color of the track.

- **Link**

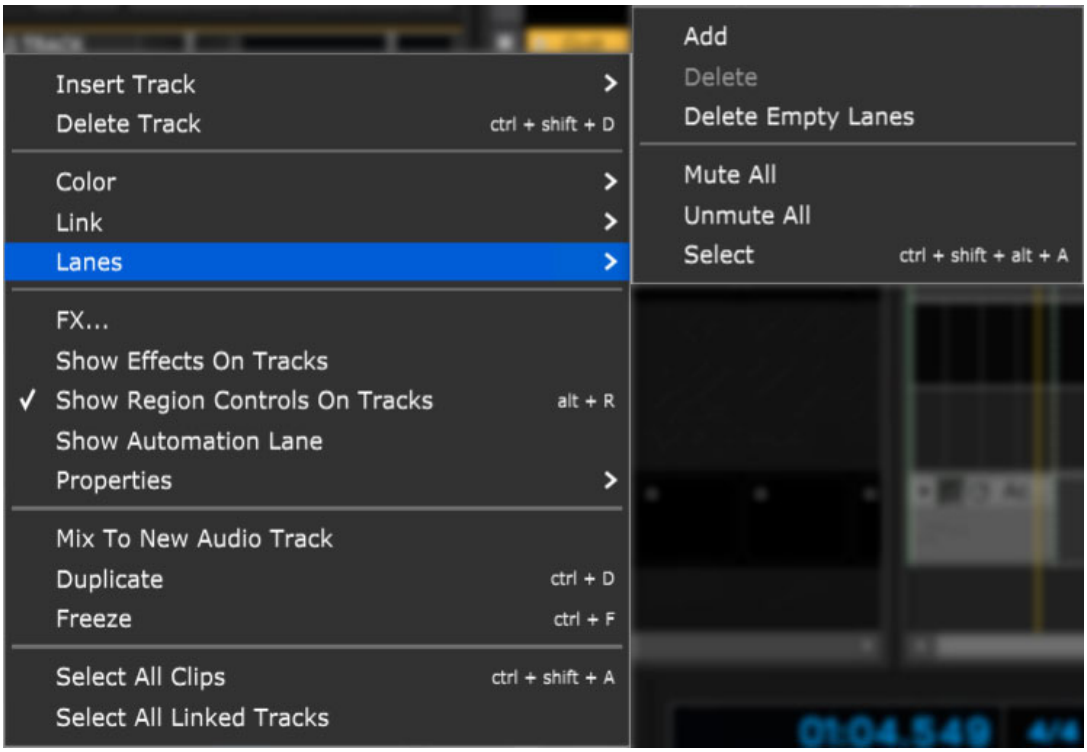
Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It's particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored "chain" icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• Lanes



Lanes allow multiple tracks of audio (or MIDI) to occur on the same channel. The *Lanes* right-click commands enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All*,*Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

• **FX...**

Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

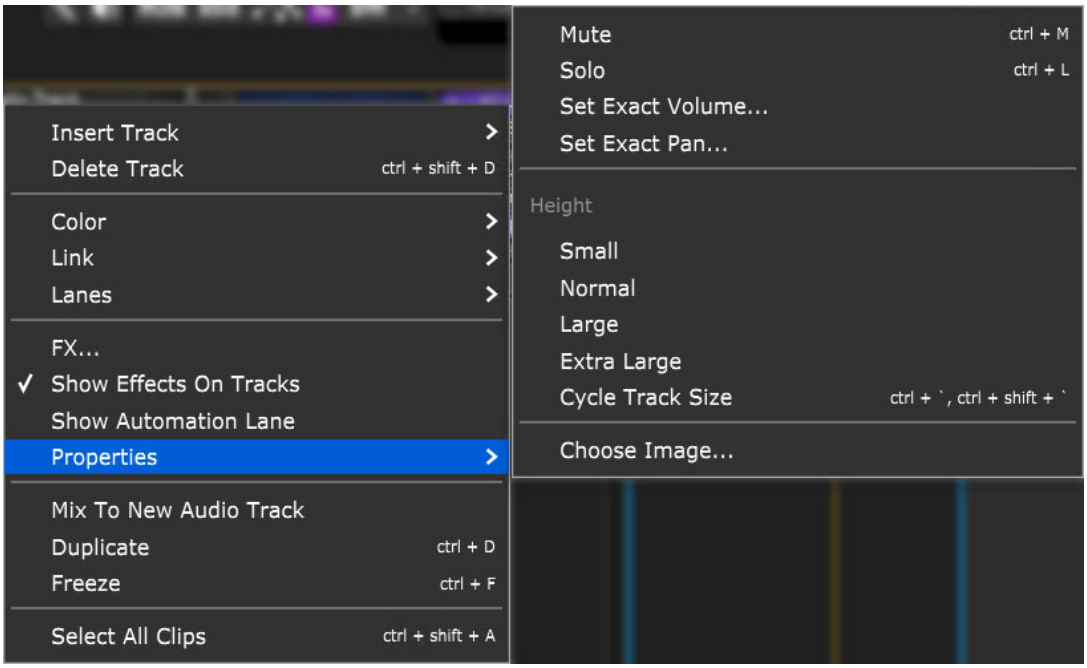
• **Show Effects On Tracks**

Globally shows or hides insert effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

• **Show Automation Lane**

Shows or hides track automation.

• **Properties**



- **Mute**
  Tracks can be temporarily silenced by selecting *Mute*. The *Mute* button turns blue, and all clips on the track turn gray with diagonal lines.
- **Solo**
  Disables audio for all other tracks. The track *Solo* button will turn blue. Multiple tracks may be soloed simultaneously.
- **Set Exact Volume...**
  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Set Exact Pan...**
  Opens a window where the panning can be set precisely, either by slider control or by entering a numeric value.
- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:

To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

• **Mix To New Audio Track**

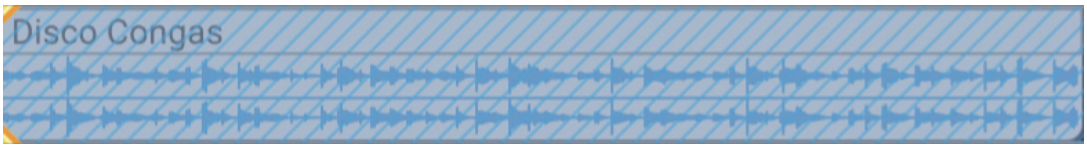
Mixes virtual instrument or audio clips on the selected track to a single, continuous audio clip and places it on a newly created track beneath the current track. This has a couple of practical uses:

- **Permanently Embed Insert Effects Or Instruments In An Audio File Again-** This is useful if you're handing off a project to another user who doesn't have effects plug-ins you've used.
- **Long-Term Archiving** - Instrument or effects plug-ins can become obsolete or incompatible with current operating systems/format changes, etc. Converting to "pure" audio files can act as insurance to guarantee projects remain playable for years to come.

• **Duplicate-** Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-in setup, etc. Also useful if you'd like to try some wild edits and want to retain an unadulterated version.

• **Freeze**- Freeze is similar to *Mix To New Audio Track*; it creates a new audio file with instruments or effects "burned in" to the file. Unlike *Mix To New Audio Track*, it does not make a new track; the audio is created in the background and plays back on the existing track. Because instruments and effects are part of the newly created audio file, Mixcraft disables instrument and effects plugs upon playback, thus freeing up computer

processor resources. If you’re using an older or underpowered computer, *Freeze* can be tremendously helpful (check out the CPU percentage meter while playing back projects for reference). Conversely, if you’re using a fast, modern computer, you probably won’t need *Freeze*.



Frozen tracks turn blue with diagonal lines; this makes it easy to keep track of which tracks are frozen. Frozen tracks can be unfrozen, that is, converted back to standard tracks with instrument and plug-ins active, by reselecting the *Freeze* command (which will say *Unfreeze*).

• **Select All Clips-** This selects all clips on the track, with one minor detail you should know about if you're using the Performance Panel: *Select All Clips* selects all of a track's clips in either the main clip grid or in the Performance Panel, depending on which was clicked most recently.

• **Select All Linked Tracks-** If *Link* to other tracks is currently enabled for the track, this selects the current track and all other tracks currently linked.

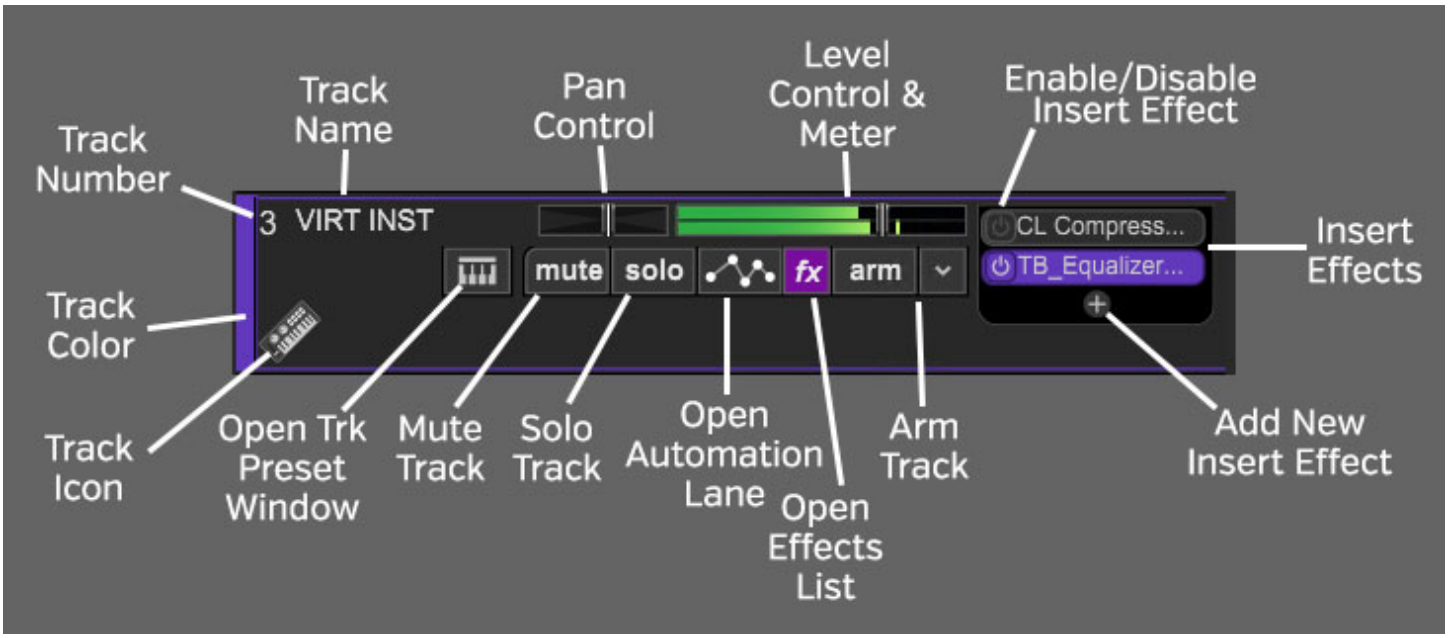
VIRTUAL INSTRUMENT/MIDI TRACK

Virtual instruments are used to play VSTi virtual instruments. These are like having a keyboard instrument within Mixcraft. They can be played and recorded using a USB or MIDI keyboard controller (or your computer's QWERTY keyboard; see **Musical Typing Keyboard (MTK)**). Mixcraft includes numerous virtual instruments, or you can expand your palette by installing third-party VSTi instruments. Virtual Instrument tracks are easily distinguished from other types of tracks by the keyboard icon next to the Mute button.

Virtual Instrument Tracks are also used to play external MIDI instruments (even though they're *not* technically virtual instruments, because they exist in three-dimensional reality... deep).

To load and play virtual instruments, check out the **Using Virtual Instruments** section, or for the quick 'n' dirty lowdown, **Recording a MIDI Track** in the **Quick Start** section.

VIRTUAL INSTRUMENT HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. The default name will be the name of the virtual instrument. Tracks can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or thwacking the [RETURN] or [ENTER] key.

PAN

The track's pan control is the small horizontal slider to the left of the track volume control. Adjust the pan control by clicking and dragging it to the left or right. Pan is adjustable from 100% left to 100% right. The pan controls default to the center position - this means that the sound is equally balanced between the left and right channels. Track panning can also be set in the main window drop-down menu *Track>Properties>Set Pan>Set Exact Value* ... This menu is also accessible by right-clicking a track.

Tip: For finer and more accurate pan adjustment, hold down [ALT], [SHIFT], or [CTRL] while dragging the pan slider.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter. In standard playback mode, this displays the output level as the track plays. If the track is in record arm mode (*The arm* button will be red), the meter functions as an input level meter.

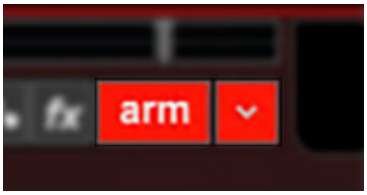
INSERT EFFECTS - ADD/ENABLE/DISABLE

The track effects slots make it easy to load and access insert effects without opening the Effects List window - effects can be added by simple clicking the *+* sign and choosing an effect. Effects can also be enabled and disabled by clicking the "power" switch on the left side of the button.

If you don't see the track effects slots, their visibility can be toggled by clicking *Track>Show Effects On Tracks*, right-clicking on the track header and choosing *Show Effects On Tracks*, or by hovering over the right edge of a track header - the mouse pointer will turn into double-horizontal arrows that can be dragged to the right.

For more information about using effects, check out the cleverly named **Using Effects** section.

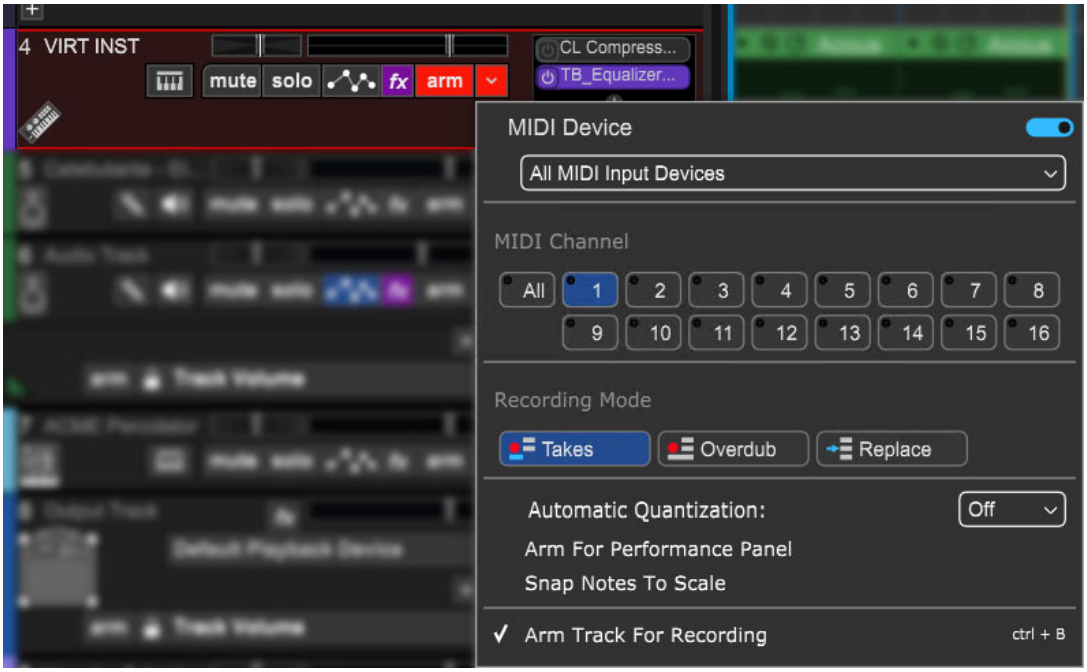
ARM BUTTON AND AUDIO INPUTS MENU (DOWNWARD ARROW)



Clicking the *Arm* button readies the MIDI track for recording. (the button turns bright red). If nothing else is armed, the currently selected track is automatically be armed for

the duration of the recording. More than one track can be armed for simultaneously recording to multiple MIDI tracks.

Clicking the downward arrow to the right of the *Arm* button opens the virtual instrument input menu where recording parameters are specified:



- **Menu Persist Switch**
  The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it. If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.
- **MIDI Input Device Selection Popup Menu**
  Click in the top box select the input device input for recording. "Input device" is generally a MIDI/USB keyboard, but could also be a drum pad controller, MIDI guitar, or maybe one those "EWI" MIDI wind controller doodads that were all the rage in the 80s.
- **MIDI Channel**
  These buttons select which MIDI channel Mixcraft will record from. In most situations, leaving this set to *All* is the best choice, because you won't need be concerned about what MIDI channel your controller device is sending. Setting to specific MIDI channels is typically used if you're recording from a multi-keyboard instrument (think

Hammond B-3 type controller with two manuals and a pedalboard), or if you're simultaneously recording multiple instrumentalists.

- **Recording Mode**
  The *Takes*, *Overdub*, and *Replace* buttons define how Mixcraft handles recorded audio, specifically, when audio clips already exist in the location you're recording to. Please see **Recording Mode** in the Recording MIDI Tracks section for full information on how these work.
- **Arm For Performance Panel**
  This readies Performance Panel slots for direct recording (instead of the main clip grid). For full information, please see the **Performance Panel** section.
- **Automatic Quantization**
  Selecting a note value in this popup menu automatically quantizes notes "on the way in."
- **Snap Notes To Scale**
  Similar to *Automatic Quantization* above, enabling this snaps incoming notes to the key signature and scale set in the transport area at the bottom center of the screen.
- **Arm Track For Recording**
  Enables track arming (see *Arm Button* section above).

FX LIST

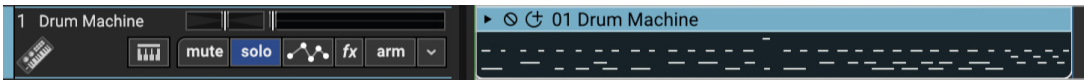
Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

OPEN AUTOMATION LANE (SQUIGGLY LINE ICON)

Opens a track automation lane for the track directly beneath the main track. This defaults to *Track Volume*. For full information on using track automation, see the **Automation and Controller Mapping** section.

SOLO

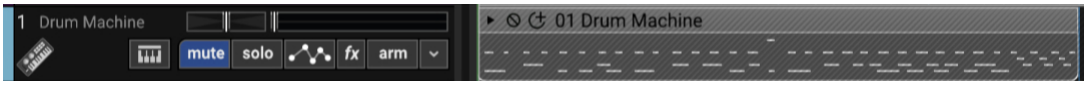
To hear a single track’s audio, click the *Solo* button. Multiple tracks may be soloed. For example, to hear how the bass and guitar sound together without drums, solo the bass and guitar tracks. Once soloed, the track’s solo button turns blue and all other tracks turn gray with diagonal lines. If multiple tracks are selected, all selected tracks are soloed simultaneously.



The currently selected track can also be soloed using the shortcut [CTRL]+L, or by right-clicking the track and selecting *Properties>Solo*.

If multiple tracks are soloed, [CTRL]-clicking a non-soloed track disables solo on all other tracks and soloes the clicked track. If multiple tracks are soloed and one of them is [CTRL]-clicked, solo is disabled for all tracks.

MUTE



Tracks can be temporarily silenced by clicking the track *Mute* button. Once muted, the solo button turns blue, and all clips on the track turn gray with diagonal lines. Tracks may also be muted using the shortcut [CTRL]+M, or by right-clicking the track and selecting *Properties>Mute*. If multiple tracks are selected, all selected tracks are muted simultaneously.

If multiple tracks are muted, [CTRL]-clicking an unmuted track unmutes all others and mutes the clicked track (sort of a mute “solo” function). If multiple tracks are muted and one of them is [CTRL]-clicked, **all** are unmuted.

Mute and Solo Button [CTRL] + Click Shortcuts

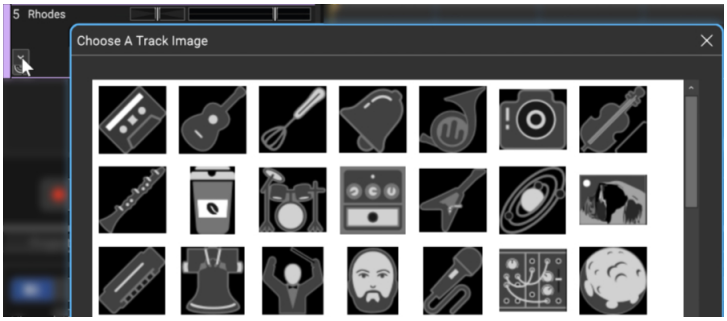
If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:

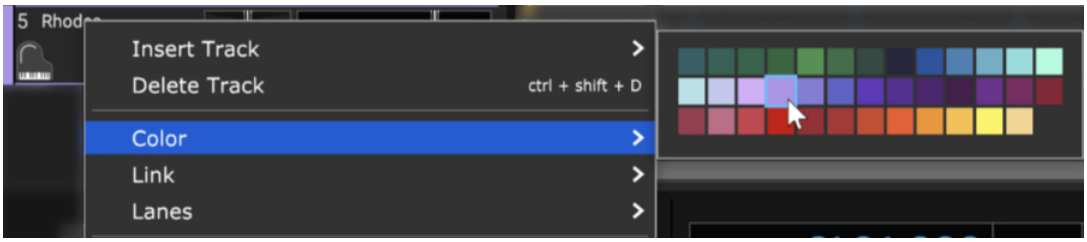


To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.


Insert Track
Delete Track
ctrl + shift + D
Color
Link
Lanes

RECORDING MIDI TRACKS

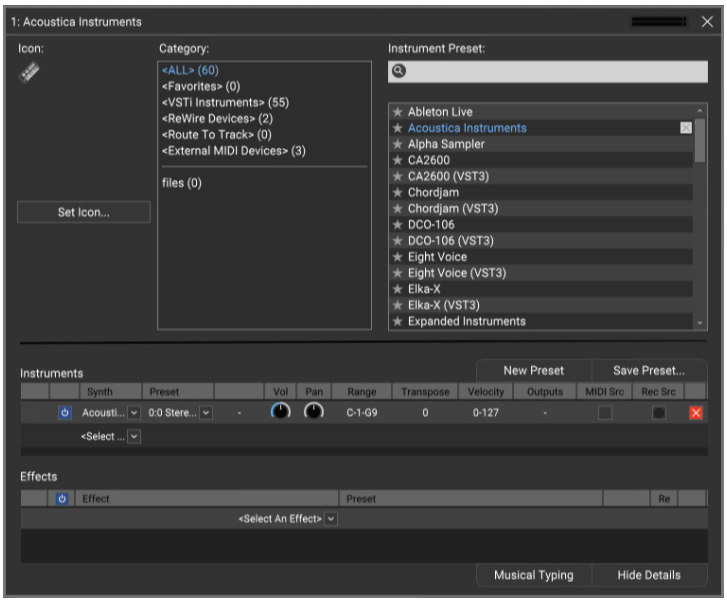
Unlike an audio clip, which contains an actual recording of digitized sound data, a MIDI Clip contains MIDI notes. Think of MIDI clips as a sort of computerized player piano ... a MIDI clip contains digital on/off messages saying, “hey computer instrument, play these notes at this time please.” It can also contain fairly detailed information about *how* to play said notes: loud or quiet, dark or bright, or perhaps with or without vibrato.

There are a number of ways to create MIDI clips, but the most common way is to plug in a USB MIDI controller keyboard, press the *Record* button, and tickle the ivories (plastics?). If you have a USB MIDI controller, plug it into an available USB port on your computer. If you don’t have a USB keyboard controller, you can input notes directly from the computer keyboard using Mixcraft’s *Musical Typing Keyboard*. For more info, see **Musical Typing Keyboard (MTK)**.

SETTING UP A VIRTUAL INSTRUMENT FOR PLAYING AND RECORDING

A Virtual Instrument is like having keyboard instrument that lives inside the computer. Mixcraft includes a bunch of them, so let’s open one.

First, create a new virtual instrument track. Click the *+Track* button at the top left, and select *Insert Virtual Instrument Track*. Now click the track’s piano keyboard icon. This opens a dialog box where instruments can be selected:

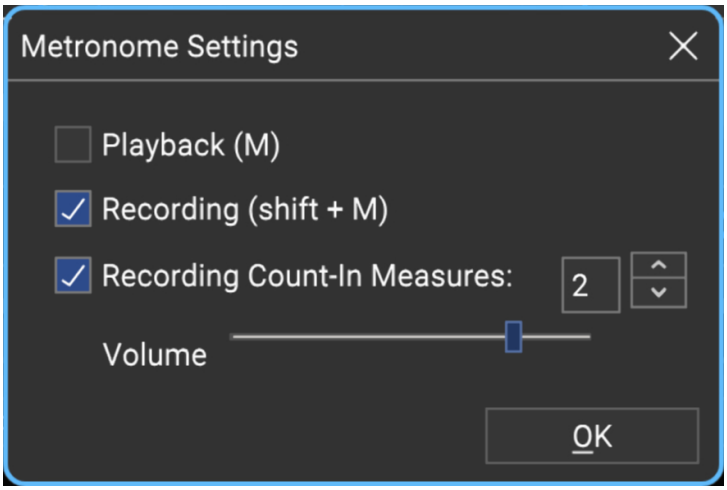


The list on the left side displays categories for quick access to various sound types. If you've already installed third-party instruments, click the <*VSTi*> category and they'll show in the column on the right. Hardware MIDI instruments can be used by selecting *External MIDI Devices* (like that DX21 that's been collecting dust in your uncle's closet next to his MC Hammer pants). Otherwise, choose a sound/instrument from the right-hand column. When you've made your selection, click the X in the upper-right corner.

SETTING UP THE METRONOME

The metronome lets you play in time with the project's tempo during recording. To turn on the metronome, click the metronome button in the middle of the transport:

This opens the *Metronome Settings* dialog:



Check the *Recording box*. This makes the metronome click during recording. Checking the *Playback* box makes it click during playback, but we can leave this off for now. If it isn't already checked, check the *Recording Count-In Measures* box.

SETTING TEMPO

The tempo is displayed in beats-per-minute in the transport bar. To adjust the tempo, hover the mouse and use the arrows either on the left to adjust in 1 BPM increments, or use the arrows on the right to adjust in 1/10th of BPM increments. To enter an exact tempo, click on the numbers and enter the desired tempo.

If you're recording MIDI, you can set the tempo to a slow rate during recording to simplify playing and then speed it up later (and tell everyone you're a virtuoso keyboardist).

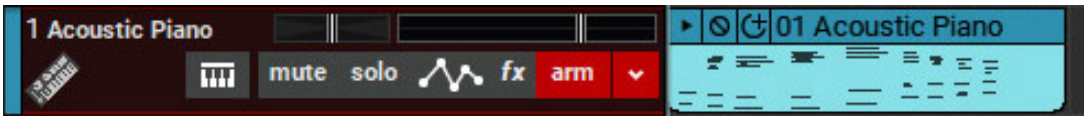
LET'S RECORD!

Upon pressing the *Record* button, a countdown occurs before the recording begins. The number selector lets you choose the length of the countdown. Unless your computer and MIDI keyboard are really far away from each other, choosing 1 or 2 bars should give you plenty of time to get those fingers poised. Hit *OK* when you're done. Once you've configured when the metronome plays, you can quickly toggle the metronome on and off by pressing the *M* key on the computer keyboard.

We're almost there! Let Mixcraft know where to begin recording by positioning the Caret in the grid. This can be done by either clicking on the timeline at the top of the main window or by clicking anywhere in the Main Grid. We recommend positioning the Caret exactly on a number (e.g., 1, 2, 3).

To simplify positioning the Caret, make sure *Snap To Grid* is selected in the *Snap* menu at the top of the screen.

Make sure the track is armed for recording - if it's not red, click on it. Now click the red *Record* button in the transport (that's the one with the red dot), wait four clicks for recording to begin, and lay down some rock. When you're done, click the *Record* button again to stop (you'll notice the red circle turns into a square while recording), or just hit your computer's space bar. You should see something like this:



To create more MIDI tracks, select empty tracks in the Track List on the left of the screen and add more instruments as described above.

CHOOSING THE MIDI RECORD INPUT

By default, Mixcraft listens to all MIDI channels for each track, letting you record multiple tracks of virtual instruments at the same time.

Clicking the down arrow next to the *Arm* button lets you specify the MIDI input and MIDI channel the track listens to. For example, if you have two keyboards and want to record

each keyboard on a different track:

1. Set keyboard one to send on MIDI channel 1 and keyboard two to send on MIDI channel 2.

2. Click the *Arm* button on track 1 and select *All Input Devices to Receive From MIDI channel 1*.

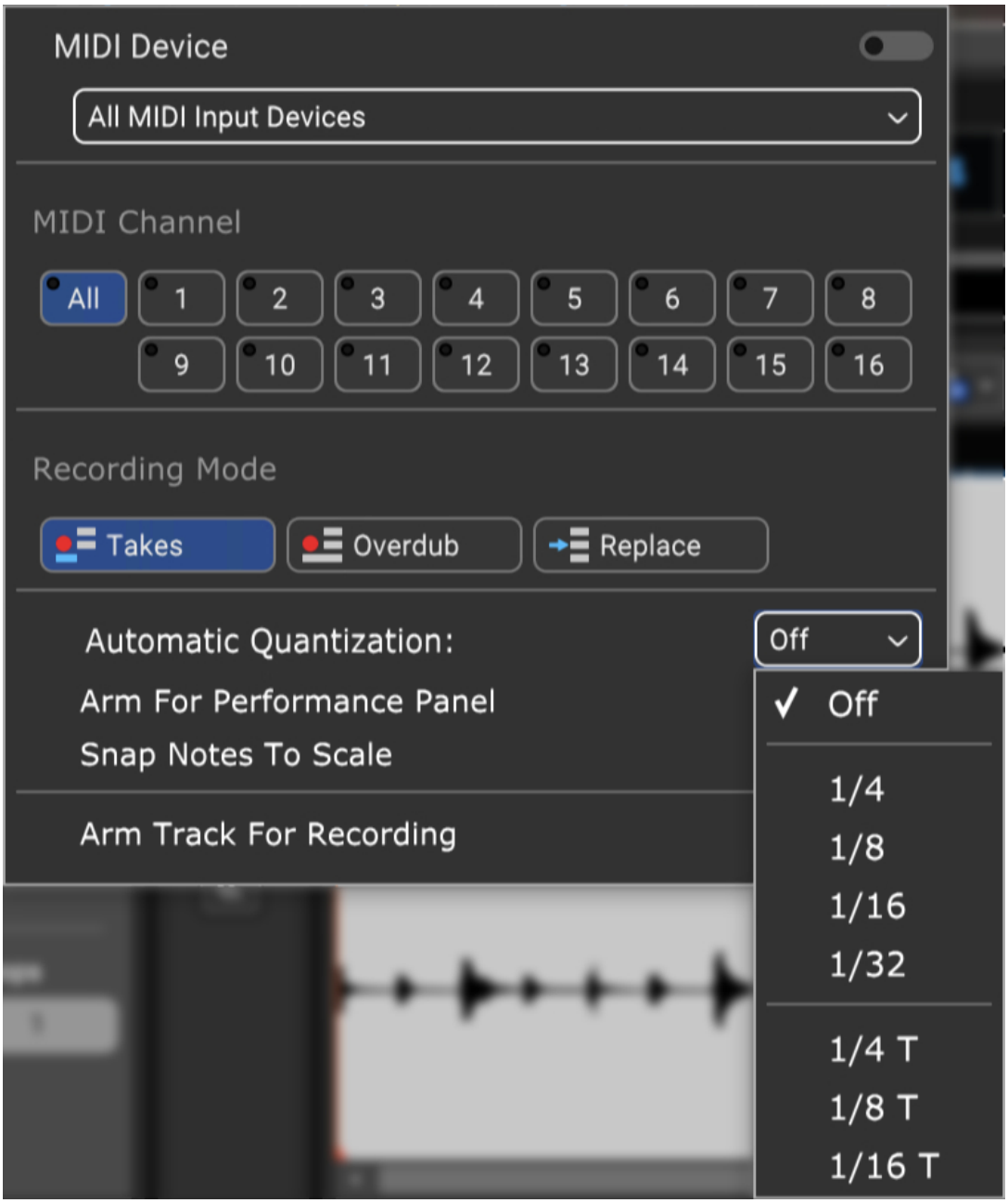
3. Click the Arm button on track 2 and select *All Input Devices to Receive From MIDI channel 2*.

Alternatively, you could split one MIDI keyboard into two sections, sending the first section or range of notes to MIDI channel 1 and the second range of notes to MIDI channel 2. This would allow one keyboard to behave like two separate ones. (You may need to check the keyboard's owner's manual to see if it's capable of sending separately channelized MIDI zones.)

RECORDING MULTIPLE TRACKS SIMULTANEOUSLY

Multiple virtual instrument MIDI tracks can be recorded simultaneously. Simply click the arm button for each track to be recorded. To record from multiple sources or MIDI channels, click the down arrow beside the *Arm* button, then choose the MIDI input device and/or the MIDI channel you'd like the track to record from.

AUTOMATIC QUANTIZATION



Quantization automatically “rounds off” the locations of MIDI notes on the grid in order to clean up minor timing mistakes in performances (or major ones). Quantization is typically done *after* recording a MIDI performance, but Mixcraft also lets you quantize “on the way in” during recording by clicking the *Arm* button down arrow and selecting a value from the *Automatic Quantization* dropdown menu, followed by a note value. Setting to *1/16 notes* is usually a good place to start in most instances.

The word *Arm* turns yellow when *Automatic Quantization* is engaged.

If you'd rather quantize after recording, right-click a MIDI clip and choose *MIDI Editing>Quantize...* following recording.

LANES

Lanes allow multiple tracks of audio (or MIDI) to occur on the same channel. New lanes are created automatically when looping is enabled in *Takes* or *Overdub* recording mode.

ADDING LANES

Empty lanes can be manually added by right-clicking in the Main Clip Grid and selecting *Lanes>Add* (or with the shortcut [ALT]+L). If multiple tracks are selected, extra lanes will be added to all selected tracks.

DELETING LANES

A track's bottom-most lane can be deleted by right-clicking and selecting *Lanes > Delete*. To delete unused lanes, right-click and select *Lanes>Delete Empty Lanes* (or with the shortcut [ALT]+K).

MUTING LANES

All clips on any lane can be muted or unmuted by right-clicking on an empty part of a lane and clicking *Lanes>Mute All* or *Lanes > Unmute All*.

LANE MIDI CHANNEL ASSIGNMENT

Separate MIDI channels can be assigned to individual lanes when using Virtual Instruments. This is particularly useful with multi-timbral instruments. To assign MIDI channels, right-click an empty part of a lane, and select *Lanes > MIDI Channel*, followed by the desired MIDI channel for the lane.

RECORDING MODE

There are three recording modes:

- Takes
- Overdub
- Replace

To choose a recording mode, click the down arrow next to the track *Arm* button and select *Recording Mode*:

Recording Mode can also be selected by right-clicking in the track header or by clicking Track>Recording Mode in the Main Window menus. Recording Mode **can be set independently for each track in a project.**

The default *Recording Mode* for audio and MIDI can be independently set in

Preferences>Recording in the Main Window menus.

- **Takes**

Takes mode is useful for laying down multiple performances without starting

and stopping each time. It's generally used in conjunction with Loop Mode, wherein a section is looped and each cycle records a new "take" (see *Loop Recording* below). Mixcraft automatically creates recording Lanes to accommodate each pass.

As new takes are recorded, the clips of previous recording passes are automatically muted. Take clips can freely be moved to their own instrument tracks.

When Takes mode is used in conjunction with a punch in/out, it creates a clip on a new lane in the punch area but only mutes the portion of the audio clips in the punch area.

- **Overdub**

In this mode, all previous clips are heard during recording. Virtual Instrument (MIDI) tracks default to Overdub mode. This works well for quickly stacking parts. Each new recording is placed on a new lane. Overdub mode is the default *Recording Mode* for MIDI tracks.

- **Replace**

Replace mode functions exactly the same as Takes mode when recording MIDI tracks. (It operates this way because actually replacing MIDI recording regions would have made it very easy to accidentally erase prior performances, and we don’t want to accidentally erase your work!)

- **Loop Recording**

Loop recording allows the recording of multiple takes or overdubs without stopping the transport.

To create a loop, click the *Loops* mode button in the Transport, then drag the *Loop Start* and *Loop End* markers in the Timeline to set a loop area.

Be a Loop Mode Ninja

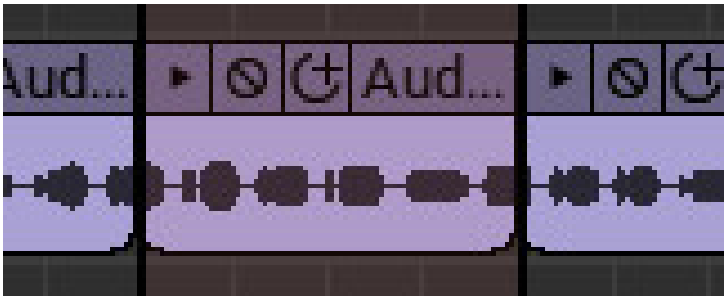
A faster way to set loop points is to drag a purple highlight area either in the Timeline or Main Clip Grid, then click the Loop button. This automatically sets the in and out points to the beginning and end of the highlight region. (You can also use the[L] key shortcut to toggle loop mode on and off.) Remember that the Snap setting affects where the loop region markers land; we recommend setting this to Snap To Grid or Bar for more congruent clips.

- **Punch In/Out**

Punch In/Out recording lets you place markers that define where to start and end recording.

To mark a region for punch in/out recording, click the *Punch In/Out* button. Set the *Punch In* and *Punch Out* handles in the Timeline.

After setting up a punch area, press record, and the new recordings will be created inside the punch start and end markers.

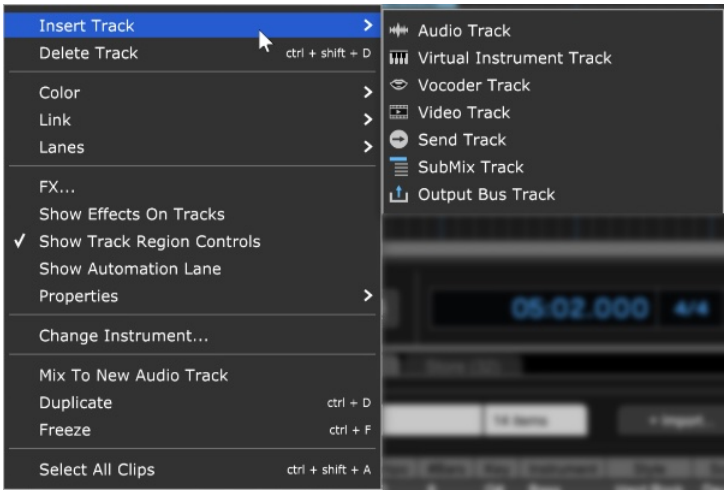


You can use the same technique described in the "*Be A Loop Mode Ninja*" sidebar on the previous page for setting Punch In/Out locations.

TRACK RIGHT-CLICK COMMANDS - VIRTUAL INSTRUMENT TRACK

- **Insert Track**

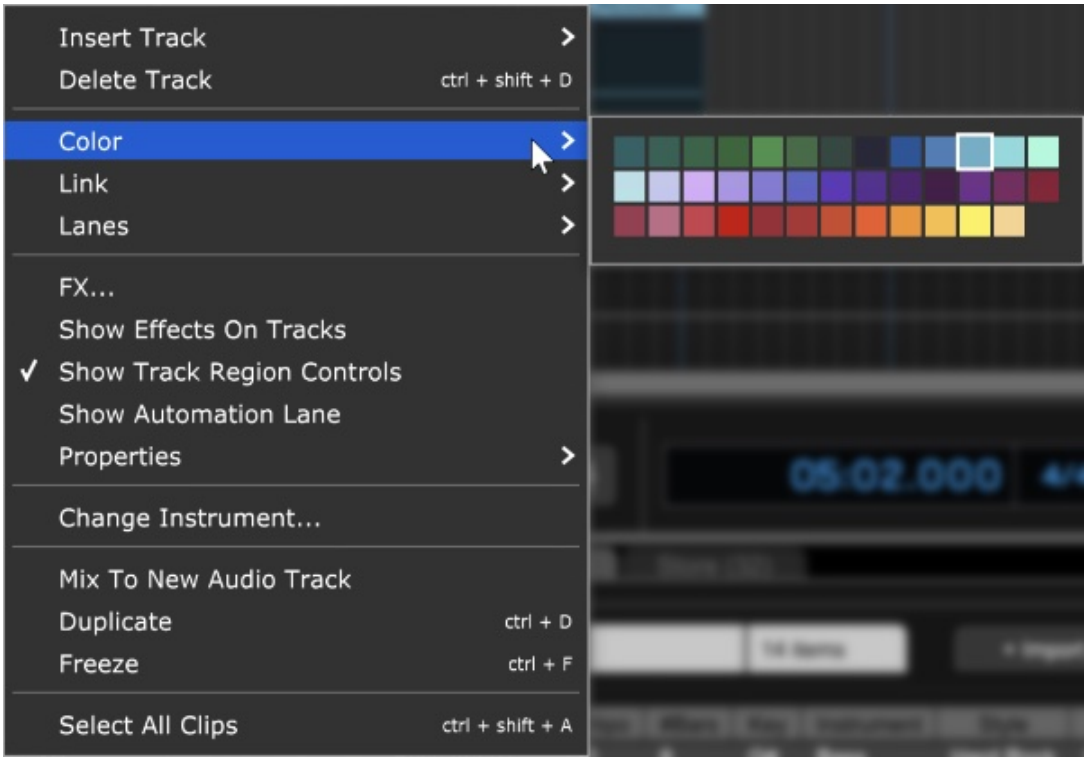
These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.



- **Delete Track**

Removes the current track.

- **Color**



Changes the color of the track.

• **Link**

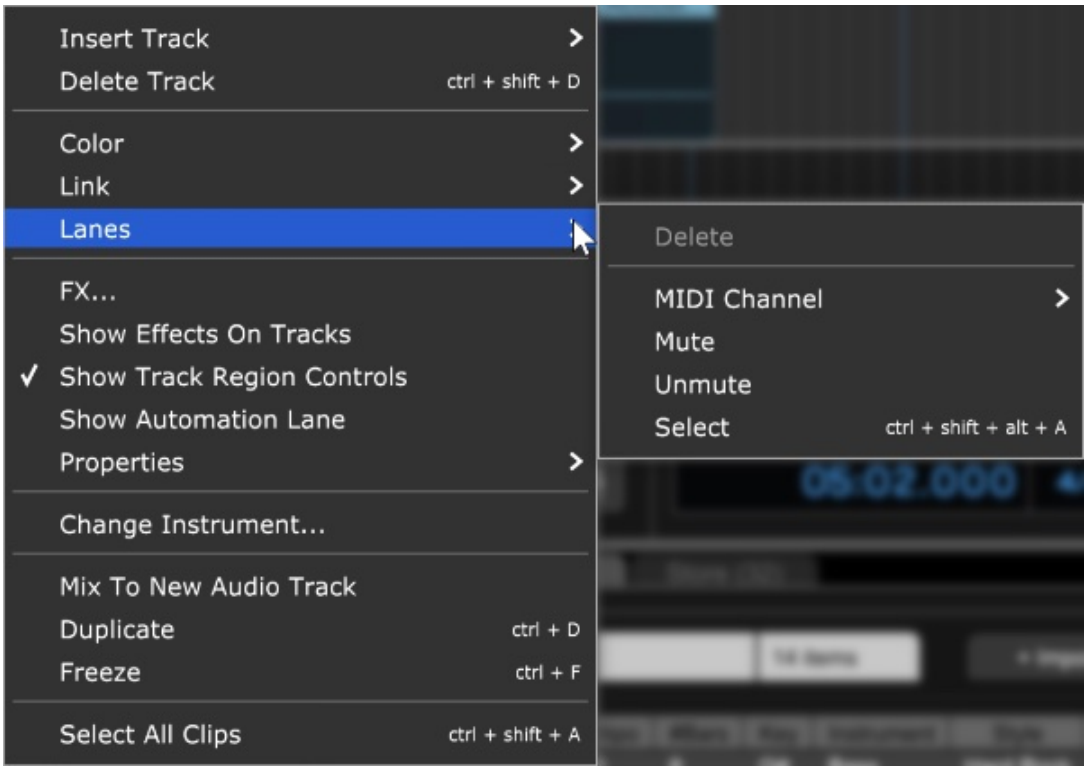
Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It's particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored "chain" icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• **Lanes**



Lanes allow multiple tracks of audio (or MIDI) to occur on the same channel. The *Lanes* right-click commands enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All*,*Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

• **FX...**

Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

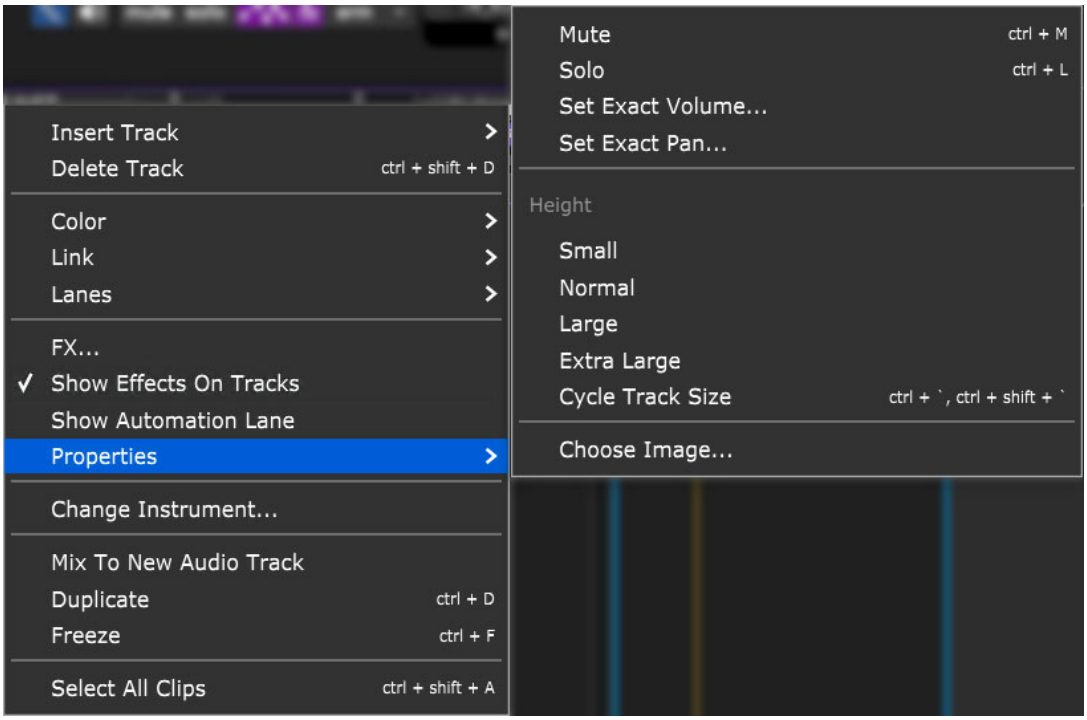
• **Show Effects On Tracks**

Globally shows or hides insert effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

• **Show Automation Lane**

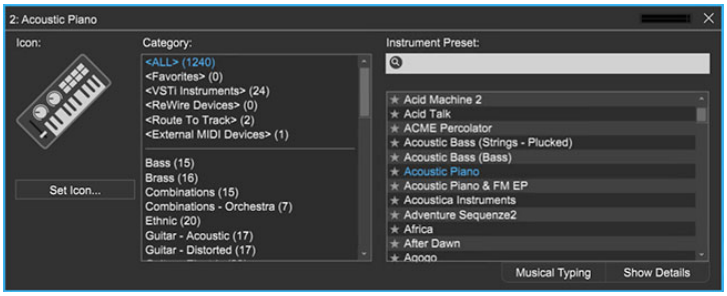
Shows or hides track automation.

• **Properties**



- **Mute**
  Tracks can be temporarily silenced by selecting *Mute*. The *Mute* button turns blue, and all clips on the track turn gray with diagonal lines.
- **Solo**
  Disables audio for all other tracks. The track *Solo* button will turn blue. Multiple tracks may be soloed simultaneously.
- **Set Exact Volume...**
  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Set Exact Pan...**
  Opens a window where the panning can be set precisely, either by slider control or by entering a numeric value.
- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as

well as organization. Choose from Mixcraft's included images or import your own.
To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...
The *Choose A Track Image* window opens:
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.
JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.



• **Change Instrument...**

Opens the Instrument Preset window, where presets and instruments can be selected.

• **Mix To New Audio Track**

Mixes virtual instrument or audio clips on the selected track to a single, continuous audio clip and places it on a newly created track beneath the current track. This has a couple of practical uses:

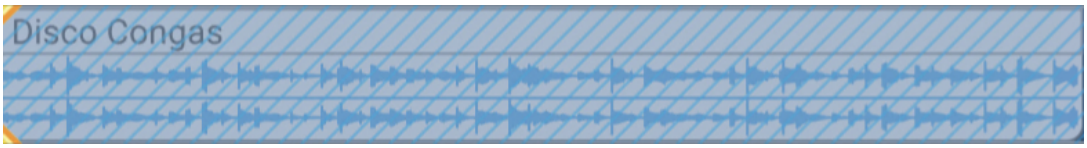
- **Convert MIDI Virtual Instrument To An Audio Wave** -This is useful if you're running an older computer and a high-CPU instrument plugin is slowing down your computer; in this way, you can "print" the audio and shut off the plugin.

  It's also useful if you're handing off files to ~~some chump~~ another user who doesn't have virtual instruments you've used in a project.
- **Permanently Embed Insert Effects Or Instruments In An Audio File Again-** This is useful if you're handing off a project to another user who doesn't have effects plug-ins you've used.

- **Long-Term Archiving** - Instrument or effects plug-ins can become obsolete or incompatible with current operating systems/format changes, etc. Converting to “pure” audio files can act as insurance to guarantee projects remain playable for years to come.

• **Duplicate-** Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-in setup, etc. Also useful if you’d like to try some wild edits and want to retain an unadulterated version.

• **Freeze**- Freeze is similar to *Mix To New Audio Track*; it creates a new audio file with instruments or effects “burned in” to the file. Unlike *Mix To New Audio Track*, it does not make a new track; the audio is created in the background and plays back on the existing track. Because instruments and effects are part of the newly created audio file, Mixcraft disables instrument and effects plugs upon playback, thus freeing up computer processor resources. If you’re using an older or underpowered computer, *Freeze* can be tremendously helpful (check out the CPU percentage meter while playing back projects for reference). Conversely, if you’re using a fast, modern computer, you probably won’t need *Freeze*.

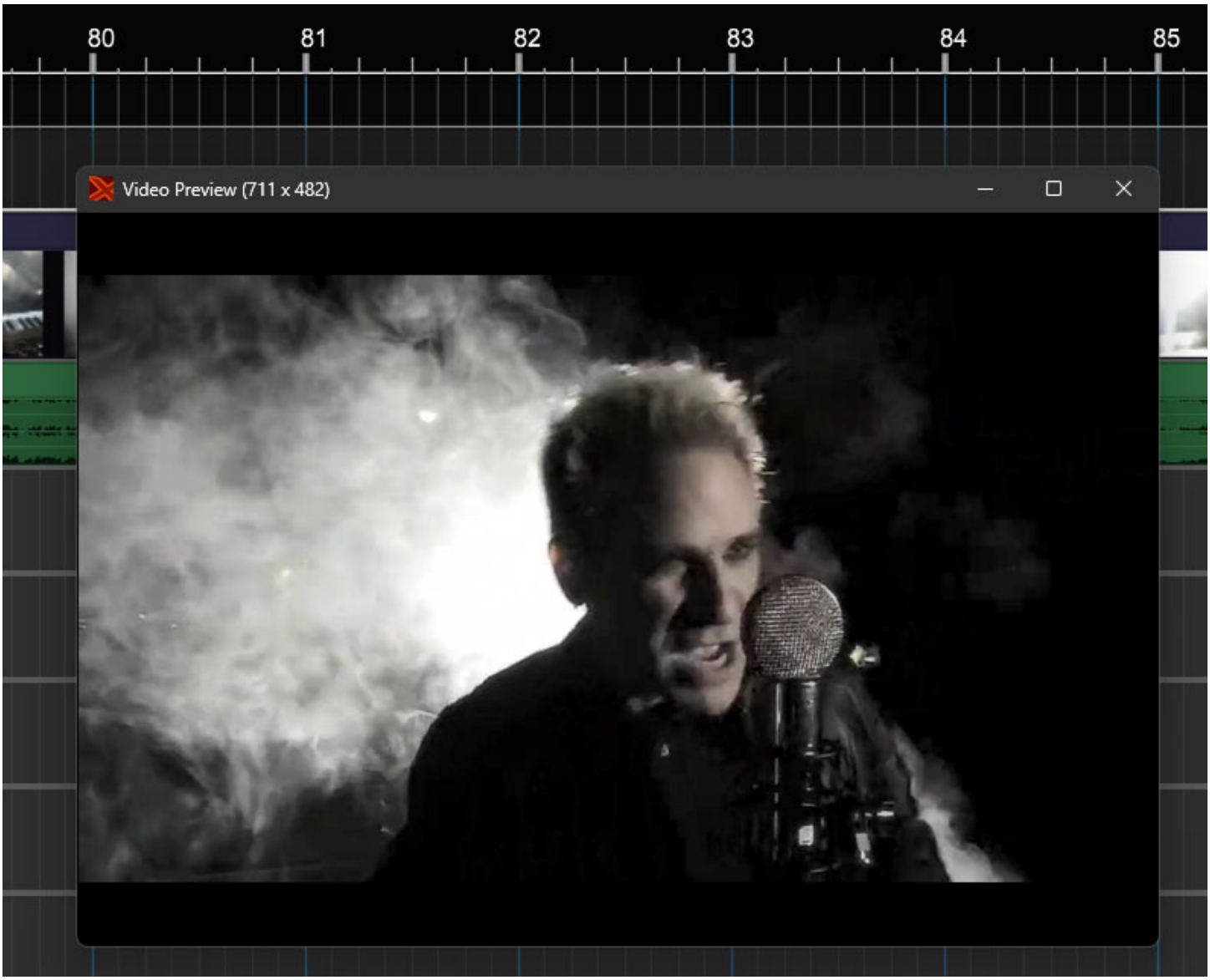


Frozen tracks turn blue with diagonal lines; this makes it easy to keep track of which tracks are frozen. Frozen tracks can be unfrozen, that is, converted back to standard tracks with instrument and plug-ins active, by reselecting the *Freeze* command (which will say *Unfreeze*).

• **Select All Clips-** This selects all clips on the track, with one minor detail you should know about if you're using the Performance Panel: *Select All Clips* selects all of a track's clips in either the main clip grid or in the Performance Panel, depending on which was clicked most recently.

• **Select All Linked Tracks-** If *Link* to other tracks is currently enabled for the track, this selects the current track and all other tracks currently linked.

VIDEO AND VIDEO TEXT TRACKS



Mixcraft includes powerful video editing features that let you:

- Add a musical soundtrack to a video.
- Add sound effects to a video.
- Create slideshows of still images.
- Add titles, lyrics, or credits to your videos.
- Sync video to sound with millisecond accuracy.
- Export a project to video for burning DVDs or Internet upload.

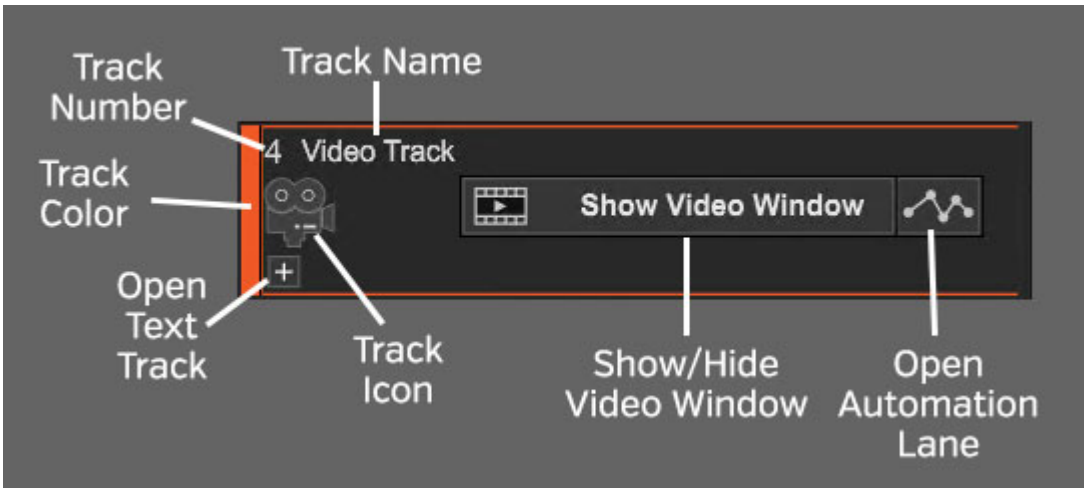
VIDEO TRACK

A video track holds video clips and/or still images. A project can only have **one** video track. For an in-depth explanation of how to use video and video tracks, see **Video Tracks and Editing**. For an in-depth explanation of how to create videos and movies, attend the **New York Film Academy**.

VIDEO TRACK HEADER

Below we'll go over all controls of a video track. When a video with audio is imported, the video track will always have an associated audio track directly beneath it, but this track (and its associated audio clip) can be deleted without affecting the video track.

A project can only have one video track.



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

The default name will be *Video Track*, but it can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or

thwacking the [RETURN] or [ENTER] key.

OPEN AUTOMATION LANE (SQUIGGLY LINE ICON)

Opens a track automation lane for the track directly beneath the main track. This defaults to *Track Volume*. For full information on using track automation, see the **Automation and Controller Mapping** section.

SHOW/HIDE VIDEO WINDOW

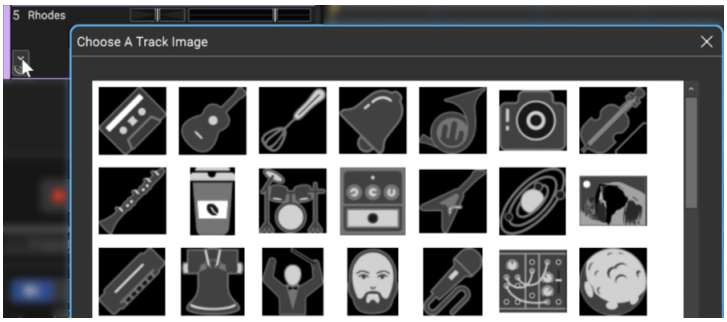
Shows or hides Mixcraft's floating video preview window.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:



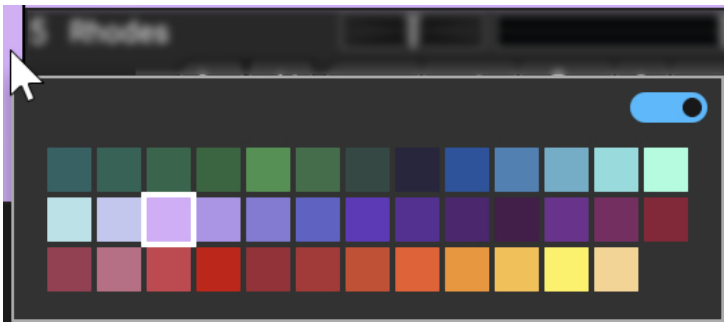
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

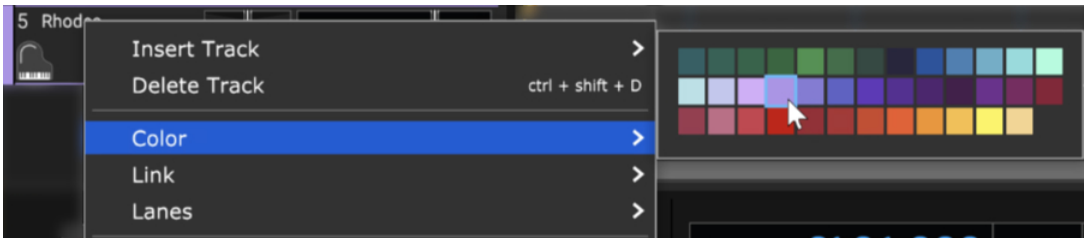
SHOW/HIDE VIDEO TEXT TRACK (+/- SIGN)

Shows or hides video text track directly beneath the main video track. (see Video Text Track below).

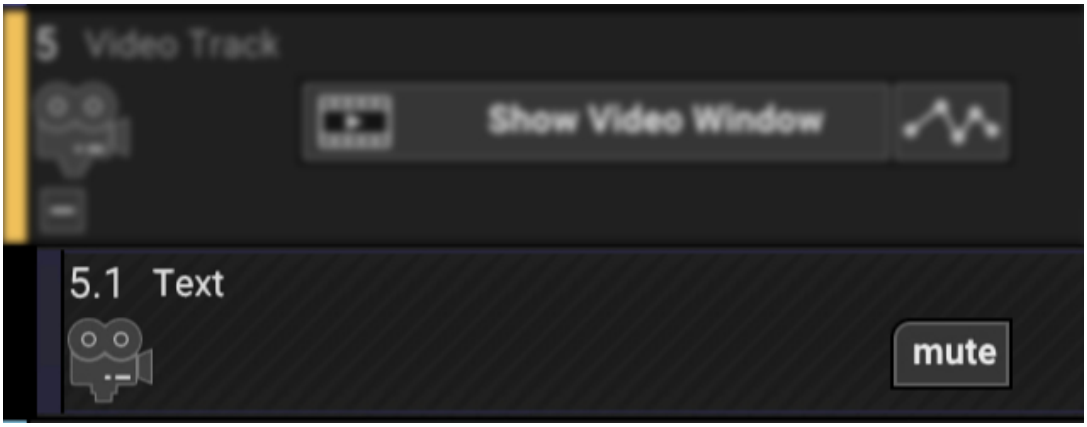
TRACK COLOR



Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.



VIDEO TEXT TRACK



This is a specialized type of video track that lets you add static and scrolling text to video tracks. It's also covered in the **Video Tracks and Editing** chapter.

USING VIDEO TRACKS

VIDEO TRACK

A video track holds video clips, images, and text. A project can only have one video track. To create a video track, click the +*Track* button and select *Insert Video Track*. You can also insert a video track by right-clicking and selecting *Insert Track*, or accessing from the *Track> Insert Track* menu at the top of the main page.

To toggle viewing of the video playback window, click the *Show/Hide Video Window* button. A video preview window will open, and the *Show/Hide Video Window* button will turn green.

LOADING VIDEOS

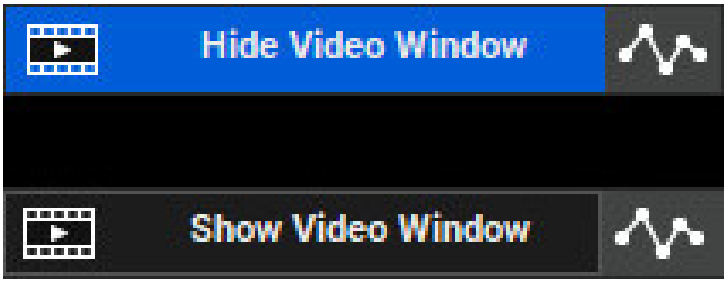
Mixcraft supports AVI,WMV, and MP4 video formats. To load any other format, you'll need to convert it using a third-party video conversion app.

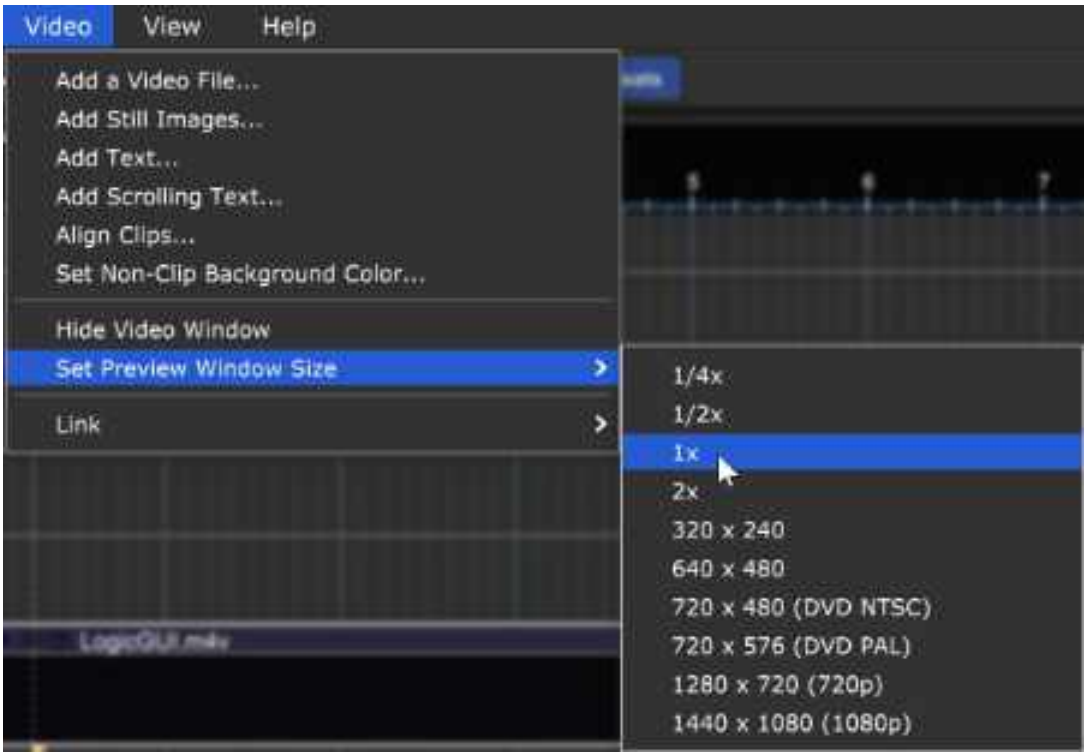
Note: MP4 format is only available with Windows 7 or higher.

To add a video, click *Video>Add a Video File...* in the Main Window menus and navigate to the video to be loaded. The video will be placed at the current Caret location. Videos can also be dragged and dropped into the Main Clip Grid from a Windows directory. You don't even need to create a Video Track; if the project doesn't have one, Mixcraft will create it.

VIDEO PREVIEW WINDOW

This Video Preview window displays the video at the current playback position, including text and any currently active effects. It can be toggled on and off by clicking *Show Video Window* or *Hide Video Window* in the *Video Track*. The Video Preview can be moved at will by grabbing and dragging its title bar. This is especially handy if you're using two displays.





The Video Preview window can be resized by selecting *Video>Set Preview Window Size* in the Main Window menus.

ADDING PHOTOS/IMAGES

Photos or images can be added by clicking Video>Add a Video File... in the Main Window menus. This opens a file dialog, which allows the loading of an image or multiple images. The images will be placed at the Caret location. Images can also be dragged and dropped into the Main Clip Grid from a Windows directory. The following image types are supported:

- .JPG
- .PNG
- .BMP
- .GIF

To add more than one image at a time, select multiple photos or images when adding. The images will be added to the video track; each one will last five seconds and overlap the next by one second.

EDITING PHOTO DURATION

The amount of time a photo is displayed can be altered by moving the mouse to the left or right edge of the clip and dragging horizontally to change the duration.

Entire clips can be moved by dragging the title bar. All standard edit commands apply to images, such as copy, paste, linking, splitting, etc.

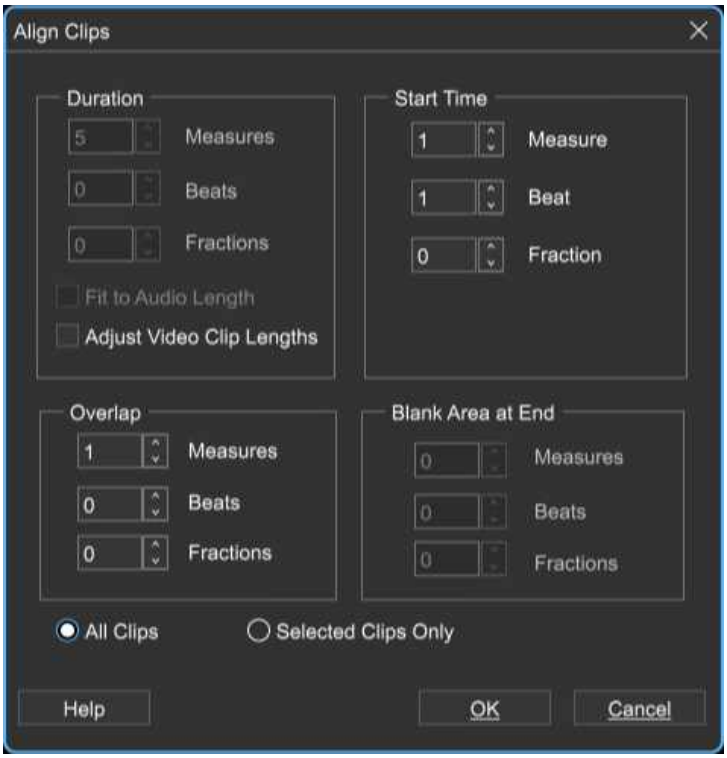
As with audio clips, overlapping a video or image clip automatically creates a crossfade, but in this case, it will be a “visual” crossfade.

ALIGN VIDEO CLIPS

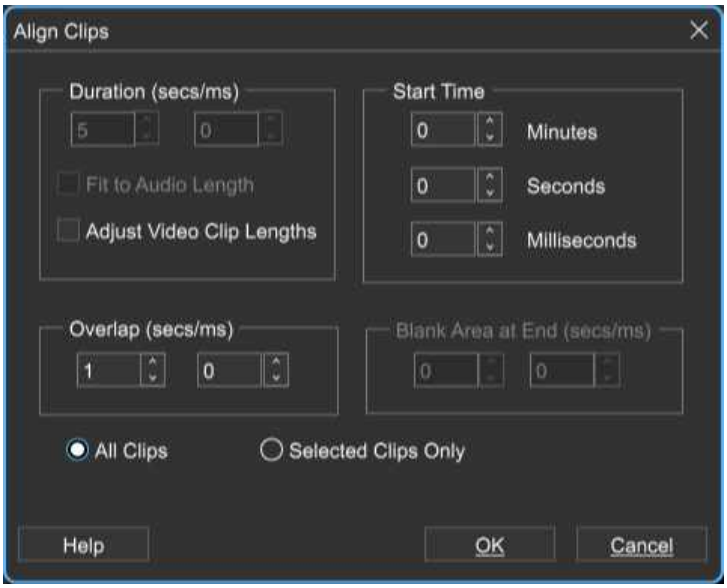
This allows easy tempo syncing of images or videos as well as precisely timed slide shows.

To align video clips, click *Video>Align Clips i*n the Main Window menus. This opens one of the following dialogs depending on whether Mixcraft is currently set to *Time* or *Beats* mode.

In *Time* mode:



In *Beats* mode:



DURATION

Sets the length of clips.

- **Fitting To Audio Length**

If you have a lot of audio, such as a song or several songs, and you'd like the images to span the length of the audio, click *Fit to Audio Length*. This disables the duration field, resizes, and aligns clips to create a slide show of all the images spaced over the duration of the audio.

• **Adjust Video Clip Lengths**

If there are video clips in the project, their length will not be changed by default. In order to crop the right-hand side of video clips, make sure to check the *Adjust Video Clip Lengths* checkbox.

• **Start Time**

Sets the start location of the clip.

• **Overlap**

Causes clips to overlap and fade crossfade.

• **All Clips/Selected Clips Only**

Use these to select which clips are affected. All Clips applies alignment to all clips in a project whereas Selected Clips Only affects only currently highlighted clips.

VIDEO EFFECTS

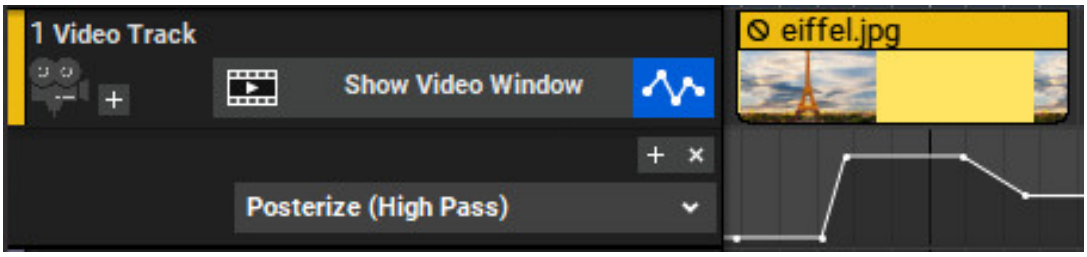
Video effects can be added to alter a video's appearance over time. You can fade in and out, add blur, transition to grayscale, and much more. On the *Video* track, click the automation button.

VIDEO EFFECTS AUTOMATION DISPLAY

Adding Mixcraft's video effects is very similar to automating audio parameters. All "standard" automation parameters apply, including curves, and manipulation of region segments via the automation "handle" tool.

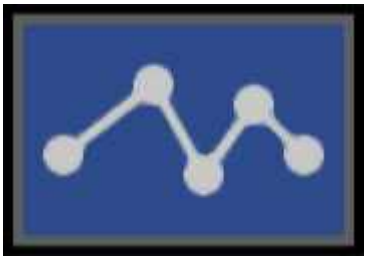
Multiple video effects lanes can be displayed simultaneously. To view or hide video effects, click the Video Track's *Toggle Automation* button.

If a Video Track has no video effects, a single automation lane opens displaying the Lightness effect. If a track has existing video effects, you'll see all automation lanes with views currently enabled (using the *+* and *X* buttons described below).



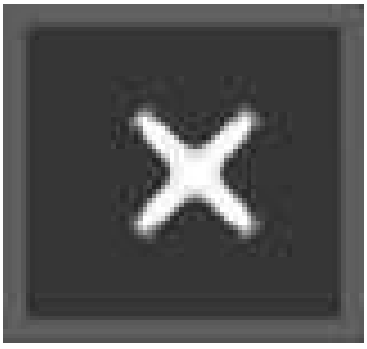
The *Toggle Automation* button only hides and displays the video effects automation lanes, but has no affect on automation playback. In other words, video effects are active even if the lanes are hidden with the *Toggle Automation* button.

ADD AUTOMATION LANE



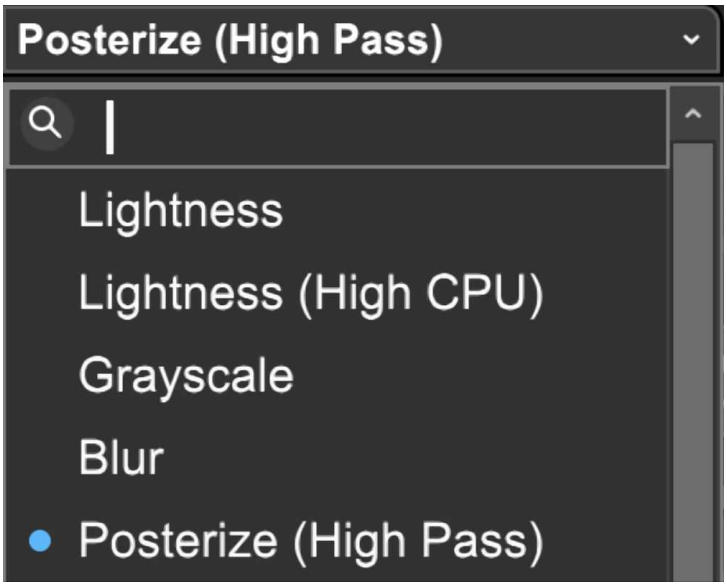
Adds a new video effects automation lane to the track.

HIDE AUTOMATION LANE



Hides a video effects automation lane.

SELECTING A VIDEO EFFECT



To choose an effect, click on the drop-down menu in the tracklist.

Video Effects List

Lightness	Blue Channel Strength
Lightness (High CPU)	Red Filter
Grayscale	Green Filter
Blur	Blue Filter
Posterize (High Pass)	Invert Red Channel
Low Pass	Invert Green Channel
Emboss	Invert Blue Channel
XOR (Invert/Negative)	XOR High Pass
Sepia	XOR Low Pass
Antique (Light)	Flip Horizontal
Antique (Heavy)	Kaleidoscope Right
Red Channel Strength	Kaleidoscope Left
Green Channel Strength	

ADDING AND EDITING VIDEO EFFECTS AUTOMATION

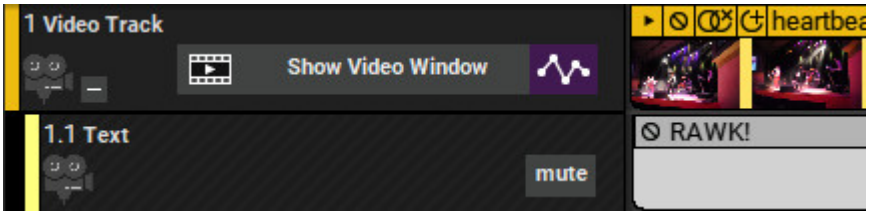
To add automation points, click on the automation line and drag the point up and down. The position of newly created automation points will conform to the current Snap setting. The global snap value applies when adding and editing automation points.

If you experience problems moving an envelope point to a specific location, remember to change the Snap setting to *Snap Off.*

To move a horizontal section of the automation line, hold down the [SHIFT] key while dragging. The cursor will turn into an up/down arrow.

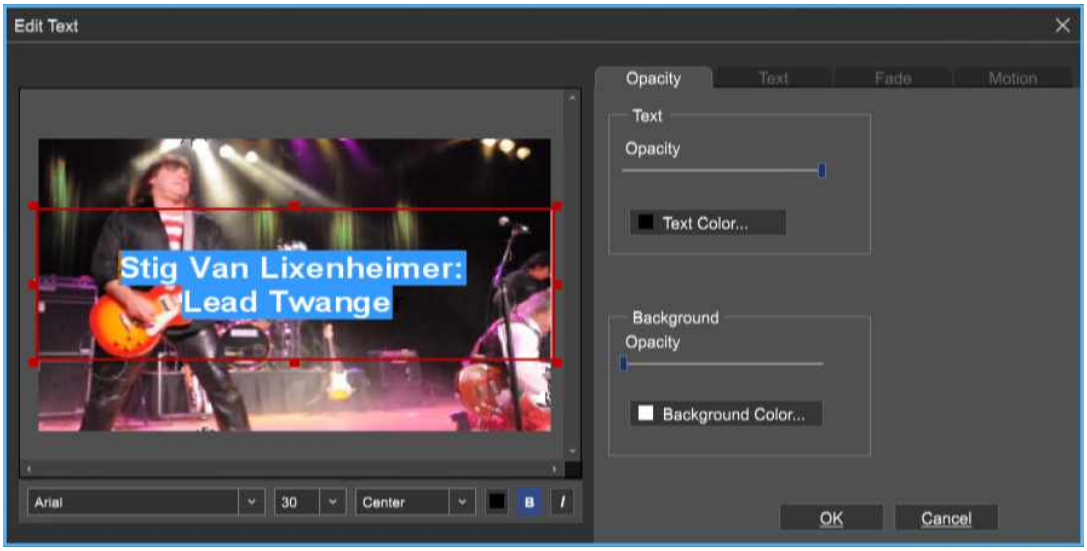
Dragging an automation point over other automation points will cause them to be “overrun” and deleted upon mouse release.

FINE-TUNING AND DELETING AUTOMATION POINTS



- **Edit Exact Value**

To precisely set automation point values, right-click it and choose *Edit Exact Value*. The dialog box below opens and allows exact settings for automation points.



- **Delete Point**

To delete an automation point, right-click on it and choose *Delete Point*.

CUTTING, COPYING, AND PASTING AUTOMATION DATA

As with audio automation, video effect automation data can be cut, copied, and pasted.

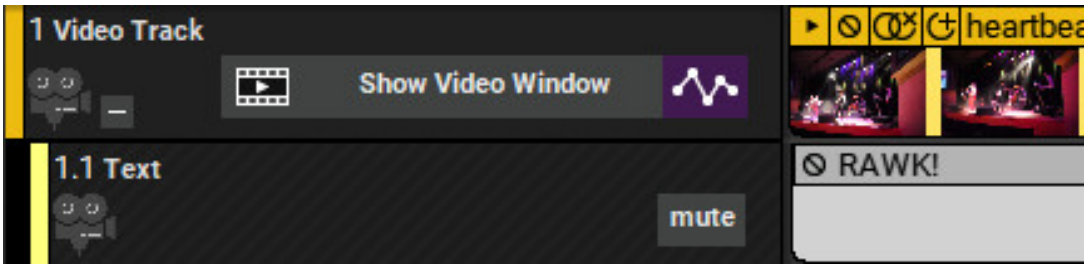
- **Cut**

To cut a section of Video Effect automation, highlight the section to be cut by clicking and dragging over it. Now select [CTRL]+X either in Mixcraft's file menu or by right-clicking the mouse. Paste the cut automation data to a new location by positioning the Caret marker in the desired new location, then selecting [CTRL]+V either in Mixcraft's file menu or by right-clicking.

- **Copy**

To copy, highlight the section of Video Effect automation you'd like copied by clicking and dragging over the area to be copied. Now select [CTRL]+C either in Mixcraft's file menu or by right-clicking. Position the Caret marker in the desired copy location, and paste by selecting [CTRL]+V either in Mixcraft's file menu or by right-clicking.

VIDEO TEXT TRACKS



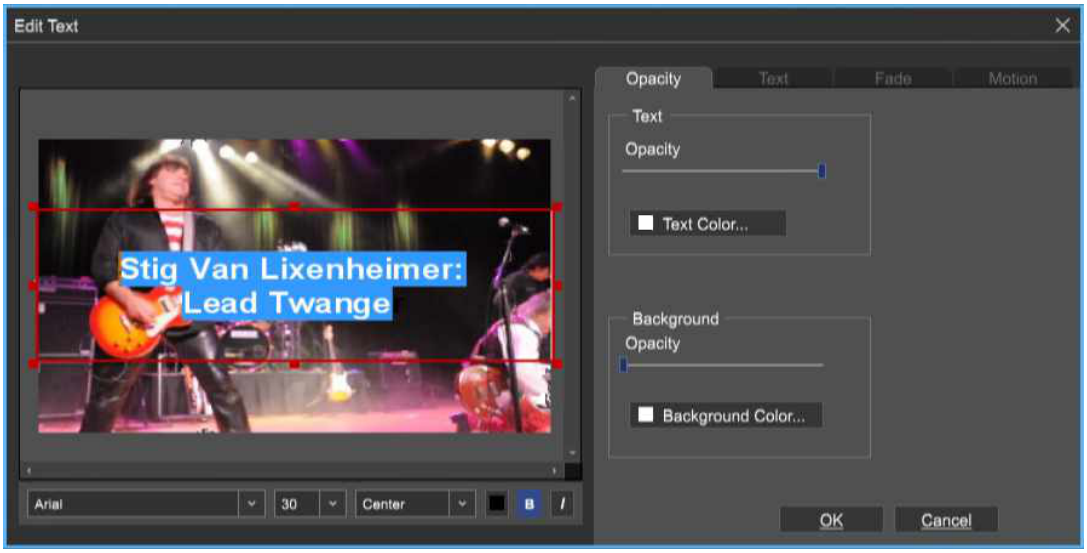
The text track contains text clips and is a child of the video track. It can be viewed by clicking the + sign at the bottom-left corner of the video track.

There are two types of text clips:
- Normal
- Scrolling Text

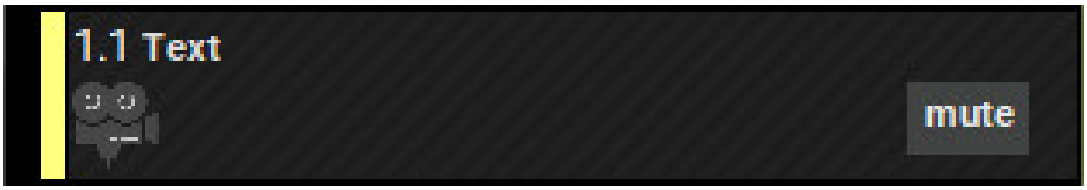
Text tracks can contain multiple lanes and can be used for titles, lyrics, credits, transitions, and more.

ADDING AND EDITING TEXT

Use the Text feature to add titles, lyrics, captions, and more.



To open the *Edit Text* window, click *Video>Add Text...* in the Main Window menus. Opening the *Edit Text* window automatically creates a Text clip and places it in the grid at the current Caret location. Text clips are placed on the Text track. This is a child track of the Video track. To view or hide the Text track, click the + or - sign on the left side of the Video track.



The Text track also has a *Mute* button. This won't make on-screen words any quieter, but it disables the display of text in the project.

To edit a Text clip, double-click it, or right-click and choose *Edit Text...*

The Text Object is the field within the red rectangle where text is contained.

To resize the Text Object, click and drag on the small red squares; the cursor turns into arrows when in the correct position.

To move the entire Text Object, grab one of the red lines (away from the red squares), click and drag. The cursor turns into a hand when in position.

SETTING TEXT FONT, SIZE, AND COLOR

The font, size, and color settings can be set using the toolbar at the bottom of the *Edit Text* window.

The font, size, and color settings can be specified per character. In other words, every letter or number in a title can have its own individual settings. Simply highlight the characters you'd like to modify and make changes. (Go easy on this one - you can make a real mess!)

OPACITY TAB

The Opacity Tab changes the text, colors, background colors, and transparency level.

- **Text/Background Opacity Sliders**

Moving the *Opacity* sliders adjusts the text and background from transparent to a solid color.

- **Selecting a Text Color**

To select text color, click the *Text Color* button and click a color square. You can also click the mouse anywhere in the color spectrum display, or if you're familiar with RGB color numbering, numbers may be entered in the RGB fields, then click OK. Custom colors can be saved for future use by clicking *Add To Custom Colors*.

• **Selecting a Background Color**

To select a color for the text background, click the *Background Color* button and choose a color as specified above.

Note: The text color setting at the bottom of the toolbar and the *Text Color...* button both perform the same function.

Background Check

A text background color can be very helpful for making the text easy to read on an overly bright or dark video image.

TEXT TAB

These parameters specify text placement within the Text Object as well as masking and drop shadow options.

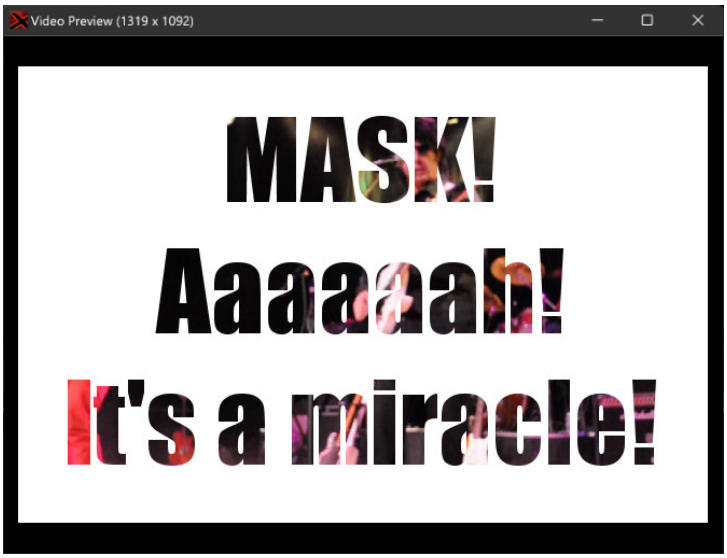
• **Orientation**

Choose whether the text justifies left, center, or right, and top, center, or bottom.

• **Margins**

Percentage setting for vertical and horizontal margins.

• **Treat Text As Mask**



Creates a solid color screen fill with the underlying video bleeding through the text characters.

- **Drop Shadow**

Adds a black drop shadow to text characters with choices of small, medium, and large.

FADE TAB

Text can be faded in and out over time using the *Fade* tab. Check the *Fade In* or *Fade Out* checkboxes, then set the desired fade duration. As a reference, one second = 1000 milliseconds.

MOTION TAB

The *Motion* tab provides intro and outro text animation.

TYPES OF ANIMATION

Adds movement to text. *Start Animation* and *End Animation* lets you specify separate animation behavior for the start and end of Text Clips.

- **None**

Text does not animate. Not very exciting.

- **Move**

Choose whether text enters from the left, right, top, or bottom of the frame as specified by the Direction drop-down menu. Enter the animation length using the *Duration* field.

- **Reveal**

Text characters reveal themselves in the specified according to the Direction drop-down choice. Enter the animation length using the *Duration* field.

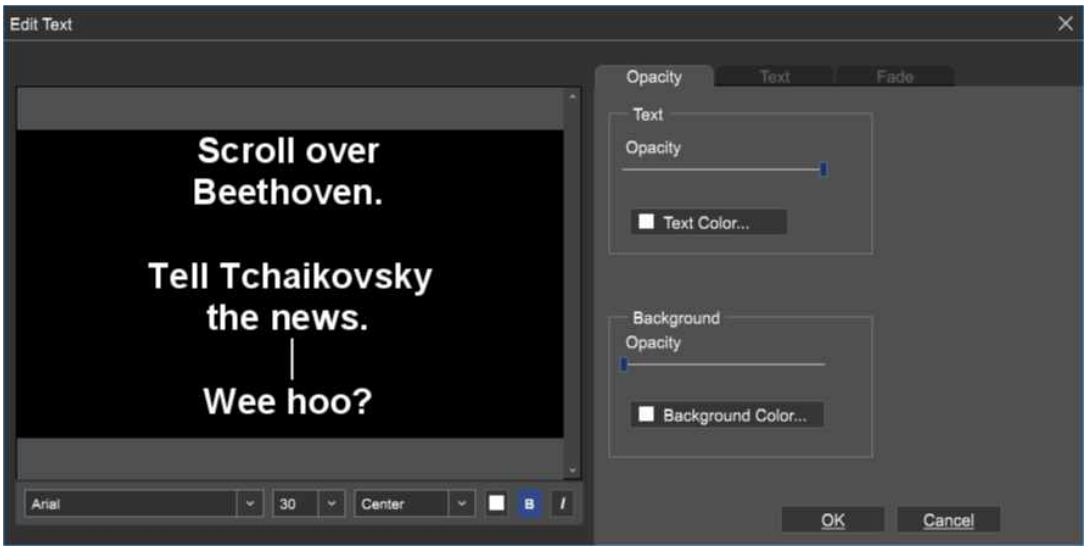
EDITING TEXT CLIP SIZE

Resizing a Text Clip alters how long the text is displayed. To change the the size a text clip, click on the clip’s left or right edge and drag horizontally. The cursor turns into left/right arrows when hovering on the clip’s edge.

ADDING AND EDITING SCROLLING TEXT

Scrolling Text functions much the same as regular text, but scrolling text automatically moves from the bottom to the top of the screen (hence the clever name). Scrolling text is ideal for creating credits.

To add Scrolling Text, click *Video>Add Scrolling Text*... in the Main Window menus. Opening the *Edit Text* window automatically creates a Scrolling Text Clip and places it in the grid at the current Caret location on the Video Track's *Text* child track.



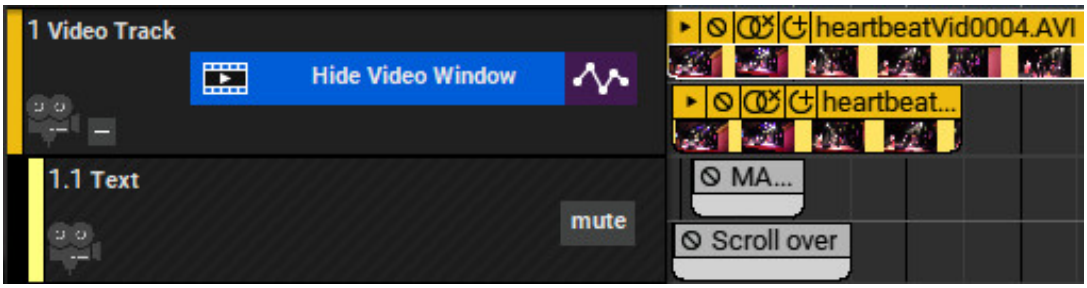
To edit a Scrolling Text Clip, double-click it, or right-click and choose *Edit Text*...

All editing functionality and tabs work the same as when editing static text, but because Scrolling Text inherently moves from the bottom to the top of the screen, the Motion tab is removed from the Edit Text window.

ALTERING SCROLL SPEED

The scroll rate of Scrolling Text clips is automatically adjusted depending on the clip size. To slow down or speed up the rate of scrolling, move the mouse over the left or right edge of the clip and resize it horizontally. The cursor will turn into left/right arrows when hovering on the clip's edge.

USING LANES WITH VIDEO AND TEXT TRACKS



As with Audio Tracks and Virtual Instrument Tracks, multiple lanes can be created for Video and Text tracks. To create or delete lanes, highlight a Video Track or Text Track and right-click and select *Lanes>Add* or *Lanes>Delete*. Lanes can also be added with the key shortcut [ALT]+L.

Remember that only one video stream can play at any given time; if multiple video lanes are used, the clip in the uppermost lane will have playback priority.

Text and Scrolling Text clips are not subject to “one-at-a-time” limitations. Text and Scrolling Text clips in multiple lanes will all play simultaneously.

TRACK RIGHT-CLICK COMMANDS - VIDEO TRACK

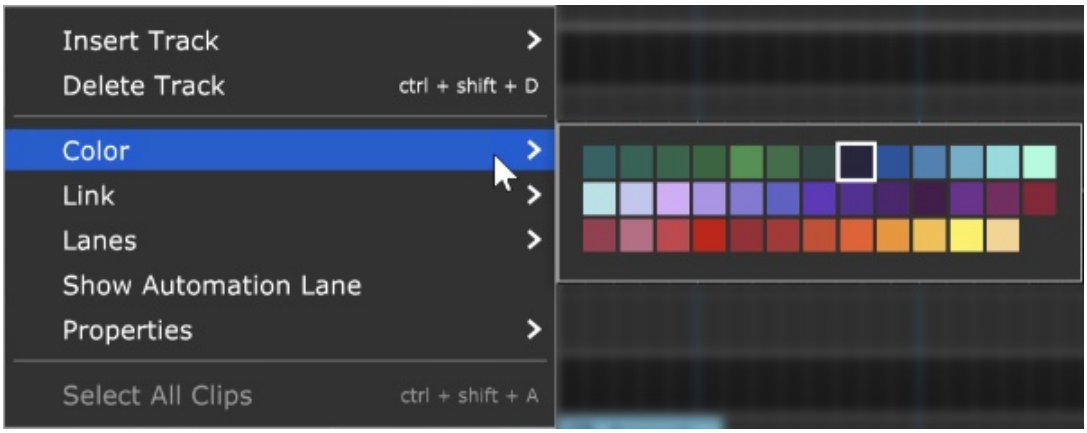
• **Insert Track**

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

• **Delete Track**

Removes the current track.

• **Color**



Changes the color of the track.

• **Link**

Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It’s particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks

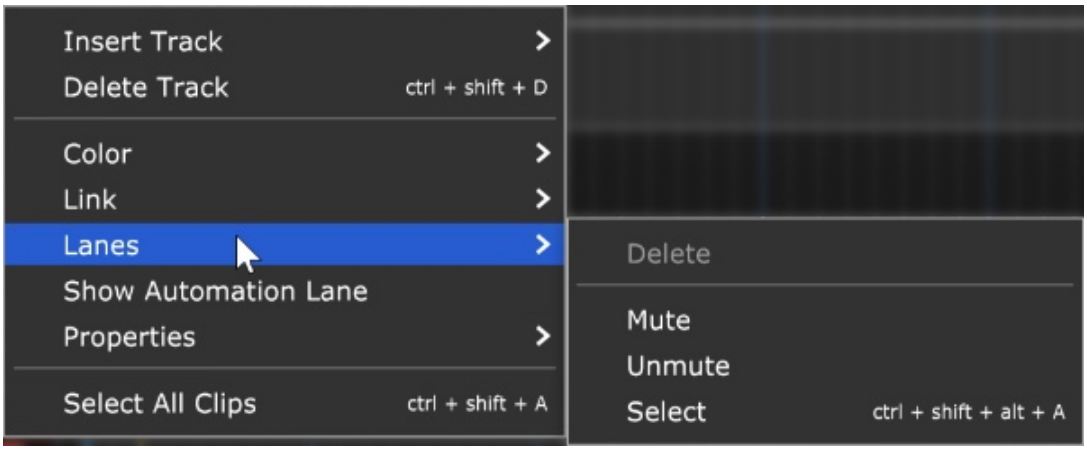
linked as you like. Linked tracks will display uniquely colored “chain” icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• Lanes

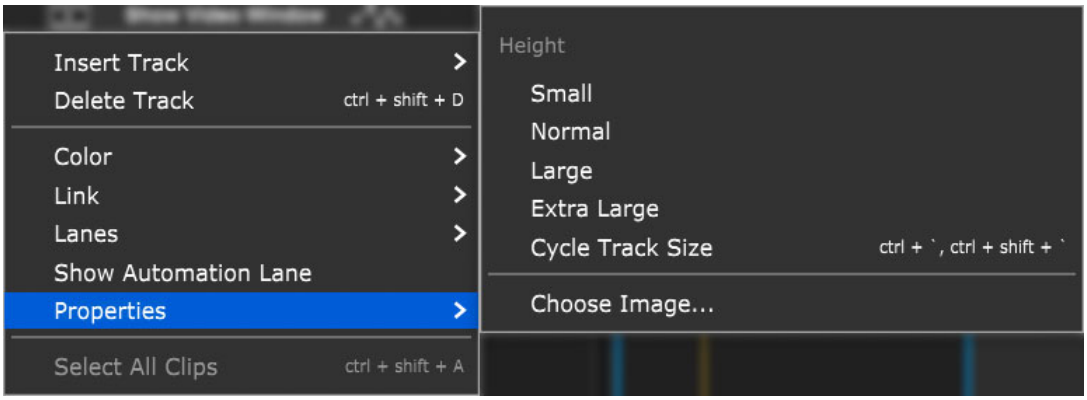


Lanes allow multiple tracks to occur on the same channel. The *Lanes* right-click commands enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All*,*Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

• Show Automation Lane

Shows or hides track automation.

• Properties



- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.
  To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...
  The *Choose A Track Image* window opens:
  To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.
  JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

- **Select All Clips-** This selects all clips on the track,

SEND TRACK

Send Tracks are tracks containing an effect, or a chain of effects, and track automation. Unlike inserting an effect into a standard audio channel, multiple audio channels can be “sent” to a send track effect using the channel send knobs in the *Mixer* tab. A Send Track is also often referred to as an Aux Bus.

Benefits of using Send Tracks:

• Share effects over multiple tracks.

• Fine degree of control over dry vs. effect level and placement of dry vs. effects in the stereo field.

• Use effects on a specific portion or section of a track (via automation).

• Brag to friends that you're a professional mixer-ing engineer.

If you’re not super clear on when or why to use Send Tracks, grab yourself a 64 oz jug of coffee, and read the following section:

To Insert or To Send Effects, That Is The Question

There are two ways to use effects in a mix environment: insert effects and send (aka, bus) effects. Both methods can be used somewhat interchangeably, but each has its own advantages, largely dependent upon the type of effect, its intended use, and in the virtual DAW environment, the use of computer resources.

Insert Effects

*When an effect is added to a track by clicking the **fx** button, you're using it as a channel insert. You can think of an insert effect as being a part of an individual channel strip. It also means that the wet-to-dry signal balance is adjusted using the controls in the effect itself. Although you can insert any type of effect, it's best suited to gain and dynamics effects such as compressors, limiters, EQs, distortion, etc., because their mix is typically set "fully wet."*

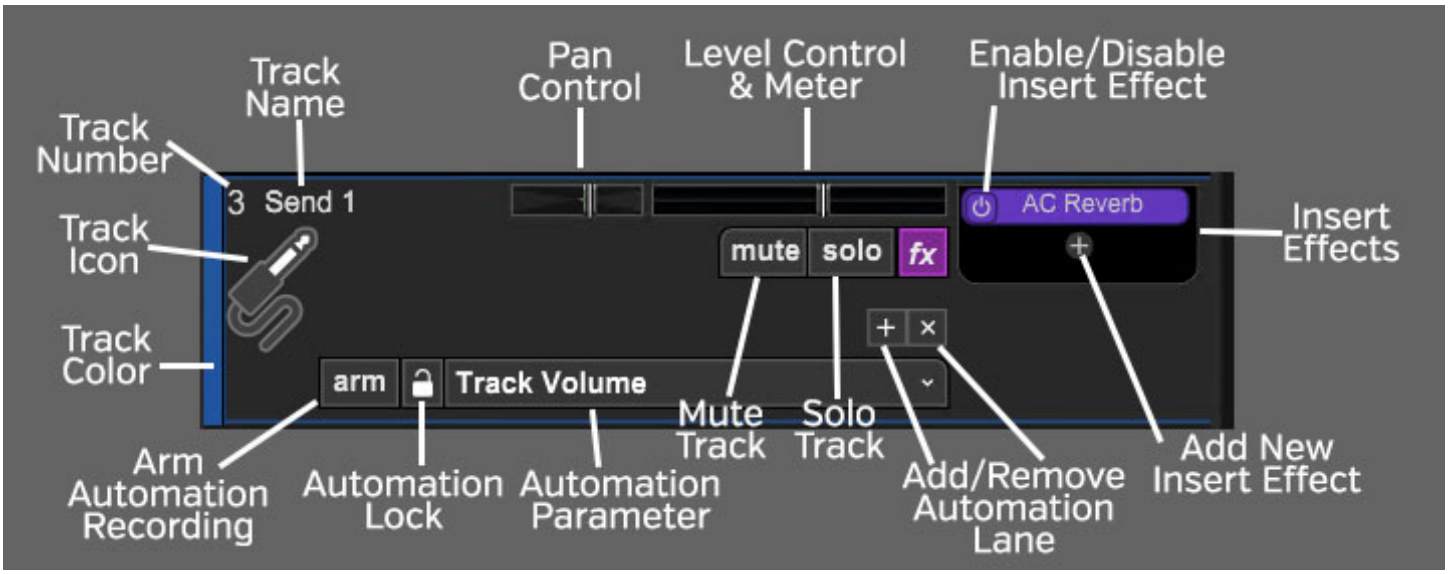
In other words, you don't usually use a partial amount of a compressed or distorted signal (although some crafty engineers have been known to break this rule). Conversely, time-domain effects such as chorus, delay, and reverb are almost always mixed together with the dry signal. In other words, the dry signal is always at full blast and some proportion of the effected signal is mixed in.

Send Track (Bus) Effects

One good way to think of a send effect is as one or more channels being mixed together and then being sent to a standalone effects unit. The dry mix remains unaffected, and the effect gets added to the final mix. Because of this, the wet/dry mix control of a send effect should always be set to 100% wet, otherwise, you'd end up with the dry signal from the main mix plus some dry signal from the effect itself, making it confusing to mix. Perhaps the biggest benefit of send effects is the conservation of computer processing resources. If you're using a reverb plug-in that demands a great deal of computer overhead, send tracks to allow you to send many mix channels to just one instance.

Additionally, if you're using an effect to process multiple channels of one "instrument" (a drum kit with multiple channels, for example), a send effect lets you add different amounts of the effect for each channel by simply adjusting the amount of each track's send knob. Send tracks also offer tremendous flexibility with regard to stereoization. For example, a dry track could be panned to one side of the stereo image, with the effected side panned to the other, or anything in between.

SEND TRACK HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. Default names are generally the type of track (*Send Track*, *Video Track*, etc.). Tracks can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or clicking the [RETURN] or [ENTER] key.

PAN

The send track's pan control is the small horizontal slider to the left of the track volume control. Adjust the pan control by clicking and dragging it to the left or right. Pan is adjustable from 100% left to 100% right. The pan controls default to the center position - this means that the sound is equally balanced between the left and right channels. Track panning can also be set in the main window drop-down menu *Track>Properties>Set Pan>Set Exact Value* ... This menu is also accessible by right-clicking a track.

Tip: For finer and more accurate pan adjustment, hold down [ALT], [SHIFT], or [CTRL] while dragging the pan slider.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter. In standard playback mode, this displays the output level as the track plays. If the track is in record arm mode (*The arm* button will be red), the meter functions as an input level meter.

INSERT EFFECTS - ADD/ENABLE/DISABLE

The track effects slots make it easy to load and access effects without opening the Effects List window - effects can be added by simple clicking the *+* sign and choosing an effect. Effects can also be enabled and disabled by clicking the "power" switch on the left side of the button. In the case of a Send track, this is where you'll add the effects that you're sending the signal to. If it's a time-domain effect (chorus, reverb, delay, you'll want to set its wet level to 100%.

If you don't see the track effects slots, their visibility can be toggled by clicking *Track>Show Effects On Tracks*, right-clicking on the track header and choosing *Show Effects On Tracks*, or by hovering over the right edge of a track header - the mouse pointer will turn into double-horizontal arrows that can be dragged to the right.

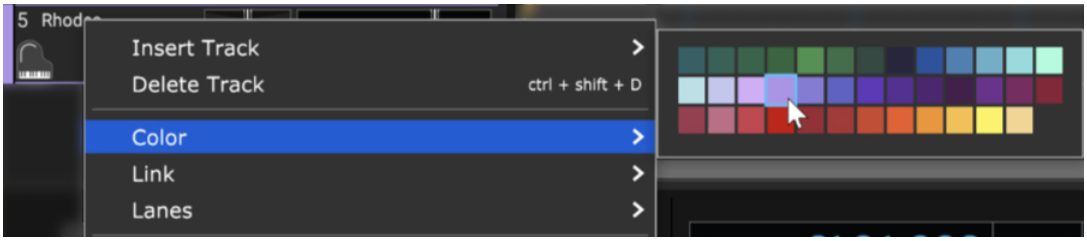
For more information about using effects, check out the cleverly named **Using Effects** section.

FX LIST

Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

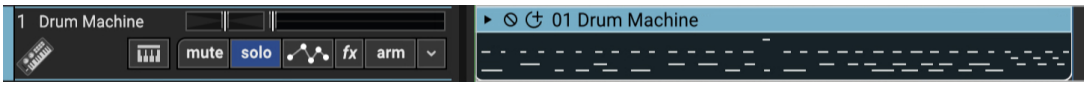
ADD/REMOVE AUTOMATION LANE BUTTONS

The *+* button adds automation lanes beneath the send track, the *X* button will hide the closest automation lane the track. Keep in mind that clicking the *X* button does not delete automation data, it just hides the lane displaying it. For full information on using track automation, see the **Automation and Controller Mapping** section.



SOLO TRACK

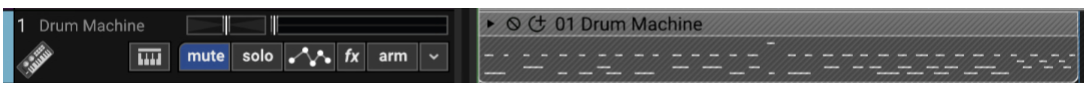
To hear a single track's audio, click the *Solo* button. Multiple tracks may be soloed. For example, to hear how the bass and guitar sound together without drums, solo the bass and guitar tracks. Once soloed, the track's solo button turns blue and all other tracks turn gray with diagonal lines. If multiple tracks are selected, all selected tracks are soloed simultaneously.



The currently selected track can also be soloed using the shortcut [CTRL]+L, or by right-clicking the track and selecting *Properties>Solo*.

If multiple tracks are soloed, [CTRL]-clicking a non-soloed track disables solo on all other tracks and soloes the clicked track. If multiple tracks are soloed and one of them is [CTRL]-clicked, solo is disabled for all tracks.

MUTE TRACK



Tracks can be temporarily silenced by clicking the track *Mute* button. Once muted, the solo button turns blue, and all clips on the track turn gray with diagonal lines. Tracks may also be muted using the shortcut [CTRL]+M, or by right-clicking the track and selecting *Properties>Mute*. If multiple tracks are selected, all selected tracks are muted simultaneously.

If multiple tracks are muted, [CTRL]-clicking an unmuted track unmutes all others and mutes the clicked track (sort of a mute “solo” function). If multiple tracks are muted and one of them is [CTRL]-clicked, **all** are unmuted.

AUTOMATION PARAMETER POPUP MENU

Click this to select the current track/lane automation parameter.

LOCK BUTTON

Synchronizes the movements of lane automation with onscreen displays of channel volume and pan. See the **Automation and Controller Mapping** section for a full explanation.

ARM AUTOMATION RECORDING

Allows recording of automation data either via the onscreen control associated with the lane’s automation parameter, or by using a hardware controller assigned to a parameter. See **Recording Real-Time Automation** below.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track’s highlight color and all clips on the track.

Mute and Solo Button [CTRL] + Click Shortcuts

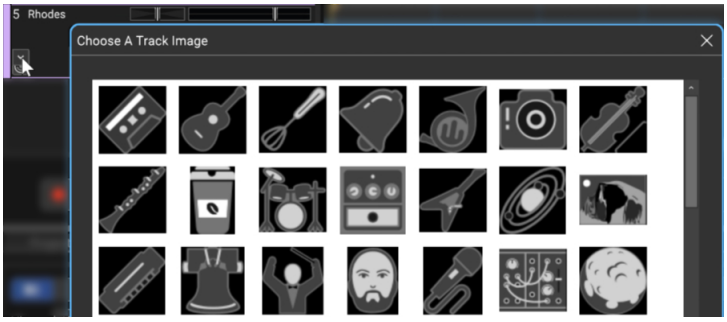
If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:



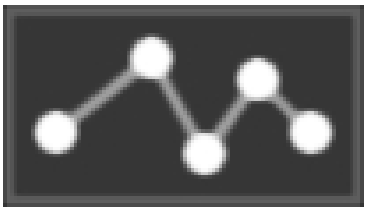
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

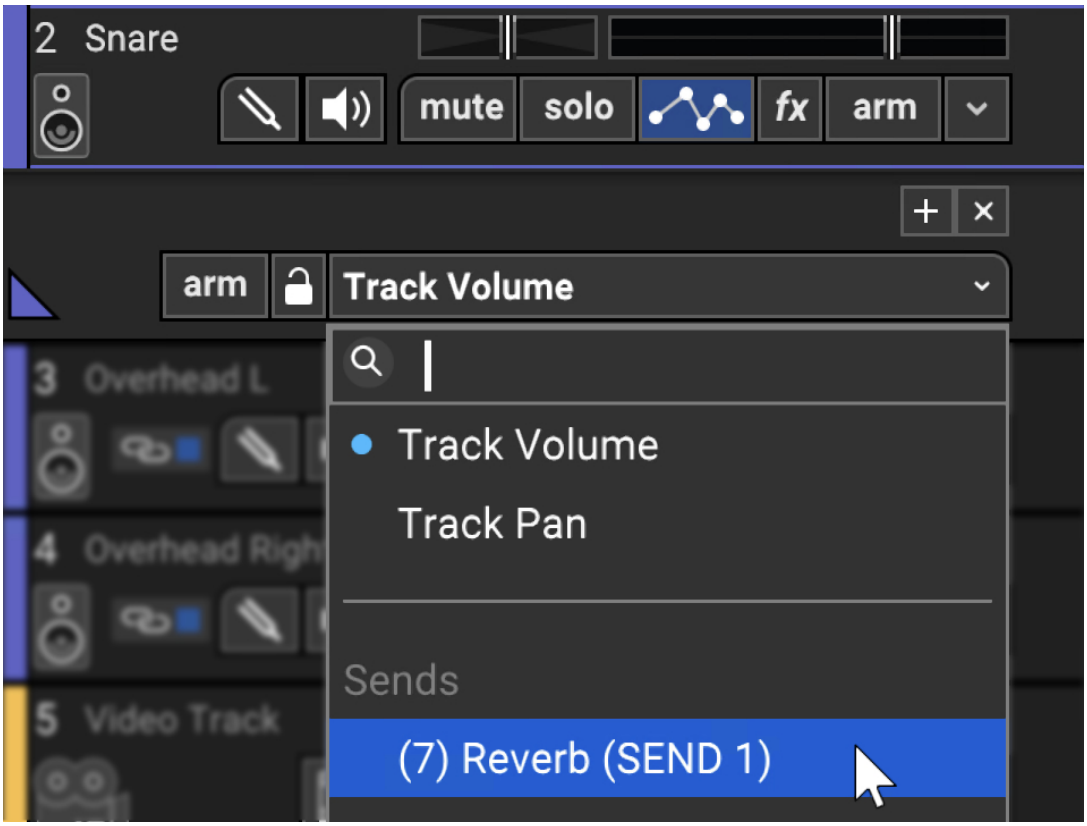
USING SEND TRACKS

Add a Send Track to the project by clicking the *+Track* button and selecting *Add Send Track*. You can also click *Track>Add Track>Send Track* in the main window menus.

In this example, we've renamed the Send Track, "*Reverb (SEND 1)*."



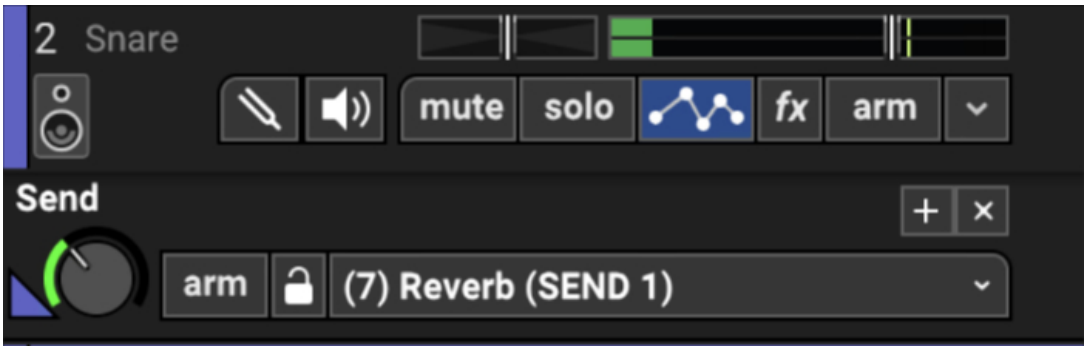
Click on the track you'd like to add reverb to. Display its track automation by clicking the *Automation* button.



Click the *Automation Type* drop-down menu (by default it will say *Track Volume*), then click beneath *Sends* to select the Send Track effect. In this example, the number *11* is

the track number of the Send Track, and *Reverb (SEND)* is the Send Track's name.

Once the Send Track is selected, a knob appears. This sets the amount of signal sent to the Send Track.



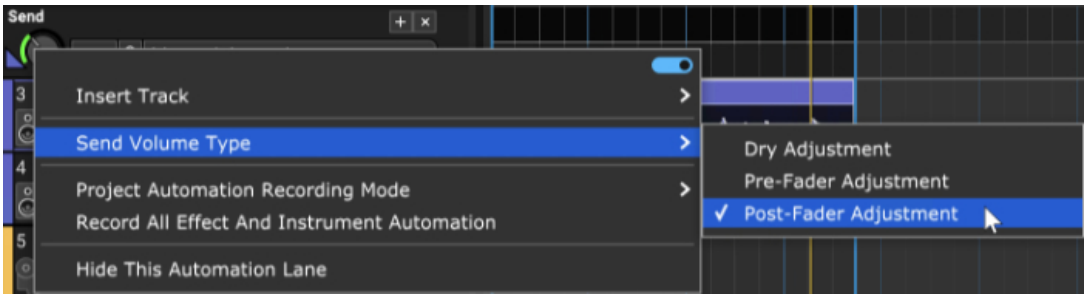
The send level can be set by clicking and dragging the knob up and down - the mouse cursor turns into up and down arrows. You can also set a channel's Send Track level by clicking the *Mixer* tab at the bottom of the screen and rotating the channel's *Send* knob, but we'll talk about the mixer later on. Keep in mind that numerous tracks can be sent to the same Send Track. The amount of the track's audio sent to the Send Track can also be adjusted via track automation. (For more information, see "Automation and Controller Mapping.") **LINK HERE**

Wait A Minute Mr. Post Send

Mixcraft Send Tracks default to Post-Fader volume adjustment. This is a sensible choice for most mix situations because it means reducing the volume of a track fader proportionally reduces the volume of the

Send Track. There are situations where this behavior isn't optimal. For example, if you'd like a dry instrument to be very quiet, but you'd like the reverbed signal very loud, Pre-Fader adjustment is a better choice.

SEND VOLUME TYPE



This lets you choose the point in the signal flow of a channel where audio is tapped to be sent to the Send Track. To change the Send Volume Type, right-click on the channel's *Send* knob in the Mixer or on the Send knob displayed when track automation is visible.

- **Dry Adjustment**

Audio is sent to the Send Track *before* the channel's insert effects or volume fader. Thus the signal sent to Send Track will have no channel insert effects applied and the volume fader has no effect on the signal level sent to the Send Track. You'll see the word *Dry* appear next to the track Send knob as a reminder. (i.e. "My channel faders are all down... why do I still hear these wacky effects?!?")

- **Pre-Fader Adjustment**

The track's audio is sent to the Send Track before the volume fader, thus the volume fader has no effect on the signal level sent to the Send Track. You'll see the word *Pre* appear next to the track Send knob as a reminder.

- **Post-Fader Adjustment**

The track's audio is sent to the Send Track after the channel volume fader. This the default setting, and the desired setting in most cases. To find out why, see the sidebar, "Wait A Minute Mr. Post Send."

Using Presets Optimized For Send Track Effects

When adding an effect to a Send Track, we recommend using a preset designed for a Send Track. (They'll have the word ***Send*** *in the title.) These presets will already have the wet/dry mix set to 100% wet in order to avoid the problem of having the dry signal's*

volume controlled by the channel fader and the effect's dry signal balance. If the clean volume appears to behave strangely ("Why can't I turn this darn channel down!%^&?"), click ***fx*** *in the Send Track, then the* ***Edit*** *button next to the effect. Now adjust the dry mix down to 0% and the wet mix up to 100%.*

TRACK RIGHT-CLICK COMMANDS - SEND TRACK

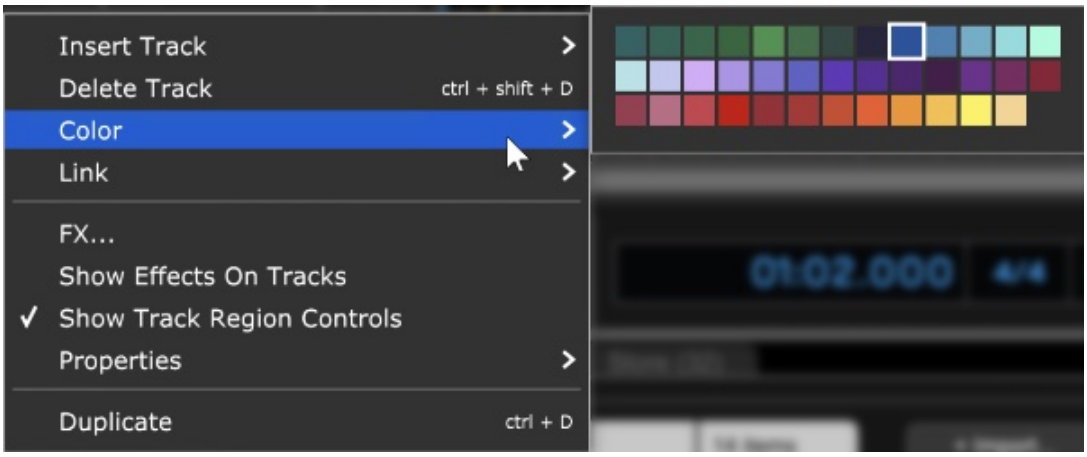
- **Insert Track**

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

- **Delete Track**

Removes the current track.

- **Color**



Changes the color of the track.

- **Link**

Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It's particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored "chain" icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• **FX...**

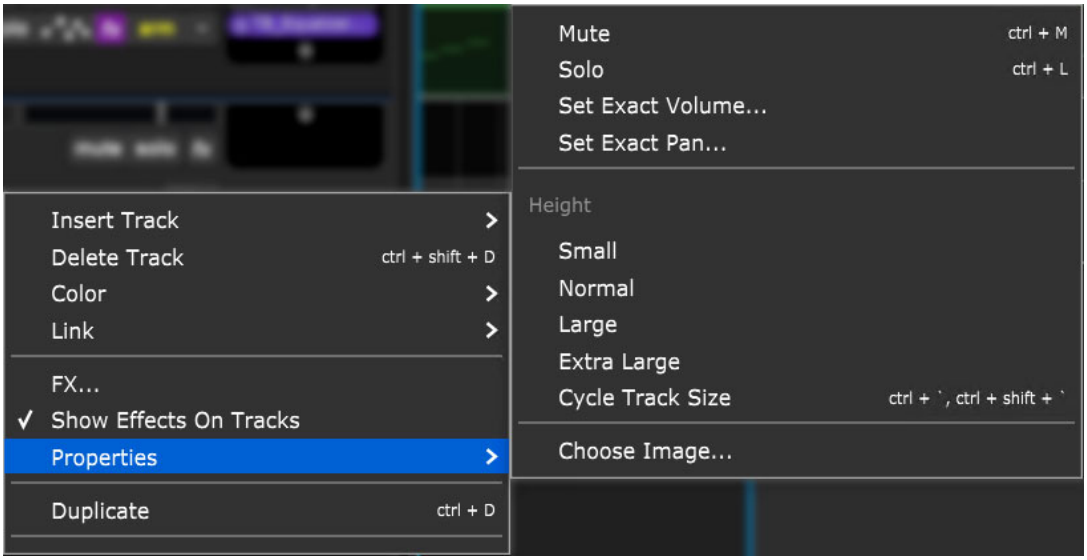
Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

• **Show Effects On Tracks**

Globally shows or hides insert effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

• **Show Regions Controls On Tracks**- Globally shows or hides Track Regions bars for Master and SubMix tracks. (MC 10 Pro Studio only)

• **Properties**



- **Mute**
  Tracks can be temporarily silenced by selecting *Mute*. The *Mute* button turns blue, and all clips on the track turn gray with diagonal lines.
- **Solo**
  Disables audio for all other tracks. The track *Solo* button will turn blue. Multiple tracks may be soloed simultaneously.
- **Set Exact Volume...**
  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Set Exact Pan...**
  Opens a window where the panning can be set precisely, either by slider control or by entering a numeric value.
- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.

- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.
  To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...
  The *Choose A Track Image* window opens:
  To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.
  JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

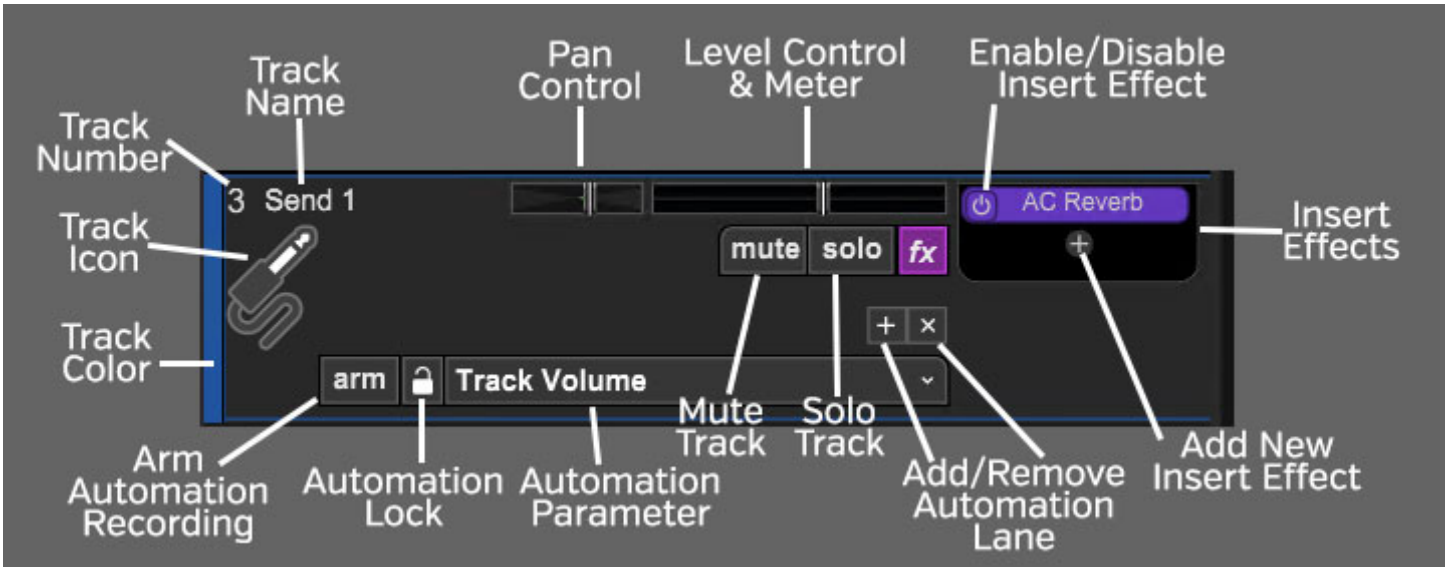
• **Duplicate-** Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-in setup, etc. Also useful if you'd like to try some wild edits and want to retain an unadulterated version.

• **Select All Linked Tracks-** If *Link* to other tracks is currently enabled for the track, this selects the current track and all other tracks currently linked.

SUBMIX TRACK

A SubMix track routes audio to an intermediate track before the Main Mix master volume. This is very useful as a master volume control for a group of related tracks such as a drum kit, or multiple tracks of backing vocals. SubMix tracks are also useful if you'd like to send a group of tracks to single channel insert effect. One common use would be to send drums or multi-tracked layered backing vocals through a single compressor instance to "glue" them together.

SUBMIX TRACK HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays

constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. Default names are generally the type of track (*SubMix*, *Video*, etc.). Tracks can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or clicking the [RETURN] or [ENTER] key.

PAN

The submix track’s pan control is the small horizontal slider to the left of the track volume control. Adjust the pan control by clicking and dragging it to the left or right. Pan is adjustable from 100% left to 100% right. The pan controls default to the center position - this means that the sound is equally balanced between the left and right channels. Track panning can also be set in the main window drop-down menu *Track>Properties>Set Pan>Set Exact Value* … This menu is also accessible by right-clicking a track.

Tip: For finer and more accurate pan adjustment, hold down [ALT], [SHIFT], or [CTRL] while dragging the pan slider.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*… from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter which displays the output level as the track plays.

INSERT EFFECTS - ADD/ENABLE/DISABLE

The track effects slots make it easy to load and access effects without opening the Effects List window - effects can be added by simple clicking the *+* sign and choosing an effect. Effects can also be enabled and disabled by clicking the "power" switch on the left side of the button.

If you don't see the track effects slots, their visibility can be toggled by clicking *Track>Show Effects On Tracks*, right-clicking on the track header and choosing *Show Effects On Tracks*, or by hovering over the right edge of a track header - the mouse pointer will turn into double-horizontal arrows that can be dragged to the right.

For more information about using effects, check out the creatively named **Using Effects** section.

FX LIST

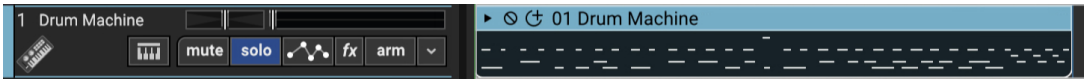
Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

ADD/REMOVE AUTOMATION LANE BUTTONS

The *+* button adds automation lanes beneath the send track, the *X* button will hide the closest automation lane the track. Keep in mind that clicking the *X* button does not delete automation data, it just hides the lane displaying it. For full information on using track automation, see the **Automation and Controller Mapping** section.

SOLO TRACK

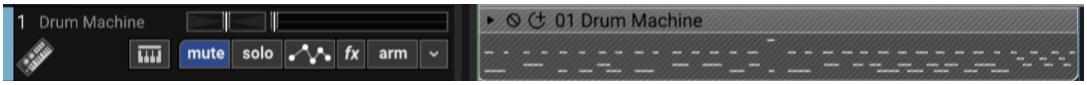
To hear a single track's audio, click the *Solo* button. Multiple tracks may be soloed. For example, to hear how the bass and guitar sound together without drums, solo the bass and guitar tracks. Once soloed, the track's solo button turns blue and all other tracks turn gray with diagonal lines. If multiple tracks are selected, all selected tracks are soloed simultaneously.



The currently selected track can also be soloed using the shortcut [CTRL]+L, or by right-clicking the track and selecting *Properties>Solo*.

If multiple tracks are soloed, [CTRL]-clicking a non-soloed track disables solo on all other tracks and soloes the clicked track. If multiple tracks are soloed and one of them is [CTRL]-clicked, solo is disabled for all tracks.

MUTE TRACK



Tracks can be temporarily silenced by clicking the track *Mute* button. Once muted, the solo button turns blue, and all clips on the track turn gray with diagonal lines. Tracks may also be muted using the shortcut [CTRL]+M, or by right-clicking the track and selecting *Properties>Mute*. If multiple tracks are selected, all selected tracks are muted simultaneously.

If multiple tracks are muted, [CTRL]-clicking an unmuted track unmutes all others and mutes the clicked track (sort of a mute “solo” function). If multiple tracks are muted and one of them is [CTRL]-clicked, **all** are unmuted.

AUTOMATION PARAMETER POPUP MENU

Click this to select the current track/lane automation parameter.

LOCK BUTTON

Synchronizes the movements of lane automation with onscreen displays of channel volume and pan. See the **Automation and Controller Mapping** section for a full explanation.

ARM AUTOMATION RECORDING

Allows recording of automation data either via the onscreen control associated with the lane’s automation parameter or by using a hardware controller assigned to a parameter.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.

Mute and Solo Button [CTRL] + Click Shortcuts

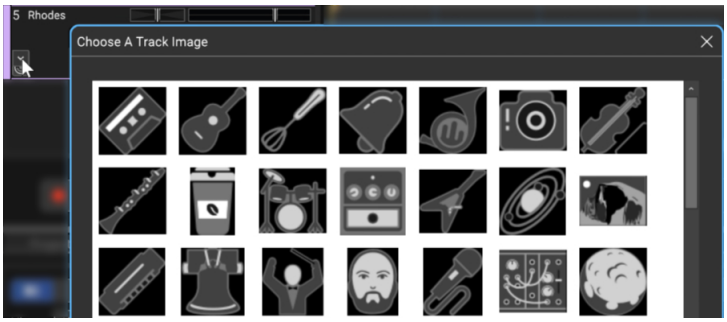
If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in the project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:



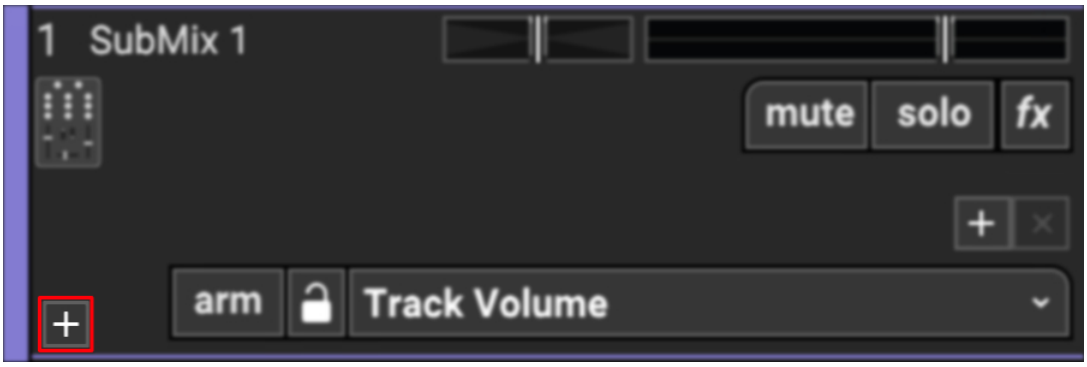
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

USING SUBMIX TRACKS

To create a SubMix Track, *click the +Track button* and select *Add Submix Track*. You can also click *Track>Add Track>SubMix Track* in the main window menu or right-click in the Track List area and use the *Insert Track* menu.

To add tracks to a SubMix Track, drag and drop the tracks onto the SubMix track. (Make sure to grab tracks in the track list, not clips in the grid; when you move a track, its clips move with it.) Once tracks are the child of a SubMix track, they can be freely moved up and down in the track list. Besides being directly beneath the SubMix track, child tracks will indent slightly with a small black region on the left side for ease of visibility. identification. If the SubMix Track is moved in the track list, all child tracks move with it. Child tracks may be shown or hidden by clicking the +/- sign at the far left side of the SubMix Track.



Regardless of the show or hide state of child tracks, you'll see a "ghost" waveform approximating the sum of all the child track audio waveforms in the clip area next to the SubMix track. This is particularly handy when SubMix child tracks are hidden.

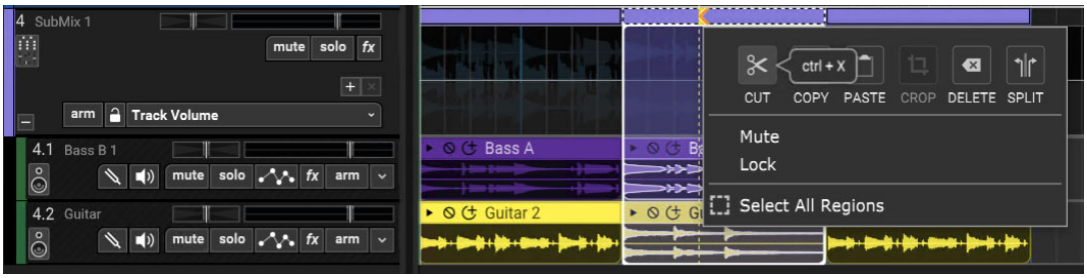
Volume, panning, solo, mute, insert effects, and automation remain independently adjustable for SubMix child tracks. Tracks may also be dragged and dropped out of the SubMix track - drag the track up or down to a location out of the SubMix track and the track becomes a standard track again.

NESTING SUBMIX TRACKS

SubMix tracks can be nested into *other* SubMix tracks. This is done exactly like dragging tracks into a SubMix track. Nested SubMix tracks let you subdivide and organize tracks with great precision. You could nested SubMix tracks for the toms of a SubMixed drum kit, or multi-tracked individual harmony lines in a large vocal production.

TRACK REGIONS (MIXCRAFT PRO STUDIO ONLY)

Track Regions is a Master Track and SubMix Track feature that makes light work of retooling song arrangements. **For a step-by-step example of how to use Track Regions, please see the** Track Regions **section.**



The basic idea is that instead of editing and moving individual clips, edits made to the purple horizontal bar at the top of the SubMix Track affect all clips in the SubMix Track.

Note that Track Region edits made in the Master Track affect ALL clips below, **including** SubMix tracks, whereas SubMix Track Region edits affect only clips within the SubMix Track.

TRACK RIGHT-CLICK COMMANDS - SUBMIX TRACK

• **Insert Track**

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

• **Delete Track**

Removes the current track.

• **Color**

Changes the color of the track.

• **Link**

Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It’s particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored “chain” icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).

- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• **FX...**

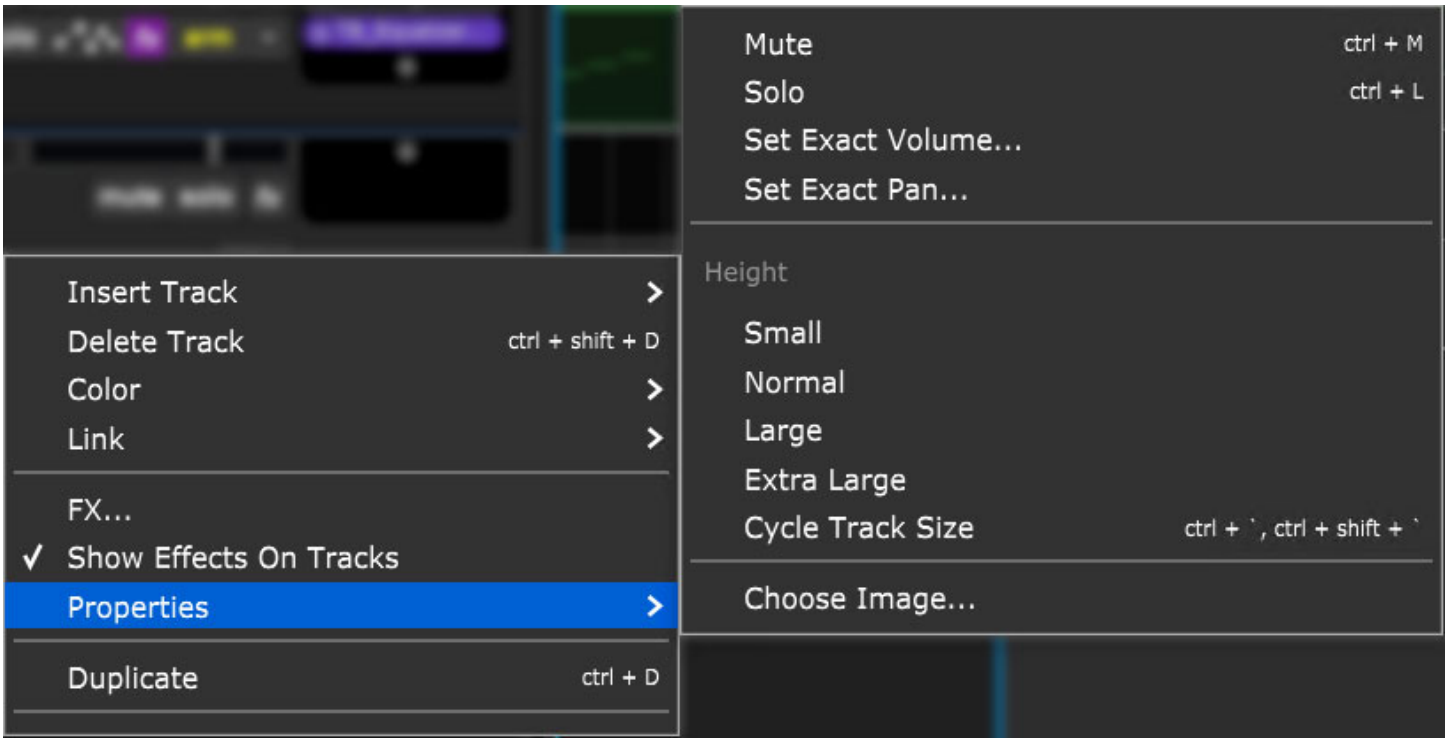
Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

• **Show Effects On Tracks**

Globally shows or hides insert effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

• **Show Regions Controls On Tracks**- Globally shows or hides Track Regions bars for Master and SubMix tracks. (MC 10 Pro Studio only)

• **Properties**



- **Mute**

  Tracks can be temporarily silenced by selecting *Mute*. The *Mute* button turns blue, and all clips on the track turn gray with diagonal lines.

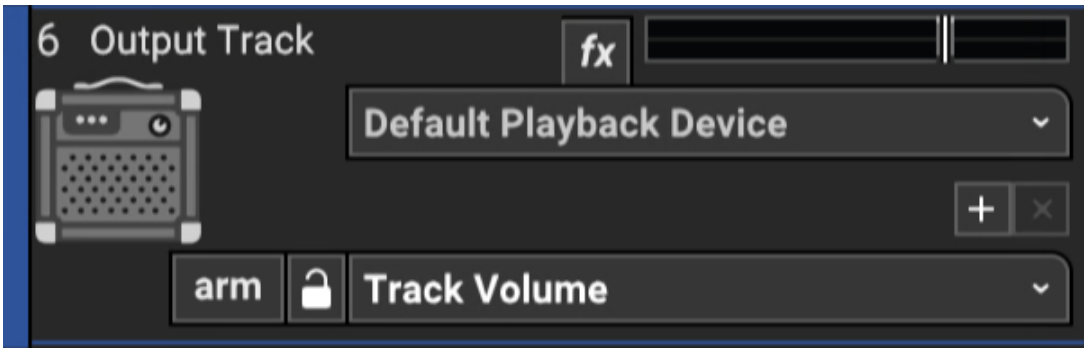
- **Solo**
  Disables audio for all other tracks. The track *Solo* button will turn blue. Multiple tracks may be soloed simultaneously.
- **Set Exact Volume...**
  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Set Exact Pan...**
  Opens a window where the panning can be set precisely, either by slider control or by entering a numeric value.
- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.
  To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...
  The *Choose A Track Image* window opens:
  To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.
  JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

• **Duplicate-** Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-in setup, etc. Also useful if you'd like to try some wild edits and want to retain an unadulterated version.

• **Select All Linked Tracks-** If *Link* to other tracks is currently enabled for the track, this selects the current track and all other tracks currently linked.

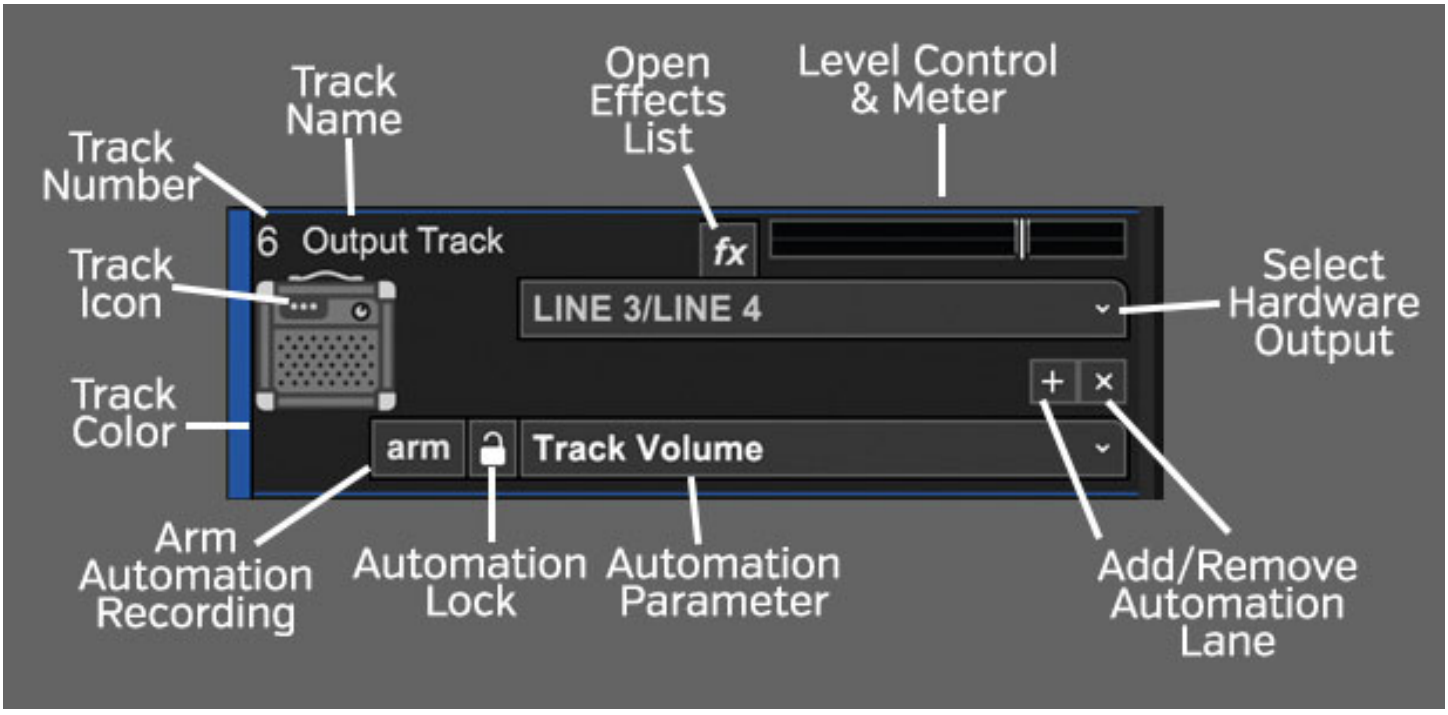
OUTPUT BUS TRACK

An Output Bus Track is typically used to route audio to physical audio outputs when using audio hardware with multiple outputs, or the outputs of additional audio interfaces attached to your computer.



To create an Output Bus Track, click the *+Track* button and select *Add Output Bus Track*. You can also click *Track>Add Track>Output Bus Track* in the main window menu or right-click in the Track List area and use the *Insert Track* menu.

OUTPUT BUS TRACK HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. Default names are generally the type of track (*Output*, *Video*, etc.). Tracks can be renamed at any time by double-clicking and typing a new name, and either clicking outside the naming field, or clicking the [RETURN] or [ENTER] key.

FX LIST

Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter which displays the output level as the track plays.

SELECT HARDWARE OUTPUT

Opens a menu where individual physical hardware outputs can be selected for the output bus track.

ADD/REMOVE AUTOMATION LANE BUTTONS

The *+* button adds automation lanes beneath the send track, the *X* button will hide the closest automation lane the track. Keep in mind that clicking the *X* button does not delete automation data, it just hides the lane displaying it. For full information on using track automation, see the **Automation and Controller Mapping** section.

AUTOMATION PARAMETER POPUP MENU

Click this to select the current track/lane automation parameter.

AUTOMATION LOCK BUTTON

Synchronizes the movements of lane automation with onscreen displays of channel volume and pan. See the **Automation and Controller Mapping** section for a full explanation.

ARM AUTOMATION RECORDING

Allows recording of automation data either via the onscreen control associated with the lane's automation parameter, or by using a hardware controller assigned to a parameter.

TRACK COLOR

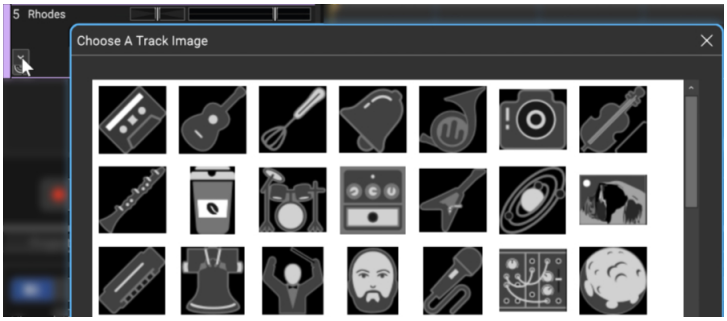
Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

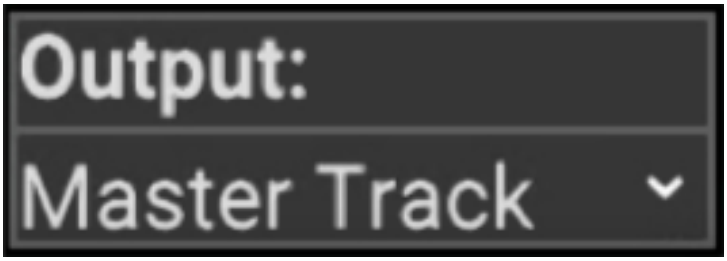
The *Choose A Track Image* window opens:



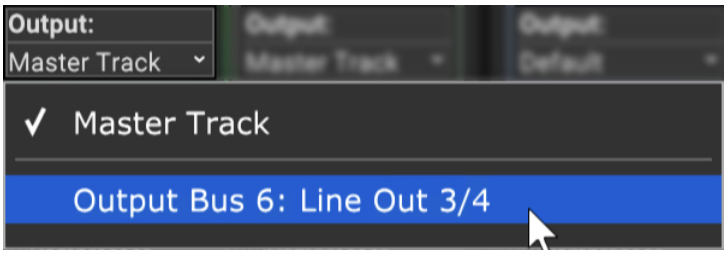
To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

ROUTING AUDIO TO AN OUTPUT BUS TRACK



Output routing for audio tracks **must** be set in the Mixer window. We'll talk more about mixer-window stuff in the "Mixer Tab" chapter, but we'll take a little detour into mixer land to explain Output Bus Track routing.

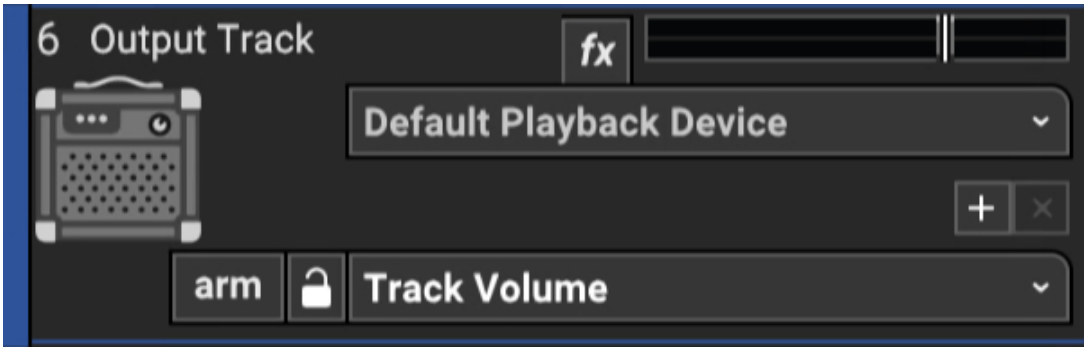


Click the *Mixer* tab at the bottom left of the screen. At the top of each mixer channel, you'll see each audio channel's output selector pop-up.(this is the default location, but it can be rearranged to appear elsewhere... we trust you'll find it). The bottom half shows the current routing; by default, this will be *Main Mix*. Clicking on the bottom half opens a pop-up menu where you'll select either *Main Mix* or any Output Bus tracks you've added to the project. Once selected, the current setting for track changes in the lower half of the output selector pop-up. At the risk of stating the obvious, you can route as many channels as desired to an Output Bus Track (it is a mixer, after all!).

ROUTING OUTPUT BUS TRACKS TO AUDIO HARDWARE OUTPUTS

If you're using an audio device with multiple outputs, click on an Output Bus Track's *Output* drop-down menu beneath the level meter (it'll say *Default Playback Device*). Here, you'll be able to select from your audio hardware's available physical outputs. The routing of tracks to physical outputs can also be configured in the *Mixer* tab; see the Mixer Tab section. There are many ways to use Output Bus Tracks to enhance a mix. For some swell examples, check out **Appendix 3: Nifty Uses For Output Bus Tracks**.

TRACK RIGHT-CLICK COMMANDS - OUTPUT BUS TRACK



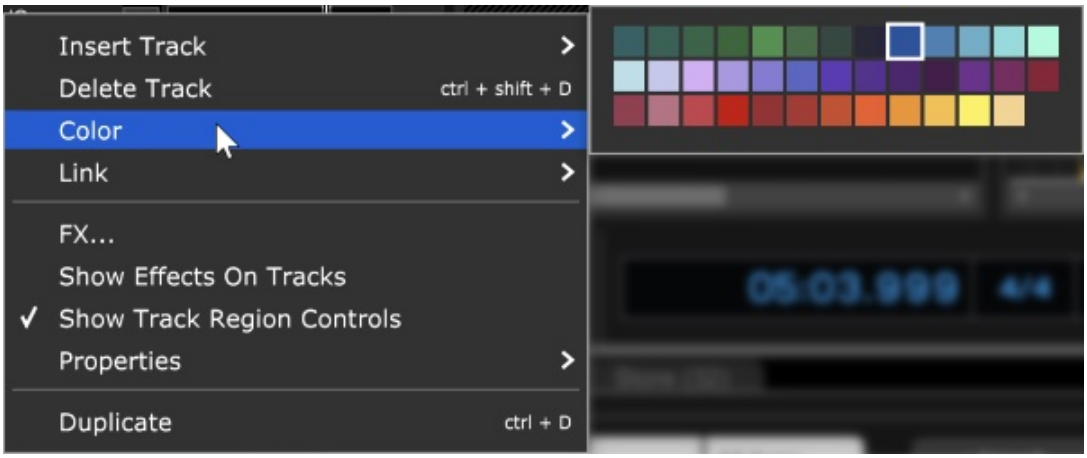
- **Insert Track**

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

- **Delete Track**

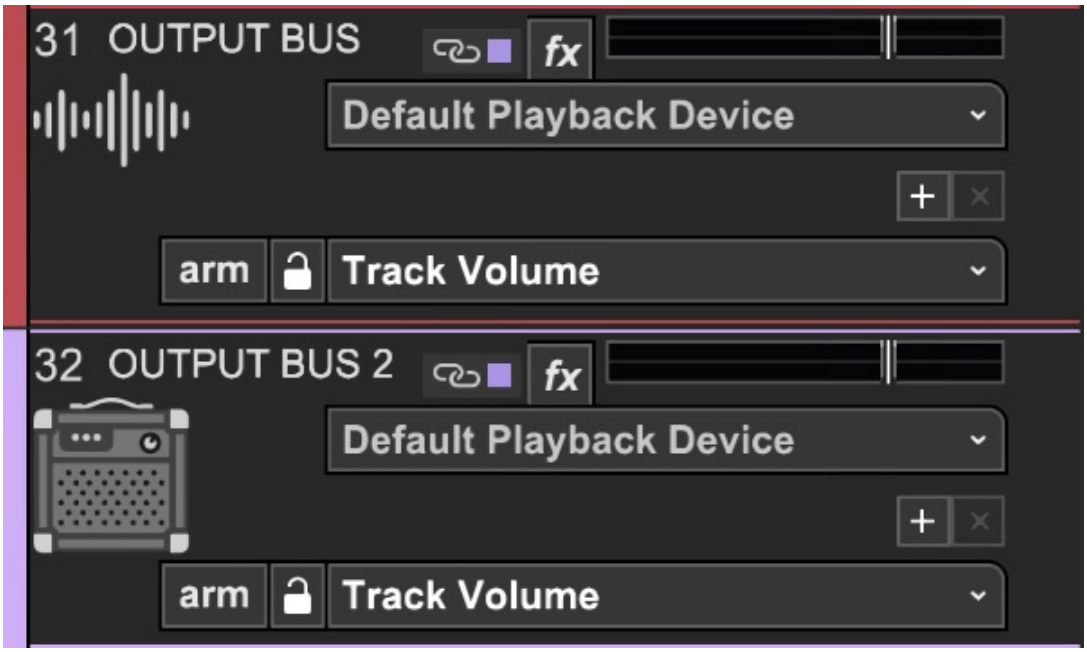
Removes the current track.

- **Color**



Changes the color of the track.

- **Link**



Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It's particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored "chain" icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• **FX...**

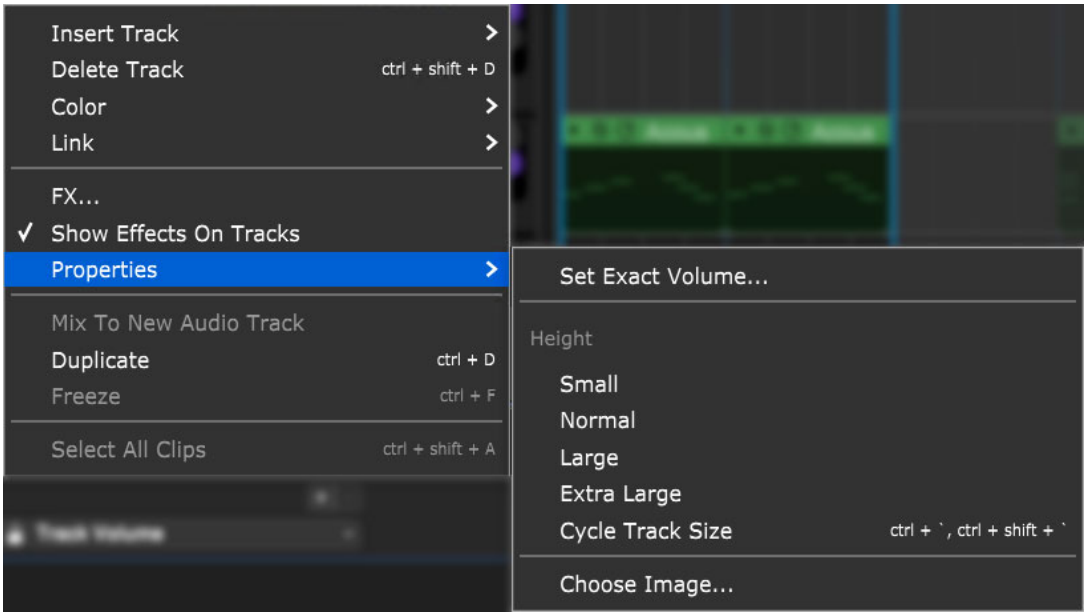
Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

• **Show Effects On Tracks**

Globally shows or hides insert effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

• **Show Regions Controls On Tracks**- Globally shows or hides Track Regions bars for Master and SubMix tracks. (MC 10 Pro Studio only)

• **Properties**



- **Set Exact Volume...**

  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Height**

  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**

  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**

  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own. To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select

Track>Properties>Choose Image... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:

To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

• **Mix To New Audio Track**

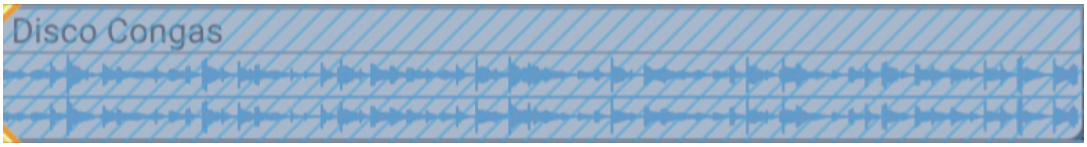
Mixes virtual instrument or audio clips on the selected track to a single, continuous audio clip and places it on a newly created track beneath the current track. This has a couple of practical uses:

- **Convert MIDI Virtual Instrument To An Audio Wave** -This is useful if you're running an older computer and a high-CPU instrument plugin is slowing down your computer; in this way, you can "print" the audio and shut off the plugin.

  It's also useful if you're handing off files to ~~some chump~~ another user who doesn't have virtual instruments you've used in a project.
- **Permanently Embed Insert Effects Or Instruments In An Audio File Again-** This is useful if you're handing off a project to another user who doesn't have effects plug-ins you've used.
- **Long-Term Archiving** - Instrument or effects plug-ins can become obsolete or incompatible with current operating systems/format changes, etc. Converting to "pure" audio files can act as insurance to guarantee projects remain playable for years to come.

• **Duplicate-** Creates a copy of the track and all of its clips. This is a time-saver if you want to add a second part using the same instrument, add a vocal double with the same plug-in setup, etc. Also useful if you'd like to try some wild edits and want to retain an unadulterated version.

• **Freeze**- Freeze is similar to *Mix To New Audio Track*; it creates a new audio file with instruments or effects “burned in” to the file. Unlike *Mix To New Audio Track*, it does not make a new track; the audio is created in the background and plays back on the existing track. Because instruments and effects are part of the newly created audio file, Mixcraft disables instrument and effects plugs upon playback, thus freeing up computer processor resources. If you’re using an older or underpowered computer, *Freeze* can be tremendously helpful (check out the CPU percentage meter while playing back projects for reference). Conversely, if you’re using a fast, modern computer, you probably won’t need *Freeze*.



Frozen tracks turn blue with diagonal lines; this makes it easy to keep track of which tracks are frozen. Frozen tracks can be unfrozen, that is, converted back to standard tracks with instrument and plug-ins active, by reselecting the *Freeze* command (which will say *Unfreeze*).

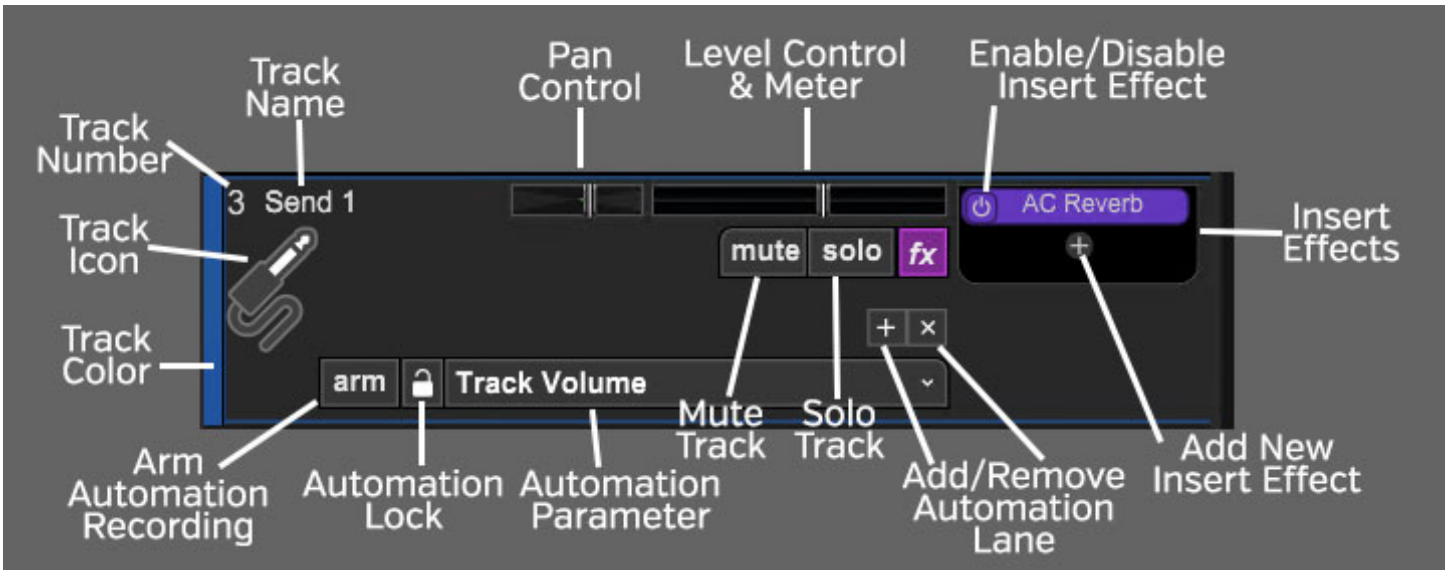
• **Select All Clips-** This selects all clips on the track, with one minor detail you should know about if you're using the Performance Panel: *Select All Clips* selects all of a track's clips in either the main clip grid or in the Performance Panel, depending on which was clicked most recently.

• **Select All Linked Tracks-** If *Link* to other tracks is currently enabled for the track, this selects the current track and all other tracks currently linked.

MASTER TRACK

A project has one Master Track. Think of this as the stereo master output the entire mix gets routed through. Volume, panning, and effects can be added and automated for the entire project.

MASTER TRACK HEADER



TRACK NUMBER

All tracks in a Mixcraft project are numbered, starting at 1 at the top track, and increasing up as tracks are added below. Note that track numbering always stays constant - that is, track numbers increment from 1 upward no matter how tracks are arranged or moved. (Track numbers aren't "attached" to specific tracks.)

TRACK NAME

Every track has a name. Unlike other track types, the master track cannot be renamed.

FX LIST

Click the *fx* button to open the Effect List window. Here effects can and presets can be selected.

LEVEL CONTROL & METER

Track volume is adjusted by the horizontal slider with a built-in level meter. Click down on the slider and move it left or right to decrease or increase volume. Volume can be set from 0% to 200% (-Inf dB to +6 dB).

To set an exact track volume, choose *Track>Properties>Set Volume>Set Exact Value*... from the Main Window drop-down menu and enter the desired volume. This can also be accessed by right-clicking on the track.

Tip: Hold down [ALT], [SHIFT], or [CTRL] and click-drag the slider for finer and more accurate adjustment.

The horizontal volume fader contains an integrated level meter which displays the output level as the track plays.

INSERT EFFECTS - ADD/ENABLE/DISABLE

The track effects slots make it easy to load and access effects without opening the Effects List window - effects can be added by simple clicking the *+* sign and choosing an effect. Effects can also be enabled and disabled by clicking the "power" switch on the left side of the button.

If you don't see the track effects slots, their visibility can be toggled by clicking *Track>Show Effects On Tracks*, right-clicking on the track header and choosing *Show Effects On Tracks*, or by hovering over the right edge of a track header - the mouse pointer will turn into double-horizontal arrows that can be dragged to the right.

For more information about using effects, check out the creatively named **Using Effects** section. \

ADD/REMOVE AUTOMATION LANE BUTTONS

The *+* button adds automation lanes beneath the send track, the *X* button will hide the closest automation lane the track. Keep in mind that clicking the *X* button does not

delete automation data, it just hides the lane displaying it. For full information on using track automation, see the **Automation and Controller Mapping** section.

AUTOMATION PARAMETER POPUP MENU

Click this to select the current track/lane automation parameter.

AUTOMATION LOCK BUTTON

Synchronizes the movements of lane automation with onscreen displays of channel volume and pan. See the **Automation and Controller Mapping** section for a full explanation.

ARM AUTOMATION RECORDING

Allows recording of automation data either via the onscreen control associated with the lane's automation parameter, or by using a hardware controller assigned to a parameter.

TRACK COLOR

Track colors can be individually set by selecting *Track>Properties>Track Color* in the main window drop-down menus, by right-clicking a track and choosing from the color palette, or by clicking directly on the vertical color bar at the far left of the track. This affects the track's highlight color and all clips on the track.

Mute and Solo Button [CTRL] + Click Shortcuts

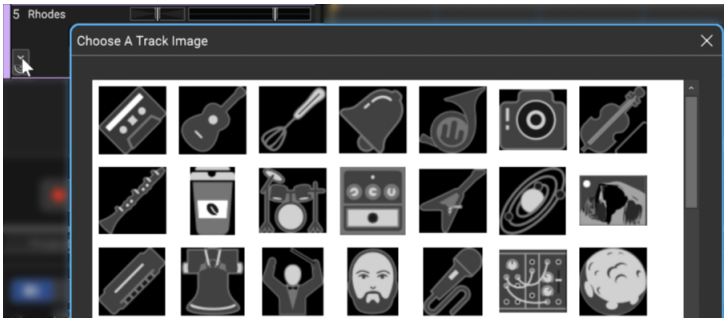
If multiple tracks are soloed or muted, you can unsolo or unmute all tracks in project by [CTRL] + clicking on a solo or mute button. Multiple tracks cannot be Han Soloed.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:



To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

HIDING AND SHOWING THE MASTER TRACK

To toggle the Master Track view, click the *Master* button at the top of the Track List. The button will turn blue and the Master Track will display at the very bottom of the Track

List. (The idea is that the Master Track is the final processing stage.) You can also click *Track>Show Master Track* in the main page drop-down menus.

TRACK RIGHT-CLICK COMMANDS - MASTER TRACK

• Insert Track

These commands add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

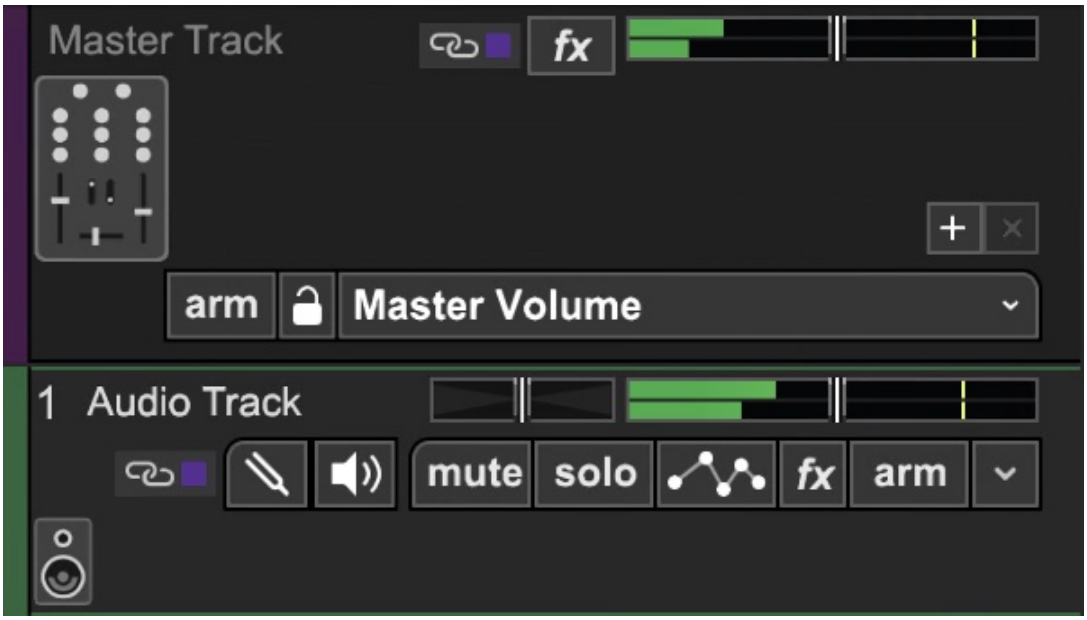
• Show Master Track

Uncheck to hide the Master Track. The Master Track can also be shown or hidden by clicking on the *Master* button directly above the track list.

• Color

Changes the color of the Master Track.

• Link



Multiple tracks can also be linked together; this gangs up the volume, pan, mute, solo and send controls. It’s particularly useful if you have a group of similar tracks (like drums, or multiple backing vocals). You may have as many separate groups of tracks linked as you like. Linked tracks will display uniquely colored “chain” icons beneath the track name.

To link two or more tracks, select tracks as detailed in the previous section then choose from the following Link options:

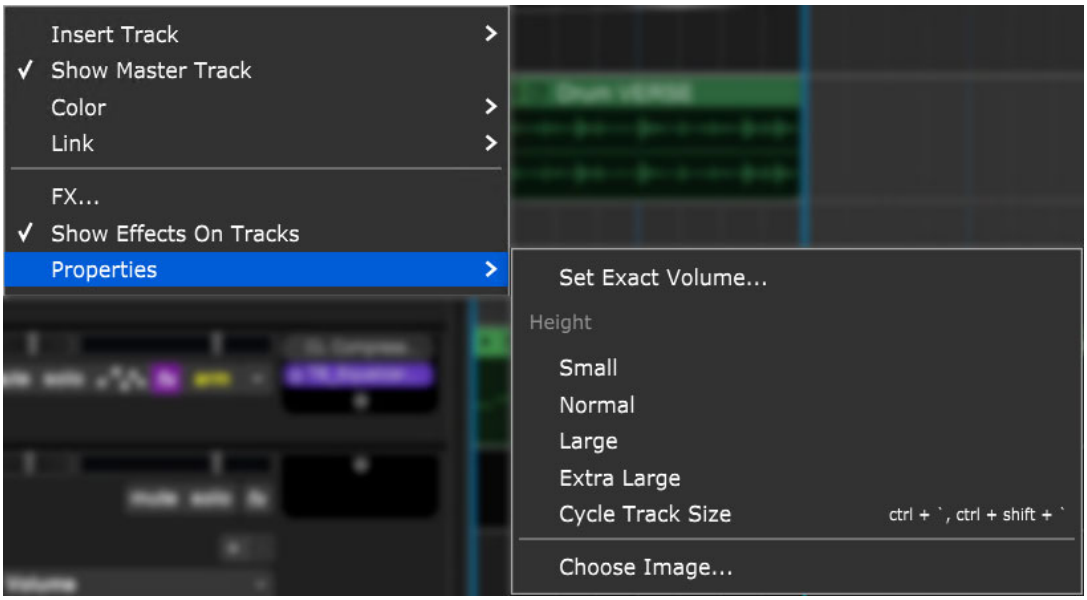
- **Link Selected Tracks**- Select two more tracks, then right-click *Link>Link Selected Tracks*
- **Unlink All**- Unlike Fleetwood Mac, you can always break the chain (always break the chain...). *Unlink All* disables linking for alltracks in the current Link group (one track within the group must currently be selected before unlinking).
- **Unlink**- This disables linking for only the selected track in the current Link group. Use this to remove a single track from the Link group.

Note: Track linking is overridden for volume, pan, or send if automation locks are enabled for these parameters.

• **FX...**
Opens the Effects List window for the track where effects can be added and edited. This is the same as clicking the track *fx* button (next to the *Arm* button).

• **Show Effects On Tracks**
Globally shows or hides insert display of effects next to the track list. Unless you're short on screen real estate (i.e., laptop), we recommend leaving this on.

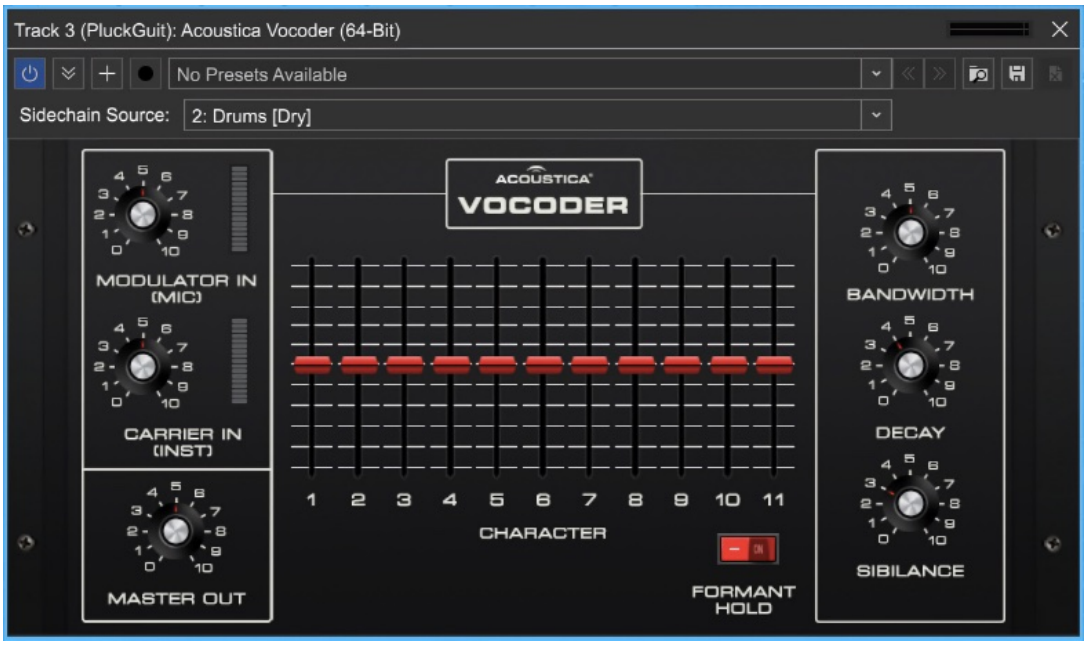
• **Properties**



- **Set Exact Volume...**
  Opens a window where the track volume slider can be set precisely, either by slider control or by entering a numeric value.
- **Height**
  Allows individual track heights to be adjusted to *Small*, *Normal*, *Large*, or *Extra Large* size.
- **Cycle Track Size**
  Moves through *Small*, *Normal*, *Large*, or *Extra Large* track heights. (This one makes more sense when track height is selected via the [CTRL] + ' and [CTRL] + [SHIFT] + ' key shortcuts).
- **Choose Image...**
  Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft's included images or import your own.
  To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...
  The *Choose A Track Image* window opens:
  To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

VOCODER TRACK



Mixcraft 10 includes an awesome vintage-style vocoder. For full information on how it works and what its controls do, please jump to the **Acoustica Vocoder** section. We'll go over just enough vocoder operation to get you up and running with Vocoder Tracks. Basically speaking, a vocoder imparts the character of one sound onto another. The base sound is known as the "carrier," and the sound altering the character of the base sound is known as the "modulator." In the case of the classic "talking robot" effect vocoders are known for, a full, brassy, constant sawtooth wave synthesizer sound is the carrier, and a spoken voice talking into a mic is the modulator. A synth sawtooth wave or full string sound is an ideal carrier wave, because it's constant, and contains a wide frequency spectrum.

We'll get into more detail in the **Acoustica Vocoder** section, but for now, the important part to understand is that the carrier and modulator signals must be properly routed to the vocoder for it to work correctly. You could manually set up the same configuration, but Mixcraft's Vocoder Track makes this really easy by setting up everything in one step.

The following four things occur when a Vocoder Track is created:

• A Submix Track containing an audio track (Vocoder Modulator) and an Instrument Track (Vocoder Carrier) is created.

• Software Monitoring is enabled for the audio track - this lets you use a microphone or other input source for real-time modulation.

• The Mixcraft instrument preset Vocoder Saw is opened in the instrument channel, and the Acoustica Vocoder is inserted into the first effects slot.

• The Vocoder Modulator audio track is routed to the Acoustica Vocoder sidechain input. This is the important secret sauce because the microphone audio (aka, the modulator) needs to control the vocoder.

With everything above set up, vocoding is as easy as plugging a microphone in, making sure its audio input is routed to the Vocoder Modulator audio track, selecting the Vocoder Carrier instrument track, and holding down notes on a keyboard controller.

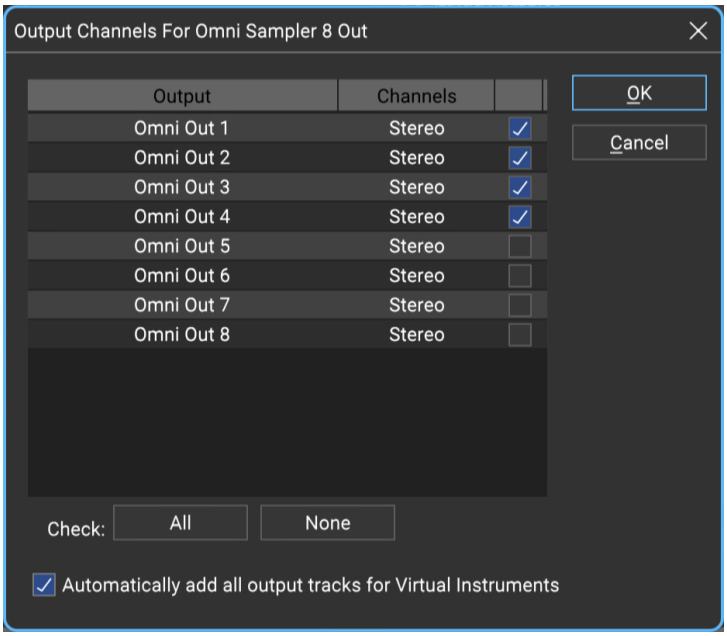
MULTI-OUT INSTRUMENT CHILD TRACKS

Some virtual instruments have multiple output channels (most commonly virtual drum kit-type instruments), allowing separate routing and processing of individual sounds. When a multiple-output instrument is loaded, a + sign appears next to the small keyboard icon and at the bottom of the corresponding mixer channel.

If a track has multiple outputs, Mixcraft creates a child track for each output. This enables independent control of volume, pan, and EQ settings, as well as using independent insert and send effects for each of the instrument's outputs. This is useful if you'd like a massive reverb on a snare drum, but want to keep the kick drum dry, for example.

To set up multiple outputs, click the channel's keyboard instrument icon next to the *Mute* button, then click the instrument's *Outputs>Config*... button.

Use the checkboxes to enable individual outputs, or click the *All* or *None* button to quickly enable or disable all outputs (or if you're an all-or-none type).



Checking the *Automatically add all instrument output tracks for Virtual Instruments* box at the bottom will always enable all available individual outs when new multiple-out instruments are opened (you can also enable the *Automatically add all instrument output tracks for Virtual Instruments* in *File>Preferences>Plug-Ins* in the main window).

If you do not need all the mix output channels, unused outputs can be shut off by unchecking outputs. Click the *OK* button when the outputs are configured as desired.

The + sign in a Multiple-Out Virtual Instrument track hides or displays the view of child tracks. This won't affect the audio configuration in any way, but it's convenient if you don't want to fill the screen with tracks from a single multi-out virtual instrument.

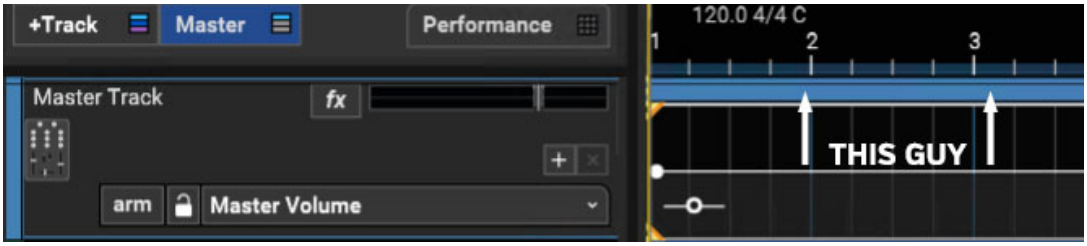
More About Multiple-Out Virtual Instruments

In addition to configuring Mixcraft to recognize multiple-output virtual instruments, you'll likely need to set up the instrument itself. Drum-based multiple-output virtual instruments typically feature a built-in mixer page with output destination settings. This is where you'll instruct the instrument to send individual sounds to Mixcraft's separate outputs. Sampler-type virtual instruments may not have a page resembling a traditional audio mixer, but may feature keymaps or groups with output destination settings. If you're unable to figure it out, consult the virtual instrument's owner's manual.

TRACK REGIONS (MIXCRAFT PRO STUDIO ONLY)

Track Regions is a super-nifty Master Track and SubMix Track feature that makes light work of retooling song arrangements. The basic idea is that instead of editing and moving individual clips, edits made to the horizontal bar in the Master Track affect ALL clips beneath, or in the case of a Submix Track, all clips in the SubMix track. Note that both region and lane automation is "included" in when clips are duplicated.

The Track Regions edit bar looks like this:



Note: The Track Regions bar is visible by default but it can be hidden. If you're not seeing it, click the *Preferences* gear icon at the top of Mixcraft interface (below the *Sound* menu), click *Project*, and select the *Show Track Regions On Master And Submix Tracks* check box.

Let's say we have a basic song that looks like this:

Your windbag manager saw on Twitter that the chorus is important in modern music, so you'd like to add an additional chorus before the second verse.

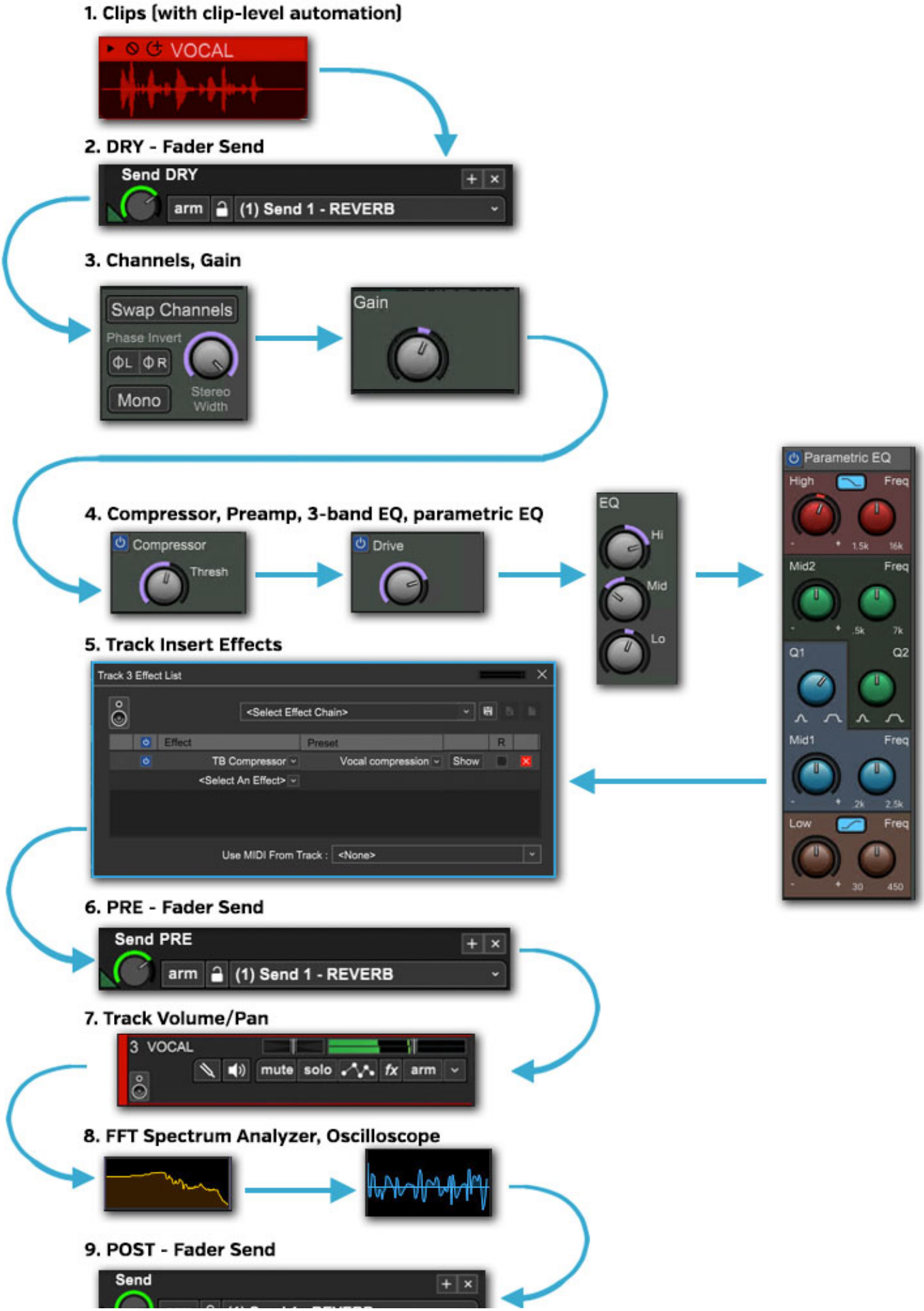
Place the Caret exactly at the beginning of the chorus (bar 3), then right-click on the blue bar in the Master Track and click the *Split* button. (By the way, the Track Regions bar won't necessarily be blue - its color is the same as the current Master or SubMix Track color). You'll see two tiny triangles on the Track Region Bar at the Caret location that look kinda like a fortune cookie.

Move the Caret to the end of the chorus (bar 5), right-click on the Track Region bar, and *Split* a second time.

Now entire song sections can be freely moved by just click+dragging the appropriate Track Regions bar. Going along with our example, to add an extra chorus, drag the Track Regions bar above the second chorus (bars 5-7) to bar 7 in order to create a 2-bar "opening." Now [ALT]+drag the Track Regions bar above the chorus (bars 3-5) to create a duplicate of all of the chorus clips.

The song now has two consecutive choruses, it'll be a giant hit, you're gonna be a massive rock star, and we're still stuck here typing this enormous owner's manual that nobody's gonna read.

Below is a diagram of how the audio signal flow works in Mixcraft. This should help illustrate all previous discussed dry/pre/post business.


1. Clips (with clip-level automation)
VOCAL
2. DRY - Fader Send
Send DRY
arm
(1) Send 1 - REVERB
3. Channels, Gain
Swap Channels
Phase Invert
ΦL
ΦR
Mono
Stereo Width
Gain
4. Compressor, Preamp, 3-band EQ, parametric EQ
Compressor
Thresh
Drive
EQ
Hi
Mid
Lo
Parametric EQ
High
Freq
Mid2
Q1
Q2
Mid1
Low
5. Track Insert Effects
Track 3 Effect List
<Select Effect Chain>
Effect
Preset
R
TB Compressor
Vocal compression
Show
<Select An Effect>
Use MIDI From Track :
<None>
6. PRE - Fader Send
Send PRE
arm
(1) Send 1 - REVERB
7. Track Volume/Pan
3 VOCAL
mute
solo
fx
arm
8. FFT Spectrum Analyzer, Oscilloscope
9. POST - Fader Send
Send

arm
(1) Send 1 - REVERB

MIDI BASICS

MIDI is an acronym for *Musical Instrument Digital Interface*. It’s a series of digital messages used to transmit notes or alter the sounds of instruments. A Virtual Instrument Track in Mixcraft contains Virtual Instrument Clips, which in turn contain MIDI data. MIDI messages contain no actual audio - a good analogy is to think of MIDI as a sort of high-end player piano that tells virtual or hardware instruments what note to play, how long, and other details, such as pitch bend, mod amount, etc.

MIDI NOTES

When middle C is played on a music keyboard, it sends a short message that translates to “play middle C.” When you let go of the key, a message is sent that translates to “stop playing middle c.” In addition, the message contains other information, such as the MIDI channel and key velocity. There are 16 MIDI channels which allow you to route MIDI messages. The key velocity is a number from 1 to 127 which describes how fast the key was depressed. A velocity of 1 would hardly be heard and a velocity of 127 would be full volume.

Each MIDI Note message contains the following information: note value (C0 - G10), key velocity (1-127), and MIDI channel (1-16).

NOTE VALUE

This is the pitch value of the note. There are 128 possible MIDI notes, ranging from a low of C-1 to a high of G9.

KEY VELOCITY

This is how fast, i.e. hard, the key was pressed. Faster velocities usually correspond to louder sounds or may trigger extra sounds, depending on the instrument and how it’s programmed.

MIDI CHANNEL

MIDI channels can be thought of like lanes on a freeway, with each of its 16 channels containing an independent MIDI data stream. In reality, MIDI messages are sent down the cable one after the other (i.e. serially), but because the data is moving very quickly, it’s fuctionally equivalent to multiple channels sent simultaneously (i.e. in parallel).

MIDI channels allow routing of specific channels to specific instruments or tracks.

MIDI CONTROLLERS

A controller is a type of MIDI message that controls other parameters. The most commonly used controllers are the pitch and modulation wheels (or possibly a joystick, ribbon, or other fancy controller).

- **Pitch Wheel (Pitch Bend)**

This controller usually bends the pitch up or down. Though most MIDI controls have a range of 0-127, MIDI pitch bend has range of -8191 to 8192. This much finer scale is used our because our ears are extremely sensitive to tiny pitch changes, and it prevents audible “stepping” during pitch bends.

- **Modulation**

Modulation is most often used to control vibrato. You’ll see it abbreviated as “mod wheel,” or just, “mod.” Mod isn’t limited to vibrato - like most MIDI controllers,

it can be assigned to control almost any MIDI parameter. Like most other MIDI controllers, it uses the standard 0-127 range.

- **Other Controllers**

There are many other controllers allowing real-time control of instrument and plug- in parameters. Many are standardized. For example, MIDI controller #7 always controls volume.

For lots of information about using MIDI controllers, check out the **Automation and Controller Mapping** and **MIDI Controller Module** sections.

OPERATIONS COMMON TO ALL CLIP TYPES

CLIP HEADER BUTTONS

At the top of every clip next to its name are three tiny buttons:

- **Play**

Clicking the play icon at the left of the clip button plays the clip once through.

- **Mute**

This silences the clip. The clip turns gray and *[Muted]* appears beside its name. Click again to unmute it. You can also mute clips by highlighting them and selecting *Sound>Properties>Mute* in the Main Screen menu.

- **Duplicate**

Creates copies of the clip immediately to the right.

MOVING/DELETING/LINKING/LOCKING CLIPS

- **Moving Clips**

Clips can be freely moved in the Main Clip Grid by clicking and dragging the title bar area. Clips can also be moved using the keyboard. Highlight the clip or clips to be moved, and press the arrow keys. The clip(s) moves based on the current *Snap* setting.

Holding down the [SHIFT]key temporarily bypasses the *Snap* setting, allowing clips to be positioned freely.

To move lock clip time offset (i.e. horizontal position) while moving, hold down [CTRL]+[SHIFT] when dragging.

To make a copy of a clip while maintaining time offset, use [ALT]+[SHIFT]+drag.

- **Deleting Clips**

Select a clip or group of clips and then select *Edit>Delete* from the Main Window, or press the [DEL] key.

- **Deleting Parts Of Clips**

If a section of a clip is selected, *only the selected part will be deleted*. For example, if you've recorded a singer and there is an extra audible breath, select the unwanted area and delete it. Holding [SHIFT] while clicking will delete the entire clip (or clips if multiple regions of multiple clips are currently selected).

- **Linking Clips**

Related clips can be linked together letting them move as a single unit. This is useful when moving video clips with associated audio, multiple-mic drum recordings, or layered background vocals.

To link clips together, select the clips and click *Edit>Link Selected Clips* in the Main Window menus or by right-clicking one of the selected clips. To unlink clips, click the two rings/*X* button on the clip, or choose *Edit > Unlink Selected Clips* from the Main Window menus. If there are multiple clips linked together, unlink one by choosing *Edit>Unlink This Clip*.

• Locking Clips

Clips can be locked to prevent them from being moved or resized. To lock a clip(s), select it, then click *Sound>Properties>Lock* from the Main Window menus (or by right-clicking the clip). Clips can be unlocked the same way; simply click in the same menus to uncheck locking. Clips can also be locked and unlocked in the “Sound Tab.”

• Cropping and Trimming Clips

The start and end of any clip can be trimmed. Moving the mouse to the left or right edge of a clip changes the cursor into a left/right resize arrow. Hold the mouse down and drag horizontally to resize or trim. The left or right edge will quantize to the current *Snap* setting - change the value to *Off* for a precise setting. If multiple clips are selected, all clips will resize simultaneously.

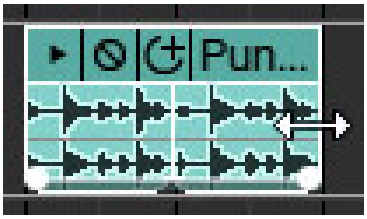
• Crop From A Selection

A specific region can be cropped by making a selection over a clip, or a group of clips, and selecting *Edit>Crop* from the Main Window menus or by right-clicking and selecting *Crop*.

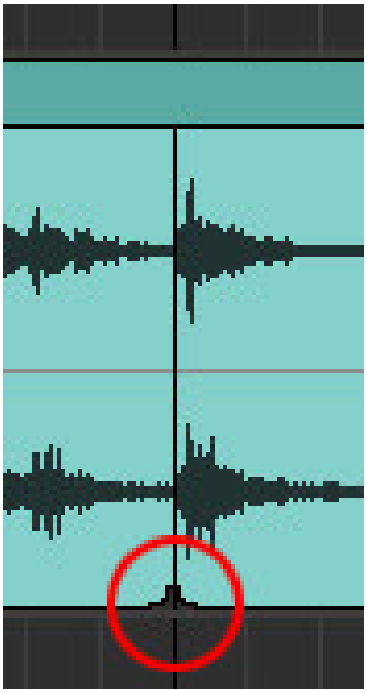
Before cropping:

After cropping:

- **Looping Clips**



To create additional loops of a clip, move the mouse onto the left or right edge of the clip. The cursor turns into a left/right arrow. Click and drag the right edge of the clip; when the length of the clip exceeds the length of the *Loop Start* and *Loop End* points (defined in the *Sound* tab), a new loop begins.



The indentations **at** the bottom of a clip indicate the loop start and end points (we've highlighted the indentation with a red circle in the screenshot at the left). Additional loop copies can be created by clicking the Add One Loop button to the immediate left of the clip name - it's the one that looks like a + sign with a semi-circle.

• Remove Space Between Clips

This eliminates silent gaps by moving clips together. It does not combine clips into one big sound - it just scoots clips closer together. Select *Edit>Remove Space Between Clips* from the Main Window *Edit* menu.

• Cutting/Copying/Pasting Clips

To cut and paste a clip, select a clip, or a portion of one, by dragging over it. Select *Cut* from the Main Window *Edit* menu, then click in the Main Clip Grid to position the Caret in the desired destination. Select *Paste* from the *Edit* menu to paste to the Caret location.

Copying clips works exactly as above - select *Copy* instead of *Cut*, and the original clip will remain. You can also *Cut*, *Copy*, or *Paste* by right-clicking the mouse.

• Alt-Drag Copying

To duplicate selected clips, hold down the [ALT] key and click-drag a copy of the clip to a new location.

MERGING

To merge two or more audio or virtual instrument clips on the same track, select the clips and then click *Sound>Merge To New Clip* in the Main Window menus or in the right-click menu.

Before a merge:

After the merge:

Reasons To Merge Clips

• Multiple virtual instrument clips are on one track and you'd like to print out sheet music for the entire track, but the notation view only displays one clip at a time. Merging clips together allows notes to appear correctly in the notation view.

• Multiple audio clips have been recorded with the same noisy air conditioner in the background and you'd like to use the noise reduction function to remove the A/C noise all at once (instead of applying it to each clip individually).

• The current project has hundreds of clips and the workspace is getting confusing and slow. Merging the clips into one sound reduces computer resources for increased speed and additionally, unclutters the workspace

• The left or right corner of a MIDI clip has been resized leaving a "gray area" when editing in the Piano Roll, Step, and Score editors. Merging will erase the gray area and leave only the "used" section of the MIDI clip.

SELECTING CLIPS

A selection is an area of clip highlighted for editing.

• Drawing A Selection

Click and drag the cursor over a region to create a selection. The selection is displayed as a transparent purple rectangle. Selections obey the *Snap* setting. ("*Transparent Purple Rectangle*" is a fabulous name for a psychedelic band.) The selection drag may be started on the timeline, a clip, or a track body.

• Selecting An Individual Clip or Multiple Clips

To select an individual clip, click on its title bar. The clip will have a white outline when selected. To select multiple clips, hold down the [CTRL] key and click on the title bars of the clips to be selected.

• **Selecting A Region of a Clip**

To select part of a clip, click and drag in the bottom section of a clip (beneath the Title Bar). The cursor will change to an I-beam to simplify selection.

Selection Shortcuts

Action	Shortcut	Description
Select all clips on a lane	[CTRL]+[SHIFT]+[ALT]+A	Choose *Track> Lanes >Select All*
Select all clips on a track	[CTRL]+[SHIFT]+A	Choose *Track>Select All Clips On This Track*. Alternatively, double-click a track header.
Select all clips in project	[CTRL]+A	Choose *Edit>Select All*
Unselect clips	[ESC]	Deselect any selected clips.
Select next clip	[TAB]	A quick way to select the next clip.
Select previous clip	[SHIFT]+[TAB]	A quick way to select the previous clip.

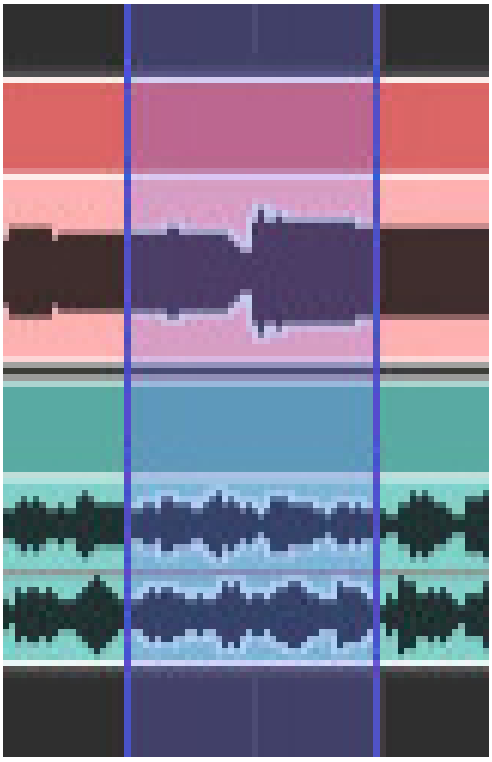
• **Other Selection Operations**

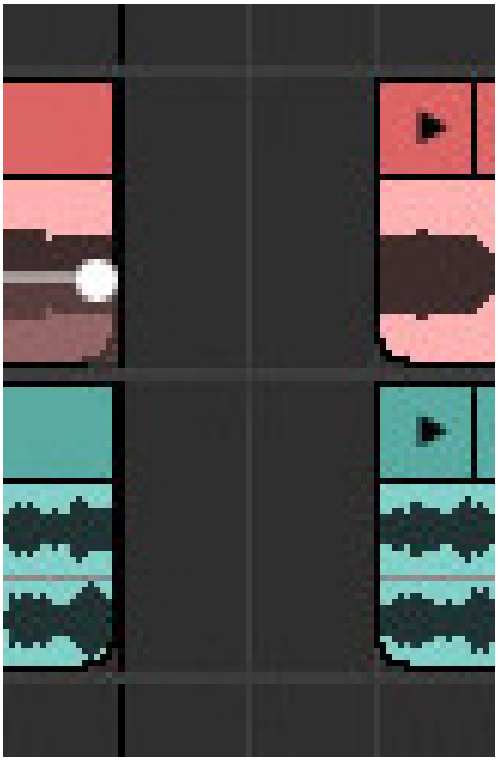
Once regions are selected, they may be cut, copied, and pasted. Here are some less obvious region selection operations:

- Boosting or reducing audio levels
- Normalizing clips
- Creating fades
- Removing space between clips
- Cropping clips
- Setting Loop to Crop
- Linking clips
- Trimming silence
- Merging clips

INSERTING TIME INTO A PROJECT

Regions of time may be inserted into the project. This automatically repositions all markers, automation, and clips. This is useful if, for example, you need to make space in the middle of a song to add an additional chorus.

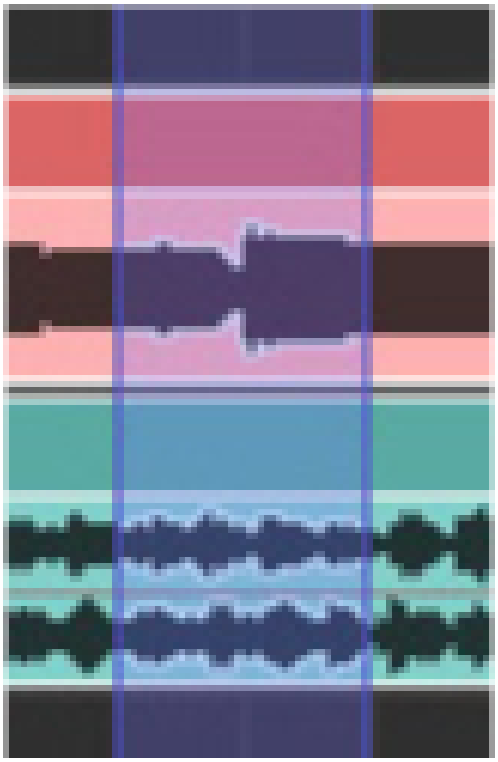


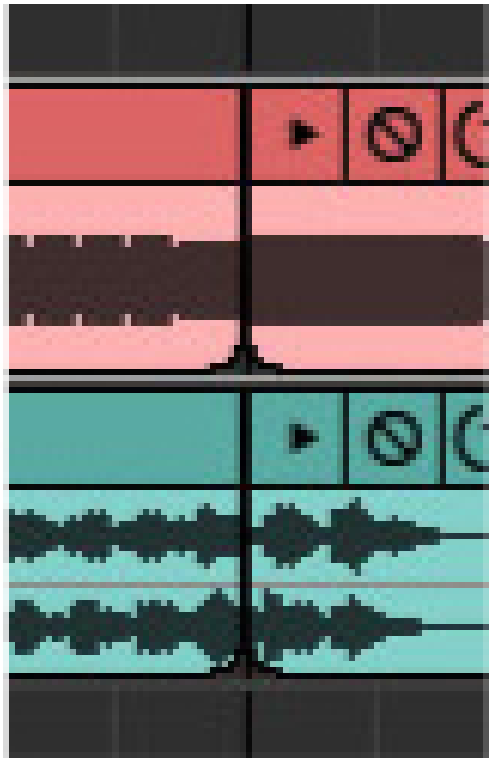


To insert a region of time, create a selection in the Timeline by click-dragging either in the Timeline, or in an empty area of the Clip Grid. Select *Edit>Insert Selected Time* in the Main Window menus, or by right-clicking in the Timeline. The two screenshots at the left show the resulting effect on the timeline and clips. All other clips, markers, and automation to the right of the insertion point advance in the project.

REMOVING TIME FROM A PROJECT

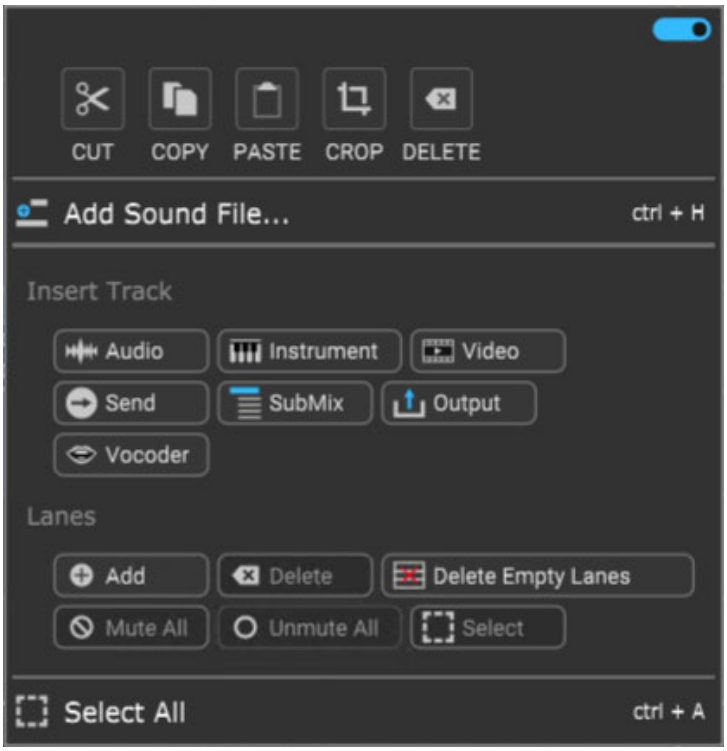
Removing works just like inserting time, only in reverse. It deletes markers, automation, and clips in the removed section and repositions existing markers, automation, and clips. It's useful, for example, if you'd like to shorten a sax solo in the middle of a song (because who wants to listen to that nonsense, am I right folks?!?).





To remove a region of time, create a selection by click-dragging either in the Timeline or in an empty area of the Clip Grid. Select *Edit>Delete Selected Time* in the Main Window menus, or by right-clicking in the Timeline. The screenshots at the left show before and after removing time. All clips, markers, and automation in the deleted region are removed, and the remaining clips, markers, and automation slide to the left.

CLIP GRID RIGHT-CLICK MENU



This section covers the super-slick right-click popup menu that opens when clicking in an empty area of the clip grid (i.e., not on a clip).

- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

- **Cut, Copy, Paste**

Allows cutting, copying, and pasting of currently selected clips.

- **Crop**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Crop* removes any part of the clip outside of the selection range. (It's generally easier to start the highlight part of the clip from outside the clip.)

• **Delete**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Delete* removes the selected part of the clip - essentially the opposite of the *Crop* command. This often results in splitting the clip into two clips.

• **Add Sound File...**

Opens a window allowing audio files to be imported into a clip on the currently selected audio track, at the current Caret location. MP3, OGG, WMA, WAV and AIF file formats are supported.

• **Insert Track**

These handy buttons allow a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track to be inserted after the currently selected track.

• **Lanes**

These buttons enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All,Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

• **Select All**

Selects all clips in the project.

AUDIO CLIPS

Audio clips contain audio recordings and always display a waveform in their lower section. Existing audio can be added to Mixcraft, or new audio clips can be created by recording audio into Mixcraft. MP3, OGG, WMA, WAV, or AIF format audio files can be loaded into Mixcraft. New recordings will be saved as WAV or OGG files and stored in the current project folder.

ADDING AND LOADING AUDIO CLIPS

There are several ways to add audio clips to a project.

- **Sound Menu**

Click *Sound > Add Sound File...* from the Main Window menus. Navigate to a folder, select the sound, and click *Open*. The sound will be placed at the current Caret location. Alternatively, use [CTRL]+H or click the *Add Sound* button on the Main Window Toolbar.

- **Double-Click An Empty Area of the Main Clip Grid**

Double-clicking in an empty area to the right of an audio track in the Main Clip opens a dialog for importing audio. The selected audio will be placed at the current Caret location.

- **Add a Sound From Mixcraft's Loop Library**

Click the *Library* tab at the bottom of the Mixcraft window. Select a sound from the library, position the Caret where you'd like the sound to go, then click the + button next

to the sound. Alternatively, you can drag the sound directly into the Main Clip Grid.

- **Drag In a Sound From Windows File Explorer**

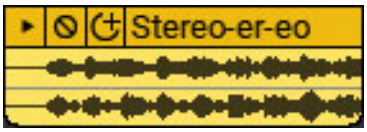
Open a Windows File Explorer window and navigate to the sound or sounds to be added. Select the sound(s) in Windows File Explorer and drag them into the Main Clip Grid.

AUDIO CLIP PROPERTIES

These settings govern how Mixcraft displays and plays back individual audio clips.

- **Channel**

If a clip contains a mono audio file, the clip will display one waveform. (With one caveat - a stereo clip can be set to play its left or right channel *only* via the *Sound>Properties>Channels* menu, in which case it displays a single waveform. It will say *Left* or *Right* next to the clip name.)



If a clip contains a stereo audio file, the clip displays two waveforms atop one another.

If the track height is reduced to a small size, stereo clips will display a single waveform, but don’t worry, it’s still playing back in stereo. (Track height can be restored to normal size by selecting *Track > Properties > Track Height > Normal* in the Main Window menus.)

To play back **only** the left or right channel of a stereo sound, highlight the audio clip and select *Sound > Properties > Channels > Left Channel* or *Right Channel*. To restore stereo playback, select *Sound > Properties > Channels > Stereo*. If a stereo clip is set to play one channel only, Mixcraft adds *[Left Channel]* or *[Right Channel]* to the clip name and only one waveform is displayed.

- **Phase**

The *Phase* setting allows the inversion of either or both channels in a stereo file. This is useful if you're experiencing frequency cancellation as a result of poorly placed mics, and can also be used

to eliminate monophonic audio content, such as drums, bass, and lead vocals, in complete mixes. Here are the *Phase* options for clips:

- *Sound menu > Properties > Phase > Normal*
- *Sound menu > Properties >Phase > Invert Left Channel Only*
- *Sound menu > Properties > Phase > Invert Right Channel Only*
- *Sound menu > Properties > Phase > Invert Both Channels*

- **Normalize**

Normalizing a sound locates its loudest peak, raises it up to "full scale" (i.e. loudest level before clipping), and proportionately raises the volume of the rest of the clip.

To normalize a clip, highlight and select *Sound > Properties > Normalize*. Like all Mixcraft, normalization is not "destructive," so it doesn't permanently alter the sound stored on your hard drive. To disable normalization, simply go back to *Sound>Properties* and uncheck *Normalize*.

Note: Normalizing essentially makes clips as loud as possible without clipping, but does **not** affect dynamic balance like a compressor or limiter.

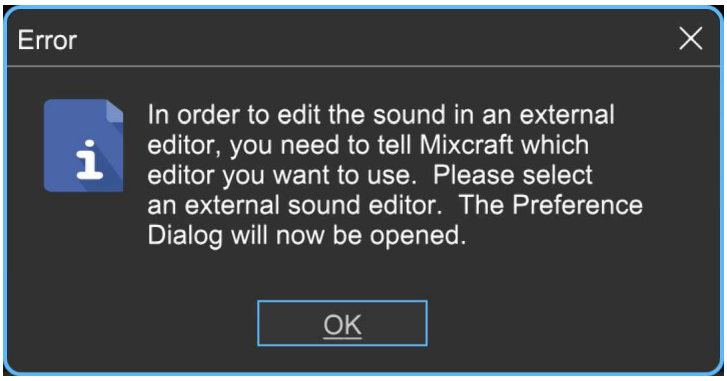
USING AN EXTERNAL WAVE EDITOR

Mixcraft can work in conjunction with external sound editing software to apply permanent changes or edits to the sound. External editing software can be useful for functions not available in Mixcraft, such as editing out crackles, pops, clicks, and other noises associated with Rice Krispies™.

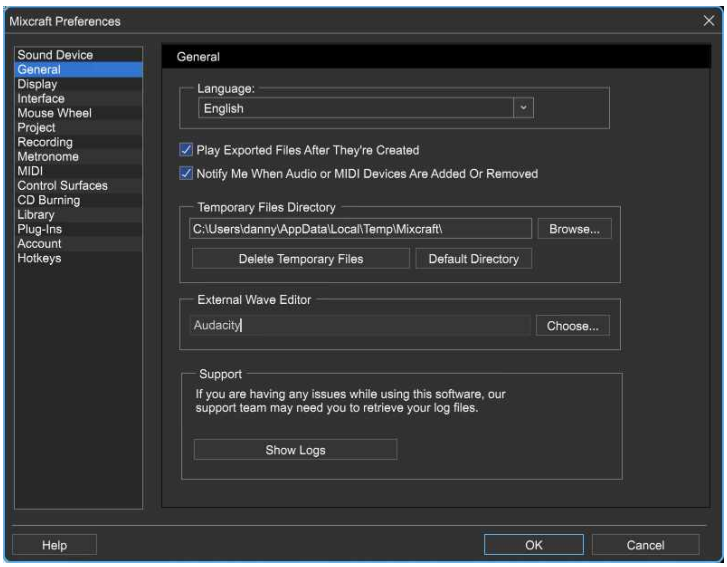
Before you can edit a sound using an external editor, Mixcraft needs to know what sounding editing app you'll be using.

- **Configuring An External Wave Editor**

To configure an external Wave editor, select *File > Preferences > General*. If you haven't configured Mixcraft's external editor setting, you'll see this danger-Will-Robinson dialog:

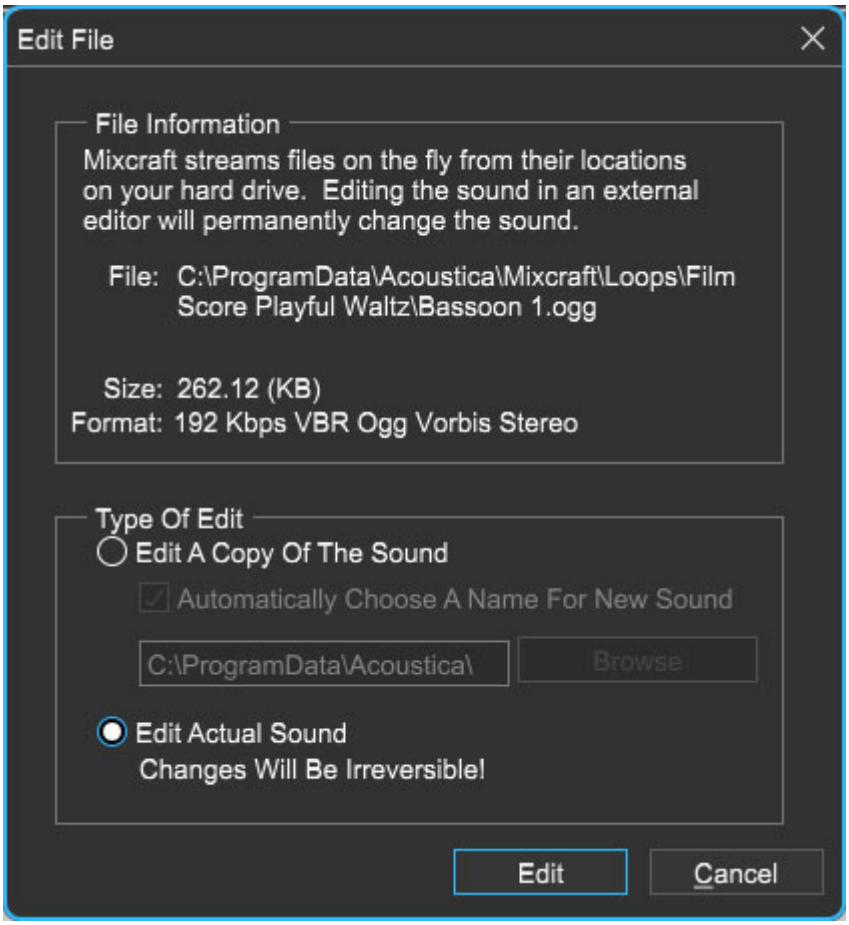


Clicking *OK* also opens the Mixcraft also opens *File > Preferences > General* window; beneath *External Wave Editor*, click the *Browse*... button and navigate to the app you'd like to use, and click to select it.



- **Editing A Sound In An External Wave Editor**

Once the editor is configured, choose *Sound > Edit In External Editor* from the main window menus, or by right-clicking the clip. You'll be greeted by this dialog, scientifically engineered for people who really like reading:



You'll have the option of editing the original sound or a copy of it. If the original sound is edited, any changes made to it will be permanent. This is known as "destructive editing."

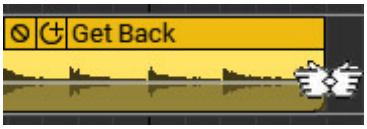
CROSSFADING BETWEEN CLIPS

Crossfading with Mixcraft is so easy that, for all intents and purposes, it's automatic. Simply drag one sound over another and a crossfade is instantly and visibly created. The length of the crossfade corresponds to the size of the overlap of neighboring clips.

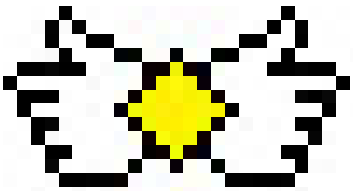
REVERSING CLIP PLAYBACK

Audio clip playback can be reversed by highlighting a clip and selecting *Sound>Reverse* in the Main Window menus. (Or "unreversed" by reselecting *Sound>Reverse*.) If clip automation has been applied, remember that envelope points won't move - they stay in their original location. Reverse sound playback works especially well with long, decaying sounds such as cymbal crashes or long piano chords (or if you're Ozzy or Priest in 1980 doing that backward masking thing - someone *really* needs to bring that back).

FLEXAUDIO™ TIME STRETCHING



FlexAudio™ allows easy time compression and expansion by visually dragging the left or right edge of a clip. While holding the [CTRL] key down, click on the left or right edge and drag left or right.



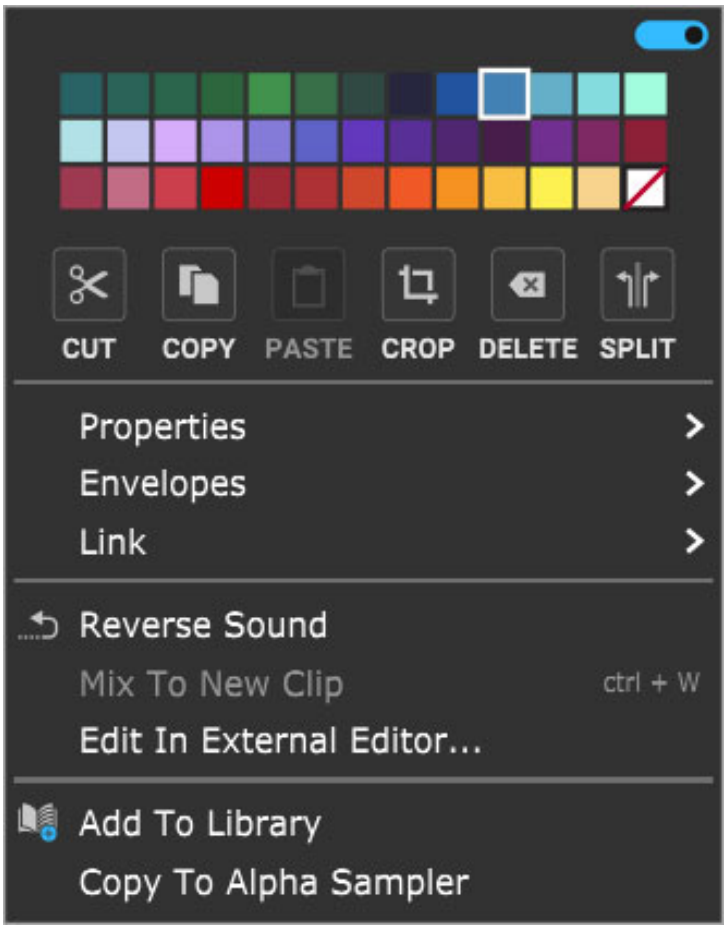
The cursor turns into two hands when in FlexAudio™ mode. FlexAudio™ works on audio and MIDI clips. For finer control of clip lengths, set the *Snap* value to *Off*.

If multiple clips are currently selected, [CTRL]+[SHIFT] will apply FlexAudio™ to multiple clips.

Fast Talkin' With FlexAudio™

Ever created a 30- or 60-second ad that ran a couple of seconds long? Try time-stretching it with FlexAudio™. FlexAudio™ can also be used to create super fast dialogue like those legal disclaimers at the end of commercials by time-stretching around 75%. You may need to set Snap to Off to set to the desired length.

AUDIO CLIP RIGHT-CLICK MENU



Mixcraft 10's clip right-click menus are pretty awesome, if we do say so ourselves. Let's go over them:

- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

- **Clip Color Palette**

Use this to select a color for the clip.

- **Cut, Copy, Paste**

Allows cutting, copying, and pasting of the clip.

• **Crop**

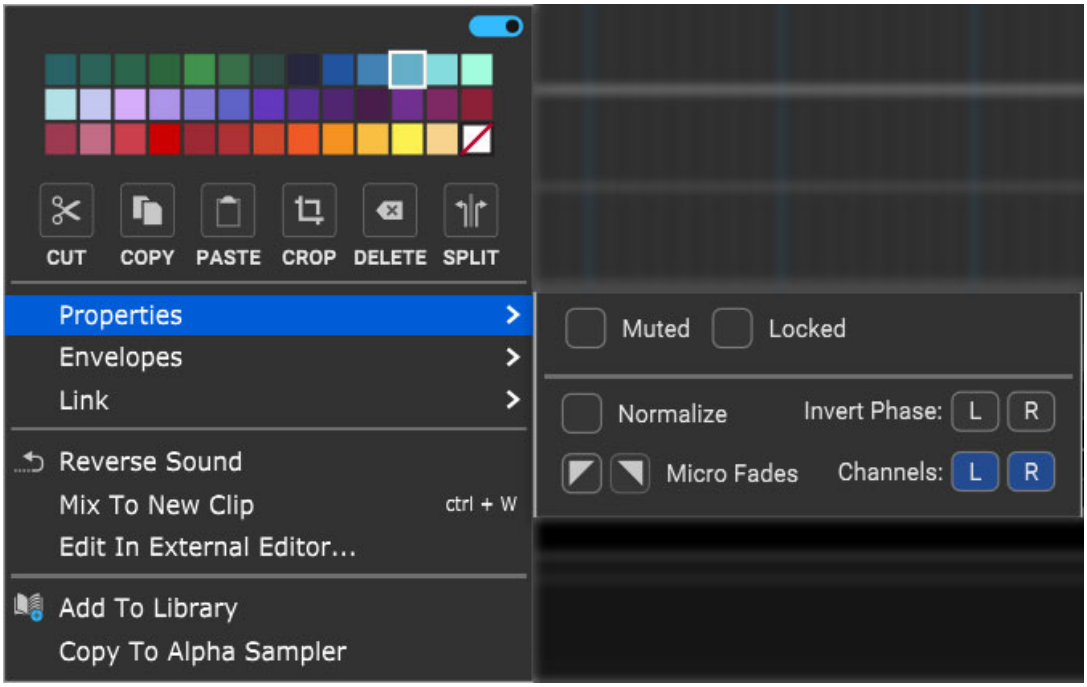
If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Crop* removes any part of the clip outside of the selection range. (It's generally easier to start the highlight part of the clip from outside the clip.)

• **Delete**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Delete* removes the selected part of the clip - essentially the opposite of the *Crop* command. This often results in splitting the clip into two clips.

• **Split**

Splits the clip into two separate clips at the current Playhead location. *Split* has no effect if the Playhead isn't atop the clip.



• **Properties**

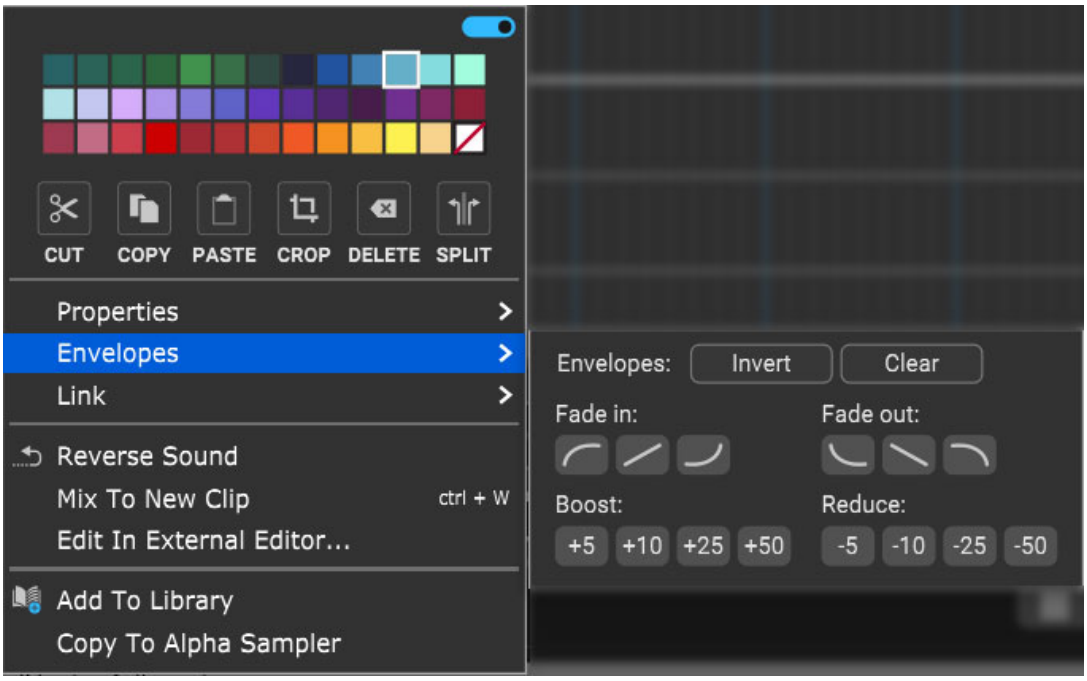
- **Muted**- Checking this mutes clip audio output. Muted clips will appear grayed out and *[Muted]* text will be added to the onscreen clip name.
- **Locked**- Freezes all location and clip size/length parameters. *[Locked]* text will be added to the onscreen clip name. Clips can be unlocked by unchecking the *Locked* check box.

- **Normalize**- Raises the overall volume of the clip so that the loudest peak is at zero dB. This it not a destructive process, that is, the audio isn't permanently edited, it's strictly a playback parameter. Normalization differs from compression or limiting in that dynamic relationships of the audio aren't altered; it just increases the overall volume of a clip if there's any unused headroom. *[Normalized]* text will be added to the onscreen clip name.
- **Invert Phase L/R**- Flips the polarity of the left or right channel of a clip. Typically you'd use this to reduce the phase cancellation that can occur when stereo mics are used to record a source (overhead drum mics, for example). The admittedly non-scientific procedure is generally to flip one channel's phase and see what sounds better. *[Invert L]* or *[Invert R]* will be added to the clip name.
- **Micro Fades-** Besides being the hairdo of choice for *Boyz II Men* in 1991, *Micro Fades* adds a tiny volume fade at the beginning or end of audio clips. This helps to eliminate clicks if the clip is begins or ends at a non-zero crossing in middle of an audio waveform. A tiny inverted triangle will appear in the upper-left corner of the clip if Micro Fade in is selected, or in the upper-right corner if a Micro Fade out is selected.
- **Channels**- Sets the clip to play back either left, right, or both audio channels for stereo clips. If only *L* or *R* is selected, only one side of the audio plays back monophonically - in other words, it will be center-panned in the stereo image. The clip waveform display will show a single waveform and *[Left Channel]* or *[Right Channel]* will be added to the clip name.

• Envelopes

These add a preset-configured volume adjustments to individual clips in the form of fade-ins, fade-outs, or overall level. Envelopes do not permanently alter the wave data and can easily be removed.

Envelope settings are reflected in the volume curve line that's superimposed on top of the clip waveform display and clips will always default to a volume setting of 100%. Envelopes can adjust clip volume between a range of 0-200%.

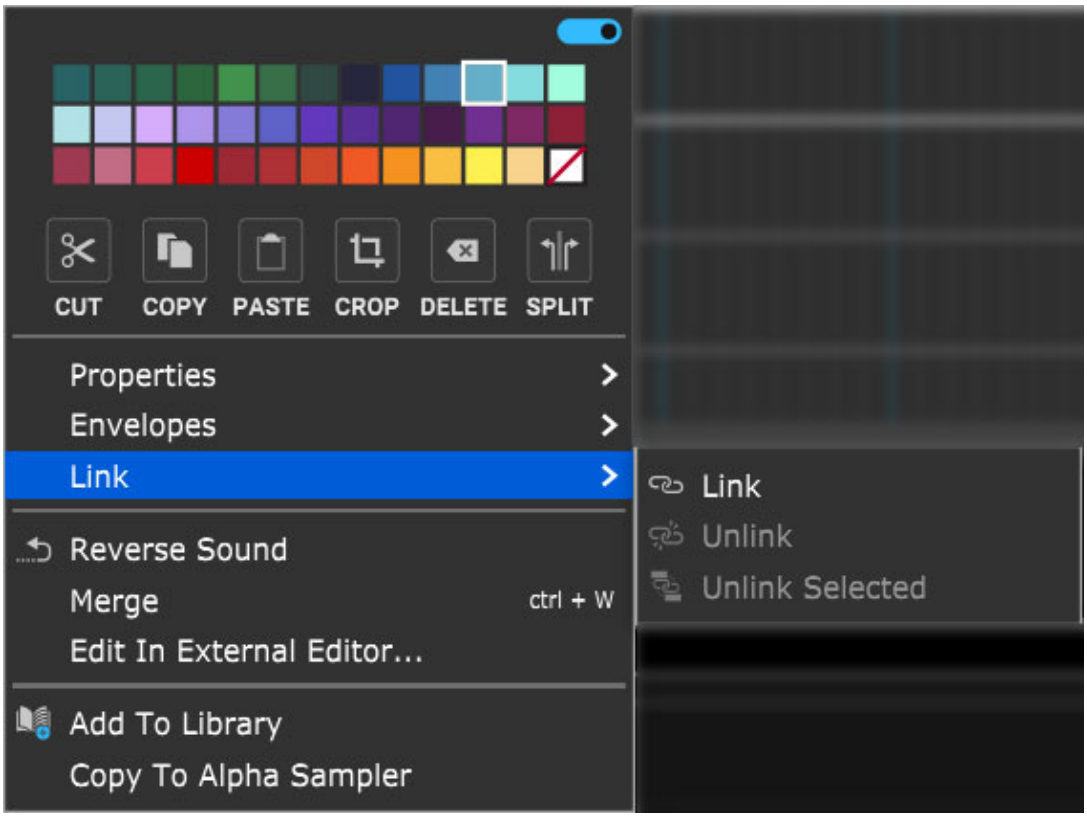


- **Invert**- Vertically "flips" the current Envelope curve. For example, if a clip has a fade that begins at minimum volume and gets louder, *Invert* will make the clip begin at maximum volume, and get quieter. *Invert* even works on static volume settings; for example, if the clip is at 80% volume, *Invert* will change the clip volume 20%. Note that *Invert* can be undone by simply clicking a second time.
- **Clear**- Initializes the clip volume setting to 100%
- **Fade In/Fade Out buttons**- These six buttons automatically apply logarithmic, linear, or exponential fade in or fade out volume curves.
- **Boost/Reduce**: These buttons add or subtract overall clip volume in 5, 10, 25, or 50% increments.

When the blue *Menu Persist* switch is enabled (at the top of the right-click window), the *Envelopes* window remains open, making it easy to experiment with various volume curves. You can always hit the *Clear* button and start over if things get crazy.

• Link

Related clips can be linked together letting them move as a single unit. This is useful when moving video clips with associated audio, multiple-mic drum recordings, or layered background vocals.



- **Link**- Links clips together. Multiple clips must be selected (otherwise the *Link* command will be grayed out).
- **Unlink**- Unlinks only the clip that's being right-clicked.
- **Unlink Selected**- Unlinks all linked clips in the group.

Linked clips will add *[Linked]* to the clip name and display an "interlocked rings" icon.

• Reverse Sound

Audio in the clip plays backwards. Amongst other weirdness, this can useful for creepy swelling reverse reverb effects.

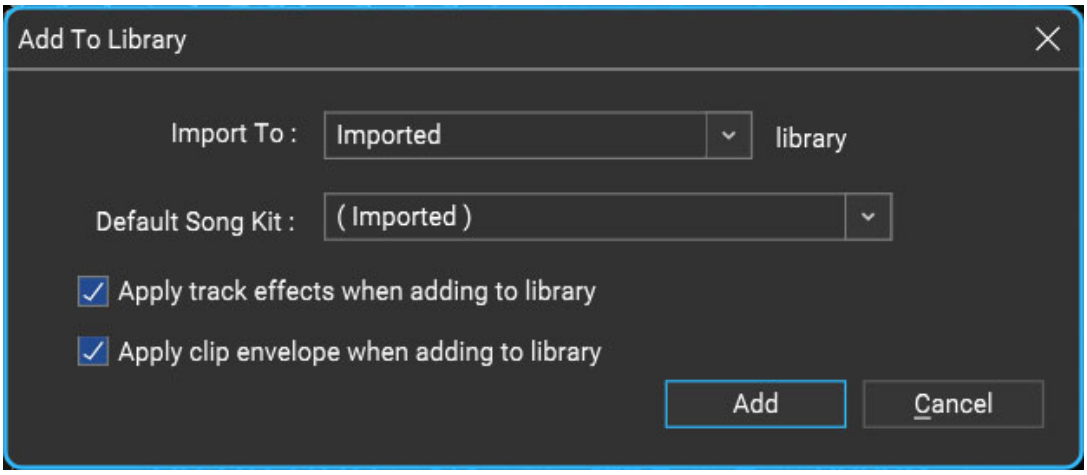
Hint: Reverse the dry audio *before* printing the reverb, then reverse the reverb audio and place it before the dry audio clip. This one took me years to uh... reverse engineer.

• Merge

Combines multiple clips into one. Empty space between clips in the Clip Grid becomes silence in the newly created single clip.

• Add To Library

Allows clips to be added to Mixcraft's onboard sound library for future use.



- **Import To**
  Choose or type in the library name to import to. To create a new library, type in a name.
- **Default Song Kit**
  Select or type in a name for a song kit if the imported sounds are to be associated with a specific Song Kit. This can be easily edited later if need be.
- **Apply track effects when adding to library**
  Track effects will be applied to the final library sound.
- **Apply clip envelope when adding to library**
  Clip envelope adjustments will be applied to the final library sound.
- **Add**
  This starts the import. While an import is happening, you are free to edit sounds or use Mixcraft without interruption.
- **Cancel**
  Closes the *Add To Library* window with no import occurring.

• Edit In External Editor...

Allows clips to be edited using dedicated sample editing software for advanced editing of clip audio. To use this function, you'll need to define which audio editing app you'd like to use. This is set in *Mixcraft Preferences>General>External Wave Editor*.

If no audio editing app has been set and theEdit In External Editor... command is selected, the *Mixcraft Preferences>General>External Wave Editor* menu is automatically opened.

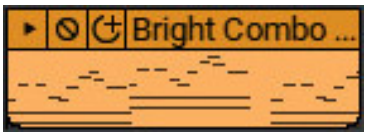
• Copy To Alpha Sampler

This super fun and easy-to-use feature automatically creates a new instrument track with an Alpha Sampler instrument and loads the clip audio into the Alpha Sampler. This lets you play and record the clip as a sampler instrument with a single mouse click. Hooray for computers!

The existing audio track and clip will be unaffected, and the clip/sound automatically saves with the Alpha Sampler in the project.

For more information on using Alpha Sampler, please check out the **Alpha Sampler** section.

VIRTUAL INSTRUMENT (MIDI) CLIPS



An Instrument Clip is made up of MIDI notes and controller data and instructs a synthesizer to play notes (as well as how to play them). It contains no actual audio data. The tiny horizontal lines inside a MIDI clip represent notes. Instrument Clips correspond roughly to the length and pitch of the clip’s notes, offering visual feedback as to its content. Finally, an Instrument Clip's note and controller data can "play" an onboard virtual instrument or an external hardware instrument via MIDI.

CREATING VIRTUAL INSTRUMENT CLIPS

Instrument Virtual Instrument Clips are used on Virtual Instrument MIDI tracks and can be created in several ways.

- **Recording A Virtual Instrument Clip**

Arm a Virtual Instrument Track and use a MIDI controller to record notes. This automatically creates a Virtual Instrument clip.

- **Creating an Empty Virtual Instrument Clip**

Empty MIDI clips can be created by clicking the *Sound* top menu or right-clicking in the Clip Grid and selecting *Add Instrument Clip*. The new clip will be created at the Caret location, and will automatically open the *Sound* tab (bottom of the screen) *Piano* editor window - this is because Mixcraft assumes you'd like to manually enter notes via one of the graphical editors (as opposed to playing notes in via a MIDI controller). For more info on using the *Sound* Tab editors, see the **Sound Tab** section.

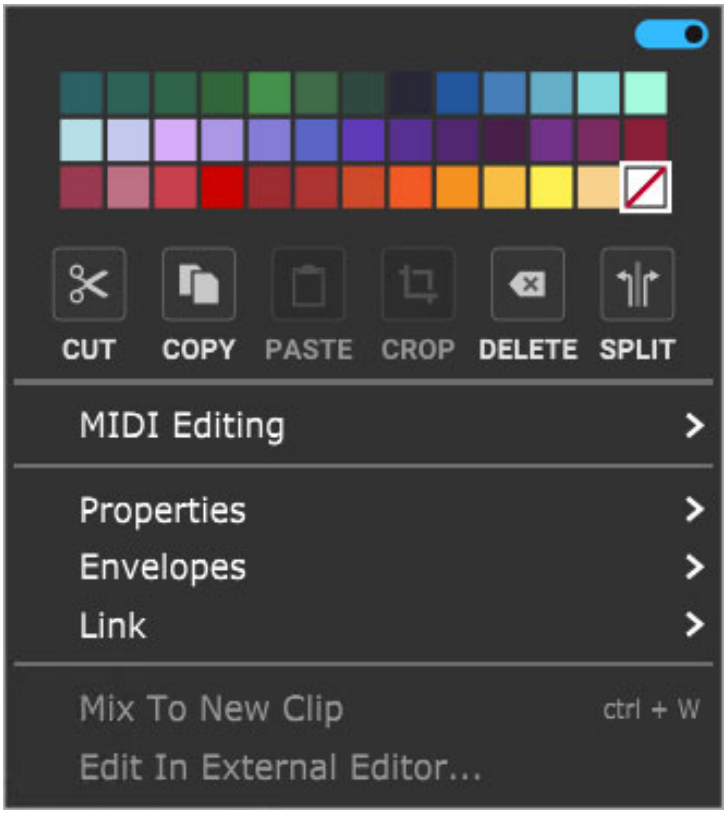
- **Import a MIDI File**

Right-click on a Virtual Instrument Track and select *Add Sound File*... Select a MIDI file (.MID) and click *Open*. The clip will be added at the current Caret position.

Note: If the MIDI file contains more than one track, each track will be loaded to a separate track and new tracks may be created.

MIDI files may also be loaded by selecting *File>Open Project* from the Main Window menus and then selecting a MIDI file. This is the best approach if you're importing an entire song in Standard MIDI format.

VIRTUAL INSTRUMENT CLIP RIGHT-CLICK MENU



• Menu Persist Switch

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• Clip Color Palette

Use this to select a color for the clip.

• Cut, Copy, Paste

Allows cutting, copying, and pasting of the clip.

• Crop

If a portion of a clip is currently selected by clicking and dragging, either on or outside of

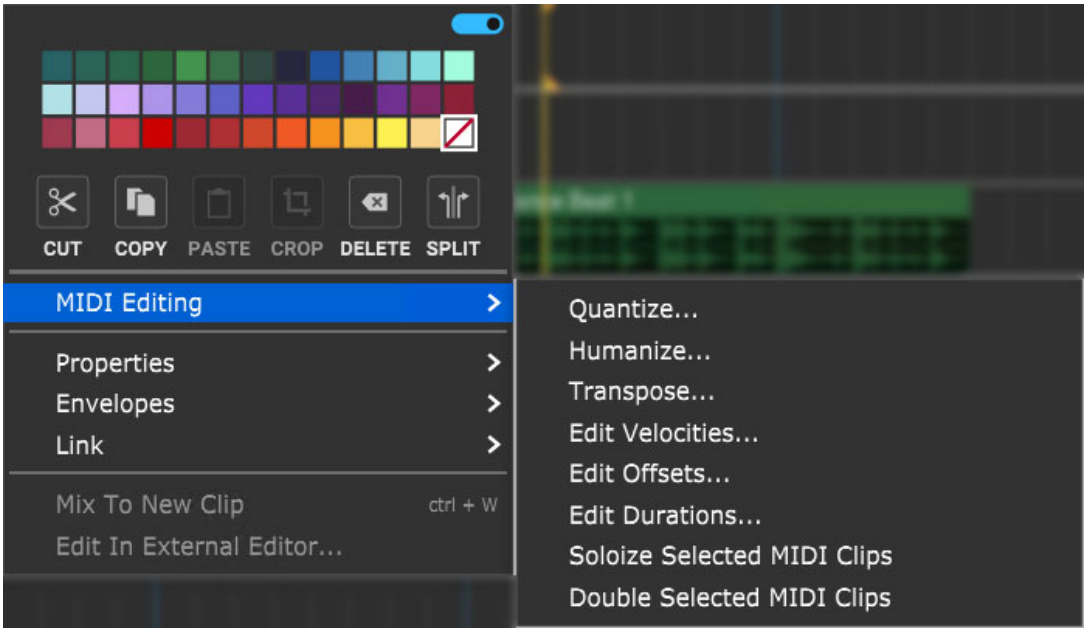
the clip, *Crop* removes any part of the clip outside of the selection range. (It's generally easier to start the highlight part of the clip from outside the clip.)

- **Delete**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Delete* removes the selected part of the clip - essentially the opposite of the *Crop* command. This often results in splitting the clip into two clips.

- **Split**

Splits the clip into two separate clips at the current Playhead location. *Split* has no effect if the Playhead isn't atop the clip.



- **MIDI Editing**

These submenus allow precise editing of MIDI note and controller data. The same menus can be accessed from the right-click menu, or via the *Sound>MIDI Editing* menu at the top of the Mixcraft UI. For full details on MIDI Editing functions, have a look at the **MIDI Editors: Clips** section.

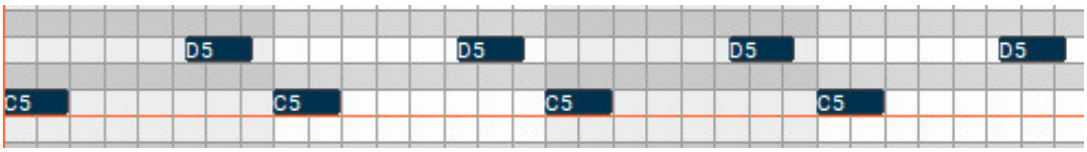
- **Quantize...**

  Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances. To access the Quantize menu, right-click on a MIDI clip or MIDI data in the Piano Roll Editor and select MIDI *Editing>Quantize...*

- **Note Type** - Specifies the snap setting to quantize to.
  - If this is set to eighth-note but you're actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
  - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
  - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.
- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.
- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

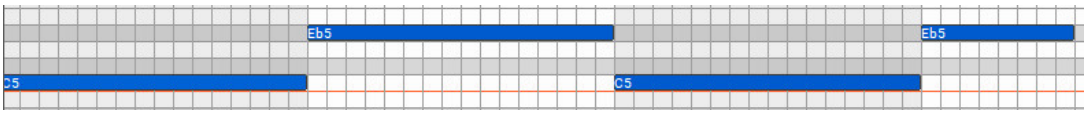
  For example, if you had a recording of eighth notes, set the Note Type to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: "Unswung" eighth notes:

After: Quantized eighth notes with a 35% swing. Swingin', baby!

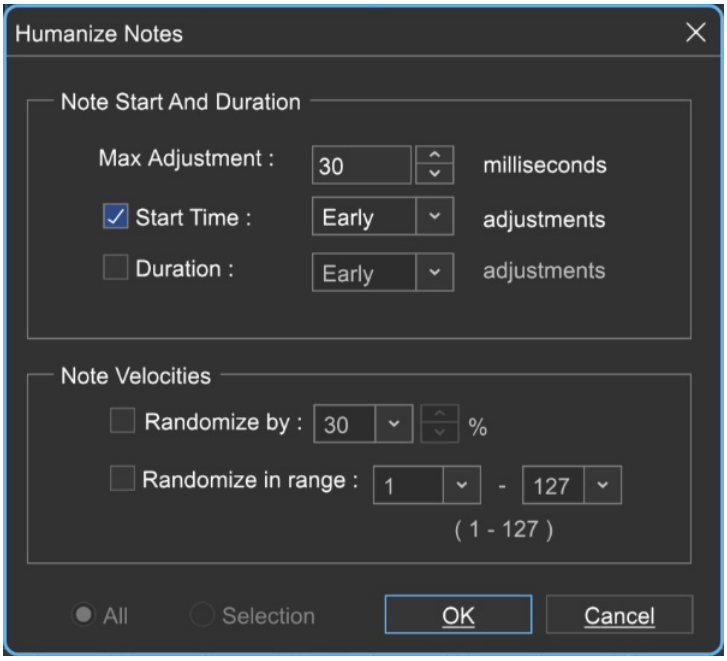


- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip. (Only applies if a region is highlighted within the Piano Roll Editor.)
  Before quantizing:

*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:



- **Humanize...**
  Humanizing is the process of adding a random and more “humanized” feel. When entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.
  Note Start and Duration



- **Max Adjustment** - The maximum note duration to humanize towards.
- **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.

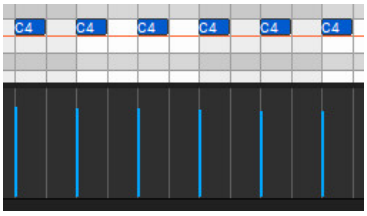
Note Velocities

Allows randomization of note velocities with the following options:

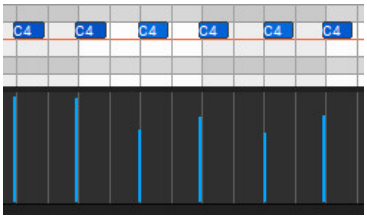
- **Randomize by** - A percentage of the original note value.

- **Randomize in range** - A new note velocity is randomly chosen in the range entered.
- **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

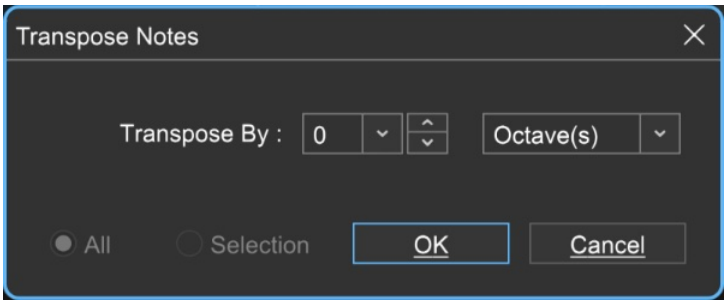
  Before humanizing - velocities are the same on every note:



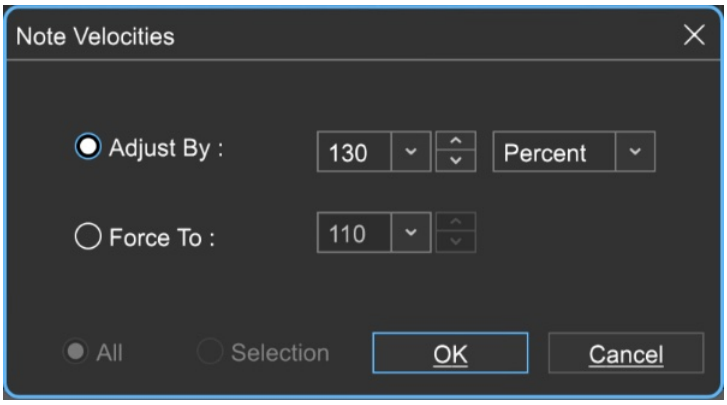
After humanizing - randomized velocities:



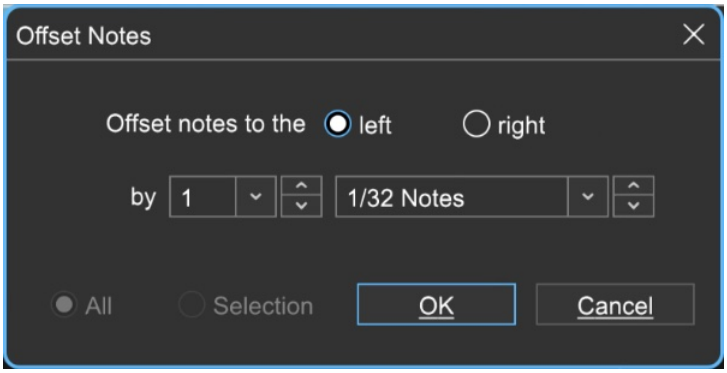
- **Transpose...**
  The *Transpose* dialog allows the shifting of all notes or selected notes in a clip by octaves or semitones. Right-click a MIDI clip or MIDI data in the Piano Roll and select *MIDI Editing>Transpose...*



- **Transpose By** - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.
- **Edit Velocities...**
  The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.

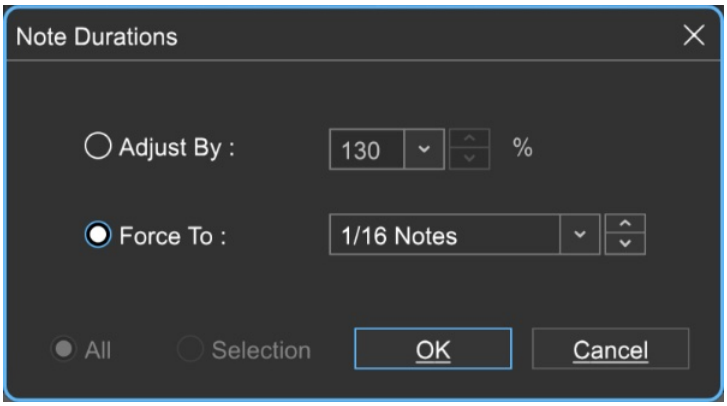


- **Adjust By**
  Adjust velocities by a specific percentage.
- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)
- **Edit Offsets...**
  Allows adjustment of all notes or the selected notes time offsets.



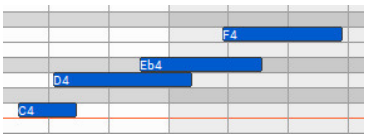
- **Offset Direction**
  Choose left or right.
- **Offset Amount**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

- **Edit Durations...**
  Note Durations allows adjustment of all notes or selected note durations.
-

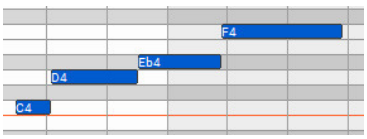


- - **Adjust By**
    Adjusts notes durations by a percentage.
  - **Force To**
    Select the desired note value here.
  - **All or Selection**
    Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

- **Soloize Selected MIDI Clips**
  Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.
  Before soloizing:



After soloizing:



- **Double Selected MIDI Clips**
  Duplicates the current clip and merges them, creating one large double-length clip.
  Before doubling:

After doubling:

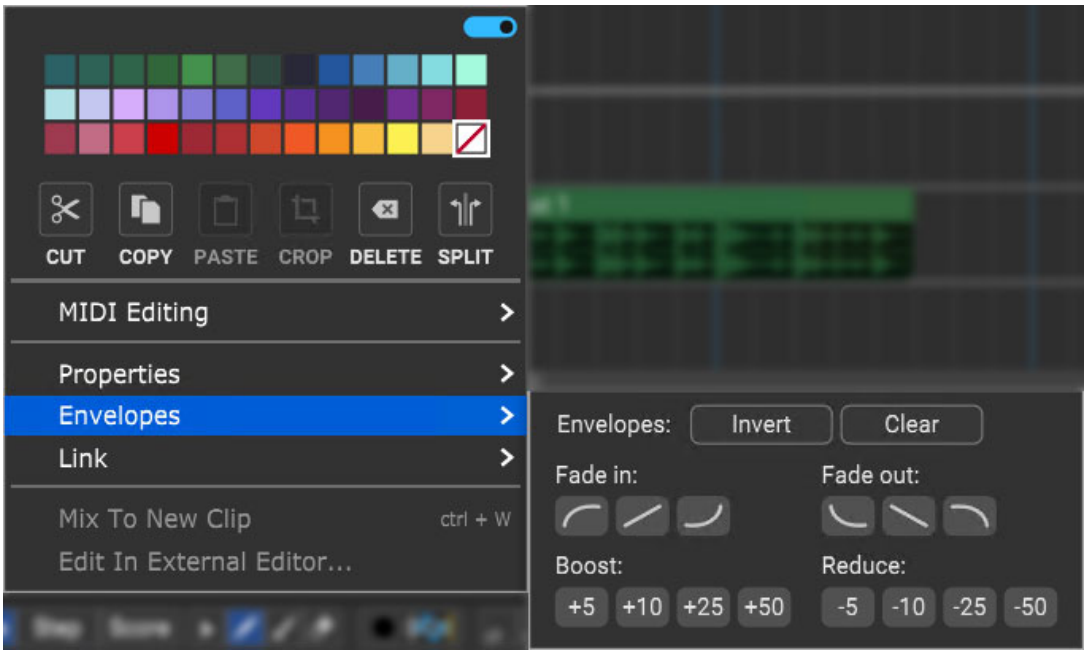
• **Properties**

- **Muted**- Checking this mutes the clip MIDI note output. Muted clips will appear grayed out and *[Muted]* text will be added to the onscreen clip name.
- **Locked**- Freezes all location and clip size/length parameters. *[Locked]* text will be added to the onscreen clip name. Clips can be unlocked by unchecking the *Locked* check box.

• **Envelopes**

These add a preset-configured volume adjustments to individual clips in the form of fade-ins, fade-outs, or overall level.

Envelope settings are reflected in the volume curve line that's superimposed on top of the clip waveform display and clips will always default to a volume setting of 100%. Envelopes can adjust clip volume between a range of 0-200%.

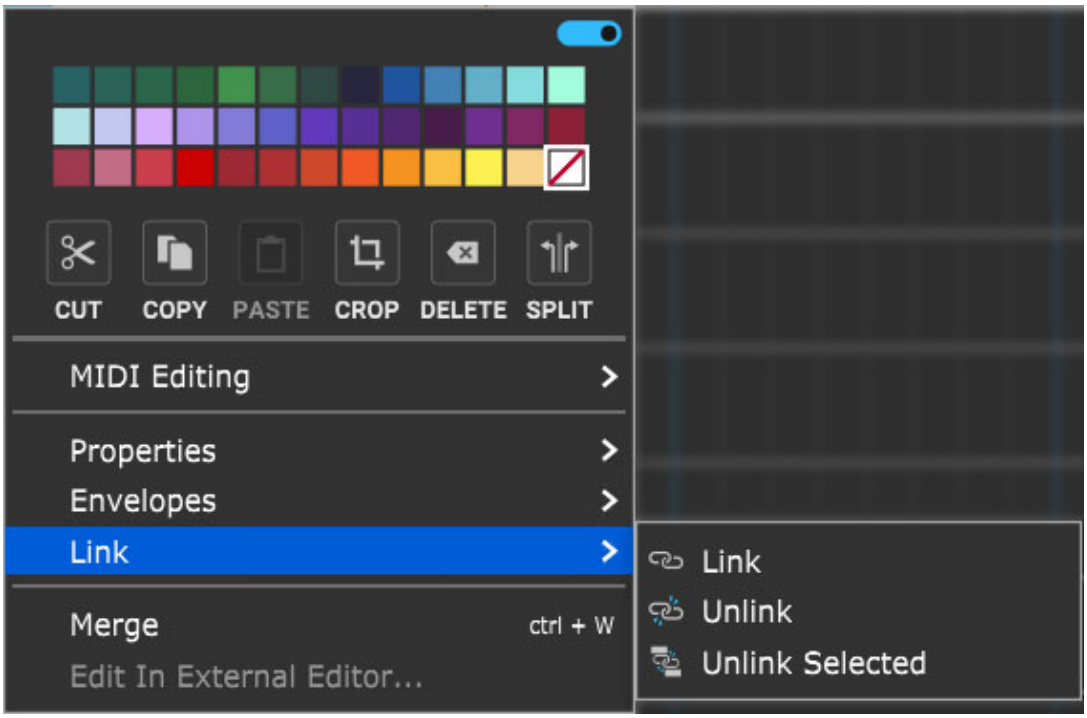


- **Invert**- Vertically "flips" the current Envelope curve. For example, if a clip has a fade that begins at minimum volume and gets louder, *Invert* will make the clip begin at maximum volume, and get quieter. *Invert* even works on static volume settings; for example, if the clip is at 80% volume, *Invert* will change the clip volume 20%. Note that *Invert* can be undone by simply clicking a second time.
- **Clear**- Initializes the clip volume setting to 100%
- **Fade In/Fade Out buttons**- These six buttons automatically apply logarithmic, linear, or exponential fade in or fade out volume curves.
- **Boost/Reduce**: These buttons add or subtract overall clip volume in 5, 10, 25, or 50% increments.

When the blue *Menu Persist* switch is enabled (at the top of the right-click window), the *Envelopes* window remains open, making it easy to experiment with various volume curves. You can always hit the *Clear* button and start over if things get crazy.

• Link

Related clips can be linked together letting them move as a single unit. This is useful when moving video clips with associated audio, multiple-mic drum recordings, or layered background vocals.



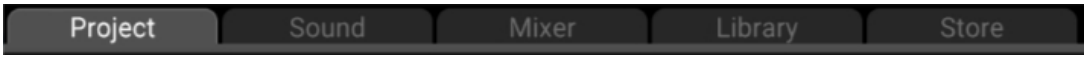
- **Link**- Links clips together. Multiple clips must be selected (otherwise the *Link* command will be grayed out).
- **Unlink**- Unlinks only the clip that's being right-clicked.
- **Unlink Selected**- Unlinks all linked clips in the group.

Linked clips will add *[Linked]* to the clip name and display an "interlocked rings" icon.

• Merge

Combines multiple clips into one.

DETAILS TABS - VIEWING AND UNDOCKING



The *Project*, *Sound*, *Mixer*, *Library,* and *Store* details tabs appear at the bottom left of the Mixcraft window. These allow in-depth editing, complete project info, and access to Mixcraft's vast sound library resources and super-cool built-in store.

In this chapter, we'll explain the basics of how to view, move, undock, and re-dock them. (We won't discuss sitting on docks at bays- that's not on the docket.) Most of the following operations are common to all five detail editing tabs.

The individual *Sound* tab functions are explained in depth in the following chapter sub-sections:

Project Tab
Sound Tab
Mixer Tab
Library Tab
Store Tab

A history of the yucky diet soft drink Tab, which my mom drank endlessly in my childhood.

VIEWING AND HIDING DETAILS EDITORS IN THE MAIN WINDOW

Clicking the *Project*, *Sound*, *Mixer*, or *Library* details tab opens the corresponding editor in a window at the bottom of the main Mixcraft window. The *Sound* tab can also be opened by double-clicking a MIDI or audio clip.

To hide the detail tab editors, click the small dash at the top-right portion of the details window.

RESIZING DETAILS EDITORS IN THE MAIN WINDOW

To adjust the height of a details editor, hover the mouse over the gray horizontal divider between the track display area and the editor window. The mouse will turn into bidirectional vertical arrows; click and drag up and down to adjust the window height.

UNDOCKING AND REDOCKING ALL DETAILS TABS

The *Project*, *Sound*, *Mixer*, and *Library* details tabs at the bottom of the screen can be undocked to open in a floating window by clicking the ***Undock*** button at the bottom right of the screen. The details tabs window can be freely moved by clicking and dragging the blue top bar and will always float in front of all windows while undocked.

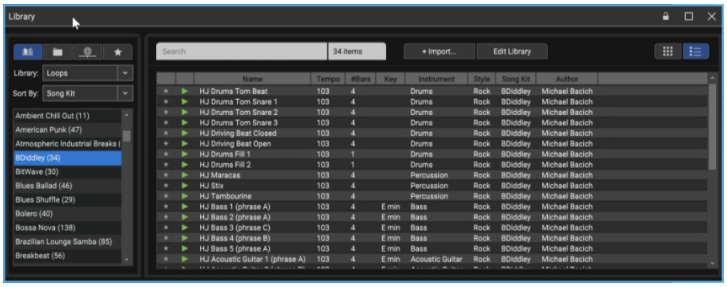
Clicking the *Dock* or *X* button in the top right corner “redocks” the floating transport and places it back at its normal location at the bottom of the main window. The *Project*,

Sound, *Mixer*, and *Library* details tabs can also be redocked by moving them to the bottom area of the display - you'll see a yellow line at the bottom of the screen when it's ready to pop back in place.

(***ReDokk*** is also a first-rate New Jersey-based Dokken tribute band formed by two brothers, featuring occasional guest appearances by original Dokken drummer, "Wild" Mick Brown.)

UNDOCKING AND REDOCKING INDIVIDUAL DETAILS TABS

In addition to undocking all four details tabs into a single window, the *Project*, *Sound*, *Mixer*, and *Library* details tabs can be individually undocked. You'll find this especially handy if you're using two displays (or one huge one).



To undock a single details tab, click and drag the handle immediately to the left of the tab name. The window can be moved around by clicking and dragging the blue bar at the

top.

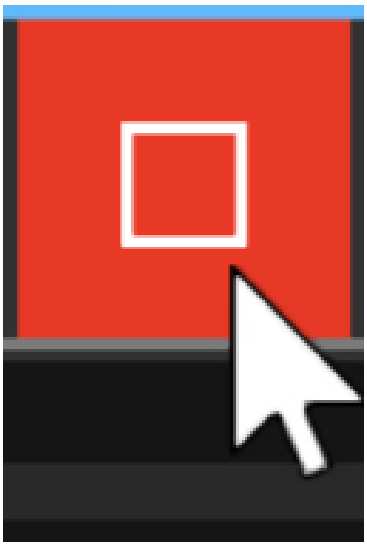
The individual *Project*, *Sound*, *Mixer*, and *Library* tabs can be undocked and moved around in any combination - again, very nice if you have a lot of display real estate.

To redock a details window, click the *X* in the upper-right corner of the window or drag it to the bottom of the main Mixcraft window. You'll see a yellow line (no detail tab currently open) or rectangle (detail tab currently open) at the bottom of the screen when it's ready to pop back in place.

LOCK BUTTON

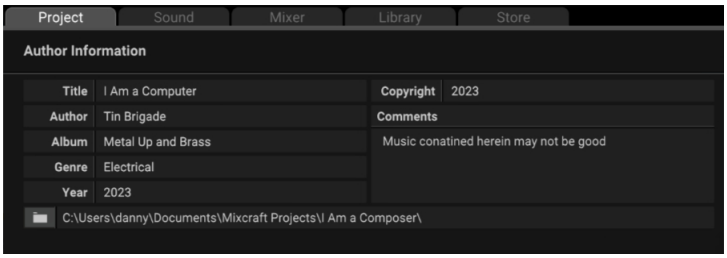
When the details windows are undocked, a *Lock* button appears at the top right. When engaged, this prevents the details tabs from snapping back to the bottom window location. Disable the *Lock* button to "put away" details tabs by dragging or clicking the *X* in the upper-right corner.

MAXIMIZE BUTTON

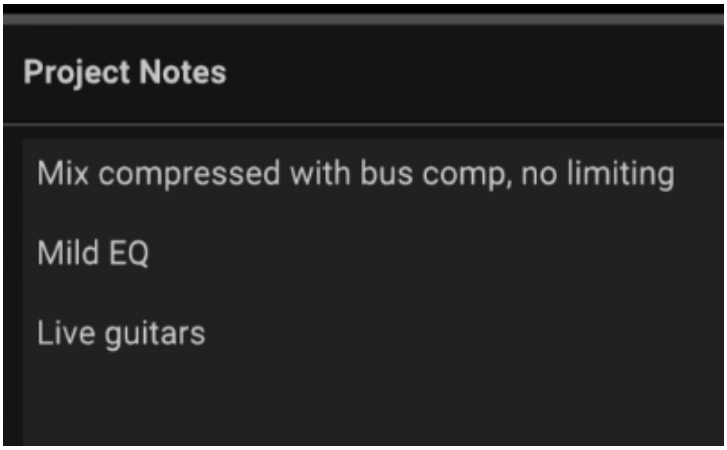


The *Maximize* button at the top right increases the Details window size to fill the entire Mixcraft window footprint.

PROJECT TAB



The *Project* tab is primarily used for information and notes about the project. All fields are can be clicked and filled in with any text.



The only non-text field is the folder icon. Clicking this lets you change the default project save location.

SOUND TAB

Click the Sound tab at the bottom left of the screen to edit and set parameters for audio, MIDI, and video clips with greater precision. The sound tab parameters will vary depending on what type of clip is currently selected, but here we'll go over the parameters common to all clip types.

Sound Tab Navigation Bar

The Sound Tab Navigation Bar allows clip previewing, vertical and horizontal zoom in/out, and lets you hide or show the Sound Tab Parameter Editor. Its appearance and operation are the same whether editing audio or MIDI notes.

Preview

The preview play button at the top of the Sound Tab Navigation Bar plays back the currently selected clip.

Zoom Controls

The up/down magnifying glass and left/right arrow icons adjust the current vertical and horizontal zoom view of the current audio clip. In the *Piano* editor, vertical zoom can also be quickly adjusted with the key shortcut [CTRL]+[ALT]+mouse wheel. The zoom controls have no effect on the sound.

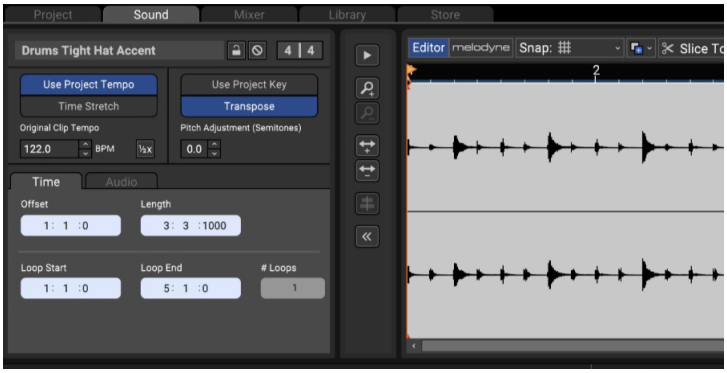
View MIDI Clips Using Project Time

The icon with two fat horizontal lines and vertical line in the middle toggles between editor timeline (beginning at 1), and the global project timeline (uses the actual clip location in the project). Note that this works for MIDI clips only.

Hide Sound Tab

The dual left arrows hide the sound tab parameters for increased viewing size.

SOUND TAB (WITH AUDIO CLIP SELECTED)



Pitch, key, loop points, and time stretching can be set and edited in the *Sound* tab. The *Sound* tab defaults to Mixcraft's standard wave editing window view shown above.

INTEGRATED MELODYNE PITCH EDITING (MIXCRAFT 10 PRO STUDIO ONLY)

You can switch between standard wave editing and Mixcraft's integrated Melodyne functionality by clicking the *Editor* and *Melodyne* buttons above the wave

display area. For a tutorial on how to use Melodyne, see “Appendix 1: Using Melodyne For Basic Vocal Tuning.” **LINK HERE** Melodyne is an amazing vocal tuning (and creative) tool. It’s worth the upgrade price to Mixcraft 10 Pro Studio on its own!

• Name Field

The name of the currently selected clip appears here. (“Crash” is the name of the clip in the above screenshot.) To edit a clip name, click on the name text and type a new name. Changing the name of audio clips from the Mixcraft library will **not** affect the filename in Windows Explorer, only within the current project.

• Lock/Unlock

Clicking the Lock icon will prevent changes to the clip’s *Loop Start*, *Loop End*, and Snap Point. Lock also prevent clips from being moved in the grid.

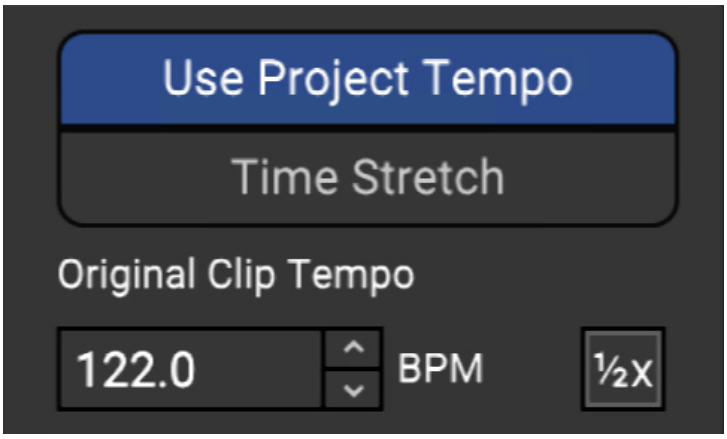
• Mute /Unmute

This is the circle-with-a-cross-through-it next to the Lock icon that mutes or unmutes the clip. When muted, all instances of the clip will turn gray. The *Mute Sound* button in the *Sound* tab is interchangeable with the *Mute Sound* button on the clip itself - you can mute or unmute with either button.

• Time Signature

This lets you set the time signature of an audio loop with an individually settable numerator (beats per bar) and denominator (note value constituting a beat). Keep in mind that the time signature setting **has no effect on the sound**; it only changes the placement of beats on the ruler above the waveform to simplify setting in/out points and looping.

• Use Project Tempo/Time Stretch



Mixcraft plays audio clips in one of two time-domain modes:

• Use Project Tempo
• Time Stretch

• Use Project Tempo
In this mode, Mixcraft adjusts sounds based on the difference between the project's tempo and the sound's detected tempo. For example, if the project tempo was 120 BPM and the sound's detected tempo was 60 BPM, it would time-stretch the sound to be half as long, because it would be playing the sound back two times as fast.

However, a project's tempo may not remain constant throughout. For example, in a transition between two songs, you could slowly ramp the tempo up with multiple tempo changes. In *Use Project Tempo* mode, Mixcraft dynamically adjusts the playback rate of audio to maintain perfect synchronization based on the current tempo. This offers lots of latitudes to mix and match loops of various tempos.

To set the loop speed by tempo, click *Use Project Tempo*. The numeric display will show the loop's original tempo. Enter a tempo by clicking in the number field to the right, or use the up/down arrows.

• Time Stretch
In this mode, the sound is simply time-stretched by a fixed amount. The sound will not adjust to the project tempo. You'll most likely use *Use Project Tempo* mode most of the time, but there are situations when automatic tempo change isn't desirable. For example, if you had a long drone with no inherent tempo, and you didn't want its length

affected. Fortunately, Mixcraft's audio playback mode is settable on a per-sound basis, so you can mix and match modes as you please.

To set the loop speed by percentage, click the *Time Stretch* and enter a percentage value by clicking in the field, or by using the up/down arrows.

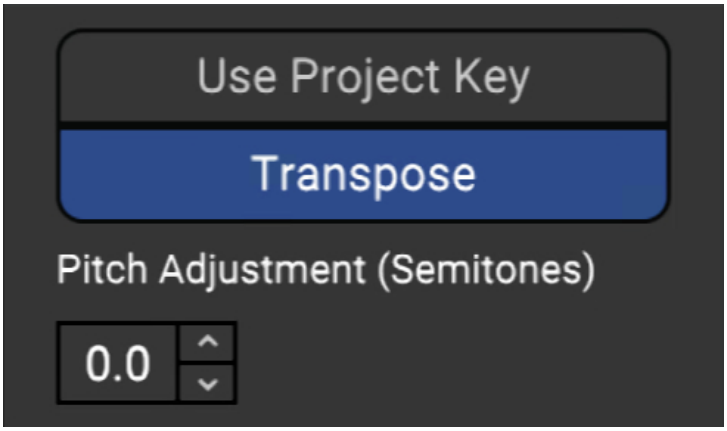
• **Double/Half-Speed**

If the current clip is set to *Use Project Tempo* mode, clicking on the 2x button will play loops at double speed. Clicking once will play the loop at half-speed, a second click will play the loop at double speed, and clicking a third time will return the loop to standard playback speed.

Note: Loops can be slowed down or sped up by up to four times their normal speed (i.e. 25% - 400% of normal playback speed). If values set are above or below this, Mixcraft "maxes out" at 25% - 400% normal playback speed.

• **Key/Pitch Adjustments**

Mixcraft plays audio clips in one of three key/pitch modes:



• Use Project Key
• Transpose
• No Pitch Adjustments

Changing The Key of a Sound, aka Songs in the Key of Right

Assuming that the key of the sound is correct, you can change the key of a sound by adding markers with key changes and/or by changing the project's key. You do not need to change the key of the sound on the Sound tab. It's recommended to change the project key or add key change markers. In short, if you want to change the key of a sound, change the project key. (Changing the key of a sound should only be done if the detected key is wrong!) If the sound's key is wrong, you can adjust it with the Original Clip Key control.

• Use Project Key

Mixcraft adjusts the pitch of the sound based on the difference between the project's key and the sound's key. (The project key can easily be seen and adjusted in the transport bar display.) For example, if the project key was F# and the sound's key was F, it would adjust the pitch of the sound up by one semitone so that it was in tune with F# instead of F.

However, you can have more than one key change in a project. A sound in *Use Project Key* mode will adjust in real-time to the correct number of half steps in order to play in the correct key based on the most recent key change. To continue the example, if the sound was in F and there were two key changes to A and then G, it would correspond to shifting the pitch of your sound by four semitones up to A and then by two semitones up to G.

Mixcraft adjusts the pitch by the shortest distance between two keys. For example, if the project key was G and the sound's key was F, it will adjust it by +2 semitones, instead of -10 semitones.

• Transpose

This gives manual control over the playback key of audio. It's useful if you don't want audio to follow Mixcraft's project key setting or obey key changes on the timeline.

You can type in a partial amount such as 1.26 semitones or use the up/down to adjust pitch in semitones up to 24 semitones in either direction. You might use this option to fix a slightly off key vocal performance or transpose a sound into a key you are more familiar with.

- **No Pitch Adjustments**

If *Use Project Key* and *Transpose* are both deselected, *No Pitch Adjustments* appears beneath the buttons and audio will play “as is” with no pitch transposition.

SOUND TAB - TIME SUB TAB

These controls let you fine-tune a clip’s location in the Main Clip Grid as well as its length and looping parameters. If the project is set to *Beats* mode in the top toolbar (next to the handsome Mixcraft 10 logo) the edit boxes display in measures, beats, and partial beats. If the project is set to *Time* mode, the edit boxes display positions in minutes, seconds, and milliseconds.

Helpful Hint: You can use the mouse scroll wheel to quickly set values by clicking in the number fields and spinning.

- **Offset**

The offset setting defines a clip’s location in the Main Clip Grid.

- **Length**

The length setting defines the size of the clip. If the length value setting is *longer* than the entire audio clip, the clip will repeat until it reaches the set length value. The clip will show “indentations” in the bottom where it repeats.

• **Loop Start/End**

Defines a clip’s playback start and end points. Example: say you like the second half of a four-bar loop, but don’t like the first half. Changing the *Loop Start* setting from 1:1:0 to 3:1:0 will skip playback of the first half. Loop start and end points can be set either by clicking in the number fields in the *Sound>Time* tab, or by moving

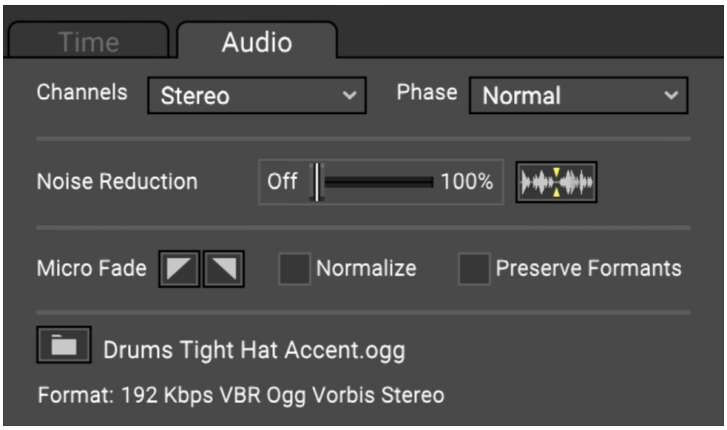
the *Loop Start* and *Loop End* markers in the audio waveform display. You can also set a clip’s start and end points by grabbing and moving its start and end points in the Main Clip Grid. Regardless of how a clip’s start and end points are set, all displays will update.

• **# Loops**

The number of times a loop will repeat. (This setting can potentially overlap with the *Length* setting - changing one automatically updates the other.)

SOUND TAB - AUDIO SUB TAB

Here you’ll find some useful extra parameters.



• **Channels**

If the audio clip is stereo, the pop-up menu selects regular stereo playback or left or right channel only. If the left or right channel is selected, playback becomes mono and the channel pan slider will control panning. (If a clip is playing in stereo, the pan slider acts as a balance control.)

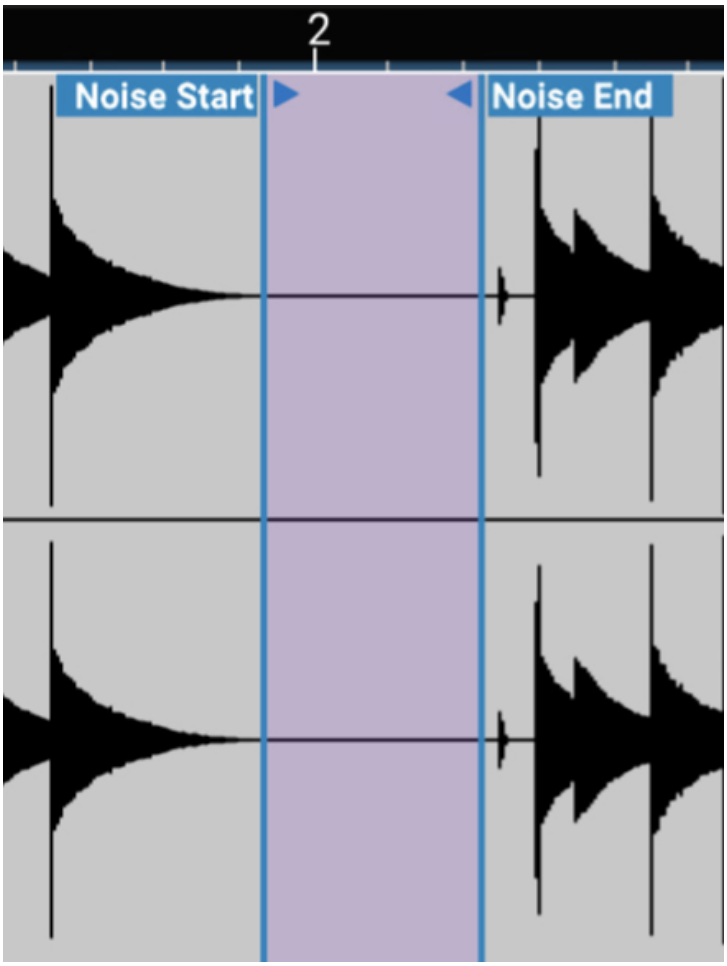
• **Phase**

Normal plays in standard stereo; Invert Left, Invert Right, and Invert Both flips the waveform phase 180 degrees of each respectively.

• **Noise Reduction**

Mixcraft features a built-in noise reduction feature for audio clips. Noise may be background hum, clicks and pops, or any other unwanted sound (not including your band's drummer). However, Mixcraft's noise reduction works best on steady-state noise such as fans, air conditioners, or other constant noises throughout the recording.

To use Mixcraft's noise reduction, highlight the audio clip you'd like to remove the noise from, then click the *Sound* tab on the bottom. Now click the *Noise Reduction* button next to the slider, and select a value up to 100%. Once an amount is selected, Mixcraft attempts to locate a good noise sample. Mixcraft displays the noise sample region between the *Noise Start* and *Noise End* markers.

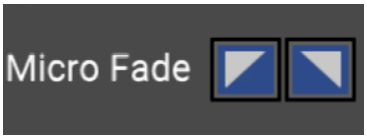


The image above shows an example of a good noise sample. The noise sample region can be edited by clicking and dragging the *Noise Start* or *Noise End* controls. To automatically locate the next best noise print, click the *Find Next Noise Sample* button next to the Noise Reduction slider. (It's the button with the green downward arrow on a wee waveform.) This instructs Mixcraft to look for the next best noise sample based on what it thinks might be noise.

Finding A Noise Sample

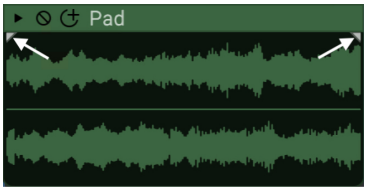
The best candidate for noise reduction is a snippet of the noise by itself. For example, if you had an air conditioner in the background and began recording, there would likely be a second of the air conditioner by itself - this would make an ideal noise sample. If you don't have a good sample of the noise, you could potentially record the noise by itself and then merge the clips together. Once you've located a good noise sample, highlight it in the audio tab, then right-click and select *Set Noise Reduction From Selection*.

- **Micro Fades**



Micro Fades automatically adds a short (5 ms) fade-in or fade-out at the beginning and/or end of a clip. Sometimes clips may start on a non-zero value, which can cause clicks at their beginning and end points; this can likely occur when editing clips to begin or end in the middle of an audio wave. Micro Fades ensures that audio will very rapidly "fade up" or down from silence, thus eliminating clicks.

The potential downside is that attack segments of transient sounds (that's drums and percussion to you, bucko) can get lopped off, so it's usually best to use Micro Fades only when you're hearing unwanted clicks. Fade-in and fade-out can be individually enabled for clips by clicking the wee upside triangles in the Sound tab. Clips with Micro Fades enabled will display teensy triangle icons in their top corners.



(We've doctored up the clip above with red circles to make the fade triangles easier to see.)

Micro Fades can be simultaneously added to multiple clips. Micro Fades can also be globally enabled for all new clips in the *Mixcraft Preferences/Project* window.

• Normalize

Checking the *Normalize* check box automatically increases the peak level of an audio waveform to full 100% scale while proportionally increasing the level of the entire waveform. In this way, audio files will play back as loudly as possible before clipping. Unlike a compressor or limiter, the dynamic range of a sound is *not* altered; normalization simply makes the entire waveform proportionately louder. Like most Mixcraft audio processes, normalization is non-destructive, so unchecking the *Normalize* checkbox will return the waveform to its original gain state.

• Formant Preservation

The Formant Preservation checkbox allows Mixcraft to maintain the harmonic "imprint" of a sound when transposing pitch up or down. This is useful for avoiding the "chipmunk" effect when transposing vocals upward, and conversely, the "born-under-a-bad-sign-bluesman" effect when transposing downward.

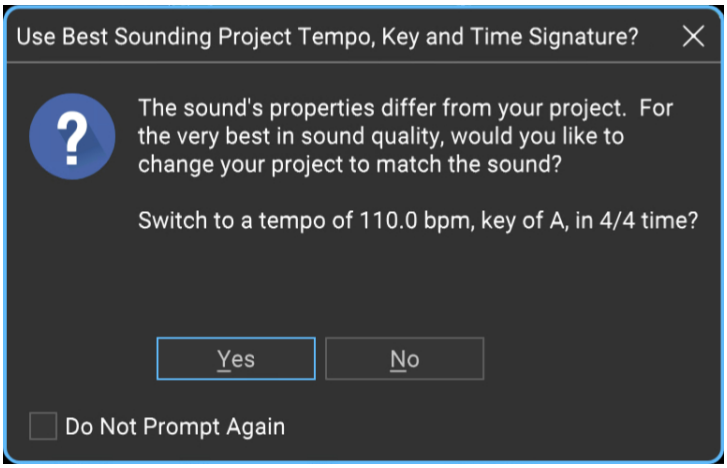
• File Path

Not really a parameter per se, but the actual file name as displayed in Windows Explorer is shown in yellow text for reference. Clicking the yellow folder icon to the left of the filename opens the enclosed Windows Explorer folder. This can be a time saver if you're trying to determine where the original file is located on your drive.

Why Does Mixcraft Ask If I Want To Change My Project's Tempo?

If you've tried dragging loops from the library onto the playback grid, you've probably seen this window. You may have clicked Yes, not knowing exactly what it meant.

Understanding the relationship between project tempo and the timing of clips used in a project is important, so read on!



When a new, empty Mixcraft project is opened, the project tempo setting is displayed in the transport in beats per minute. (If you want to get a feel for the tempo, click the Metronome icon, then click the Play button.)

Most of Mixcraft's included loops are beats or musical phrases, and are precisely edited to be an even length to ensure that they'll loop smoothly. They contain embedded information that "tells" Mixcraft their original key and tempo. (You can see the original key and tempo when browsing clips in the Library tab.)

For example, a new Mixcraft project and its tempo were set to 100 BPM. If a 90 BPM loop is placed at at bar one, it won't play in time with the project tempo. It also won't line up to bars and beats very well. If we drop in a second loop with a native tempo of 163 BPM at bar one and play back, it'll be a timing train wreck. This is where the *Use Best Sounding Project Tempo* window comes in. Clicking *Yes* when this window pops up automatically changes the project's tempo to match the first loop's native tempo. Additional clips dragged into a project are automatically adjusted to match the project tempo. Now everything plays in sync. Mixcraft works a similar kind of magic with key signatures by transposing imported clips to match the project key signature (which is displayed and adjustable in the Transport Bar).

You can set how Mixcraft handles matching the project's tempo and key to imported sounds in the Preferences>Project menu.

If the *Change Project Tempo and Key To Match First Sound* check box is checked, Mixcraft will always match the project tempo and key automatically for the first imported sound. If the *Ask To Change Project Tempo and Key To Match First Sound* box is checked, Mixcraft will politely ask first.

If neither box is checked, Mixcraft won't adjust the project tempo or key when the first sound is imported, so be careful! You can also disable both checkboxes by clicking the *Do Not Prompt Again* check box in the *Use Best Sounding Project Tempo, Key & Time Signature* window.

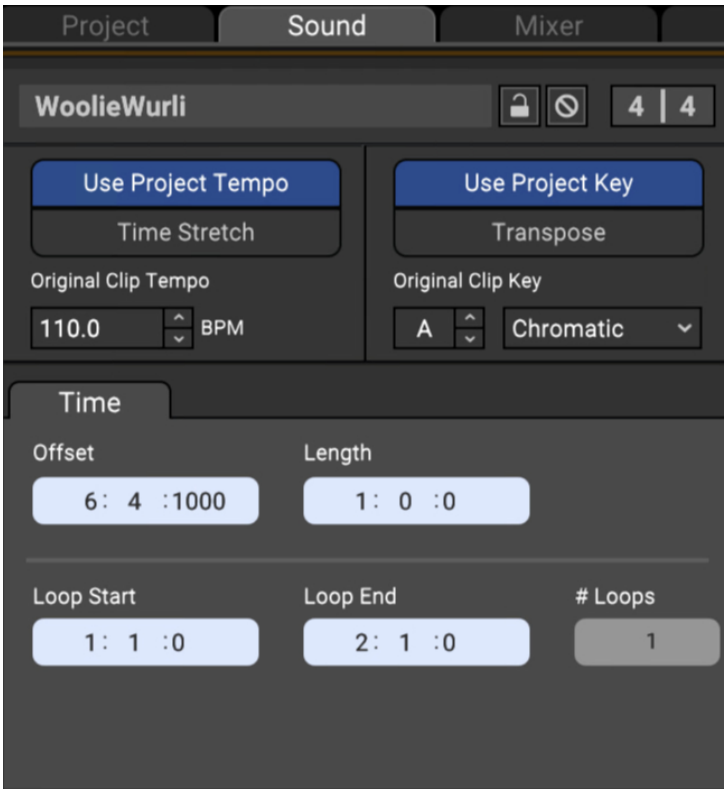
- **Format**

Again, not an adjustable parameter, this displays the current audio clip's format (e.g., WAV, Ogg, etc.), as well its sample rate, bit depth, mono/stereo, etc.

SHOW/HIDE CONTROLS BUTTON

Click the *[<<] Show/Hide Controls* button to see more sound data, instead of the controls. This toggles between showing and hiding the controls. To show the controls again, click the *[>>]* button.

SOUND TAB WITH MIDI CLIP SELECTED



The Sound tab enables editing of a MIDI clip's speed, pitch, key, grid placement, and looping parameters.

- **Name Field**

The name of the currently selected clip appears here. To edit the name, click on the name text and type a new name. Click outside of the name field when done.

- **Lock/Unlock**

Clicking the *Lock* icon prevents a clip from being moved in the grid. It also disables cropping and resizing.

- **Mute /Unmute**

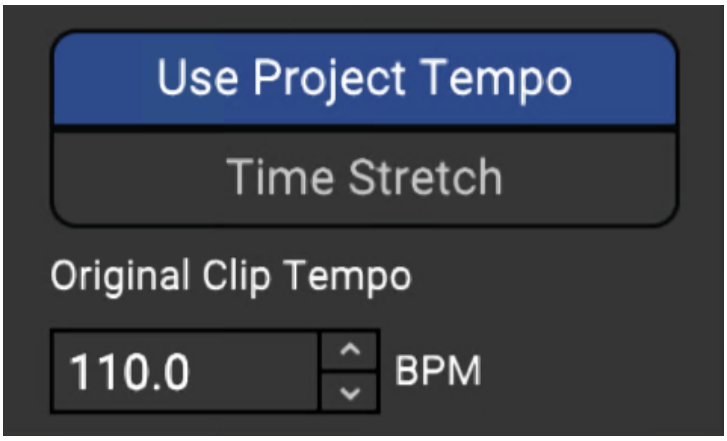
This silences the clip. All instances of the clip will turn gray. The *Mute Sound* button in the *Sound* tab is interchangeable with the *Mute Sound* button on the clip itself - you can mute or unmute using either button.

- **Time Signature**

This lets you set the time signature of a MIDI clip with an individually settable numerator (beats per bar) and denominator (note value constituting a beat). Keep in mind that the time signature setting **has no effect on the sound**; it simply changes the placement of beats on the ruler in the selected MIDI editor to the right of the *Sound* tab.

• Setting MIDI Clip Playback Rate

Mixcraft plays MIDI clips in one of two time-domain modes:



• Use Project Tempo
• Time Stretch

• Use Project Tempo

MIDI clips will lock to the current project tempo. *Original Clip Tempo* is displayed and can be altered by clicking the number field and entering a new temp, or by using the up/down arrows.

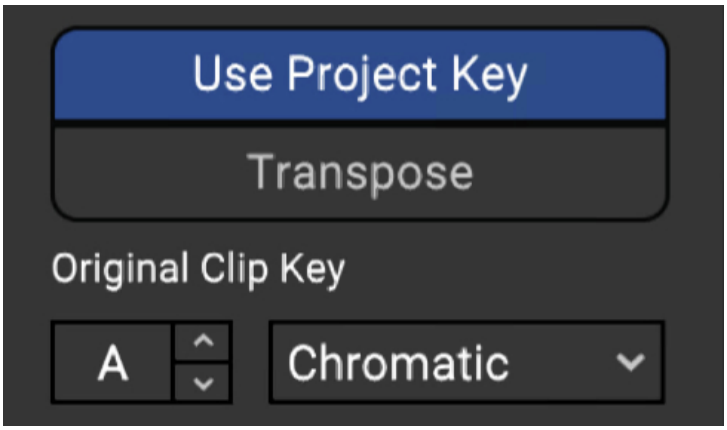
• Time Stretch

To set the playback rate by percentage, select *Time Stretch* and enter a number value by clicking in the field, or by using the up/down arrows.

• Key/Pitch Adjustments

Mixcraft plays MIDI clips in one of two key/pitch modes:

• Use Project Key
• Transpose



• Use Project Key

Mixcraft adjusts the pitch of the sound based on the difference between the project's key and the sound's key. (The project key can easily be seen and adjusted in the transport bar display.) For example, if the project key was F# and the sound's key was F, it would adjust the pitch of the sound up by one semitone so that it was in tune with F# instead of F.

However, you can have more than one key change in a project. A sound in Use Project Key mode will adjust in real-time to the correct number of half steps in order to play in the correct key based on the most recent key change. To continue the example, if the sound was in F and there were two key changes to A and then G, it would correspond to shifting the pitch of your sound by four semitones up to A and then by two semitones up to G.

Mixcraft adjusts the pitch by the shortest distance between two keys. For example, if the project key was G and the sound's key was F, it will adjust it by +2 semitones, instead of -10 semitones.

The *MAJ/MIN* popup selector conforms notes to the correct major or minor scale notes for the selected key signature. (It's mainly there to ensure that the correct key signature is displayed when using the *Score* editor.)

SOUND TAB> TIME SUB TAB

These controls let you fine-tune a clip's location in the Main Clip Grid as well as its length and looping parameters. If the project is set to *Beats* mode in the top toolbar (next to the handsome Mixcraft 10 logo) the edit boxes display in measures, beats, and partial beats. If the project is set to *Time* mode in the top toolbar, the edit boxes display positions in minutes, seconds, and milliseconds.

Helpful Hint: Use the mouse scroll wheel to quickly set values by clicking in the number fields and spinning.

• Offset

The offset setting defines a clip's location in the Main Clip Grid.

• Length

The length setting defines the size of the clip. If the length value setting is **longer** than the entire audio clip, the clip will repeat until it reaches the set length value. The clip will show "indentations" in the bottom where it repeats. If the sound is made long enough, this will also cause it to loop.

• Loop Start/End

Defines a clip's playback start and end points. Loop start and end points can be set either by clicking in the number fields in the *Sound>Time* tab, or by moving the *Loop Start* and *Loop End* markers in the *Piano*, *Step*, or *Score* editors. You can also set a clip's start and end points by grabbing and moving its start and end points in the Main Clip Grid. Regardless of how a clip's start and end points are set, all displays will update.

• # Loops

The number of times a loop will repeat. (This setting can potentially overlap with the *Length* setting - changing one automatically updates the other.)

CONVERT AUDIO TO MIDI (MIXCRAFT 10 PRO STUDIO ONLY)

This feature doesn't really live in the Sount Tab per se, but it has to do with audio and is super cool. Any audio clip containing single-note melodic content can be converted to a MIDI file by right-clicking and choosing to Convert Audio To MIDI (or by choosing it from

the *Sound* menu at the top of Mixcraft). This is really convenient for doubling up vocal lines or instrumental solos.

This semi-miraculous feature does have some limitations - it only works correctly with single-note lines (it won’t work with chords), and it works best with clean, unprocessed sound - audio with a lot of effects such as reverb or delay won’t work too well. You may also notice that some notes are converted to the correct note, but in the wrong octave. This is easy enough to fix in the Piano Editor.

PIANO ROLL TOOL BAR

In this section we'll go over the buttons and functions in the top toolbar directly above the Piano Roll grid.

MAIN EDITING TOOLS

There are four main editing tools available in the Piano Roll Editor toolbar:

- **Arrow Note Selection Tool**

Used for note selection, moving, and editing note durations. It can be selected with the keyboard shortcut *Q*.

- **Pencil Tool**

Used for drawing new notes in the Piano Roll grid. The duration of new notes is selected with the note duration buttons to the right. The Pencil tool can be selected with the keyboard shortcut *W*.

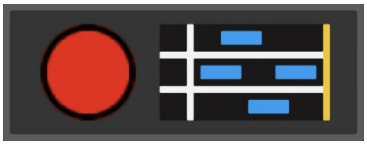
- **Paint Tool**

Like the Pencil tool, the Paint tool is used to draw notes directly into the grid, but note durations are selected by clicking to place the note, then dragging to the right to set duration (note durations will snap to the current Snap Value setting). The Paint tool "remembers" its most recent duration; single-clicking in new grid locations creates new notes with the same duration as the most recent painted note.

- **Eraser Tool**

Clicking notes with the Eraser tool removes them from the grid. It can be selected with the keyboard shortcut *E*.

STEP RECORD



Step Record allows MIDI notes to be entered sequentially in non real-time.

Step Entering Notes

When the Step Record button is enabled (red light flashing), successively played notes will appear in the grid. The note length will conform to the current setting of the Note

Duration buttons - **the actual length of time notes are played has no effect on their duration in the grid**. Note velocity is defined by the *Default Velocity* setting.

Moving the Cursor

The left and right arrow keys on the QWERTY keyboard move the cursor forward and back by the current *Snap* setting value. This is useful for adding “rests” to note sequences.

Step Entering Chords

Multiple notes (i.e. chords) can be entered by simply playing multiple simultaneous keys. You don’t have to hit all chord notes at the *exact* same time - Mixcraft waits until all keys have been released before advancing to the next step.

Exiting Step Record

Clicking the button will exit Step Record mode. Changing focus, i.e. clicking in any other window, will also disable Step Record mode.

Deleting Notes and Chords

Notes can be deleted by moving the cursor to note start positions and pressing the (DEL) key. All notes at the current cursor position will be deleted.

NOTE DURATION BUTTONS

These work in conjunction with the Pencil tool and Step Edit modes when adding new notes to the grid. Choose whole-note, half-note, quarter-note, eighth-note, sixteenth-note, and thirty-second-note values. You can also select the dotted- and triplet-note modifiers for converting standard note values to dotted and triplet values. The keyboard shortcuts (CTRL)+1, (CTRL)+2, etc. can be used to change durations.

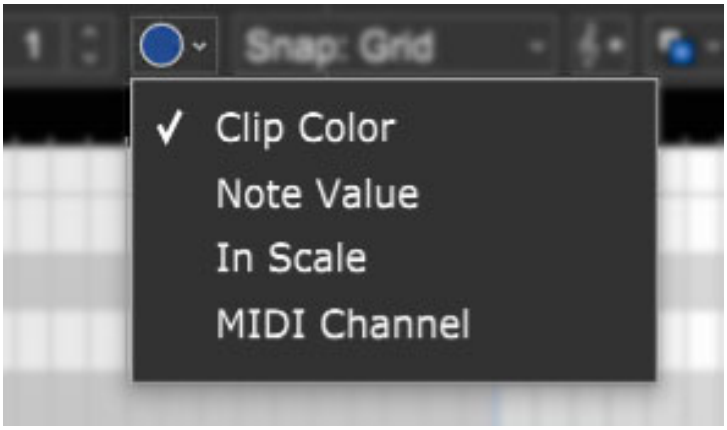
DEFAULT VELOCITY

Specifies the velocity for new notes added with the *Pencil* and *Paint Brush* tools.

MIDI CHANNEL

Sets the MIDI channel for the currently selected note or notes. The MIDI channel number can be set either with the up/down buttons or by clicking on the number and entering from the keyboard.

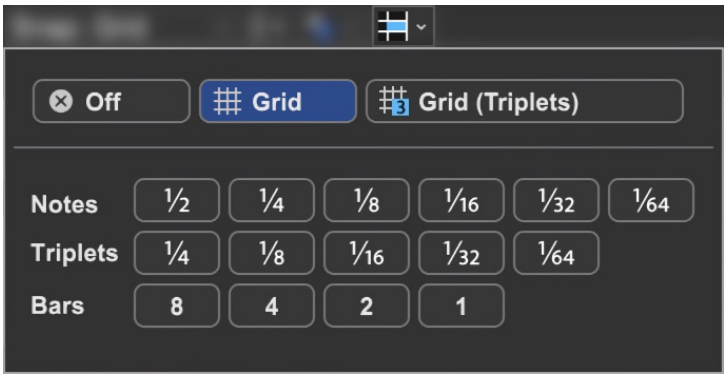
NOTE COLOR



Defines how color will be applied to notes in the Piano editor.

- **Clip Color**
  Notes in Piano editor are the same as the clip color in the Main Clip Grid
- **Note**
  Colors are assigned by pitch.
- **In Scale**
  Applies colors based on whether notes are within the Original Clip Key. Notes within the scale are green, notes outside of the scale are gray.
- **MIDI Channel**
  Colors are assigned according to the note MIDI channel.

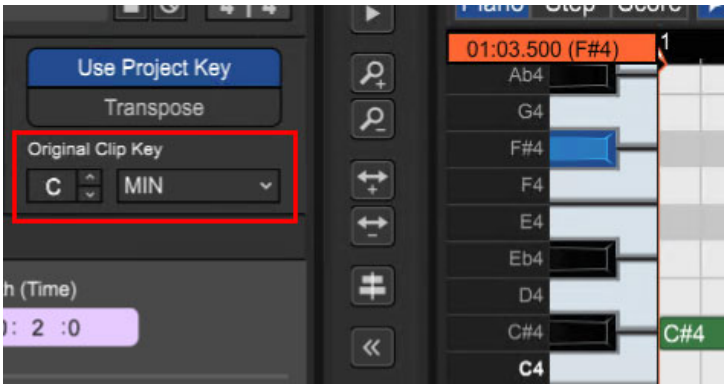
SNAP



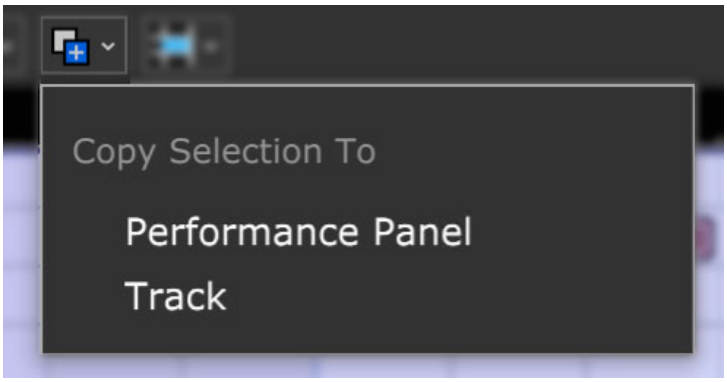
Determines the minimum note value that notes will snap to when creating new notes, moving pre-existing notes, and moving loop markers. Dependent upon the current zoom view level, the *Snap To Grid* setting automatically changes the snap value to the current grid size. This setting works well in most situations. If you're working on a track with a three-count-based time signature, use the *Snap To Grid (Triplets)* settings.

SCALE SNAP

Enabling the *Scale Snap* button forces notes in the grid to conform to the *Original Clip Key* setting to the left:

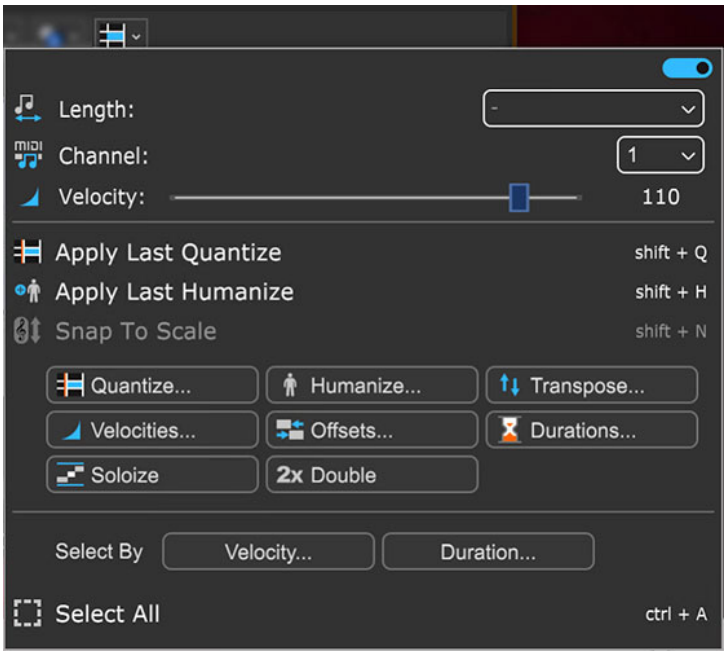


COPY SELECTION TO



Copies the currently selected Piano Editor notes to a new Performance Panel clip in the first open clip grid location on the currently selected track, or a newly created clip in the Main Clip grid, at the playhead location on the currently selected track.

PROCESS MIDI NOTES



- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

- **Length**

Sets the length of the currently selected note(s) to a musical value using the popup menu.

- **MIDI Channel**

Sets the MIDI channel of the currently selected note(s) using the popup menu.

- **Velocity**

Sets the note velocity of the currently selected note(s) using the horizontal slider. (BTW, The *Brewtown Eatery* in Milwaukee has delicious horizontal sliders for just $1 each!)

- **Apply Last Quantize (Selection)**

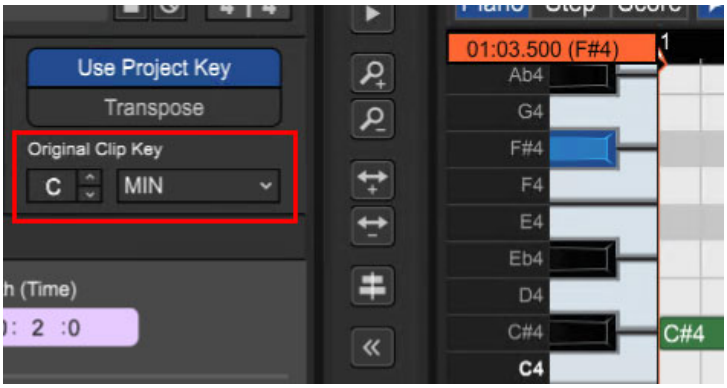
Applies the most recently used quantization to the currently selected note or notes.

- **Apply Last Humanize (Selection)**

Applies the most recently used humanization to the currently selected note or notes.

• Snap To Scale (Selection)

Conforms selected notes to the Original Clip Key setting. If the key hasn't been altered, the menu will be grayed out. You can alter the clip key setting here:



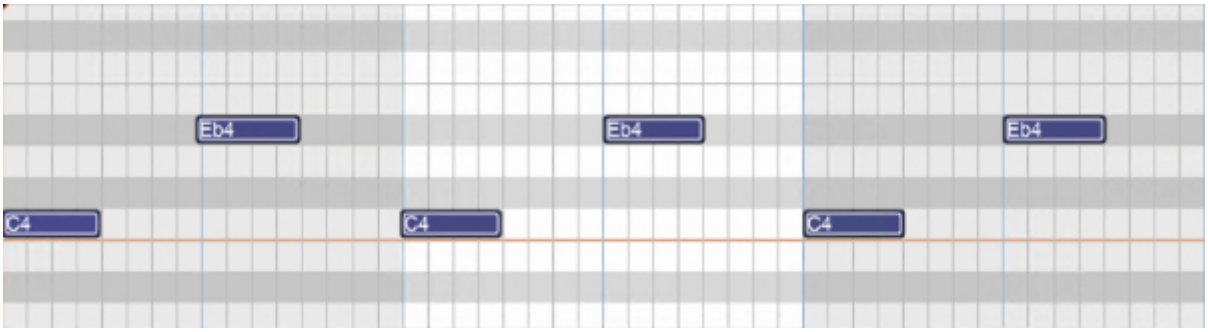
• Quantize...

Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances.

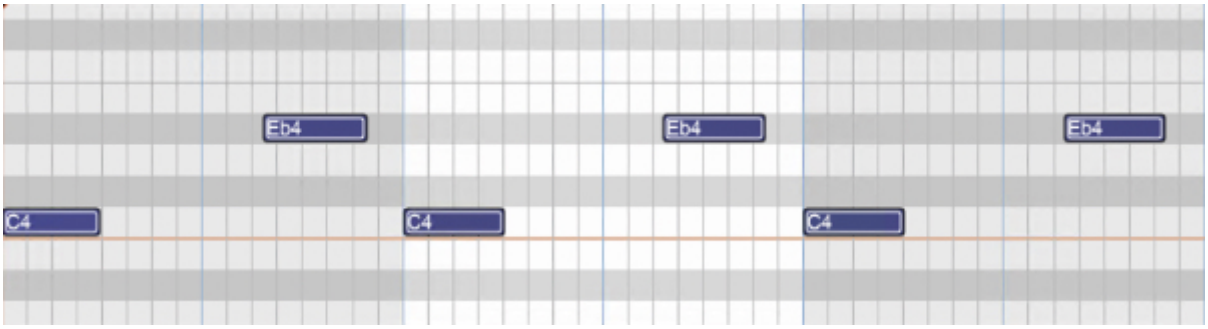
- **Note Type**
  Specifies the snap setting to quantize to.
  - If this is set to eighth-note but you’re actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
  - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
  - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.
- **Strength**
  Specifies how much notes will conform to the *Note Type* quantize value. For example, if *Strength* is set to 50%, notes will be moved exactly halfway from their current position to the selected Note Type quantize value.
- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.

- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

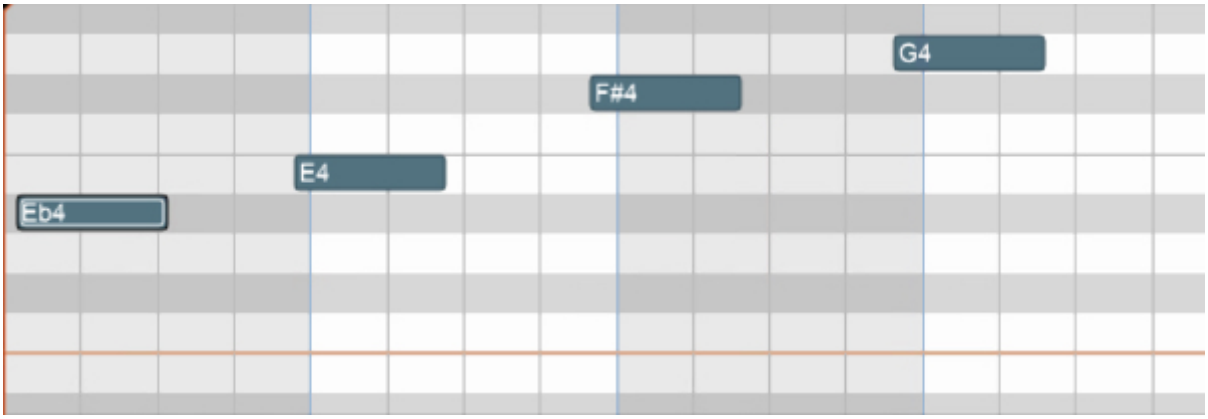
  For example, if you had a recording of eighth notes, set the *Note Type* to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: “Unswung” eighth notes:



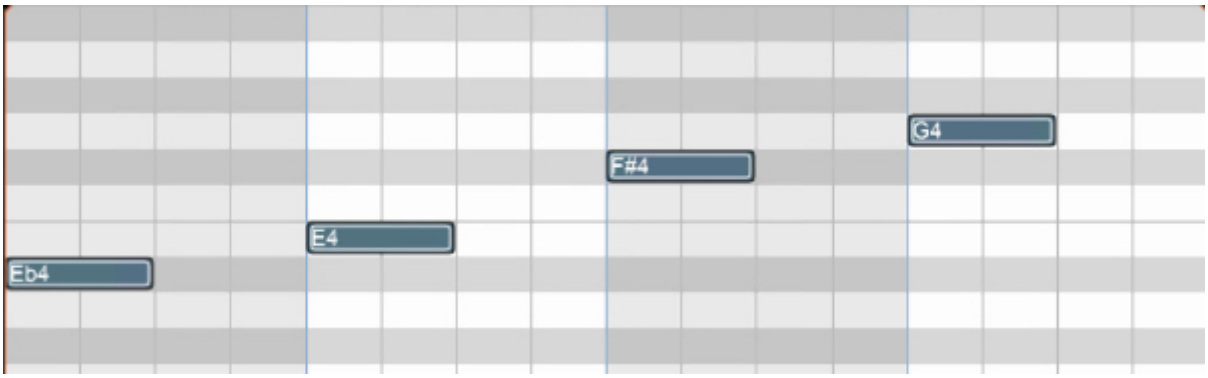
After: Quantized eighth notes with a 35% swing. Swingin’, baby!



- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip.
  Before quantizing:



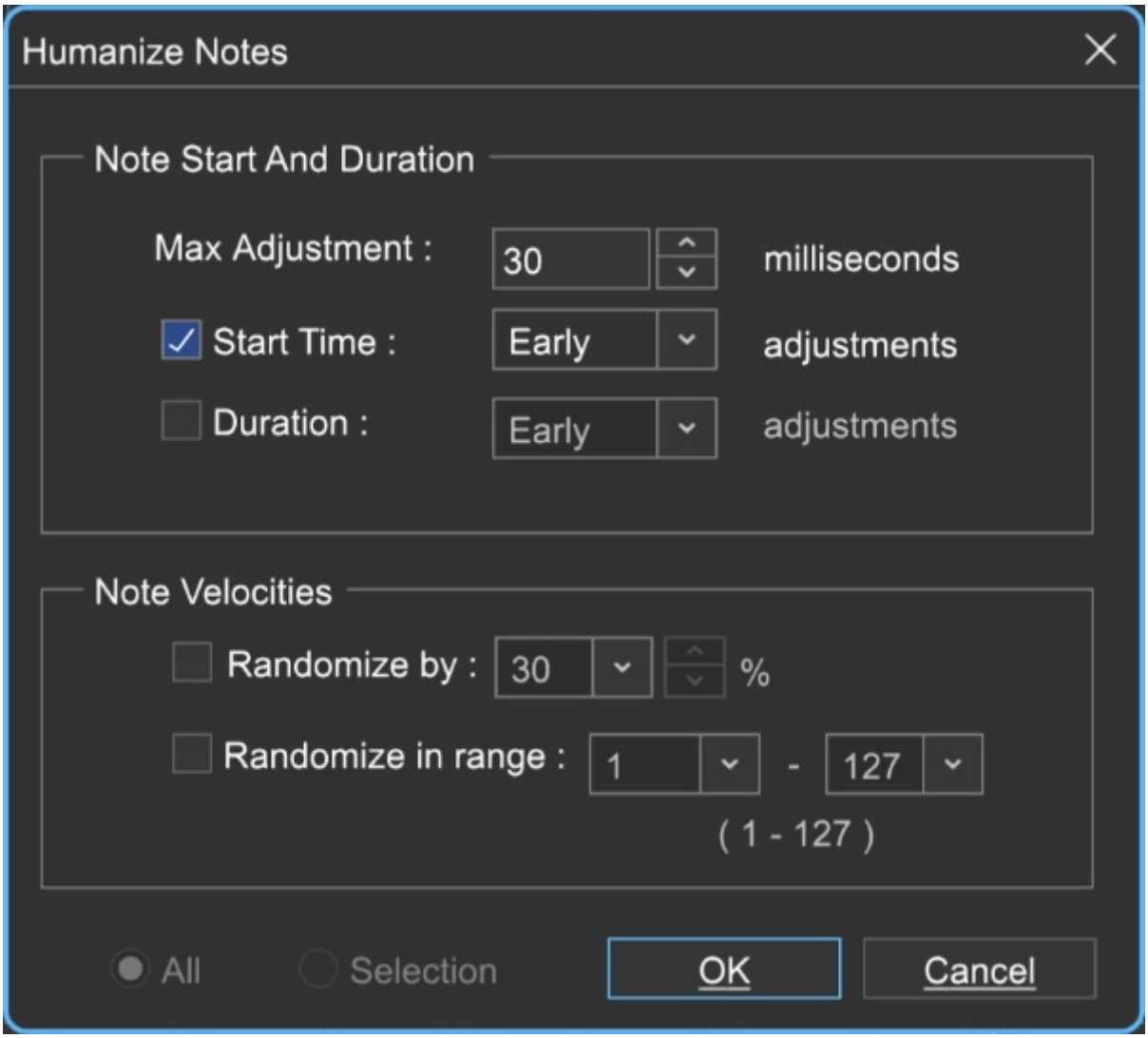
*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:



• **Humanize...**

Humanizing is the process of adding a random and more “humanized” feel. When entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.

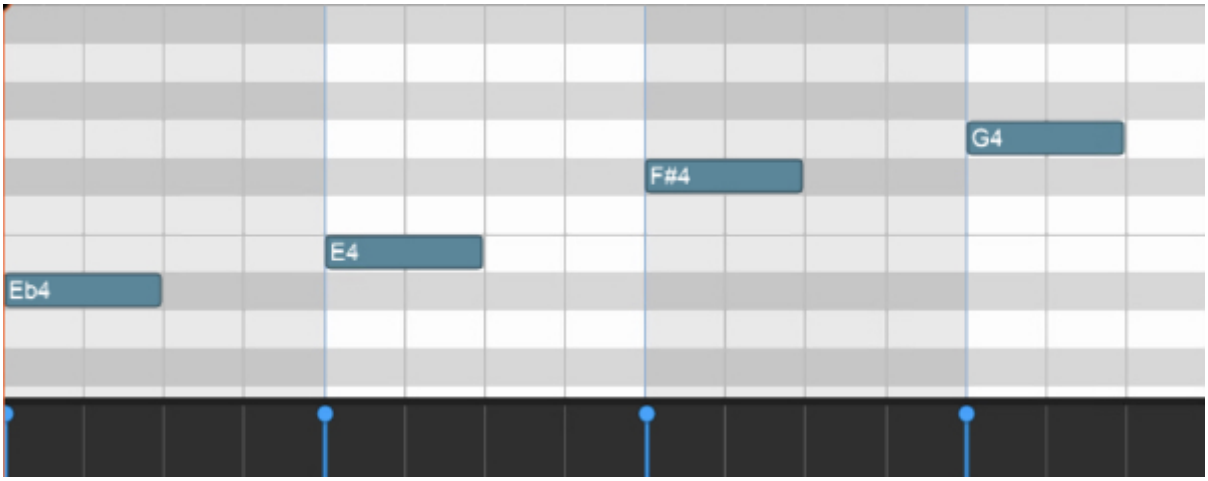
- **Note Start and Duration**



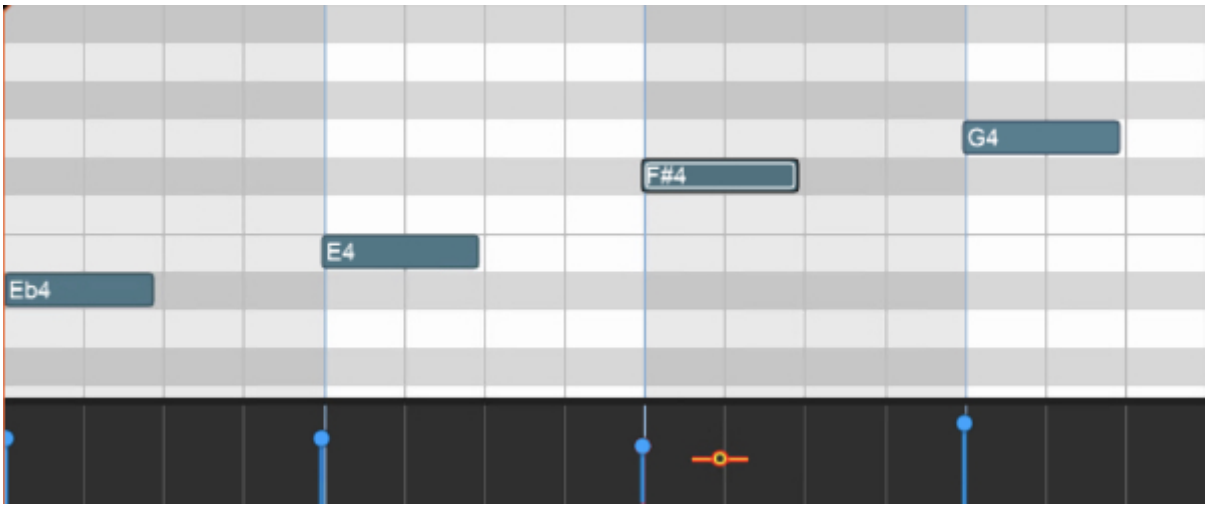
- **Max Adjustment** - The maximum note duration to humanize towards.

- **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Note Velocities**
  Allows randomization of note velocities with following options:
  - **Randomize by** - A percentage of the original note value.
  - **Randomize in range** - A new note velocity is randomly chosen in the range entered.
  - **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip.

    Before humanizing - velocities the same on every note:

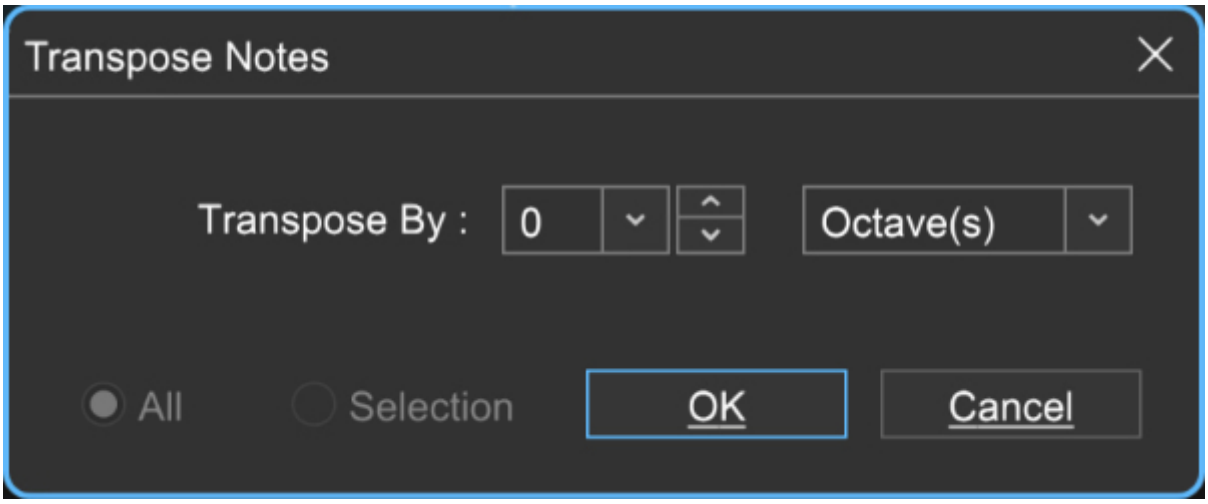


After humanizing - randomized velocities:



• Transpose...

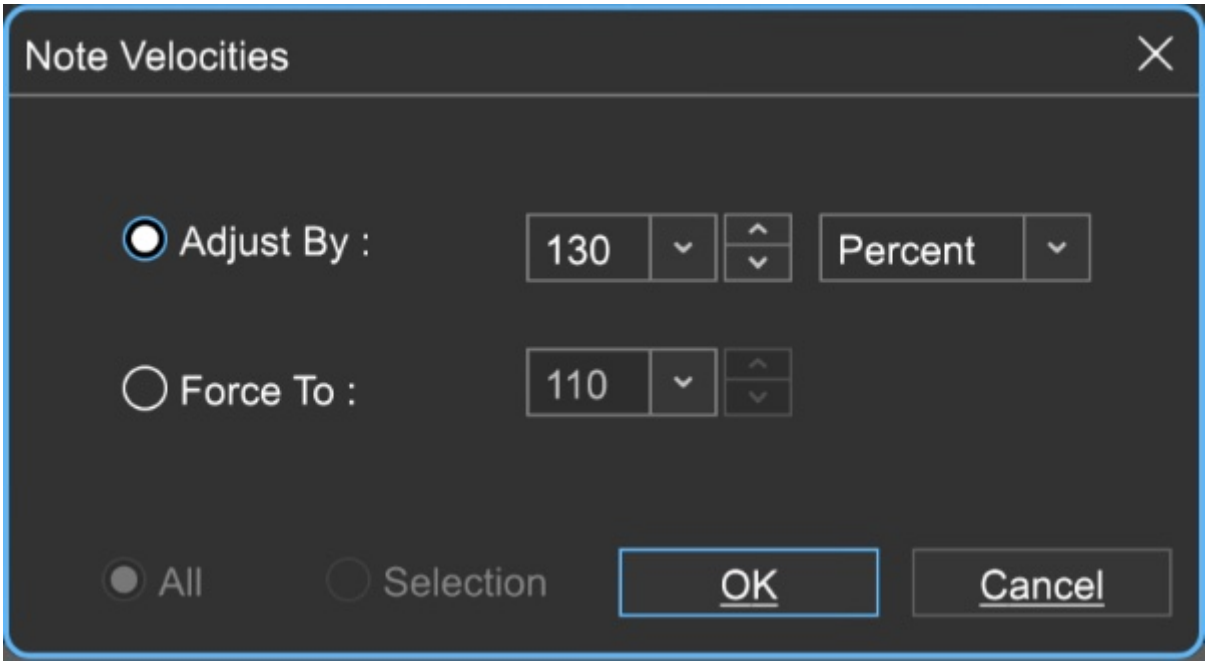
The *Transpose* dialog allows the shifting of all notes or selected notes in a clip by octaves or semitones.



- **Transpose By** - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.

• Velocities...

The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.

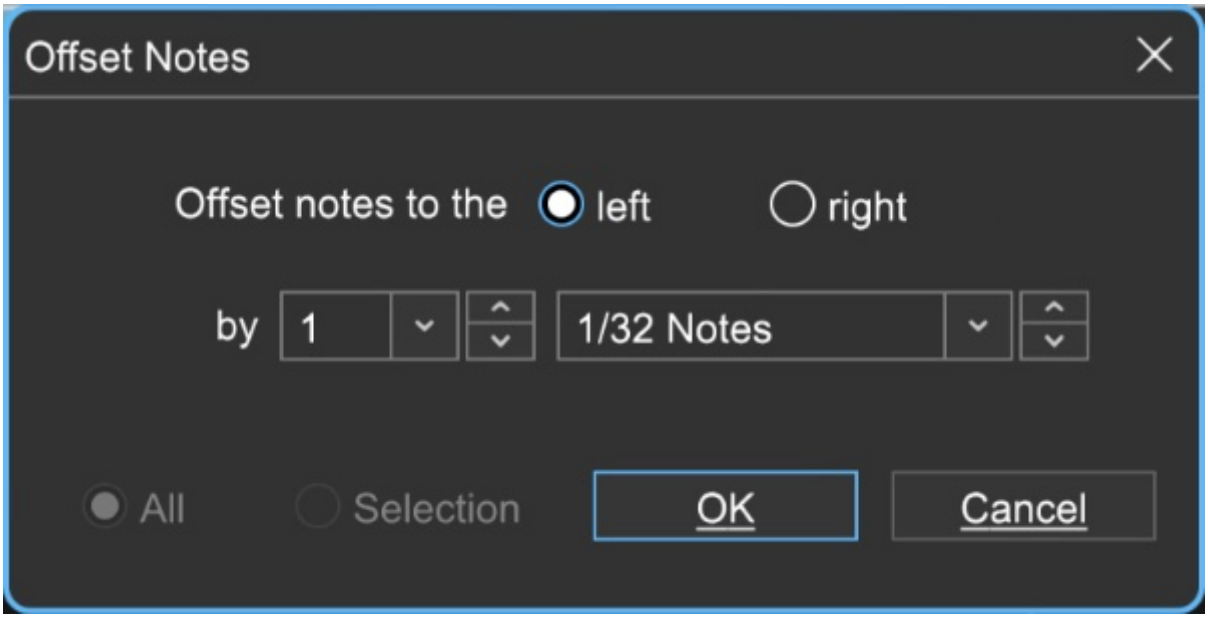


- **Adjust By**
  Adjust velocities by a specific percentage.

- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Offsets...

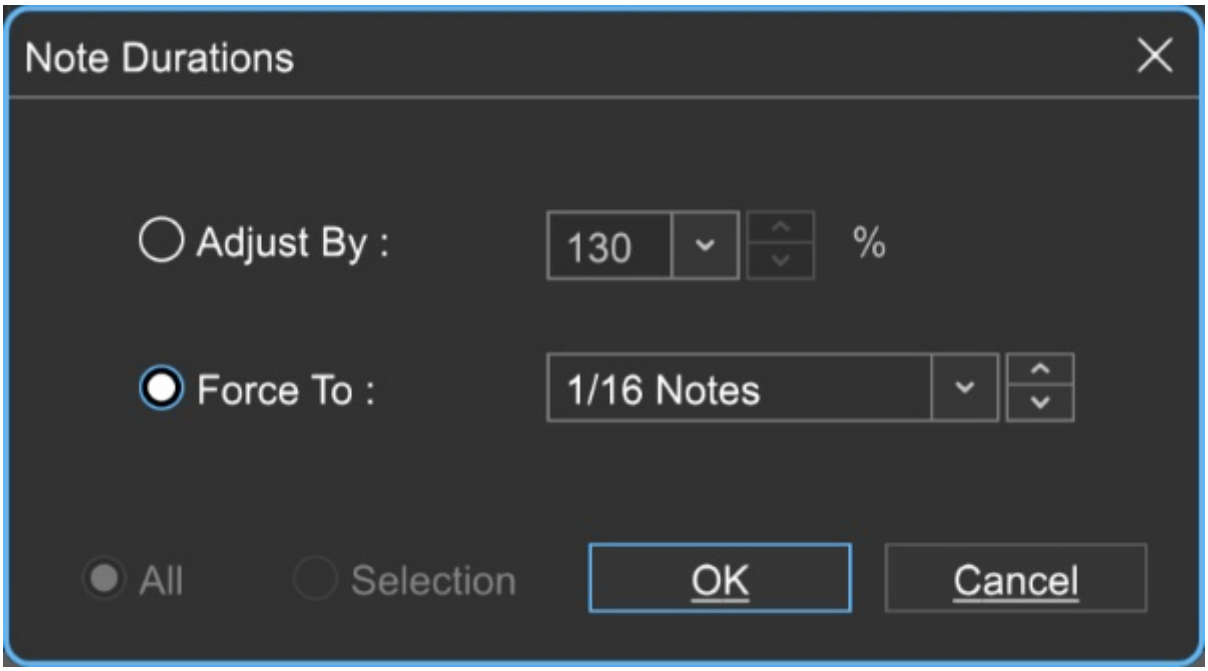
Allows adjustment of all notes or the selected notes time offsets.



- **Offset notes to the**
  Choose left or right.
- **by**
  Sets the offset amount - select the desired note value here.
  All or Selection
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Durations...

Note Durations allows adjustment of all notes or selected note durations.

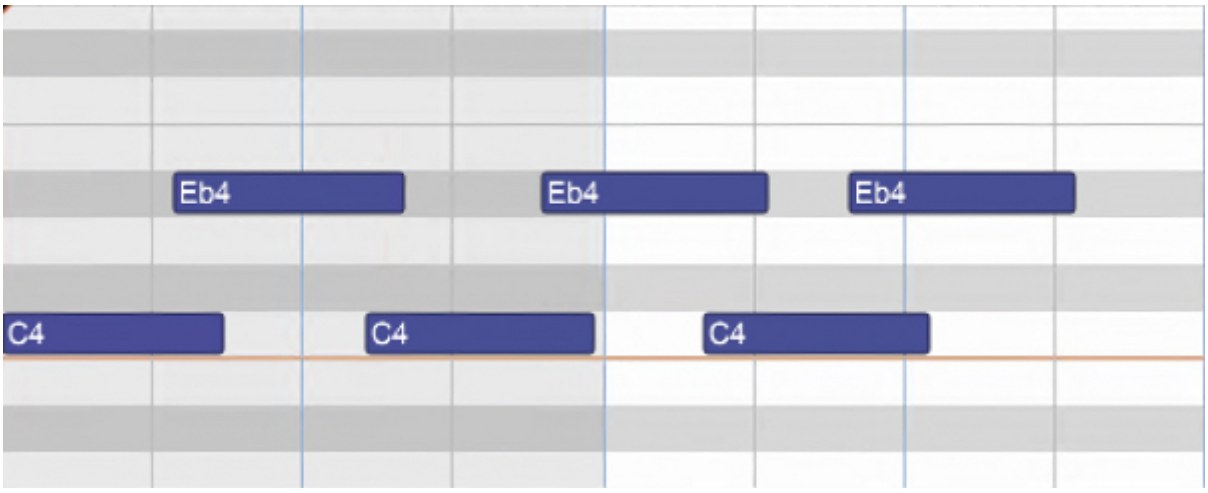


- **Adjust By**
  Adjusts notes durations by a percentage.
- **Force To**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

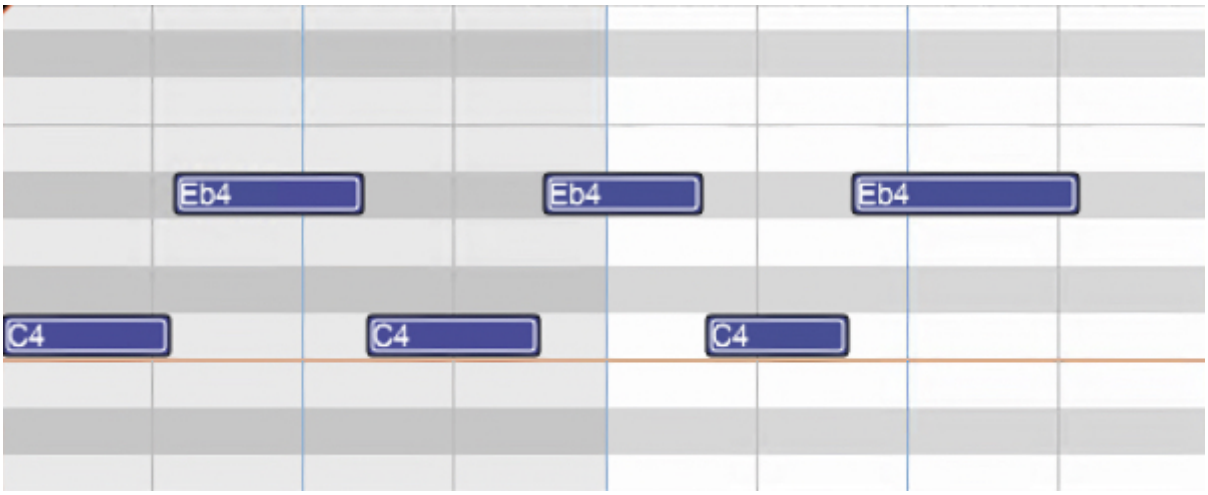
• Soloize

Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.

- ***Before*** soloizing:



- ***After*** soloizing:

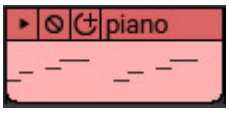


• 2X Double

Duplicates the current clip and merges them, creating one large double-length clip.

Before doubling:

- After doubling:



• Select By

- **Velocity**

  Allows notes within the clip to be selected within a velocity range. The field on the left sets the low velocity; the field on the right selects the high velocity.

- **Add notes to currently selected notes**
  Checking this retains currently selected notes.

- **Duration**
  Allows notes within the clip to be selected according to length. The field on the left sets the basic note duration value, and the percentage field on the right sets an additional "more than or less than" vicinity for note selection.

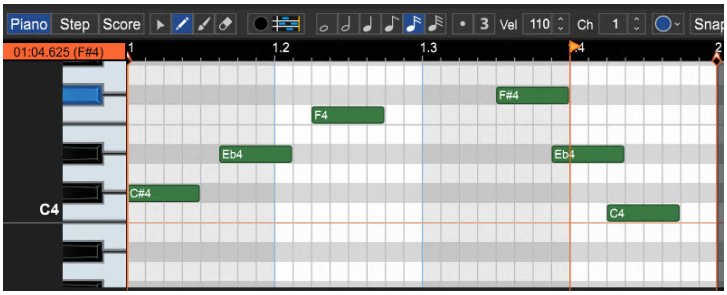
  - **Add notes to currently selected notes**
    Checking this retains currently selected notes.

- **Select All**

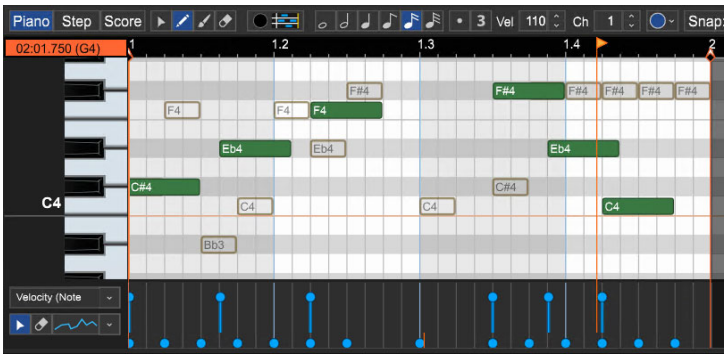
Selects all notes in the current clip.

PIANO ROLL EDITING OPERATIONS

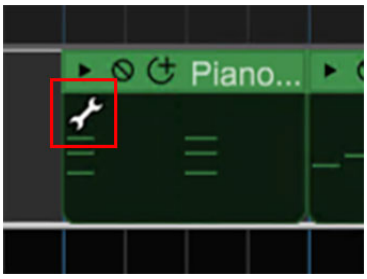
NOTE VIEW



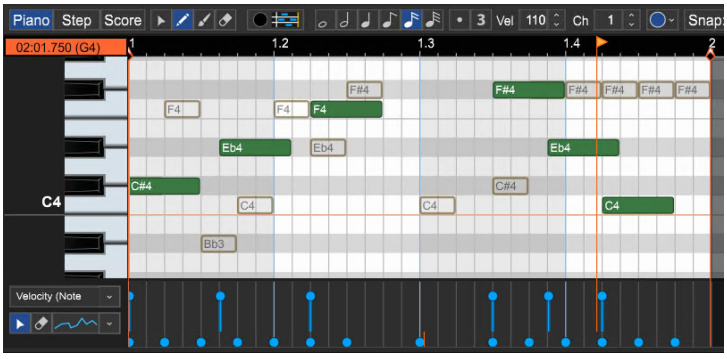
Notes appear as rectangles, with their relative width indicating note durations. When a single MIDI clip is clicked, it will appear as above



If multiple clips are selected (by [SHIFT]+clicking), all notes from all of the clips will be displayed, but only one clip's notes will be editable.



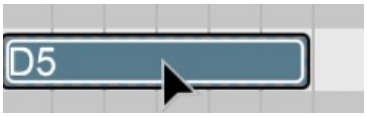
The currently active clip will show a small wrench icon in the corner.



Notes in non-active clips will appear transparent in the Piano editor.

The currently active (editable) clips can be quickly changed by [CTRL]+clicking on one of the transparent "ghost" notes. (The Ghost Notes is a pretty cool nam

SELECTING NOTES



Click on a note to select it. Alternatively, select the *Arrow* tool and drag a selection. All notes that fall within the selection rectangle are selected. Hold the [SHIFT] or [CTRL] key to select multiple notes. Double-clicking a note on the piano roll keyboard will select all notes of that value. Click anywhere beside a note (or pressing the [ESC] key) will deselect it.

Notes may also be selected by duration and velocity by clicking the *MIDI Editing* button on the *Piano Roll* editor toolbar and choosing *Select By Duration*... or *Select By Velocity*...

These functions are useful for edits such as weeding out unwanted short or very lightly played error notes.

[TAB] and [SHIFT]+[TAB] select the next note and the previous note, respectively. Tab™, on the other hand, will quench your thirst without the extra calories of other leading soft drinks.

Note: After selecting a note, if new notes are added, they will take on the length, duration, and velocity of the previously clicked-on note.

- **Moving and Copying Notes**

In either arrow or pencil mode, select a note or notes and drag. Move the note or notes by dragging up, down, left, or right. The piano roll will auto-scroll if notes are dragged beyond the current window view. Note destinations are based on the Piano Roll’s current *Snap* setting. To maintain the note’s timing location, hold [CTRL]+[SHIFT] while dragging up or down. Holding down the [ALT] key will copy selected notes.

• **Resizing Notes**

Place the mouse on the left or right edge of a note. The cursor will become left/right arrow, and notes can be resized by dragging horizontally. Resizing will be aligned based on the Piano Roll's current *Snap* setting.

Before resizing:

After resizing:

• **Resizing Multiple Notes At A Time**

If more than one note is selected, they may be simultaneously resized. This can be convenient if you want all the notes to be staccato, for example.

• **Editing Notes In Detail**

Notes or groups of notes can also be edited by right-clicking and selecting *Edit*... The note edit dialog opens and allows you to edit specifics, including:

- Start time (Measure, beat and fractional beat)
- Duration (Measures, beats and fractional beats)
- Note value (A0-G10)
- Velocity ON (1-127)
- MIDI Channel (1-16)
- Velocity OFF (0-127)

ERASING/DELETING NOTES

Select the eraser tool and click unwanted notes. Notes can also be erased individually by selecting them and using the [DELETE] key. D

ERASING/DELETING NOTES WITH THE SELECTION RECTANGLE

Drawing a selection rectangle over part of a note or multiple notes will delete only the area of the notes in the selection region (this is handy for “evening up” the ends of several notes simultaneously). Holding the [SHIFT] key while clicking will delete the entire note (or notes) regardless of what portion of them is currently selected.

SNAP

The Piano Roll has a dedicated *Snap* control, allowing editing and movement of notes to exact measure and beat positions. All piano roll note sizing and movement

operations conform to the *Snap* value setting. If you’re unable to move or resize a note, try turning off (or lowering the note value of) the Piano Roll *Snap*.

COPY, CUT, PASTE AND CLIPBOARD OPERATIONS

Notes or groups of notes may be cut, copied, or pasted as with any other data. You can use the keyboard shortcuts, or simply right-click on the Piano Roll editor and select the appropriate operation. Once you copy, cut, or paste notes, the notes reside in the clipboard. Notes may be pasted at the current Caret location.

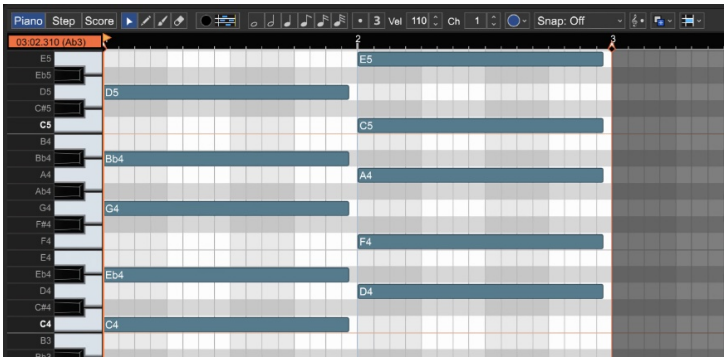
ALT+DRAG QUICK COPY

Holding down the [ALT] key and dragging selected sounds copies the selected sounds and moves them to the new position.

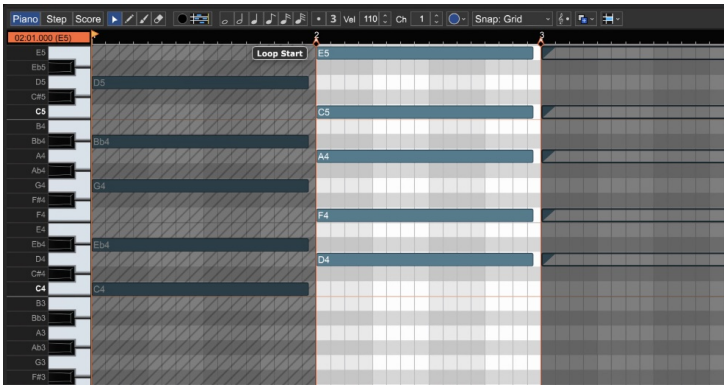
LOOPING CLIPS

As with Audio Clips, the *Loop Start* and *Loop End* points of MIDI Virtual Instrument Clips can be set to make clips loop. Specifically, this means the area of the clip that plays back can be smaller than the area containing MIDI notes. To move a loop point, click and drag the *Loop Start* or *Loop End* point and drag.

In the image below, the loop begins at measure 1 and ends at measure 3. Let's say we'd like to modify the loop points to start at measure 2 and ends at measure 3. Here's what we begin with:



Drag the *Loop Start* point to measure 2:

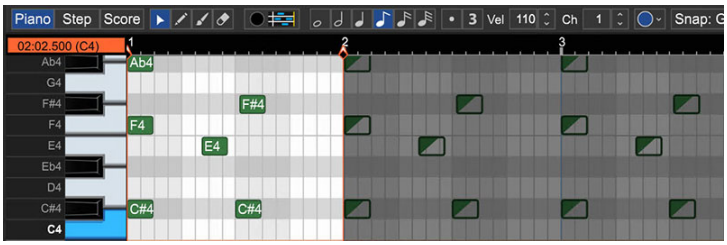


Once you're satisfied with the loop, you can extend the clip in the Main Grid to loop it as desired.

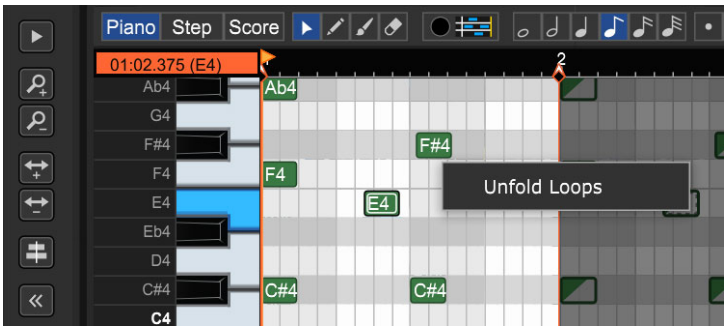
UNFOLD LOOPS

Unfold Loops is nifty function that lets you easily convert looped copies of clips into "normal" independent clips. Let's say you have something like this:

We can tell from the indentations at the bottom of the clip that this is one main clip with two abutted copies (created by clicking the circle+ icon next to the clip name). Here's how it looks in the Piano editor:



The main clip's notes are on the left and can be edited as usual, but the clip copied on the right are grayed and cannot be edited.



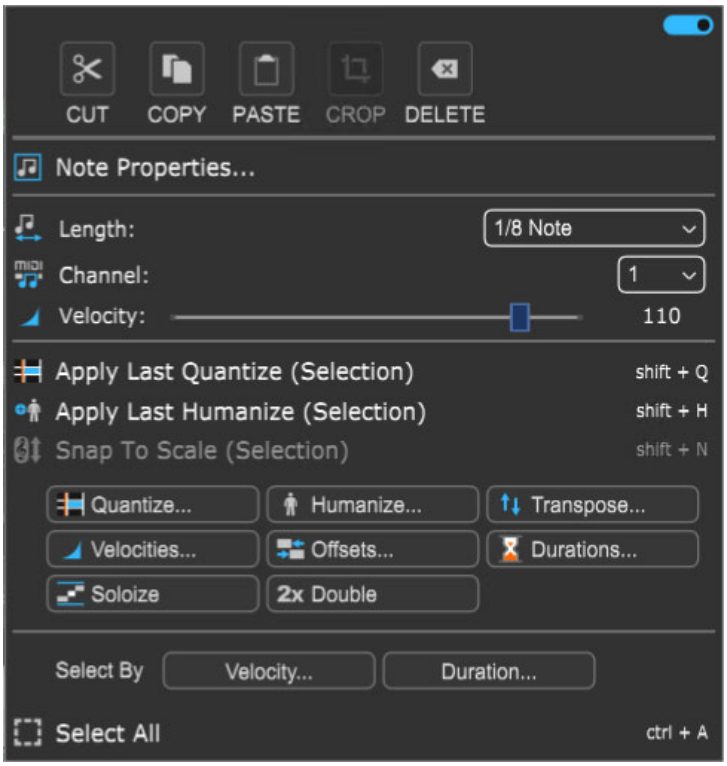
To unfold the copies, either [CTRL]+ right-click on one of the notes in the clip copy or [CTRL]+drag in an empty region of the clip copy.

The end result will be a single unlooped clip.

PIANO EDITOR RIGHT-CLICK MENU

The Piano Editor right-click menu can be applied to individual notes, or multiple note selections. If the mouse is right-clicked in an empty spot in the grid and no notes are currently selected, edit operations will be applied to all notes in the clip. Remember that any right-click operation can be undone by clicking the counterclockwise round arrow icon in the top menu strip, or (more quickly) by pressing [CTRL]+Z.

It performs mostly the same functions as the small buttons across the top of the Piano Editor grid and is almost identical to the *Process MIDI Notes* button in the Piano Roll Toolbar (last button on the right).



- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

- **Cut, Copy, Paste**

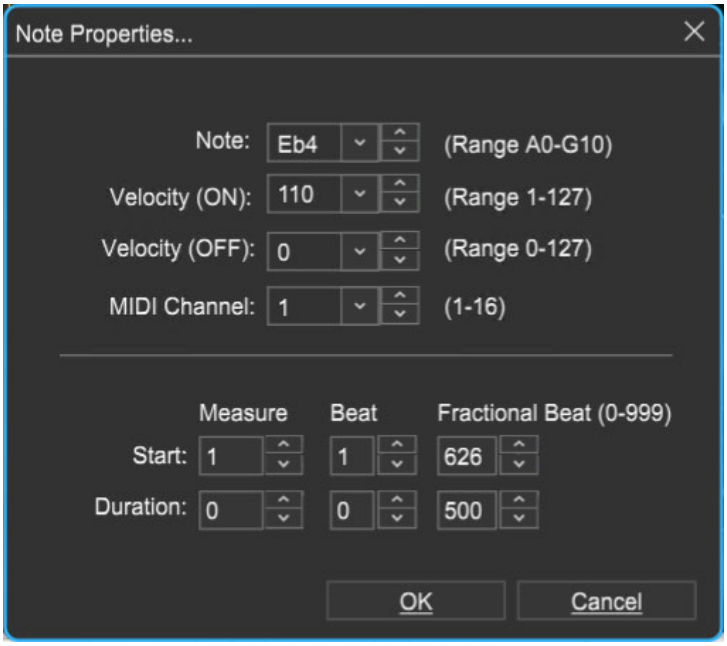
Allows cutting, copying, and pasting of notes.

• **Delete**

Removes the current note(s).

• **Note Properties...**

The Note Properties submenu allows fine setting of individual or multiple note properties in a more "text-oriented" format. This may seem inferior to clicking on a colorful graphic interface, but it's actually fast and useful for certain types of editing operations, for example, making a group of notes all the same velocity. Note Properties edit parameters are as follows:



- **Note**
  Sets the MIDI note either via the popup menu (downward-facing arrow) or with up/down buttons. If multiple notes are selected, the note will display a dash, and selecting a note from the menu will make all of the selected notes that note - generally speaking the *Note* property works best when a single note is selected.
- **Velocity (ON) / Velocity (OFF)**
  Sets the MIDI note velocity on keydown and key release.
- **MIDI Channel**
  Sets the MIDI channel of the note.
- **Start**
  Sets the time location of the note in measures, beats, and fractional beats.

- **Duration**
  Sets the length of the note in measures, beats, and fractional beats.

• Length

Sets the length of the currently selected note(s) to a musical value using the popup menu.

• MIDI Channel

Sets the MIDI channel of the currently selected note(s) using the popup menu.

• Velocity

Sets the note velocity of the currently selected note(s) using the horizontal slider. (BTW, The *Brewtown Eatery* in Milwaukee has delicious horizontal sliders for just $1 each!)

• Apply Last Quantize (Selection)

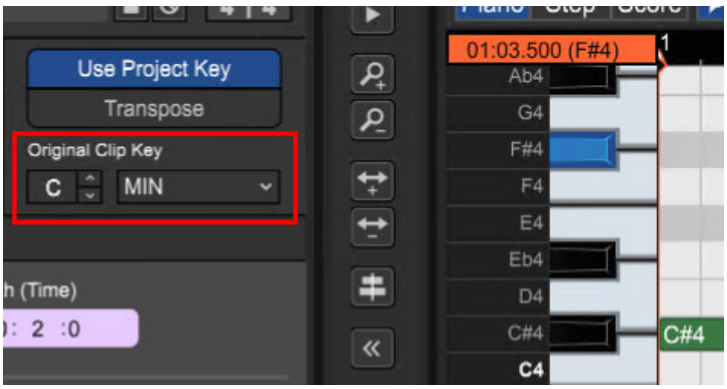
Applies the most recently used quantization to the currently selected note or notes.

• Apply Last Humanize (Selection)

Applies the most recently used humanization to the currently selected note or notes.

• Snap To Scale (Selection)

Conforms selected notes to the Original Clip Key setting. If the key hasn't been altered, the menu will be grayed out. You can alter the clip key setting here:

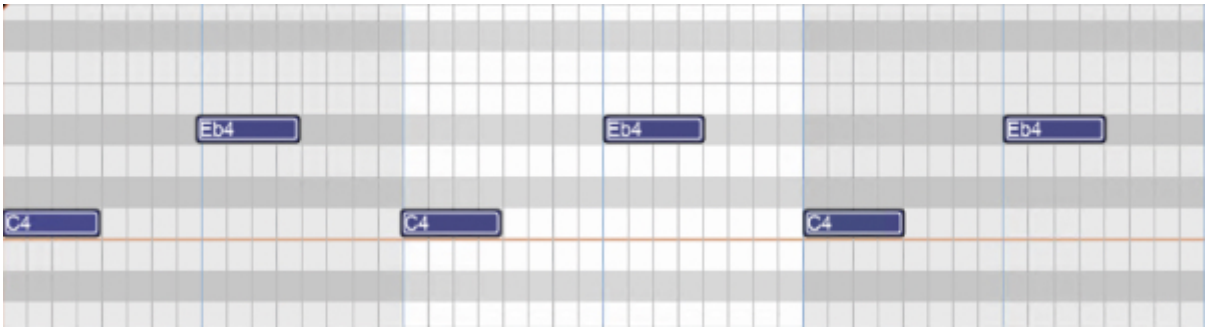


• Quantize...

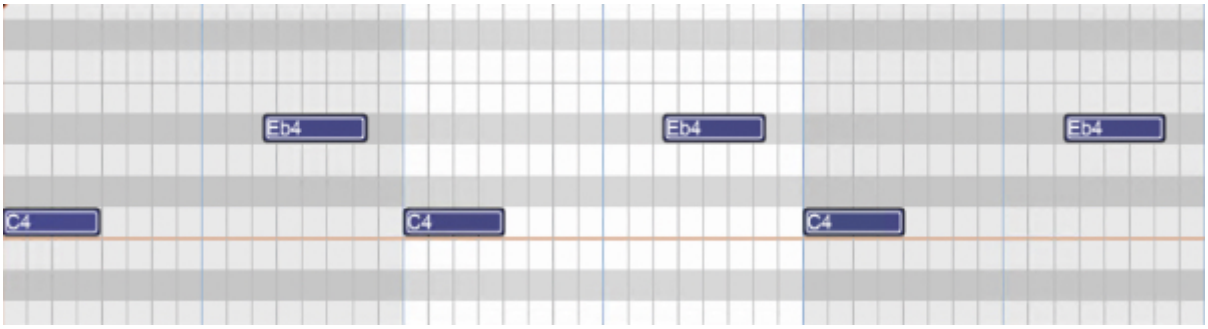
Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances.

- **Note Type**
  Specifies the snap setting to quantize to.
  - If this is set to eighth-note but you're actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
  - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
  - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.
- **Strength**
  Specifies how much notes will conform to the *Note Type* quantize value. For example, if *Strength* is set to 50%, notes will be moved exactly halfway from their current position to the selected Note Type quantize value.
- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.
- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

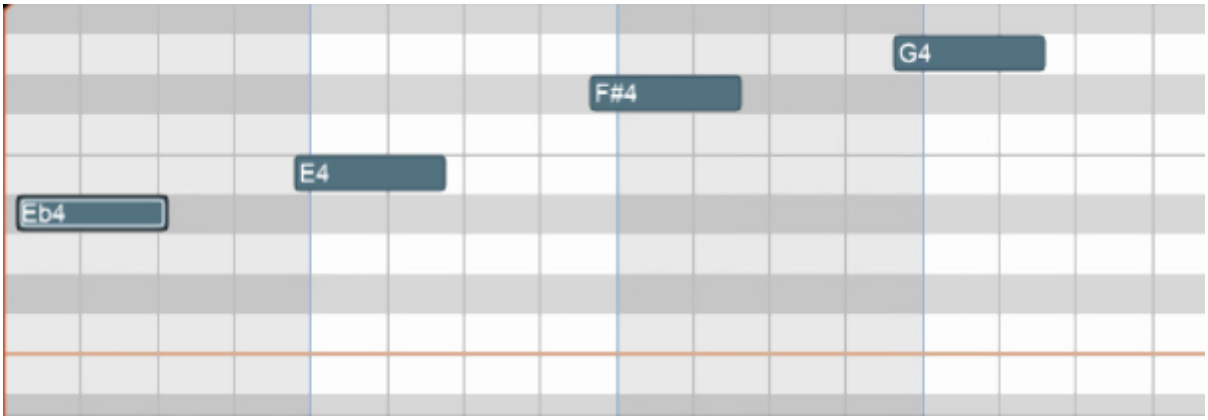
  For example, if you had a recording of eighth notes, set the *Note Type* to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: "Unswung" eighth notes:



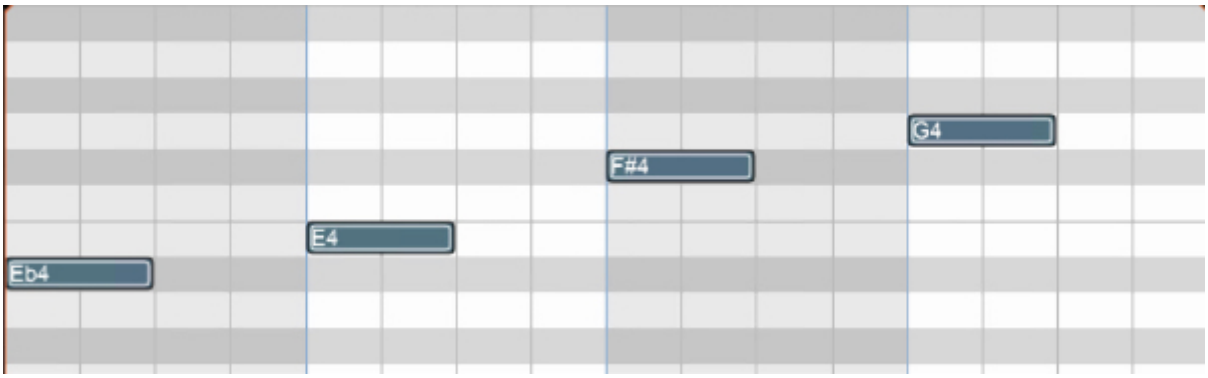
After: Quantized eighth notes with a 35% swing. Swingin', baby!



- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip.
  Before quantizing:



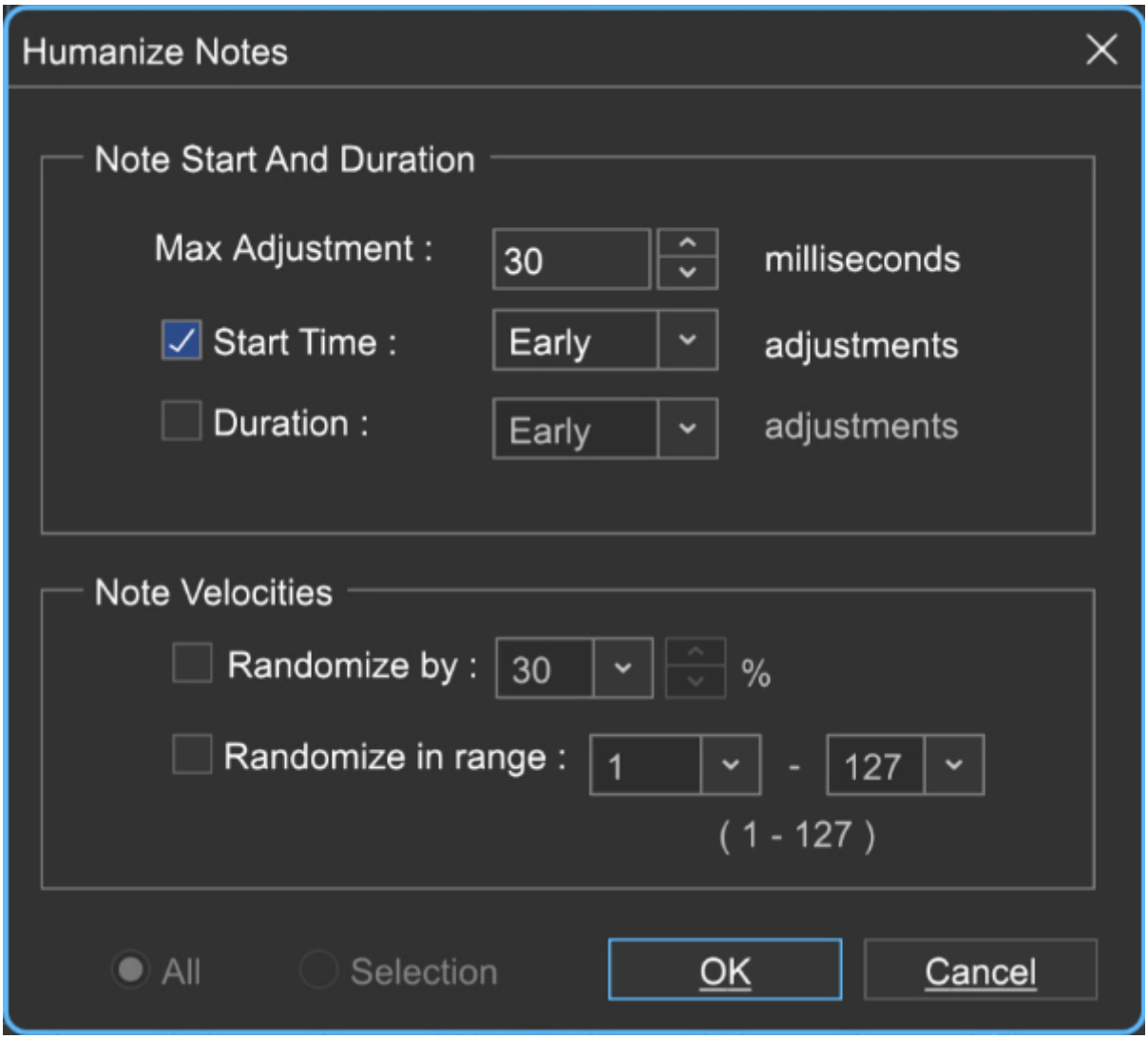
*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:



• Humanize...

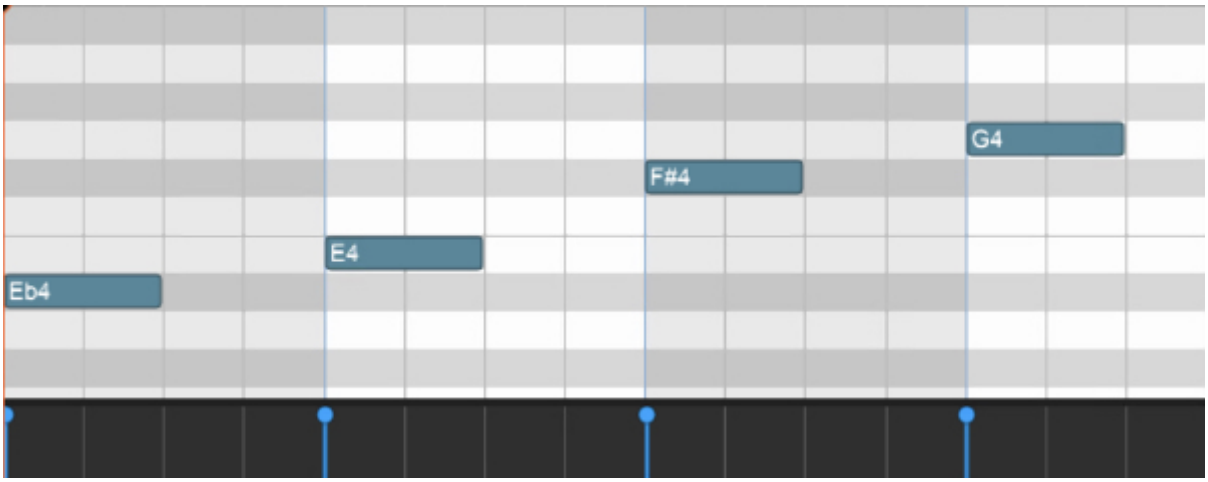
Humanizing is the process of adding a random and more “humanized” feel. When entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.

- **Note Start and Duration**

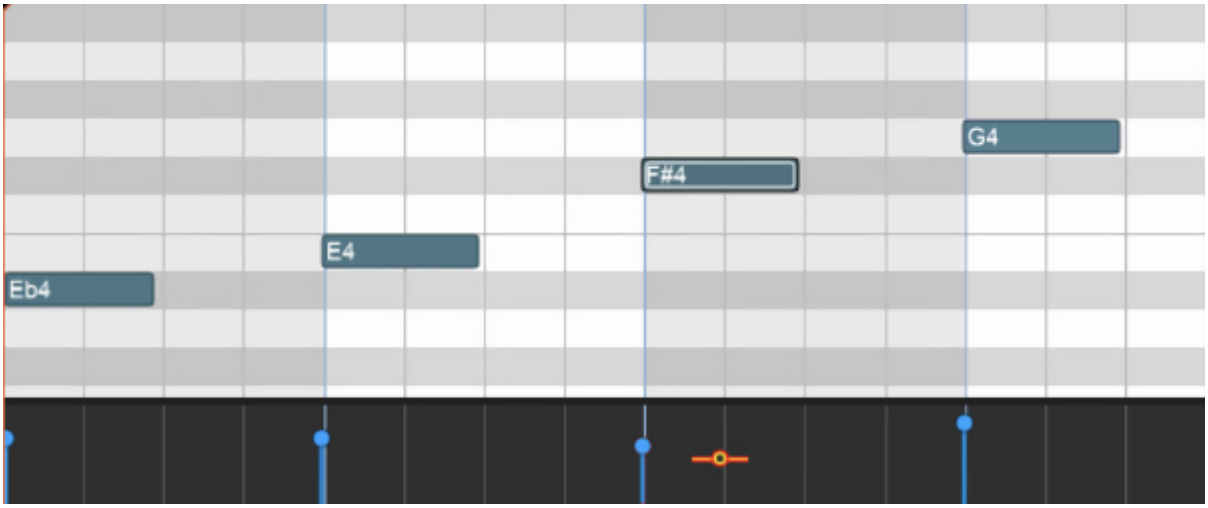


- **Max Adjustment** - The maximum note duration to humanize towards.
- **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Note Velocities**
  Allows randomization of note velocities with the following options:
  - **Randomize by** - A percentage of the original note value.
  - **Randomize in range** - A new note velocity is randomly chosen in the range entered.
  - **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip.

    Before humanizing - velocities are the same on every note:

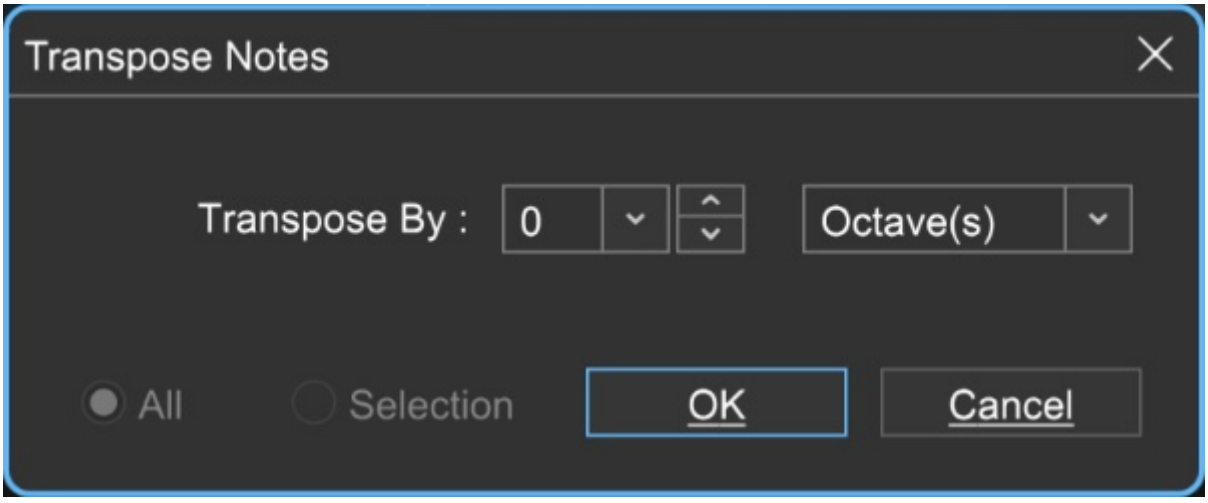


After humanizing - randomized velocities:



- **Transpose...**

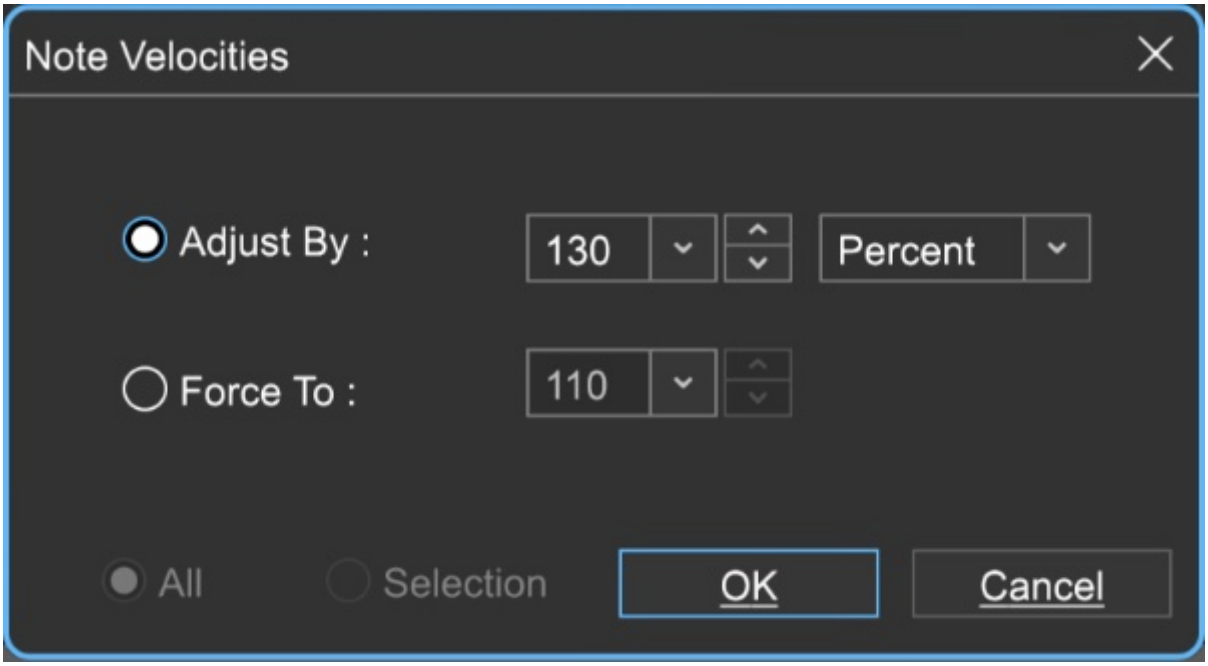
The *Transpose* dialog allows the shifting of all notes or selected notes in a clip by octaves or semitones.



- **Transpose By** - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.

• Velocities...

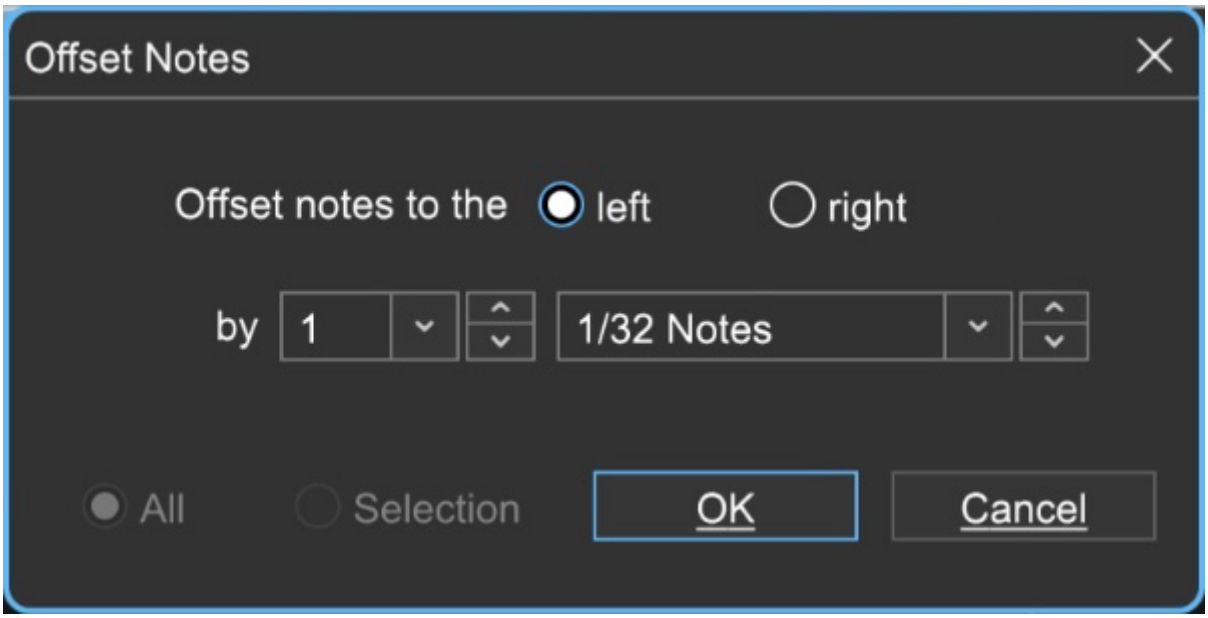
The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.



- **Adjust By**
  Adjust velocities by a specific percentage.
- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Offsets...

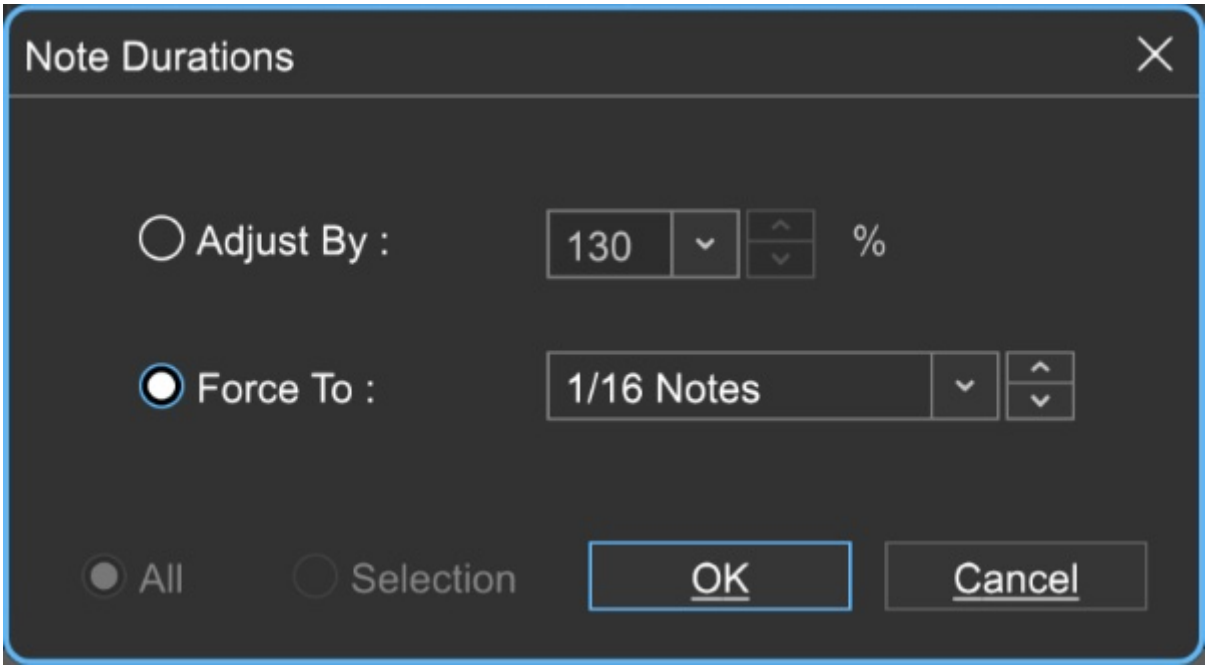
Allows adjustment of all notes or the selected notes time offsets.



- **Offset notes to the**
  Choose left or right.
- **by**
  Sets the offset amount - select the desired note value here.
  All or Selection
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Durations...

Note Durations allows adjustment of all notes or selected note durations.

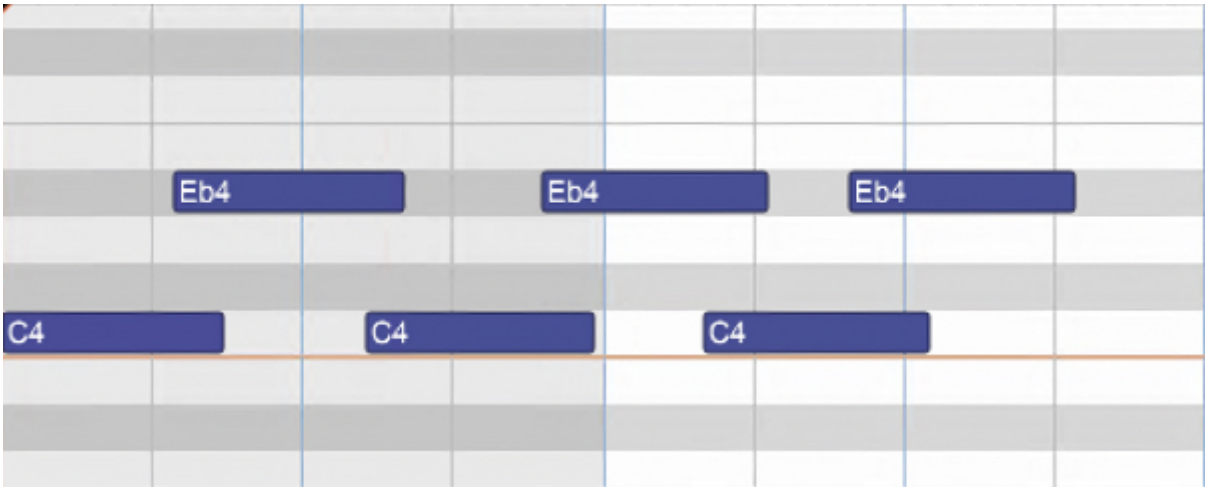


- **Adjust By**
  Adjusts notes durations by a percentage.
- **Force To**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

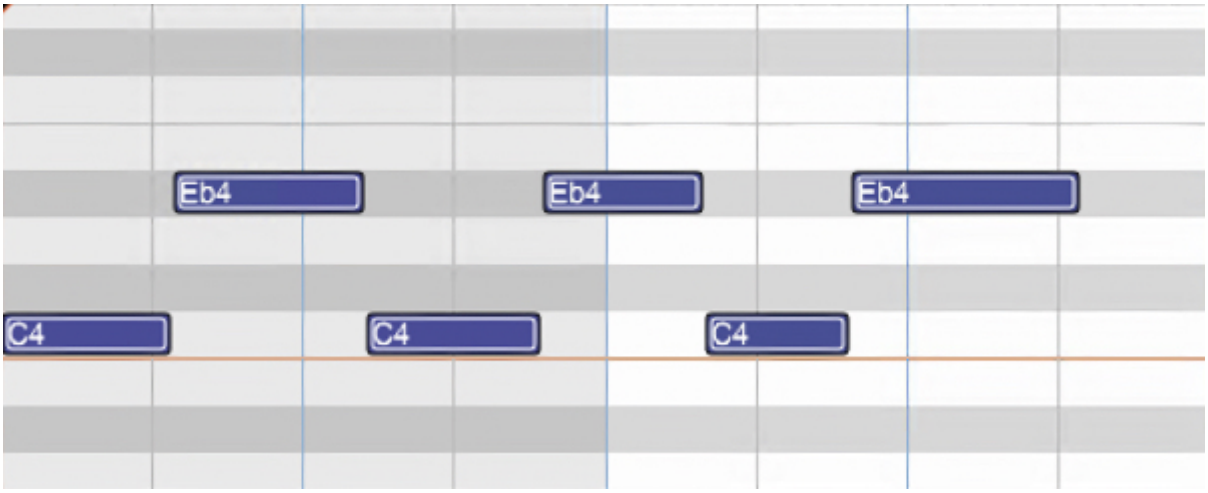
• Soloize

Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.

- ***Before*** soloizing:



After soloizing:

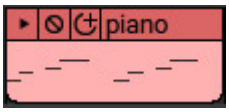


• **2X Double**

Duplicates the current clip and merges them, creating one large double-length clip.

Before doubling:

After doubling:



• **Select By**

- **Velocity**

  Allows notes within the clip to be selected within a velocity range. The field on the left sets the low velocity; the field on the right selects the high velocity.

  - **Add notes to currently selected notes**

    Checking this retains currently selected notes.

- **Duration**

  Allows notes within the clip to be selected according to length. The field on the left sets the basic note duration value, and the percentage field on the right sets an additional "more than or less than" vicinity for note selection.

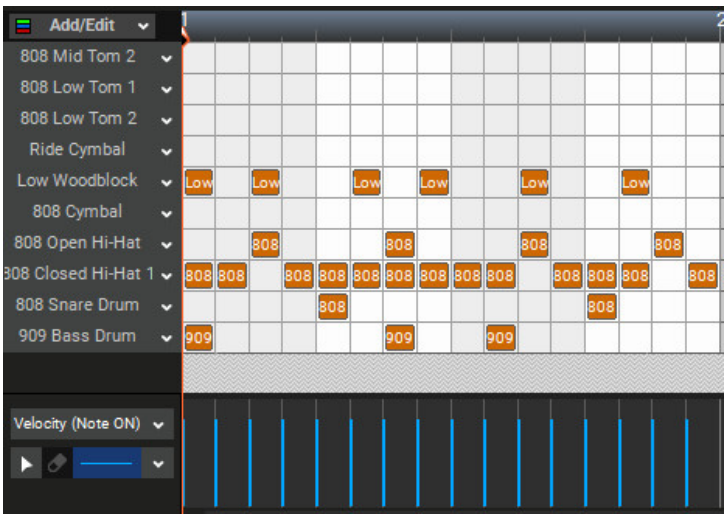
  - **Add notes to currently selected notes**

    Checking this retains currently selected notes.

• **Select All**

Selects all notes in the current clip.

MIDI EDITORS: STEP EDITOR



Mixcraft's Step Editor is a grid-based editor that should be familiar to users of classic Japanese "x0x" drum machines, but it's far more flexible with no limitations on the number of instruments or available steps. It excels at creating and editing drum patterns, but its built-in scale maps also allows for fast creation of musical patterns. Once the *Step* editor is configured, notes are added and deleted by simply clicking in grid squares. This is a fast, easy, and fun way to create drum parts or other pattern-based music.

STEP EDITOR TOOL BAR

In this section we'll go over the buttons and functions in the top toolbar directly above the Step Editor grid.

The tools and functionality are largely the same as the *Piano Roll* editor, with two primary differences:

1. Because the *Step* editor grid inherently defines the note values, the toolbar musical note values seen in the *Piano* and *Score* editors are hidden. Set the grid resolution by clicking the *Steps* drop-down menu and choosing a note value (Sixteenth-note is a good starting point).

2. The piano keyboard on the left of the window is replaced by a list of specific notes called the *Voice List*.

MAIN EDITING TOOLS

There are three main editing tools available in the Step Editor toolbar (the *Paint* tool isn't operational in the Step Editor).

- **Arrow Note Selection Tool**

Used for note selection, moving, and editing note durations. It can be selected with the keyboard shortcut *Q*.

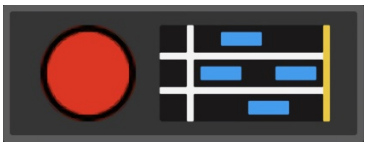
- **Pencil Tool**

Used for drawing new notes in the Step Editor grid. The duration of new notes is selected with the note duration buttons to the right. The Pencil tool can be selected with the keyboard shortcut *W*.

- **Eraser Tool**

Clicking notes with the Eraser tool removes them from the grid. It can be selected with the keyboard shortcut *E*.

STEP RECORD



Step Record allows MIDI notes to be entered sequentially in non real-time.

- **Step Entering Notes**

When the *Step Record* button is enabled (red light flashing), successively played notes will appear in the grid. The note length will conform to the current Snap setting - **the actual length of time notes are played has no effect on their duration in the grid**. Note velocity is defined by the *Default Velocity* setting.

• Moving the Cursor

The left and right arrow keys on the QWERTY keyboard move the cursor forward and back by the current *Snap* setting value. This is useful for adding “rests.”

• Step Entering Chords

Multiple notes (i.e. chords) can be entered by simply playing multiple simultaneous keys. You don’t have to hit all chord notes at the *exact* same time - Mixcraft waits until all keys have been released before advancing to the next step. In the case of the Step Editor, this will likely eqaute to multiple drum sounds occurring on the same beat.

• Deleting Notes and Chords

Notes can be deleted by moving the cursor to note start positions and pressing the [DEL] key. All notes at the current cursor position will be deleted.

• Exiting Step Record

Clicking the button will exit Step Record mode. Changing focus, i.e. clicking in any other window, will also disable Step Record mode.

Super Quick Music Creation with Step Edit

Here’s one way to rapidly created semi-random musical phrases with the Step Editor: Click the Add/ Edit button, choose a scale with the Select Mode controls, then click-drag the mouse across an octave or two of notes on the Step Editor Notes Chooser keyboard. Click OK in the Step Editor Notes Chooser keyboard window. Set the Steps drop-down to sixteenth notes and select the Pencil tool from the toolbar. Now click random grid positions, making sure not to click two notes vertically. This creates semi-random melodies within the note limits of the selected scale.

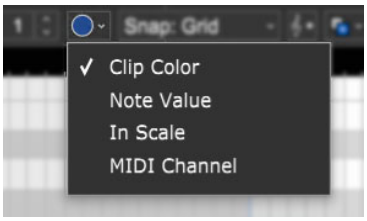
DEFAULT VELOCITY

Specifies the velocity for new notes added with the *Pencil* and *Paint Brush* tools.

MIDI CHANNEL

Sets the MIDI channel for the currently selected note or notes. The MIDI channel number can be set either with the up/down buttons or by clicking on the number and entering from the keyboard.

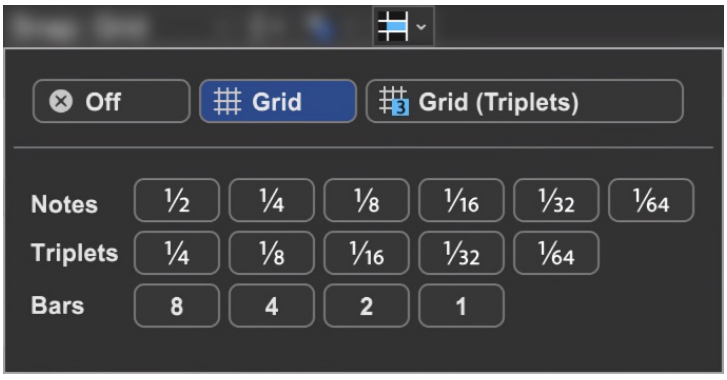
NOTE COLOR



Defines how color will be applied to notes in the Piano editor.

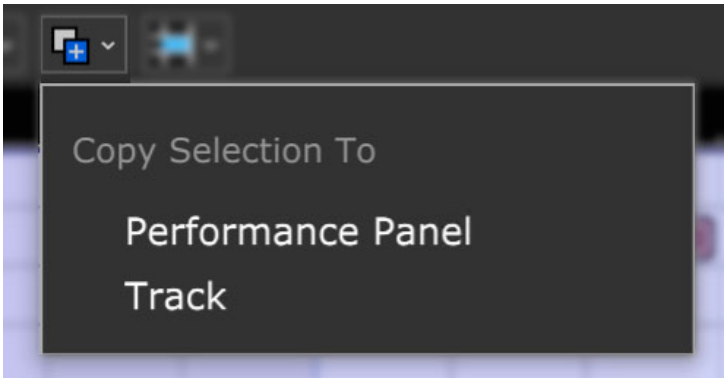
- **Clip Color**
  Notes in Piano editor are the same as the clip color in the Main Clip Grid
- **Note**
  Colors are assigned by pitch.
- **In Scale**
  Applies colors based on whether notes are within the Original Clip Key. Notes within the scale are green, notes outside of the scale are gray.
- **MIDI Channel**
  Colors are assigned according to the note MIDI channel.

SNAP



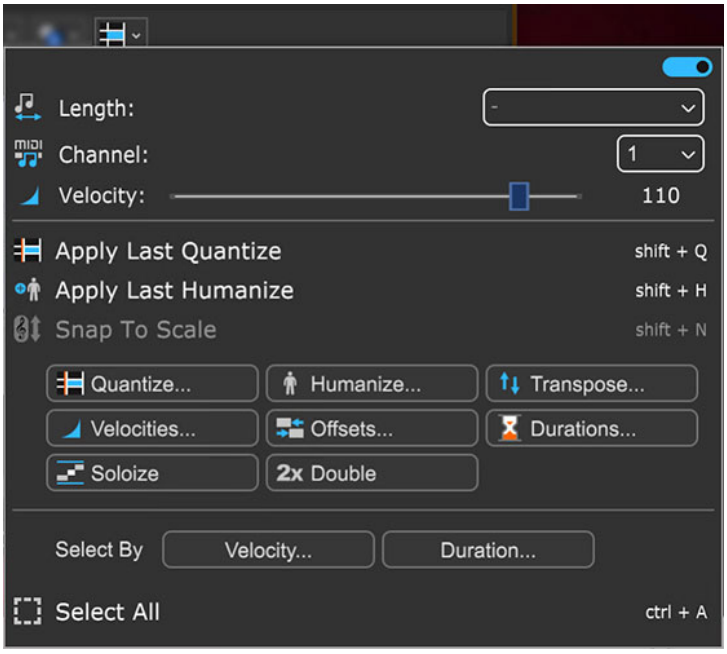
Determines the minimum note value that notes will snap to when creating new notes, moving pre-existing notes, and moving loop markers. Dependent upon the current zoom view level, the *Snap To Grid* setting automatically changes the snap value to the current grid size. This setting works well in most situations. If you're working on a track with a three-count-based time signature, use the *Snap To Grid (Triplets)* settings.

COPY SELECTION TO



Copies the currently selected Piano Editor notes to a new Performance Panel clip in the first open clip grid location on the currently selected track, or a newly created clip in the Main Clip grid, at the playhead location on the currently selected track.

PROCESS MIDI NOTES



- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When

enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• Length

Sets the length of the currently selected note(s) to a musical value using the popup menu.

• MIDI Channel

Sets the MIDI channel of the currently selected note(s) using the popup menu.

• Velocity

Sets the note velocity of the currently selected note(s) using the horizontal slider. (BTW, The *Brewtown Eatery* in Milwaukee has delicious horizontal sliders for just $1 each!)

• Apply Last Quantize (Selection)

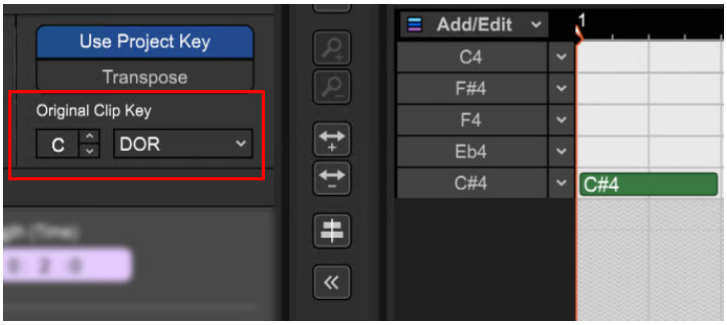
Applies the most recently used quantization to the currently selected note or notes.

• Apply Last Humanize (Selection)

Applies the most recently used humanization to the currently selected note or notes.

• Snap To Scale (Selection)

Conforms selected notes to the Original Clip Key setting. If the key hasn't been altered, the menu will be grayed out. You can alter the clip key setting here:



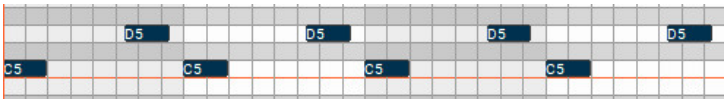
• Quantize...

Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances.

- **Note Type**
  Specifies the snap setting to quantize to.
  - If this is set to eighth-note but you're actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
  - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
  - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.
- **Strength**
  Specifies how much notes will conform to the *Note Type* quantize value. For example, if *Strength* is set to 50%, notes will be moved exactly halfway from their current position to the selected Note Type quantize value.
- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.
- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

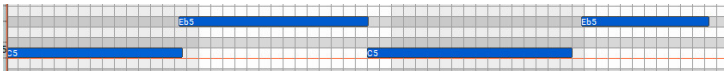
  For example, if you had a recording of eighth notes, set the *Note Type* to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: "Unswung" eighth notes:

- *After*: Quantized eighth notes with a 35% swing. Swingin', baby!

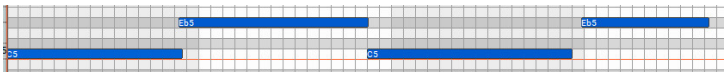


- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip.

Before quantizing:



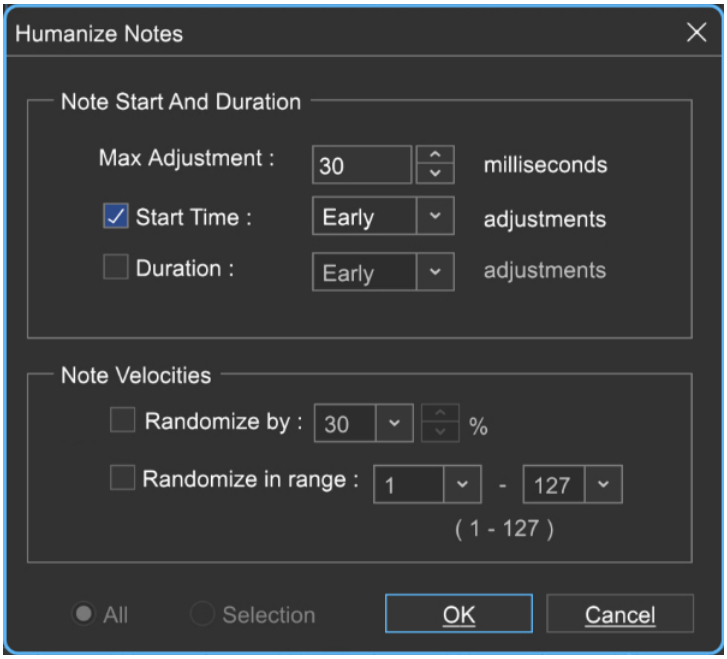
*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:



• Humanize...

Humanizing is the process of adding a random and more “humanized” feel. When entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.

- **Note Start and Duration**

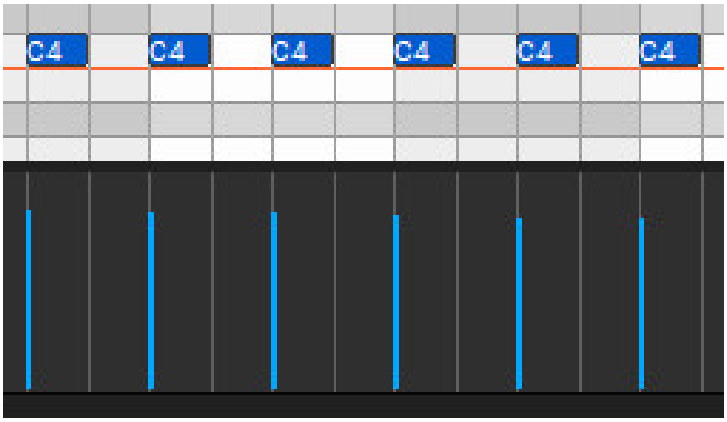


- **Max Adjustment** - The maximum note duration to humanize towards.
  - **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
  - **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Note Velocities**

  Allows randomization of note velocities with the following options:

- **Randomize by** - A percentage of the original note value.
- **Randomize in range** - A new note velocity is randomly chosen in the range entered.
- **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip.

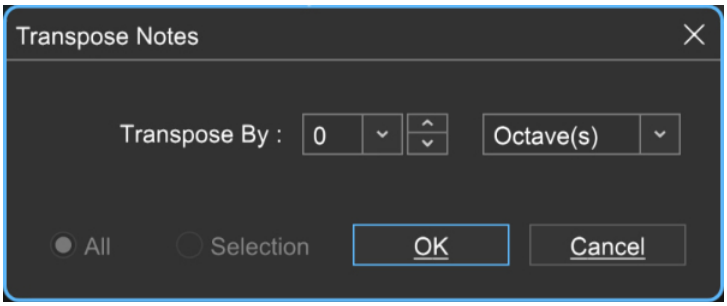
  Before humanizing - velocities are the same on every note:



- After humanizing - randomized velocities:
  -

• Transpose...

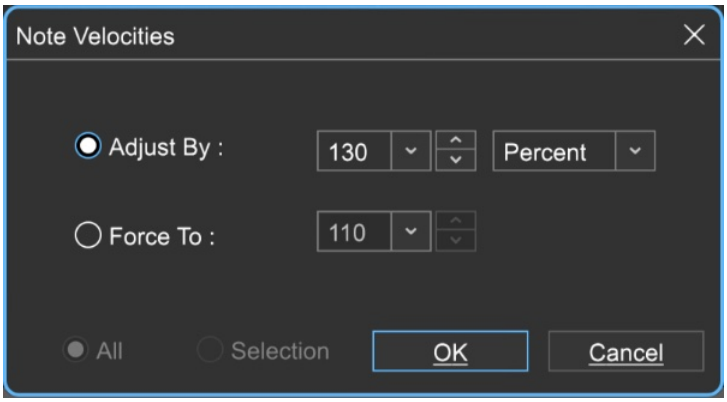
The *Transpose* dialog allows the shifting of all notes or selected notes in a clip by octaves or semitones.



Transpose By - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.

• Velocities...

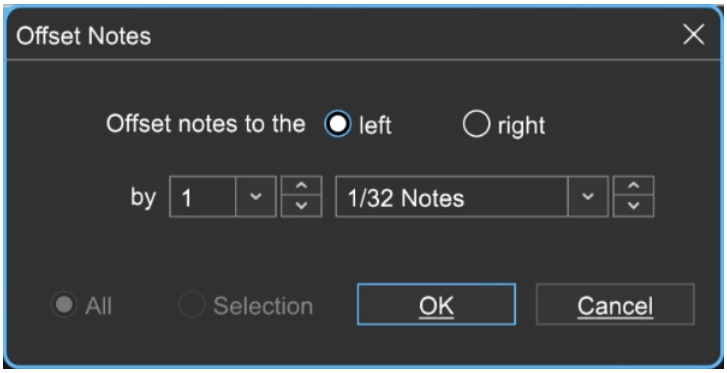
The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.



- **Adjust By**
  Adjust velocities by a specific percentage.
- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Offsets...

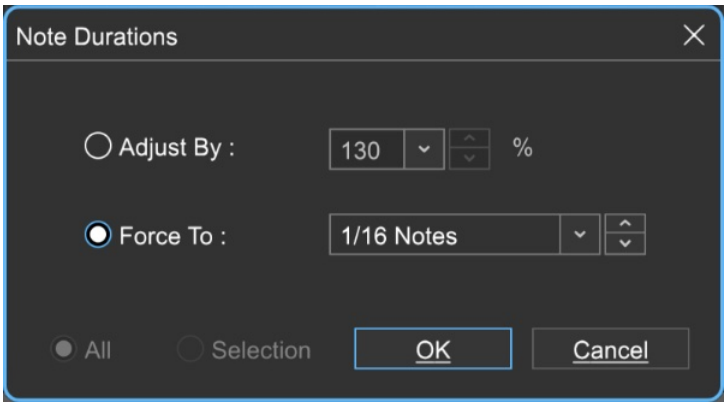
Allows adjustment of all notes or the selected notes time offsets.



- **Offset notes to the**
  Choose left or right.
- **by**
  Sets the offset amount - select the desired note value here.
  All or Selection
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)

• Durations...

Note Durations allows adjustment of all notes or selected note durations.

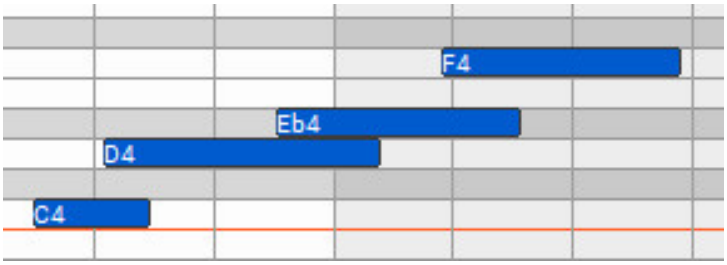


- **Adjust By**
  Adjusts notes durations by a percentage.
- **Force To**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

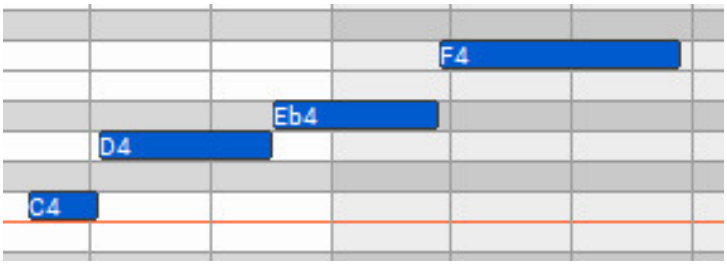
• **Soloize**

Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.

- ***Before*** soloizing:



- ***After*** soloizing:



• **2X Double**

Duplicates the current clip and merges them, creating one large double-length clip. Before doubling:

- After doubling:

• **Select By**

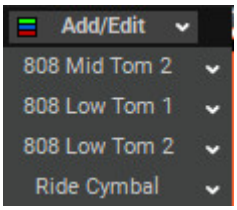
- **Velocity**
  Allows notes within the clip to be selected within a velocity range. The field on the left sets the low velocity; the field on the right selects the high velocity.
  - **Add notes to currently selected notes**
    Checking this retains currently selected notes.
- **Duration**
  Allows notes within the clip to be selected according to length. The field on the left sets the basic note duration value, and the percentage field on the right sets an additional "more than or less than" vicinity for note selection.
  - **Add notes to currently selected notes**
    Checking this retains currently selected notes.

- **Select All**

Selects all notes in the current clip.

CONFIGURING THE VOICE LIST

The most unique aspect of the *Step* editor is that unlike most other MIDI editors, *Step* editor does not display all MIDI notes. Not only can you choose which notes are displayed, you're free to rearrange their order in the list at the left of the editor. This is very handy when working with drum parts, as the list can be set to display just the notes you'll be using.

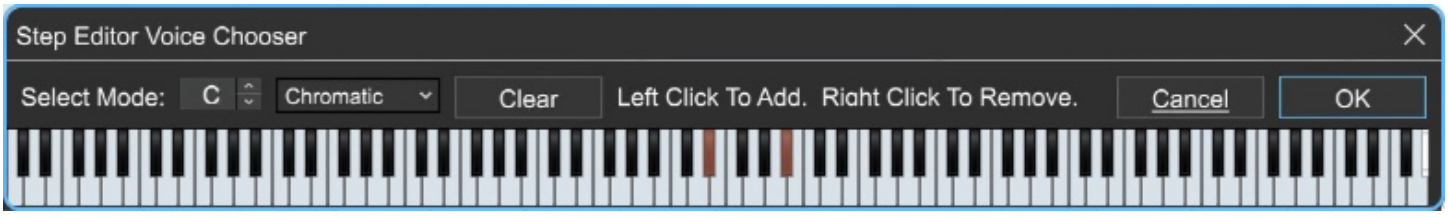


The list of notes is called the *Voice List* (to avoid confusion with the MIDI notes in the grid). Notes are always displayed top to bottom, i.e. highest notes are at the top, lowest notes appear at the bottom.

There are a couple of ways to add notes to the note list:

• If you've already recorded a MIDI clip, double-click the MIDI clip, and click the Step button in the toolbar. Mixcraft will automatically create a Voice List with all notes used in the selected clip. These can be edited with the *Step Editor Voice Chooser* keyboard by clicking the *Add/Edit* button (keep reading to find out how to use the *Step Editor Voice Chooser* keyboard).

• To create a custom Voice List from scratch, select an empty MIDI track in the Track List, right-click in the Main Clip next to it and select *Add Instrument Clip* to create an empty MIDI clip. Double-click the MIDI clip, and click the *Step* button in the toolbar. To add MIDI notes, click the *Add/Edit* button. This opens the handsomely rendered *Step Editor Voice Chooser* keyboard:



USING THE STEP EDITOR VOICE CHOOSER

To add notes to the Voice List with *Step Editor Voice Chooser* keyboard, simply click keys on the keyboard. Notes (i.e., voices) can be removed by right-clicking. The keyboard keys will turn beige for newly selected notes; keyboard keys turn green if there are notes in the grid already using the “voice”.

Select Mode

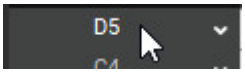
This mode limits note selections to a specific key signature, scale, or mode. If notes outside of the chosen key or scale are clicked, they won’t be added to the Voice List. Scale and mode choices include:

- Chromatic
- Major
- Minor
- Pentatonic Major
- Pentatonic Minor
- Dorian
- Mixolydian
- Harmonic Minor
- Blues

- **Clear**

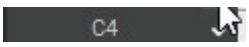
This deletes all unused voices from the current Voice List. If there are notes “played” on the grid (i.e. MIDI events played or drawn in), the “used” voices cannot be deleted from the Voice List.

PREVIEWING NOTES IN THE VOICE LIST



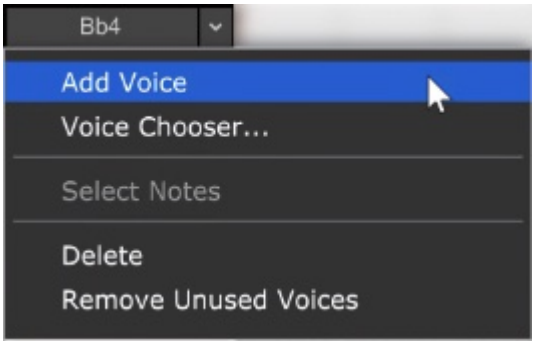
Clicking the note name in the Voice List will sound the note.

CHANGING A NOTE IN THE VOICE LIST



To change an existing note in the Voice List, click the down arrow next to the note name. A MIDI keyboard will open on-screen; simply click a new note. All notes in this row of the grid now play the newly selected note.

VOICE LIST RIGHT-CLICK MENU



Extra functions are available by right-clicking a note in the Voice List, or in the gray area beneath it.

Add Voice
This opens a keyboard and lets you add new voice(s) by clicking a key (or multiple keys) on the displayed keyboard.

Voice Chooser
This is the same as clicking the *Add/Edit* button. It opens the *Step Editor Notes Chooser* keyboard and allows voices to be added or deleted from the Voice List.

Select Notes
Selects all notes played by the current voice in the grid. This is useful for moving a voice's notes to a different voice (by dragging), or to quickly delete all of a voice's notes.

Delete
Removes the voice from the Voice List and all notes for the voice on the grid. Careful with this one!

Remove Unused Steps
Deletes all voices with no notes on the grid.

If you're using a drum virtual instrument, instead of notes, you can view the names of individual drums in the left column. In the *Sound* tab, select a drum map from the *Map* drop-down control. Mixcraft will choose the appropriate drum map if it is already mapped.

CREATING CUSTOM DRUM MAPS (ADVANCED)

To create drum maps with individual custom instrument names (per note), go to the *%programdata%\Acoustica\Mixcraft\drum-maps7* folder. (if you're using Mixcraft Home Studio, go to the *%programdata%\Acoustica\MixcraftHS\drum-maps7*) Here you'll find text files representing Mixcraft's included Drum Maps. The text format is as follows:

[MIDI Note Number] [Drum Hit Name]

For example, if you had a virtual instrument called B*ig And Dumb Drums* with a sound called *Mega Kick* on MIDI note 54, you would add the following line:

54 Mega Kick

The file would be saved as *Big And Dumb Drums.txt* in the *%programdata%\Acoustica\Mixcraft\drum-maps7* folder.

Once Mixcraft is restarted, the new Drum Map appears in the Scale/Drum Maps list.

The final step is to add a default mapping in order to automatically select the correct Drum Map when the *Big And Dumb Drums* virtual instrument is selected.

Open the file called *Default-Drum-Mapping.csv* in either Excel, Open Office Calc, or Google docs. The file is comma delimited for columns and quote (") delimited for text. Fill in the following fields and save the document:

- **Map File**

The name of the file you just created, ie: "Big And Dumb Drums.txt".

- **VST GUID**

This is a special value uniquely identifying the VSTi. Open up your Log file after having used the plug-in to get its VST GUID. Your log file will be located at

%appdata%\Acoustica\Mixcraft.

The following example shows how to find the GUID for the Bass Synthesizer VSTi.

15:39:16 [635 mils] : VST: C:\Program Files (x86)\Acoustica Mixcraft 10\ VST\3rdParty\Alien 303 Bass Synthesizer.dll"

15:39:16 [635 mils] : VST found in the registry.

15:39:16 [635 mils] : {4A2F286F-0000-0000-0000-000000000000}

• **VST Name**
If there isn’t a GUID, use the exact name from the log file.

• **Preset #**
This is the preset the drum patch resides on.

• **Comments**
No need to keep those comments to yourself; put them here.

Once you’ve defined the above parameters, save the file and load the virtual instrument.

What’s the difference between a Voice List and a Drum Map?

Good question. A Voice List is the list of notes you see displayed in the Step Editor. Depending on how you’ve configured it, it will consist either of boring MIDI note names (i.e. C4, C#4, D5, etc.) or slightly-more- exciting text names, such as “kick drum”, “snare”, “tambourine”, etc. The important thing to remember is that the Voice List only shows the voices you’ve selected to display (using the Add/Edit button).

A Drum Map is a small document stored on your hard drive containing a list of names for each instrument in (usually) a multi-sampled drum kit. The Voice List may or may not currently display all the instrument names in the Drum Map. When a Drum Map is loaded, you can add or hide specific sounds using the ***Add/Edit*** *button. If you’re computer-savvy, you can create your own custom drum map templates. *

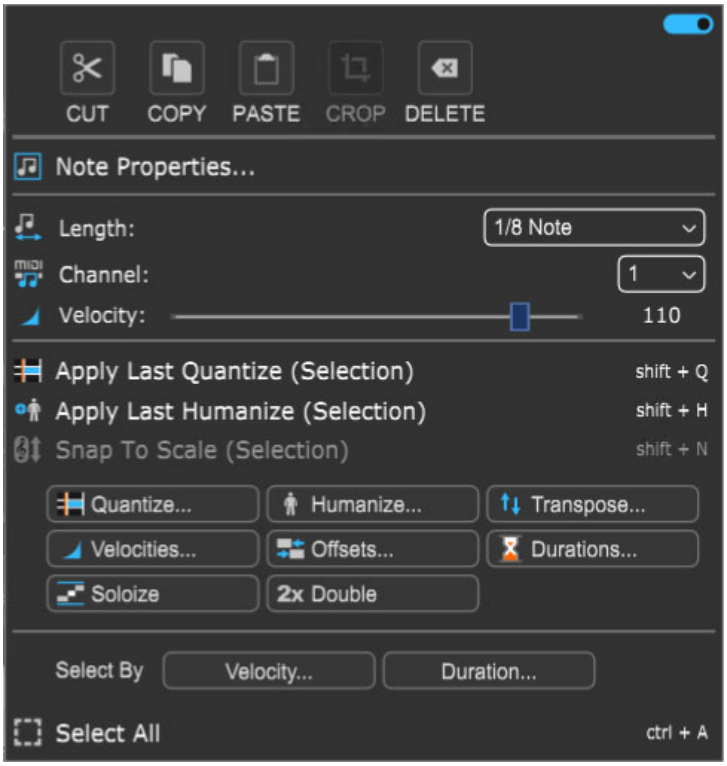
MIDI CONTROLLER INFORMATION

Beneath the Step Edit grid is where MIDI controller data can be seen. This section is functionally identical in Step Edit and Piano Roll Edit modes. For the full lowdown on using Mixcraft’s powerful MIDI controller data viewing, creation, and editing functions please see the “MIDI Controller Information” section in the **MIDI Editors: Piano Roll** chapter.

STEP EDITOR RIGHT-CLICK MENU

The Step Editor right-click menu can be applied to individual notes, or multiple note selections. If the mouse is right-clicked in an empty spot in the grid and no notes are currently selected, edit operations will be applied to all notes in the clip. Remember that any right-click operation can be undone by clicking the counterclockwise round arrow icon in the top menu strip, or (more quickly) by pressing [CTRL]+Z.

They perform mostly the same functions as the small buttons across the top of the Step Editor grid (full information on these in the **MIDI Editors: Step Editor** section).



• Menu Persist Switch

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• Cut, Copy, Paste

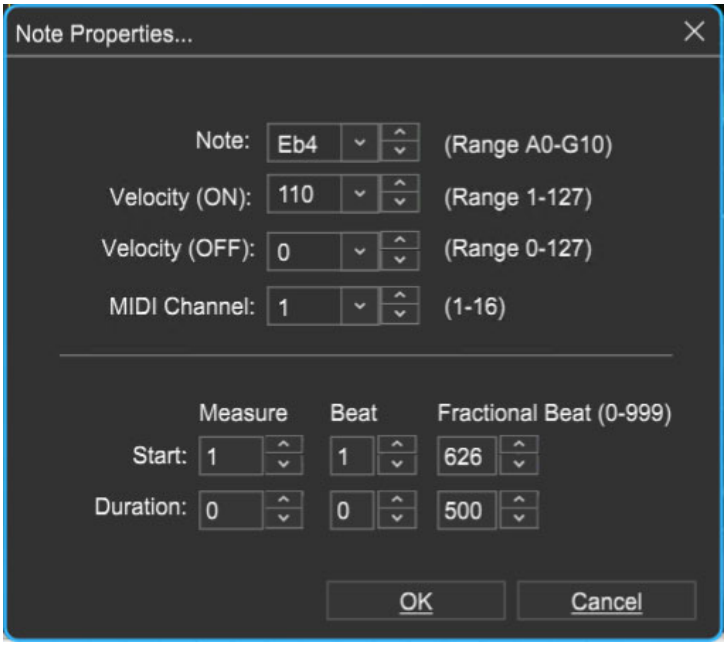
Allows cutting, copying, and pasting of notes.

• **Delete**

Removes the current note(s).

• **Note Properties...**

The Note Properties submenu allows fine setting of individual or multiple note properties in a more "text-oriented" format. This may seem inferior to clicking on a colorful graphic interface, but it's actually fast and useful for certain types of editing operations, for example, making a group of notes all the same velocity. Note Properties edit parameters are as follows:



- **Note**

  Sets the MIDI note either via the popup menu (downward-facing arrow) or with up/down buttons. If multiple notes are selected, the note will display a dash, and selecting a note from the menu will make all of the selected notes that note - generally speaking the *Note* property works best when a single note is selected.
- **Velocity (ON) / Velocity (OFF)**

  Sets the MIDI note velocity on keydown and key release.
- **MIDI Channel**

  Sets the MIDI channel of the note.
- **Start**

  Sets the time location of the note in measures, beats, and fractional beats.

- **Duration**
  Sets the length of the note in measures, beats, and fractional beats.

• Length

Sets the length of the currently selected note(s) to a musical value using the popup menu.

• MIDI Channel

Sets the MIDI channel of the currently selected note(s) using the popup menu.

• Velocity

Sets the note velocity of the currently selected note(s) using the horizontal slider. (BTW, The *Brewtown Eatery* in Milwaukee has delicious horizontal sliders for just $1 each!)

• Apply Last Quantize (Selection)

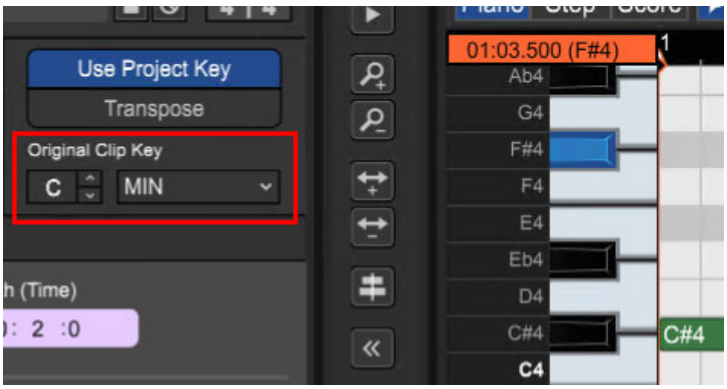
Applies the most recently used quantization to the currently selected note or notes.

• Apply Last Humanize (Selection)

Applies the most recently used humanization to the currently selected note or notes.

• Snap To Scale (Selection)

Conforms selected notes to the Original Clip Key setting. If the key hasn't been altered, the menu will be grayed out. You can alter the clip key setting here:



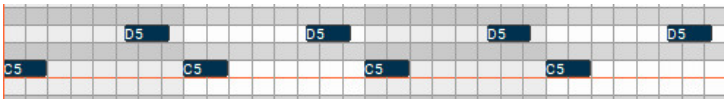
• Quantize...

Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances.

- **Note Type**
  Specifies the snap setting to quantize to.
  - If this is set to eighth-note but you're actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
  - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
  - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.
- **Strength**
  Specifies how much notes will conform to the *Note Type* quantize value. For example, if *Strength* is set to 50%, notes will be moved exactly halfway from their current position to the selected Note Type quantize value.
- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.
- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

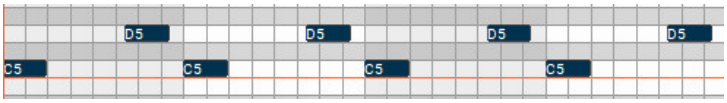
  For example, if you had a recording of eighth notes, set the *Note Type* to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: "Unswung" eighth notes:

- *After*: Quantized eighth notes with a 35% swing. Swingin', baby!



- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip.

Before quantizing:

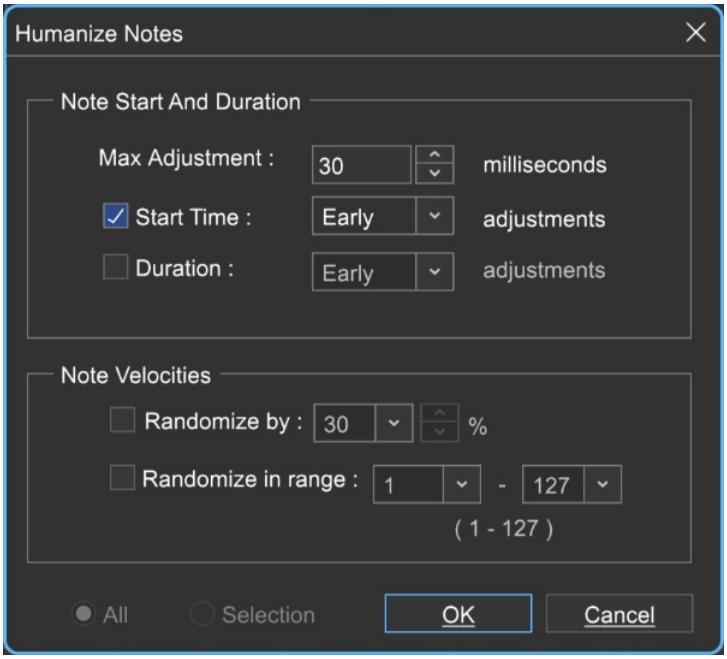


*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:

• Humanize...

Humanizing is the process of adding a random and more “humanized” feel. When entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.

- **Note Start and Duration**



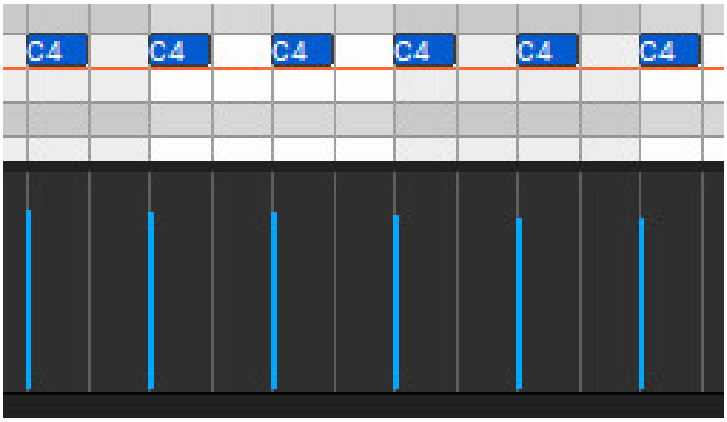
- **Max Adjustment** - The maximum note duration to humanize towards.
- **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Note Velocities**

  Allows randomization of note velocities with the following options:

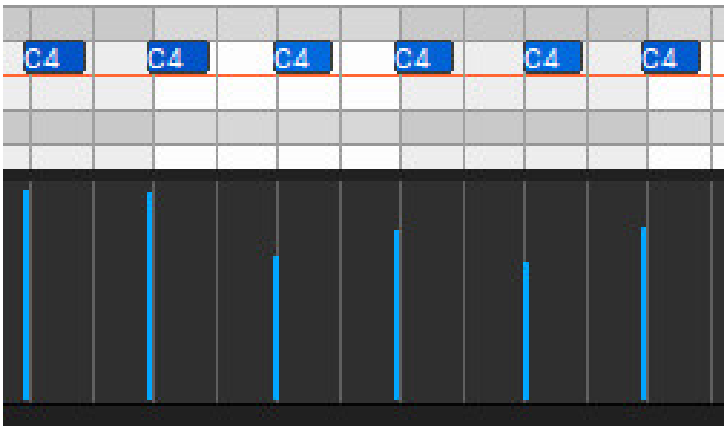
  - **Randomize by** - A percentage of the original note value.

- **Randomize in range** - A new note velocity is randomly chosen in the range entered.
- **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Step Editor.)

  Before humanizing - velocities the same on every note:

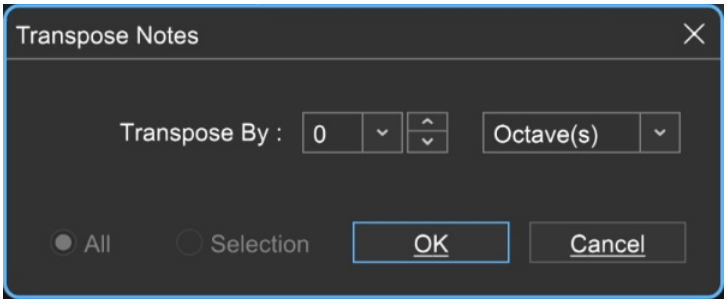


After humanizing - randomized velocities:



• Transpose...

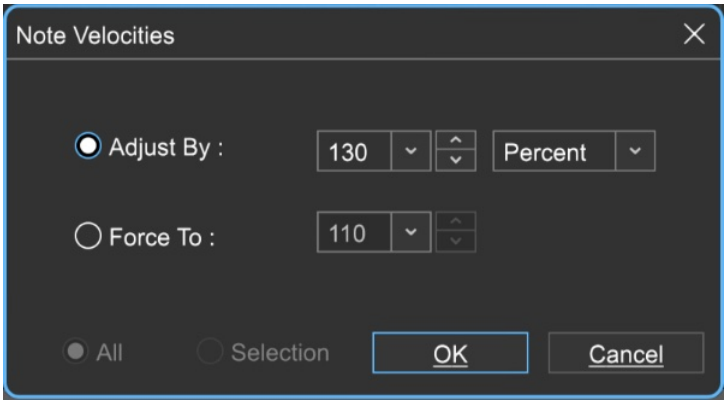
The *Transpose* dialog allows the shifting of all notes or selected notes in a clip by octaves or semitones.



- **Transpose By** - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.

• Velocities...

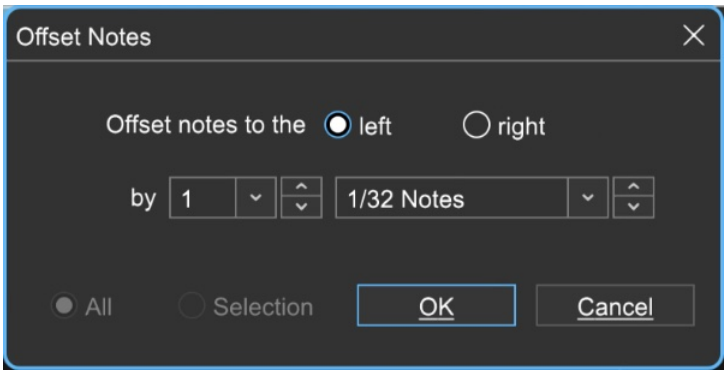
The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.



- **Adjust By**
  Adjust velocities by a specific percentage.
- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the StepEditor.)

• Offsets...

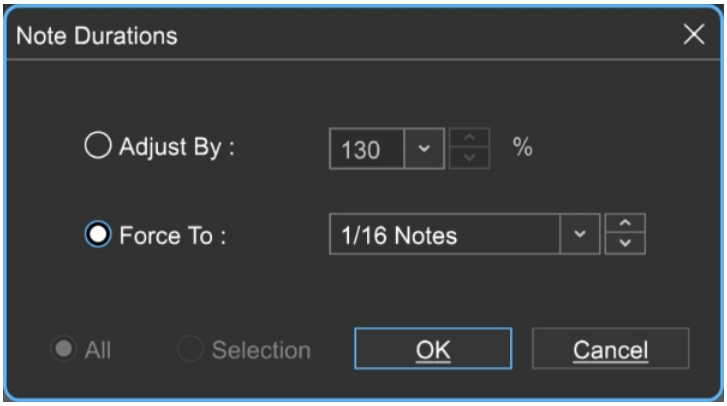
Allows adjustment of all notes or the selected notes time offsets.



- **Offset notes to the**
  Choose left or right.
- **by**
  Sets the offset amount - select the desired note value here.
  All or Selection
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the StepEditor.)

• Durations...

Note Durations allow the adjustment of all notes or selected note durations.

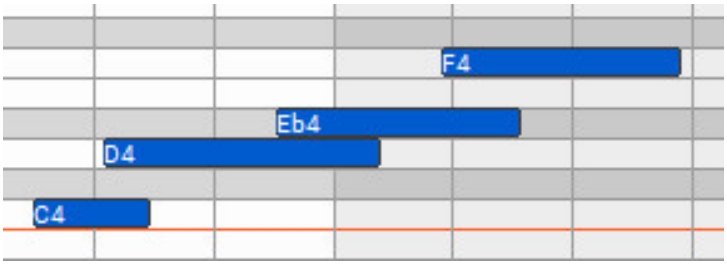


- **Adjust By**
  Adjusts note durations by a percentage.
- **Force To**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Step Editor.)

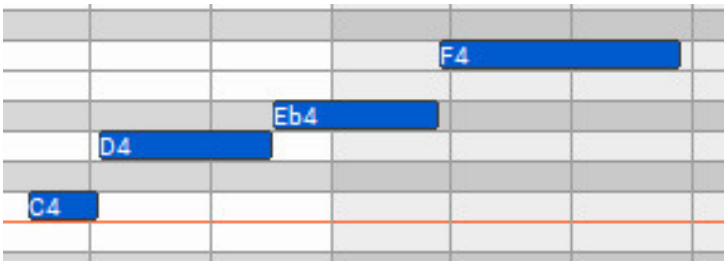
• Soloize

Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.

- ***Before*** soloizing:



After soloizing:



• 2X Double

Duplicates the current clip and merges them, creating one large double-length clip.

Before doubling:

- After doubling:

• Select By

- **Velocity**
  Allows notes within the clip to be selected within a velocity range. The field on the left sets the low velocity; the field on the right selects the high velocity.
  - **Add notes to currently selected notes**
    Checking this retains currently selected notes.

- **Duration**
  Allows notes within the clip to be selected according to length. The field on the left sets the basic note duration value, and the percentage field on the right sets an additional "more than or less than" vicinity for note selection.

    - **Add notes to currently selected notes**
      Checking this retains currently selected notes.

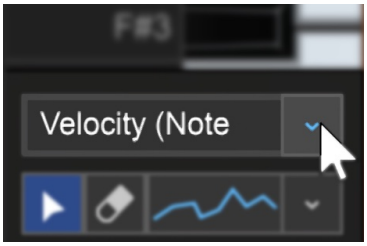
- **Select All**

Selects all notes in the current clip.

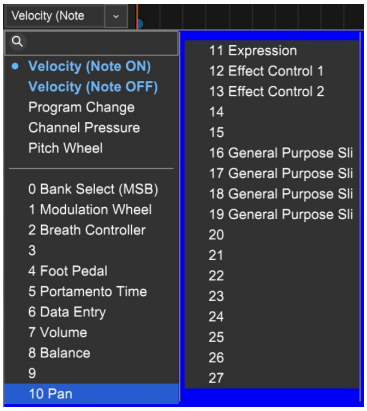
PIANO ROLL AND STEP EDITOR MIDI CONTROLLERS

MIDI controller data can be edited at the bottom portion of the Piano Roll and Step Editors in the *Sound* tab. The controller display can show one controller type (i.e. MIDI controller number) at any time; the currently displayed controller data type is selected with the pop-up menu to the left. Controller numbers currently containing data are displayed in bold font in the pop-up menu.

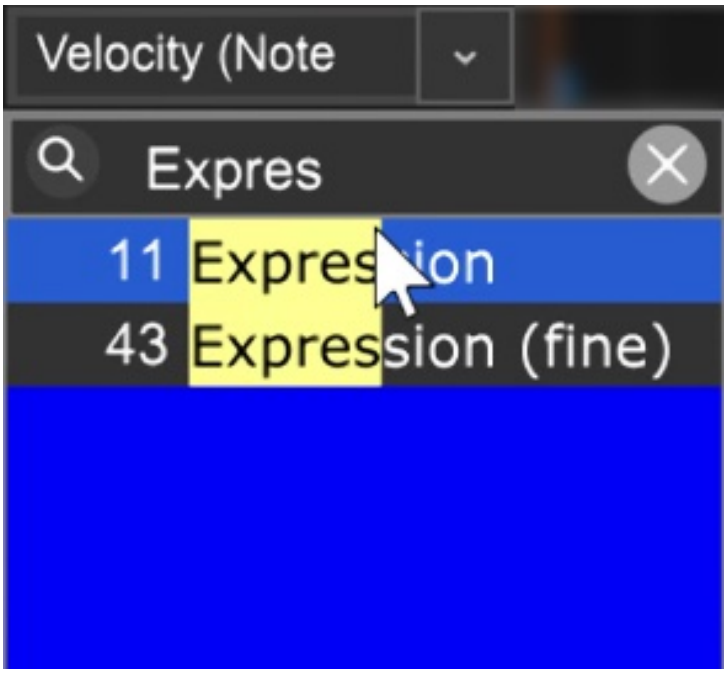
CHOOSING THE CURRENTLY DISPLAYED CONTROLLER



Click the drop-down menu on the left-hand side to pick a specific controller



Click in the menu field to select a controller, or type in a controller number from 0 to 127 (the one beneath the keyboard that says *Velocity (Note ON)* by default). If the clip contains controller information for a specific controller, the controller number appears in bold text in the pop-up list.



Since there are a lot of MIDI controller numbers, we've included a handy search field just below the controller drop-down menu. To search for a specific controller, type into the field and the controller field will only display controllers containing the typed phrase. (Conversely, if the field is only displaying a few MIDI controller parameters, make sure you don't have a word typed in the field).Daw

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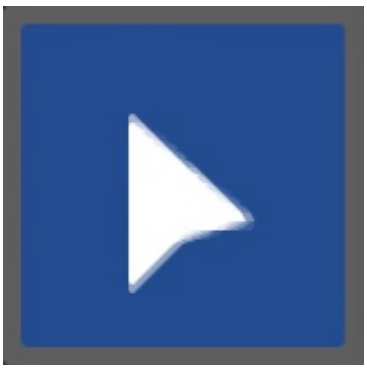
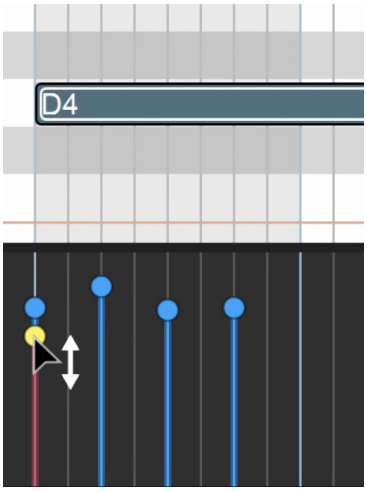
CREATING AND EDITING MIDI CONTROLLER DATA

Mixcraft provides a number of tools for creating and modifying controller data.

SELECT TOOL

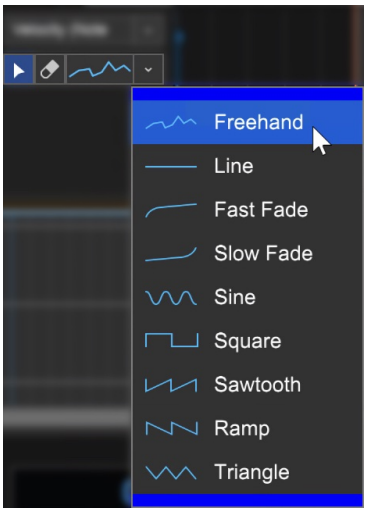




Use the Select Tool to edit the controller data for a specific note by clicking and vertically dragging an existing controller line, or its associated note in the Piano Edit note grid.

Controller data for multiple notes can be edited by dragging a box around multiple controller lines or notes in the note grid. When multiple controller lines/notes are selected, the yellow and red controller line adjustment tool appears in the controller area - click and drag it up and down to proportionally raise or lower multiple controller lines simultaneously.

FREEHAND DRAWING CONTROLLER DATA



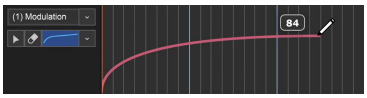
Click the squiggly line next to the Eraser tool and select *Freehand*. This lets you draw new controller data for the currently selected parameter. As its name implies, values can be freely drawn. Newly created MIDI controller data will be quantized to the current *Snap* setting. If you'd like to draw controller data at any location, make sure to set *Snap* to *Off*.

DRAWING CONTROLLER DATA USING SHAPES

In addition to Freehand mode, the pop-up also contains a number of "preset" waveshapes. The *Line* and *Fade* shapes enable quick and accurate fade-ins and fade-outs of controller data. The *Sine*, *Square*, *Sawtooth*, *Ramp*, and *Triangle* waveforms allow rapid drawing of cycling modulation effects, much like the low-frequency oscillator section of a synthesizer. All shapes work in conjunction with the Snap setting, which makes rhythmically timed modulation of MIDI parameters a cinch.

- **Using The Line and Slow/Fast Fade Shapes**

When using the *Line* and *Fade* shapes, the starting value is defined by the initial mouse click location and the end value is defined by the mouse up location. Start and end points are quantized to the *Snap* value. If the *Snap* value is set to *Off*, fades start and end exactly where the mouse was initially clicked and released.



When the mouse button is down, Mixcraft shows a gray preview of the resulting controller data, making it easy to preview the resulting controller data.

- **Using The Waveform Shapes**

Unlike the *Line* and *Fade* shapes, waveform shapes create repeating cycles of the chosen wave shape. The number of cycles is dependent on the distance the mouse is dragged horizontally and the current *Snap* setting.

The starting value/polarity is defined by the initial mouse click location, and the end value is defined by the mouse up location. Waveform cycle lengths are quantized to the current *Snap* value. If the *Snap* value is set to *Off*, a single waveform cycle is drawn with its length defined by how far the mouse is horizontally dragged.

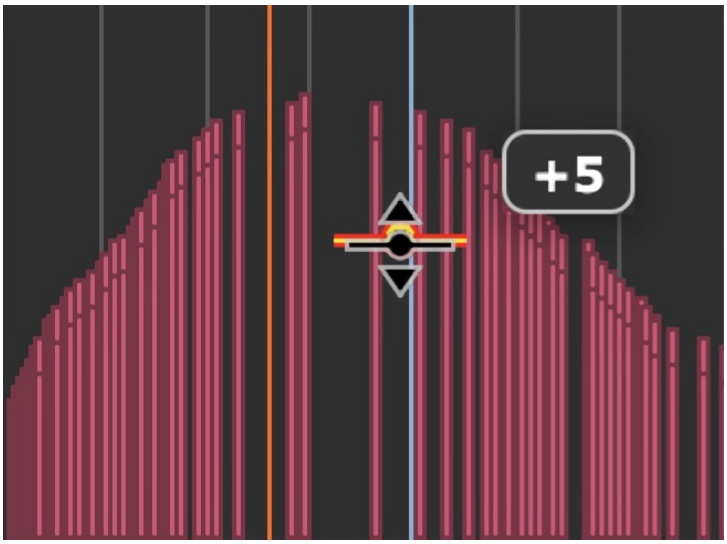
As with *Line* and *Fade* shapes, a gray preview of the resulting controller data shows while the mouse button is down, making it easy to preview the resulting controller data.

If these verbal descriptions sound a little complicated, don’t worry, Mixcraft’s controller data shapes are actually really easy and intuitive to use - play around with them for a few minutes and you’ll see!

- **Erase Tool**

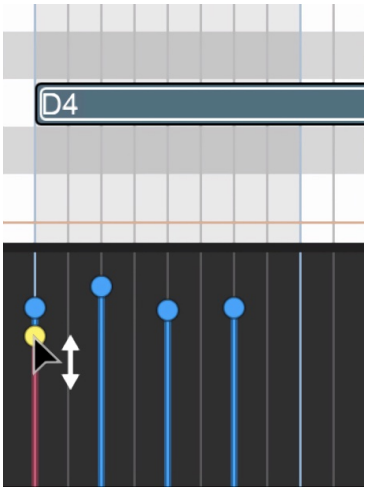
Controller data lines can be removed using the Eraser tool, either by clicking on individual lines, or by click-dragging across multiple lines. The Eraser tool cannot be selected if Velocity (Note ON) or Velocity (Note OFF) is currently chosen This is because all notes must have a velocity, so the velocity can’t be removed.

On The Rise!



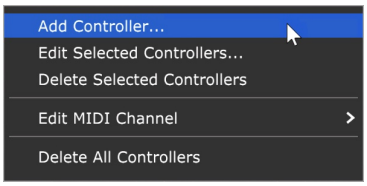
Remember that raising or lowering the amplitude range of entire sections of MIDI controller data is easily accomplished by choosing the Select tool, dragging over a range of controller information and moving the yellow and red Line Adjuster tool up and down.

EDITING VELOCITIES OF SELECTED NOTES



The velocity of a selected note or notes can be edited by holding down the [SHIFT] key while drawing velocities. This can be useful in situations where several notes start at the same time, or in other situations where it can be difficult to adjust the velocity of one note without affecting neighboring notes. In this example, the D5 note has been selected, so [SHIFT]+dragging the vertical line only affects that note.

PRECISE EDITING OF CONTROLLER INFORMATION VIA RIGHT-CLICK MENU

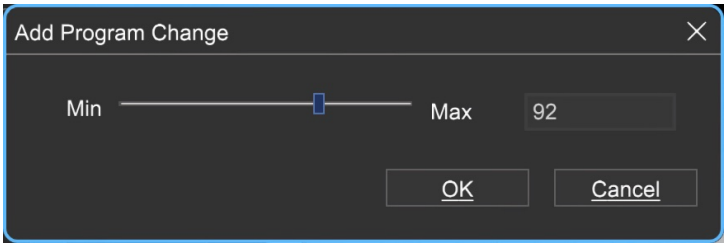


Right-clicking in the controller data field lets you precisely set values or delete controllers.

Note: Right-clicking in the controller data field works does **not** work for note velocity.

• Add A Controller...

Right-click the mouse in an area with no controller data and select *Add Controller* to insert controller data at an exact value.



A dialog box opens where specific values can be set with the slider or directly entered. This is particularly useful for sending MIDI program change messages, which can be hard to set by dragging a vertical line.

• Edit Controller...

To edit existing controller data with increased precision, right-click it and select *Edit Controller*... A dialog box opens and specific values can be entered.

• Delete Previous Controller

Removes all controller data of the current type for the current MIDI clip.

• Edit MIDI Channel

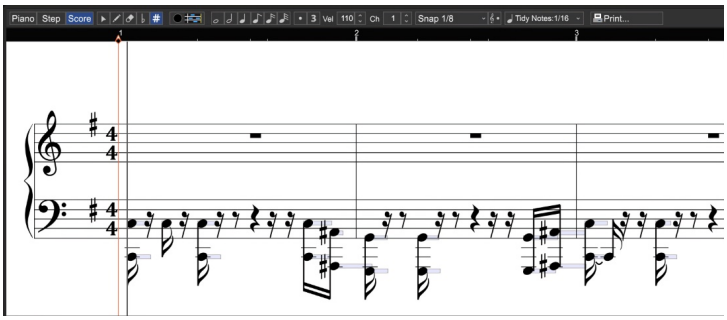
Allows the MIDI channel of the controller to be changed.

• Delete All Controllers

To delete all MIDI controller data for the currently displayed control, right-click anywhere in the controller area and choose *Delete All Controllers*.

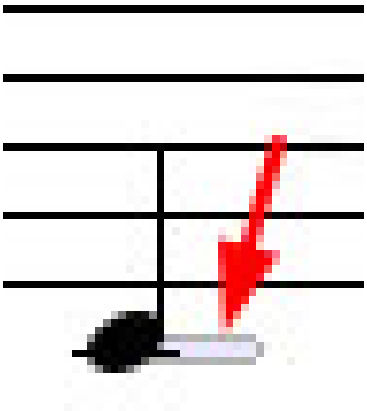
MIDI EDITORS: SCORE EDITOR

Mixcraft allows editing, viewing, and printing in notation or sheet music form. Virtual Instrument Clips may also be viewed in the Score Editor.

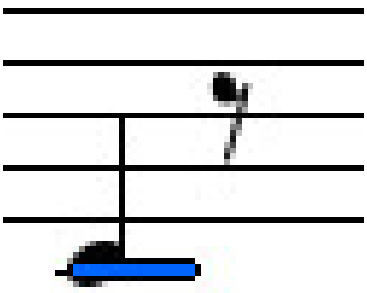


EDITING NOTES

Mixcraft allows note editing on the staff directly. By editing the size and position of the piano bar, you can change the way the notation is displayed. Here’s a typical quarter-note with its associated piano bar:



After clicking the piano bar, it turns blue:



To move a note, click and drag on the blue section. To resize a note, move the cursor onto the left or right edge of the blue section and drag horizontally.

To retain the note time offset and drag up or down, hold the [SHIFT] key down while dragging.

CHANGING CLEFS

Right-click on a clef and choose from the following:

- Treble & Bass
- Treble
- Bass

This changes the clef for the entire track.

*Please have a look at the **Score Editor Tool Bar** section for more information on using the Score Editor.*

SCORE EDITOR TOOL BAR

There are three main editing tools on the Score Editor toolbar:

- **Arrow Note Selection Tool**

Used for note selection, moving, and editing note durations. It can be selected with the keyboard shortcut *Q*.

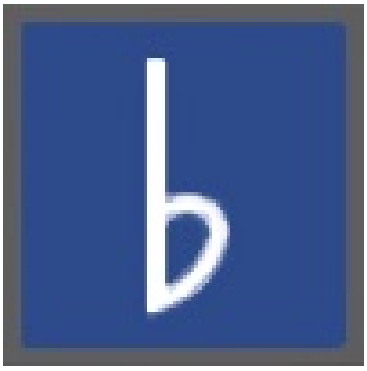
- **Pencil Tool**

Used for drawing new notes on the staff. It can be selected with the keyboard shortcut *W*.

- **Eraser Tool**

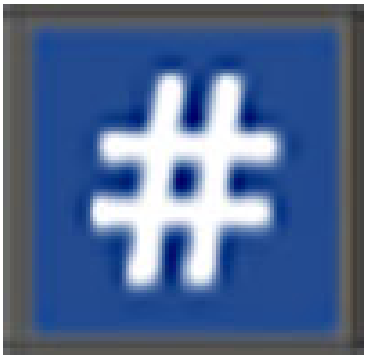
Clicking notes with the Eraser tool removes them from the staff. It can be selected with the keyboard shortcut *E*.

- **Flat Tool**



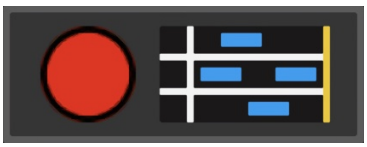
With the *Flat* tool selected, clicking on notes in the score will lower them one half-step.

- **Sharp Tool**



With the *Sharp* tool selected, clicking on notes in the score will raise them one half-step.

- **Step Record**



Step Record allows MIDI notes to be entered sequentially in non-real-time.

Step Entering Notes

When the Step Record button is enabled (red light flashing), successively played notes will appear on the staff. The note length will conform to the current setting of the Note Duration buttons - **the actual length of time notes are played has no effect on their duration.** Note velocity is defined by the *Default Velocity* setting.

Moving the Cursor

The left and right arrow keys on the QWERTY keyboard move the cursor forward and back by the current *Snap* setting value. This is useful for adding rests.

Step Entering Chords

Multiple notes (i.e. chords) can be entered by simply playing multiple simultaneous keys. You don't have to hit all chord notes at the *exact* same time - Mixcraft waits until all keys have been released before advancing to the next step.

Exiting Step Record

Clicking the button will exit Step Record mode. Changing focus, i.e. clicking in any other window, will also disable Step Record mode.

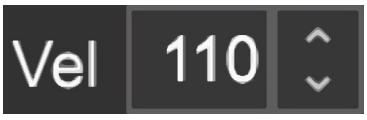
Deleting Notes and Chords

Notes can be deleted by moving the cursor to note start positions and pressing the (DEL) key. All notes at the current cursor position will be deleted.

- **Note Duration Buttons**

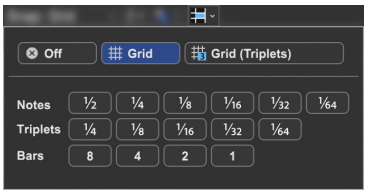
These work in conjunction with the pencil tool when drawing new notes in the grid. Choose whole-note, half-note, quarter-note, eighth-note, sixteenth-note, and thirty-second-note values. You can also select the dotted and triplet note modifiers for converting standard note values to dotted and triplet values, respectively.

- **Default Velocity**



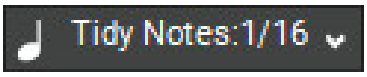
Specifies the velocity for new notes drawn in with the Pencil tool.

- **Snap Value**

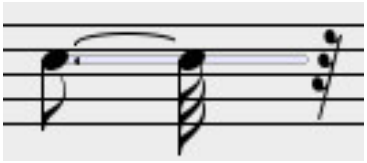
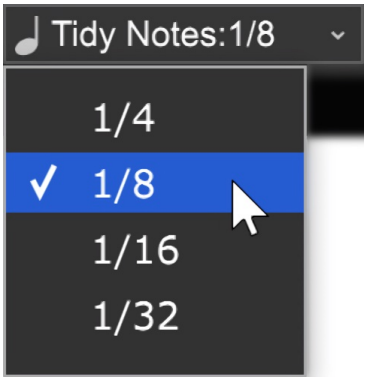


Determines the minimum note value that notes will snap to when creating new notes, moving preexisting notes, and moving loop markers. Depending upon the current zoom view level, the *Snap To Grid* setting automatically changes the snap value to the current grid size. This setting works well in most situations. If you're working on a track with a three-count-based time signature, use the *Snap To Grid (Triplets)* settings.

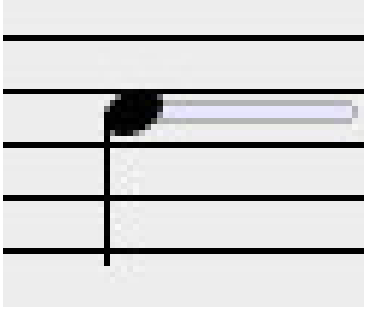
- **Tidy Notes**



Since a performance won't always present itself as nicely as printed sheet music, *Tidy Notes* attempts to clean up the display of recorded note data.

For example, if you played a quarter-note but shortened the note by a 32nd note duration, the software would show a dotted 8th note tied to a 32nd note with a 32nd note rest. This would look like the following, which is sort of icky:



To remedy this, set the *Tidy Note* level to an 8th note or less.



After changing the *Tidy Note* level, the note appears as a quarter note. The drawback is that 16th notes could potentially appear as 8th notes, so be careful when using *Tidy Notes*.

PRINTING

Once a clip is properly selected, click the *Print...* button on the Score toolbar or press [CTRL]+P to print. To include the author and title in the printed version, enter the appropriate text in the *Author Information* section of the *Project* tab.

SOUND EDITOR

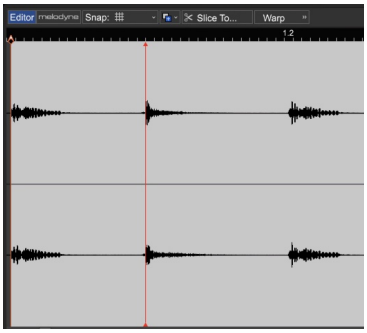
Audio clip content can be edited by double-clicking a clip. This opens the Sound tab.

IA small wrench appears in the clip's upper left corner when a clip is currently being edited in the *Sound* tab. This makes it easy to determine which clip is being edited.

WAVE SNAP POINT, AUDIBLE CLIP REGION, LOOPING, AND PLAY HEAD

The looping and audible region of a sound has a white background. The unused parts of the sound are shown in green. If the clip is “closed down” smaller in the Main Clip Grid than the entire looped region, the unused section of the loop will have a gray background. The adjustable points in the waveform display are as follows:

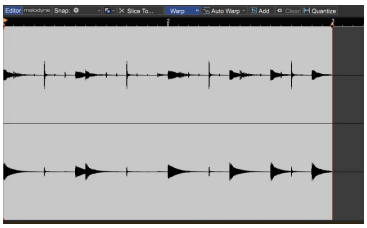
- **Snap Point Marker**



The red vertical line defines the position where a clip snaps to in the Main Clip Grid. Set the *Snap Point* marker by clicking and sliding at the marker’s top or bottom (the cursor will turn into left/right arrows), or by right-clicking and selecting *Set As Start Time*. Right-clicking and selecting *Reset Start Time* will return the *Snap Point* marker to its original position. Sometimes this guy likes to hide behind the *Loop Start* marker, so if you don’t

see it, try moving the Loop Start marker (just remember to move it back where it needs to be).

- **Loop Start**



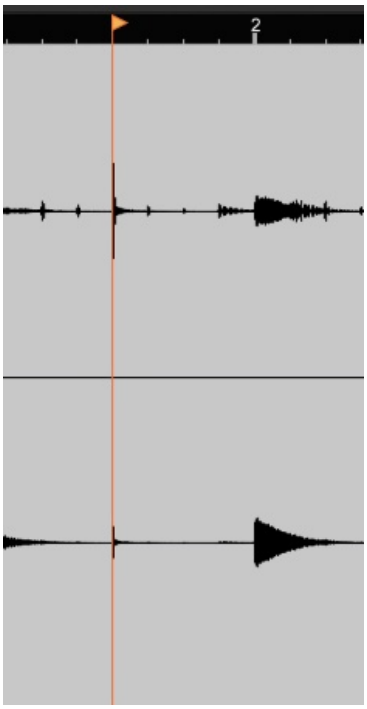
Defines the point where sound playback begins. To position *Loop Start*, click and drag at the top of the marker (the cursor will turn into left/right arrows). You can also set it by right-clicking in the waveform and selecting *Set Loop Start*.

- **Loop End**

Defines the point where sound playback ends, because all good loops must come to an end. To position Loop End, click and drag at the top of the marker (the cursor will turn into left/right arrows). You also set it by right-clicking in the waveform and selecting *Set Loop End*.

Loop points can be returned to their original positions by right-clicking and selecting *Reset Loop Points*.

- **Playhead**



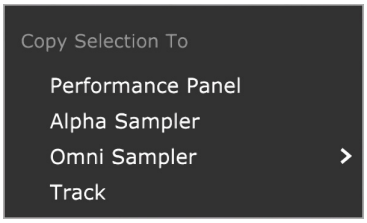
Just to keep things clear, that yellow line with the flag is the same Playhead as the one in the Main Clip Grid. You'll notice that it moves in both windows simultaneously.

SOUND TAB TOOLBAR (WITH AUDIO CLIP SELECTED)

- **Snap To Grid**

This determines the snap value when selecting a waveform region, as well as moving the play insert and loop start/end markers. When set to Grid, items will snap to the ruler markings in the timeline, directly above the waveform. The ruler markings vary in size depending on the horizontal zoom level. *Grid (Triplets)* is best suited for music with a three feel, i.e. 3/4 or 6/8 time signatures.

- **Copy Selection To**



The *Copy Selection To* command exports the currently highlighted audio wave region to one of the following:

• Copy Selection To> Performance Panel

Places the selected region in the highlighted cell of the Performance Panel.
If no cell is currently selected, the sample will be placed at the first open location.

• Copy Selection To> Alpha Sampler

A new instrument track with an Alpha Sampler is created, and the selected region will be loaded into Alpha Sampler.

• Copy Selection To> Omni Sampler

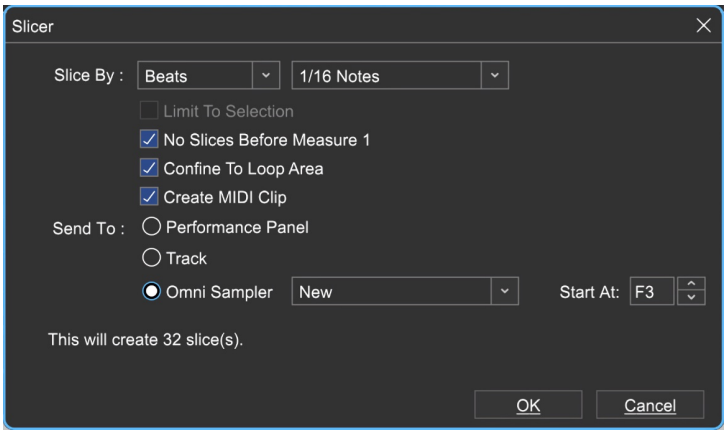
If there are no instances of Omni Sampler in the current project, selecting *Copy Selection To> Omni Sampler>New* opens a new instrument track with an Omni Sampler, and the sample is placed on the C4 sample pad. If Mixcraft detects an existing Omni Sampler, this is displayed when *Copy Selection To>Omni Sampler* is displayed. At this point, you can export the audio region to an existing Omni Sampler, or select *New* to create a new Omni Sampler instance on a new track. Samples exported to an existing Omni Sampler instance will be loaded into the first open cell above C4.

• Copy Selection To> Track

The selected region is imported to a track in the Main Clip Grid. The region is placed at the current playhead location on the current audio track. If the currently selected track isn't an audio track, the region is placed on the first audio track. (Be careful, the region can potentially land beneath existing audio - you won't see it unless you slide the existing audio up or down.)

• Slice To...

The *Slice To...* button cuts up audio regions and exports the "slices" to the Performance Panel, Omni Sampler, or directly to a Mixcraft audio track. Though the audio slices can be any length, you'd typically use this for cutting up a section of the loop or a song into smaller chunks allowing you to create new beats or loops (using small slices), rearrange sections of a song (with larger slices), or anything in between. Clicking the *Slice To...* button opens this window:



The Slice By pop-up menu selects from the following options that define how the sound will be sliced ‘n’ diced:

• *Beats* slices by the note value defined in the pop-up menu to the right. This works well for slicing beats and loops into small “chunks.”

• *Measures* works the same as Beats, but is defined in the number of measures in the pop-up menu to the right, making it more appropriate for larger chunks of music.

• *Transients* slices according to audio transients detected by Mixcraft. The sensitivity level is defined by the slider to the right according to the amplitude level in percentage; the lower the slider setting, the more sensitive, thus creating more slices.

• *Warp Markers* slices according to the location of warp markers; you must have warp markers already created in the audio region (see “Warp”).

• Limit To Selection
If a region of audio is currently selected, checking this box ensures that only audio within the selected region is exported as slices.

• No Slices Before Measure 1
This prevents the export of slices before the first measure of a loop. (Desirable if you’ve manually relocated a loop’s start point.)

• Confine To Loop Area
Checking this box ensures that slices are only exported from audio between the *Loop Start* and *Loop End* markers of the current clip.

• **Create MIDI Loop**

This creates a MIDI clip of all slices, playing consecutively and places it on the newly created Omni Sampler track at the current Carat location. Playing back this clip will sound exactly the same as playing the entire source loop, but now you'll have the ability to edit each slice (or drum hit) in Mixcraft's MIDI editors, opening the door to all kinds of creativity such as changing sounds, varying drum patterns, etc. If you like playing with beats, *Create MIDI Loop* is a powerful and fun feature.

• **Send To**

Selects the destination for exported slices.

• *Performance Panel* exports slices to the Performance Panel. The first slice appears in the currently highlighted grid location, and each additional slice lands in the next grid location to the right. If you'd like slices to land in on a particular track, it's a good idea to highlight the desired grid location prior to exporting slices.

• *Omni Sampler* exports slices to individual Omni Sampler cells. If the pop-up menu to the right is set to New, Mixcraft creates a new track with a blank Omni Sampler loaded. If there are existing instances of Omni Sampler, these can be selected in the pop-up menu. To begin exporting, click *OK*. Exported slices begin loading at the cell number selected in the Start At selector. If a cells already contain samples, Mixcraft will skip them and continue loading at the next open cell location.

• Track exports slices to the currently selected audio track, beginning at the current playhead location in the Main Clip Grid.

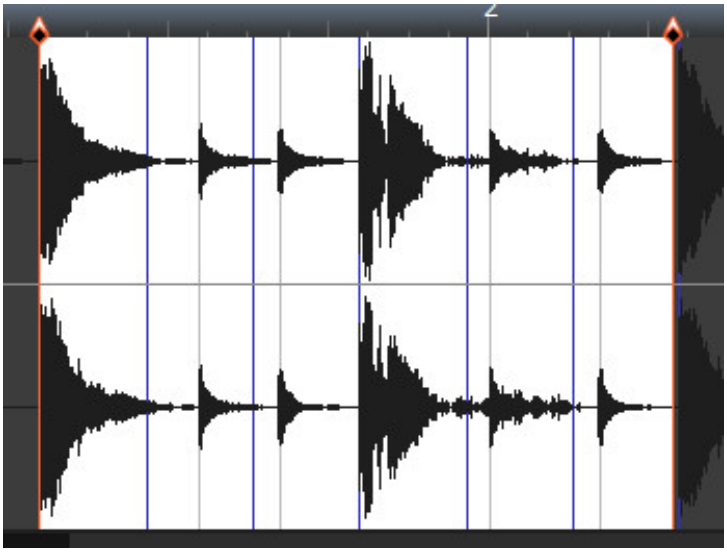
• **Warp**

Warping audio lets you adjust the timing of audio by detecting the locations of transients or "hits," then effectively time-stretching and -expanding small regions between transients within an audio file. This offers powerful creative and corrective options. Used on a smaller piece of audio, such as a drum loop, warping lets you correct the timing of poor playing, or re-quantize audio for different rhythmic feels. When applied to an entire song, warping makes it easy to lock up the tempos and feels of songs, allowing easy mixing and creation of song "mash-ups."

Mixcraft’s warping tools are easy to use; not only can Mixcraft interpret tempo, time signature, and beat locations to assist in the placement of warp markers, Mixcraft includes an Autowarp function that automatically locates warp information and places warp markers.

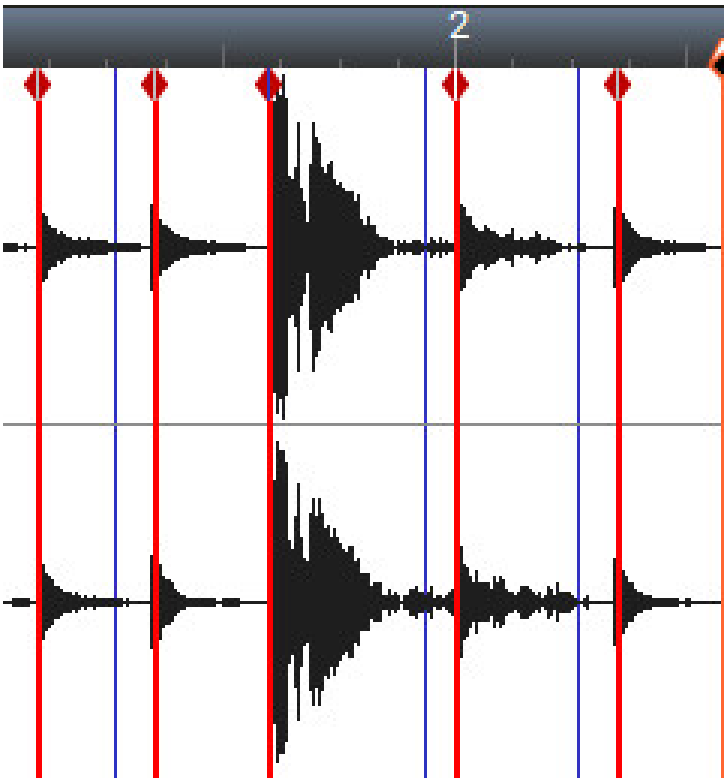
HOW TO USE WARP

1. When *Warp* is clicked in the Sound Tab Toolbar, Mixcraft scans the currently looped audio region and makes educated guesses as to tempo, time signature, and beat locations.



The blue lines shown display the predicted beat locations, and the black lines show transient hits. **The blue and black lines have no effect on the sound, but the predicted beat locations are very helpful when placing warp markers as described on the next page.**

2. Once the predicted beat locations and transient hits are displayed, set the Audio Tab’s snap setting to *Snap To Grid*. (This makes the Caret snap to predicted beat and transient locations.) Now click on beats and transients to place the Caret, and add red Warp Markers by clicking the *Add Warp Marker* button in the toolbar (or right-click and select *Add Warp Marker*). If you don’t want neighbouring hits or audio areas to be affected, place “safety” Warp Markers on hits before and after the hits or areas to be manipulated.



3. Once Warp Markers are in place, they can be freely moved left and right to squeeze and stretch audio in time. It's easiest to hear the effects of warping by pressing the green *Sound* tab play button and moving the Warp Markers in real-time during playback. Feel free to experiment - like all Mixcraft audio processes, warping is non-destructive, and its operation is easier to wrap your head around when you're actually using it!

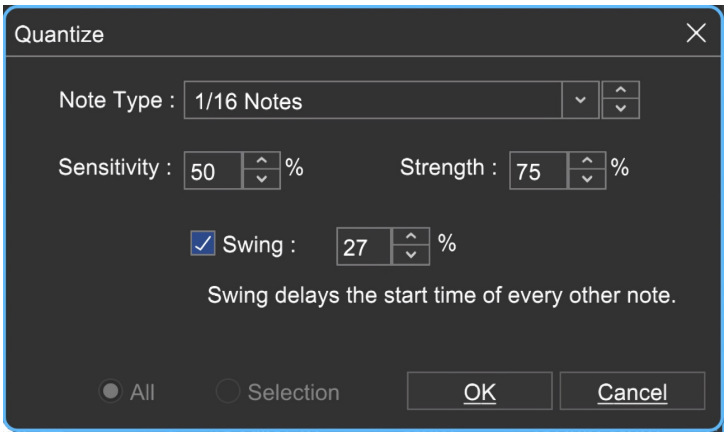
4. To remove a Warp Marker, right-click it and select *Clear*. To remove all Warp Markers from a loop, click the *Clear* button in the Sound Tab Toolbar.

- **Autowarp**

Autowarp analyzes audio material and automatically places Warp Markers at relevant points. It's particularly useful for "mashup" mixes where two unrelated songs are to be mixed together. There are four strength settings ranging from sloppy to tight. Tighter settings add more Warp Markers and affect timing more strongly, whereas looser settings add fewer Warp Markers and have less effect on the timing of audio content. By all means, experiment, as different source material responds better to different settings.

- **Warp Quantize**

Warp Quantize allows audio material to be quantized much like MIDI notes by intelligently squashing and stretching rhythmic hits in the source material.



- **Note Type**

This is the quantize value; transients will be moved to the closest note value.

- **Sensitivity**

The amplitude a transient must reach before Mixcraft considers it a “hit” to quantize to.

- **Strength**

Regulates how close hits will be moved in time toward the quantize values. 0% won’t move transients at all, whereas 100% would move transients all the way to the quantize point.

- **Swing**

As stated on-screen, the Swing value delays the start time of every other note. Your ears will recognize this as the rhythmic feel of old blues music, “Take The A Train,” or any Bobby Brown hit from the 80s. The percentage sets how much every other note is delayed.

- **All/Selection**

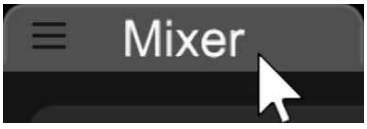
A setting of *All* applies Warp Quantization to the entire audio clip. *Selection* quantizes only the highlighted region.

MIXER TAB

By now you've probably used the channel volume and pan controls in the track list. Basic mixes can be created this way, but the Mixer Tab offers far more creative options. All audio signals including audio, virtual instruments, and effects can be precisely controlled in the mixer window.

Each track is represented by a vertical channel strip containing a volume slider, pan control, EQ (low, mid, high), insert FX, record arm, solo, and mute buttons, plus an optional Send knob and Instrument button (some controls vary depending upon the track type). Keep in mind that tracks in the track list have a one-to-one correlation with mixer channels; in other words, each newly created track adds a new mixer track.

VIEWING, HIDING, AND RESIZING THE MIXER



To open the mixer at the bottom of the workspace, click the *Mixer* tab at the very bottom of the screen. To hide it, click the dash in the upper-right corner of the mixer, next to the *Undock* button.

To open the mixer in a separate window, click the *Undock* button. This is particularly useful if you're using two displays (or one really big one). The *Dock* button in the top corner will "re-attach" the mixer to the bottom of the main Mixcraft window.

The overall height of the mixer can be adjusted by positioning the mouse pointer beneath Mixcraft's transport; the cursor will become up/down arrows when it's in the right spot. Dragging up vertically will extend the length of the channel faders. Dragging down will compress the size of the faders; once they're dragged down to their minimum size, a scroll bar appears on the right side of the mixer allowing scrolling of the mixer view area. This lets you maintain the size of the track display area without totally squashing the mixer faders.

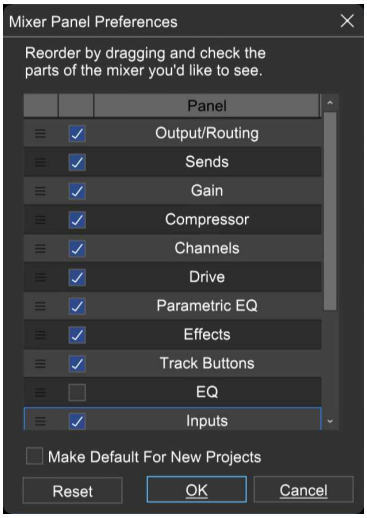
MIXER PANEL PREFS

The mixer panel prefs area to the left of the mixer hides or displays individual mixer channels. This allows you to see only the tracks you're currently working with. Hiding or showing tracks has no effect on audio; if you're hearing a track but can't see it, make sure it's not currently hidden. Mixer tracks can be quickly hidden or displayed by clicking and dragging across multiple checkboxes - this can be combined with [SHIFT]+click to select or deselect individual tracks.

ALL/NONE SELECT BUTTONS

The *All* and *None* rapidly shows or hides all mixer channels.

MIXER PANEL PREFERENCES



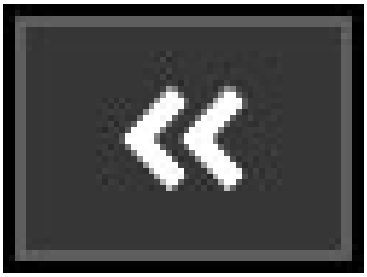
Clicking the small gear icon next to the *All* and *None* select buttons opens the *Mixer Panel Preferences* menu, for customization of mixer channel strips. Mixer control sections can be individually displayed or hidden using the checkboxes. The top-to-bottom arrangement of channel stripes is completely customizable by dragging and dropping sections in the desired order.

When you're done arranging the mixer layout, click the *X* at the top right or the *OK* button. The *Default* button returns the channel strip components to their default

arrangement in case things get really mucky.

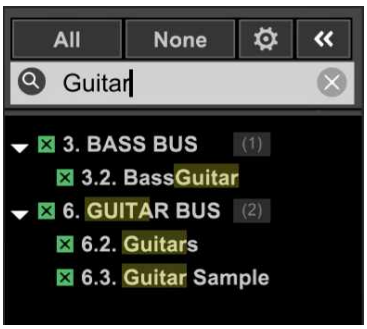
Use the *Make Default For New Projects* checkbox to apply the current Mixer Panel settings to all newly created projects. *Mixer Panel Preferences* have no effect on the sound.

HIDE/SHOW MIXER PANEL PREFERENCES



Click this to hide or show the mixer panel preferences tab. Hiding it allows viewing of more mixer channels.

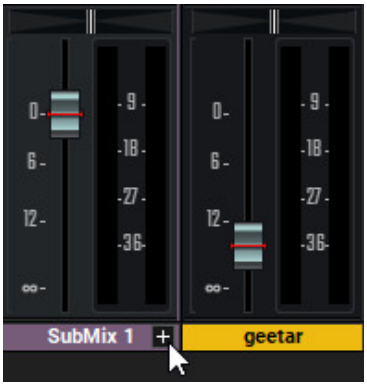
SEARCH FIELD

This can be helpful when track counts are large and tracks become hard to find. Here's how to use it:

Click the *None* track select button - this will hide all mixer tracks. Now type the name of the track(s) you're looking for. All mixer channels containing the entered text will show in the list. Click the *X* boxes next to the names to unhide their corresponding mixer channels.

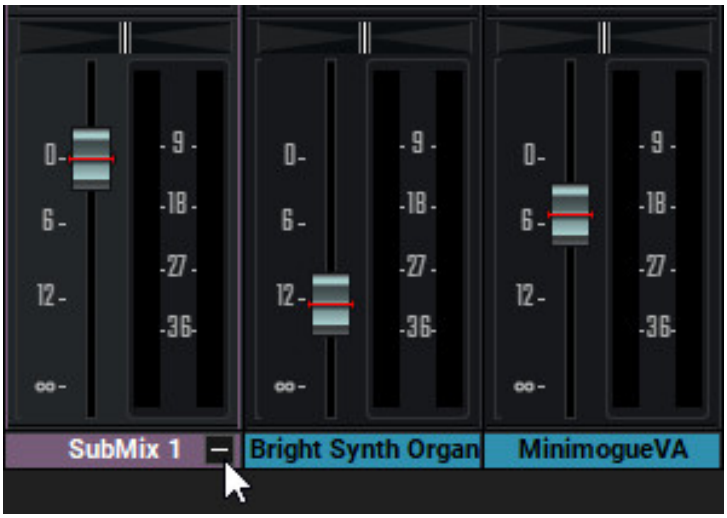
SUBMIX TRACK AND MULTI-OUT INSTRUMENT CHILD TRACK DISPLAY

SubMix Tracks and multiple output Instruments Tracks have a master “parent” track as well as any number of associated “child” tracks. As in the Track List, the child tracks can be shown or hidden in the Mixer. Hiding the child tracks saves space in the Mixer, especially if you’re working on a smaller display. SubMix and multi-out Instrument tracks will show a small + or - button in their lower-right corner - click it to hide or show the child tracks.

SubMix Track with child tracks hidden:



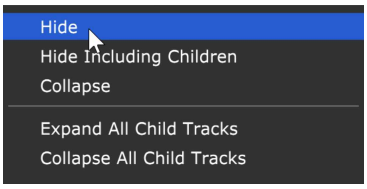
SubMix Track with child tracks showing:



Note: Child tracks in the Track List can be shown or hidden independently of child tracks in the Mixer, but none of this affects sound in any way.

SHOW/HIDE PARENT AND CHILD TRACK RIGHT-CLICK MENUS

Right-clicking in the Show/Hide Tracks menu lets you quickly show or hide all child tracks in the current project.



Right-clicking a parent or child track displays a few more options that allow the hiding of the parent and child or the child tracks only.

LINKED TRACK DISPLAY

If two or more tracks are linked (via the *Track>Link* menu or by right-clicking a track and selecting *Link Selected Tracks* when two or more tracks are currently selected), a chain icon appears at the top of the corresponding mixer tracks, as well as on the tracks in the Track List. Clicking on the chain icon unlinks the tracks.

MIXER SEND TRACK, OUTPUT BUS, PREVIEW, AND MASTER TRACK DISPLAY

Send Tracks, Output Bus tracks, Preview Track, and the Master Track always appear on the right side of the mixer, regardless of their position in the track list.

You'll see a vertical divider bar near the middle of the mixer with audio, virtual instrument, video, and submix tracks on the left, send, output bus, and the master track on the right side of the divider. This makes it easier to visualize the mix signal flow. The vertical divider bar automatically moves dependent on how many send tracks and output bus tracks are used in the project. We like to place Send Tracks and Output Bus tracks at the bottom of the project track list to maintain consistency between the track list and the mixer window, but Send Tracks and Output Bus tracks can be placed anywhere in the track list.

PREVIEW TRACK

We haven't mentioned the Preview Track up to this point, because it's the only track type that doesn't appear in the track window. The Preview Track fader appears in the mixer immediately to the left of the Master Track fader and affects the volume of Library tab sound previews, sounds played back in the Audio editing tab, and the "freezing ice" sound effect heard when tracks are frozen.

The mixer Preview Track is strictly a volume control and thus has no input or output menus, panning, track buttons, effects inserts, etc.

MIXER DELAY COMPENSATION, YOUR INVISIBLE FRIEND

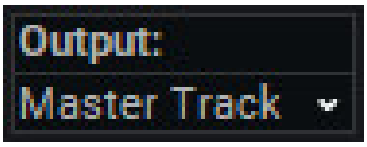
Though not a visible control, we thought this would be a good time to discuss Mixer Delay Compensation. Sometimes plug-ins and instruments can introduce delays as a result of the brief time it takes for them to process sound. If this doesn't get properly "reported" to the host app (i.e. Mixcraft), some audio tracks or effects busses will play back later than others. In some cases, this isn't too noticeable (i.e. the wet signal of nine-second reverb on a Send Track), but in other situations, it can wreak havoc with the timing of your project (think 64th-note-quantized castanets).

In the past, this might necessitate inserting VST delay compensation plug-ins at various points in the mixer signal flow. As you might imagine, this could quickly get confusing, but fortunately, Mixcraft 10's mixing engine design automatically allows for plug-in delay compensation on all mixer channels, including send knobs on instrument output tracks, sidechaining, etc. To put it bluntly, Mixcraft automatically compensates for latency introduced by plug-ins and virtual instruments and automatically makes sure everything plays back in perfect time. Hooray for mixer delay compensation!

MIXER CHANNEL STRIP SECTIONS

Below we've listed all mixer channel sections in the their default order, going from top to bottom, but keep in mind that channel strips can be customized as described in the preceding section.

OUTPUT/ROUTING



Use this popup to select signal output destinations. This generally will be set to Master Track to route signals to the main left/right outputs, but can optionally be used for routing to Output Bus tracks, and ultimately, to the separate physical outputs of an audio interface.

SENDS

Send track knobs appear when one or more send tracks have been added to a project. The number of knobs corresponds to the number of send tracks in a project, and the name shown next to the knob will be the same as the send track’s name in the track list. The mixer displays a maximum of ten send knobs at once; if more than ten send tracks have been added, a scroll bar appears at the right; just slide that guy up and down to view and adjust all 437 of your send tracks.

Due to space limitations in the mixer window, only the first nine characters and spaces will be visible in the mixer knob label, so don’t give your send tracks names like “Send 46 - Billy-Bob’s Sweet ‘Ol Gimungous Reverberation” or something equally lofty. We *do* recommend that you retain something like “Send 2” or similar at the beginning; this will simplify keeping track of signal flow, especially with larger projects.

Send Me A Send Track... Right Now

Send tracks are independent channels that allow multiple mixer channels to send signal to them. These are frequently used for time-domain effects, such as reverbs, delays, or other situations where it's desirable to have the dry signal at full volume while adding an effect at a lower level.

A good example would be if you wanted to add reverb to the components of a drum kit that was split out over multiple audio channels (kick drum on one track, snare on another, etc.). Not only would using a send track let you save CPU power by using a single instance of reverb, but because each channel has its own send knob, you could feed a great deal of snare drum signal to the reverb for dramatic impact, but only a tiny bit of the kick drum (because kick drums generally sound like cannons gone awry when over-reverbed).

Another great way to use Send Tracks is for grouping related tracks, such as backing vocals. Not only does this let you put numerous related tracks under one fader for easy control, inserting effects into a Send Track also lets you add effects to many channels at once (for adding compression and EQ to all those backing vocals in one fell swoop, for example).

GAIN

This is a handy "initial gain" control, as seen on hardware mixing boards. Use it to adjust super quiet or hot signals (or to really slam the compressor and drive sections discussed below).

Turning it left or right adds or subtracts 15 dB of gain.

COMPRESSOR

This is a handy “one-knob” compressor for taming transients. At lower settings, it works especially well for vocals, guitars, and bass, and it’s great for crushing drum loops at higher settings. Its volume is compensated, so that the overall output level remains roughly constant as the compression amount is increased. The Threshold knob increases the amount of squashing as it’s turned clockwise, as well as decreasing the attack time for more aggressive gain reduction.

CHANNELS

New in Mixcraft 10, this handy channel strip module incorporates the following useful audio utilities typically reserved for a VST plugin:

- **Swap Channels**

Reverses the left/right orientation of stereo audio; the button turns blue when on when engaged.

- **Phase Invert**

Inverts the phase of the left or right channel. This is useful when two mics have been used to record the same source - sometimes flipping the phase on one of the channels improves sound quality.

- **Stereo Width**

Sets the left to right channel width for stereo content. Note that the Stereo Width knobs doesn't add or exaggerated the stereo image - maximum setting the same as "uneffected," but narrowing stereo sound field width is often useful in mixing situations.

- **Mono**

Sums stereo signals to one mono signal.

DRIVE

The *Drive* control introduces natural “mixing console”-style saturation, from a little to a fair amount of raunch. It’s voiced with a warm, natural tone. Though it will increase overall volume, the channel fader will still keep the overall volume under control, making it easy to use while adding some grit without losing control of mix elements.

PARAMETRIC EQ

In addition to the basic three-knob EQ, more advanced users can choose Mixcraft 10’s full-featured four-band Parametric EQ. The high and low bands are semi-parametric with a switchable shelf or bell mode, while the two mid bands are fully parametric - this means that in addition to sweepable frequency selection, they each have variable bandwidth (aka, “Q”). The frequencies of all bands overlap as well. We think you’ll find Mixcraft 10’s channel EQ to be tremendously useful and flexible. Let’s go over the Parametric EQ’s controls:

• **High +/-** Boosts/cuts selected high frequency range +/- 15 db.

• **Bell/Shelf Button** - Toggles between bell mode or shelf mode. See the sidebar *Bell vs. Shelf, The Throwdown* for more information, because we love a sidebar!

• **High Freq** - Selects a center frequency between 1500-16,000 Hz.

• **Mid 2 +/-** Boosts/cuts the selected mid frequency range +/- 15 db.

• **Mid 2 Freq** - Selects the center frequency between 500-7000 Hz.

• **Q2** - Sets the bandwidth of the boost or cut range from 0.5 octaves to 3 octaves.

• **Mid 1 +/-** Boosts/cuts the selected mid frequency range +/- 15 db.

• **Mid 1 Freq** - Selects the center frequency between 200-2500 Hz.

• **Q1** - Sets the bandwidth of the boost or cut range from 0.5 octaves to 3 octaves.

• **Low +/-** Boosts/cuts the selected high frequency range +/- 15 db.

• **Bell/Shelf Button** - Toggles between bell mode or shelf mode. See the sidebar B*ell vs. Shelf, The Throwdown* for more information.

• **Low Freq** - Selects the center frequency between 30-450 Hz.

Bell vs. Shelf, The Throwdown

These refer to the two types of response curves available for the high and low bands of Mixcraft 10's channel EQ. The high and low bands of Mixcraft 10's channel EQ both include a switch for selecting between these two modes.

It's important to understand that setting an EQ to a given frequency doesn't just boost or cut that frequency only - not only is that difficult to accomplish in conventional analog circuitry, it also wouldn't serve much practical purpose. In reality, an EQ boosts or cuts in the vicinity of the selected frequency with boost or cut heard most strongly close to the selected frequency, and diminishing effects as you get further from the chosen frequency, which is far more useful.

When the bell curve is selected, the audible effects of the boost or cut are greatest at the selected (aka, center) frequency, and trail off proportionally above and below the center frequency. When boosting frequencies, this has the rounded appearance of a bell on a response plot, hence the name.

The shelf mode operates a little differently. In the case of a low band EQ in shelf mode, all frequencies below the selected frequency (referred to as the "corner" frequency in this case) are boosted or attenuated, depending on the setting. This response curve

appears like two horizontal lines on a response plot, hence the "shelf" name. A high shelf operates in a similar but reversed fashion; all frequencies above the corner frequency are boosted or cut depending on settings.

In use, bell-curve EQs are useful for boosting a specific frequency range or cutting out a specific troubling frequency range (like an air conditioner hum, or that 600 Hz snare ping that people loved in the 90s). Shelf EQs are great general tone controls. They're useful for slicing off a lot of low-end frequencies (for vocalists, who have nothing happening beneath around 150Hz anyway, or drum room mic fudge) or wideband high boosts (to brighten dull cymbals, singers, or add "air" to entire mixes), amongst other uses.

EFFECTS

Insert effects are effects that are placed into or "inserted" into the signal path of a mixer channel. To be clear, this means the signal passes through the effect in series and if the effect doesn't have a wet/dry mix knob, the effect will balance and be 100% wet, with no unaffected signal mixed in. As a result, insert effects slots are useful for effects such as compression, EQ, distortion, etc., i.e. situations where you *don't* want to mix some portion of the dry and wet signal together. If the chosen effect has a wet/dry control, such as a delay or reverb, you certainly *can* place them in an insert, but we recommend using a Send Track+its own insert, as this offers a lot more flexibility with regard to stereoization and panning (and can save a great deal of computer processor power by allowing multiple tracks to feed a single instance of a resource-hogging reverbs or other effects).

One or more insert effects can be added in the main track window by clicking on a channel strip's fx button, or by clicking the +*fx* button in a mixer channel strip. By default, mixer insert effects are located above the built-in three-band EQ in the mixer.

Clicking the +*fx* button opens a list of built-in and third-party VST effects as well as any user-created effects collections. To add an effect, simply scroll through the list and click on the desired effect. Additional effects can be added by clicking again on a channel's +*fx* button.

Effects inserts displayed in the mixer are the same as the effects shown at the far right of a track in the Main Window track list (you may need to drag the far right of the track list to "open" up the insert effects view).

For more information about using effects, please have a look at the appropriately named **Using Effects** section.

TRACK BUTTONS

The track buttons will be a little different for virtual instrument and audio tracks.

FX- Opens the *Effects List* window. Individual effects can be opened for editing from within the *Effects List* window, but you can also just click the effect itself in the channel for direct editing access

Solo- Plays the selected track only, and disables sound from other tracks. Solo buttons can be enabled on multiple tracks.

Mute- Silences audio on the selected track. Mute buttons can be enabled on multiple tracks.

Arm- readies a track for recording.

Keyboard Icon (virtual instrument tracks only)- Opens the Instrument List window where virtual instruments and effects chains can be configured.

Mon (audio tracks only)- Short for “monitor,” this enables software monitoring for an audio channel.

EQ

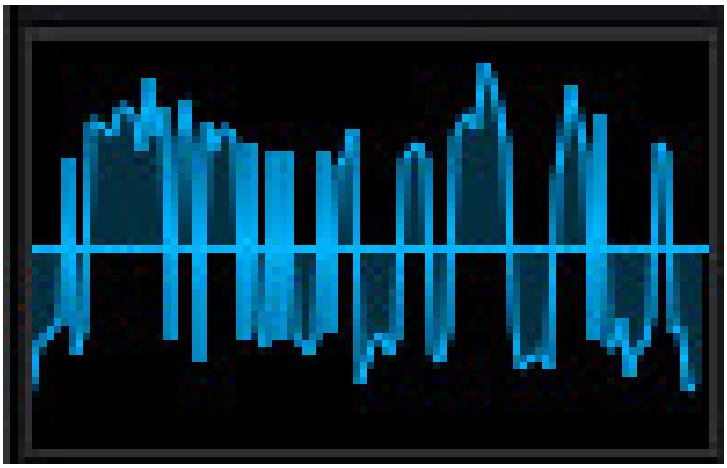
The 3-Band EQ allows quick and easy boosting or cutting of low, mid, and high frequencies. the low knob is a shelving EQ with 15 dB of boost or cuts at a corner frequency of 125 Hz. The mid knob is a one-octave wide peaking filter with 12 dB of boost or cut, centered at 2500 Hz. The high knob is a shelving EQ with 15 dB of boost or cuts at a corner frequency of 8000 Hz.

The 3-Band EQ works independently of the Parametric EQ in the next section, and can be used in conjunction with it (but things could quickly get confusing, so it’s probably best to use the Parametric EQ on its own).

INPUTS

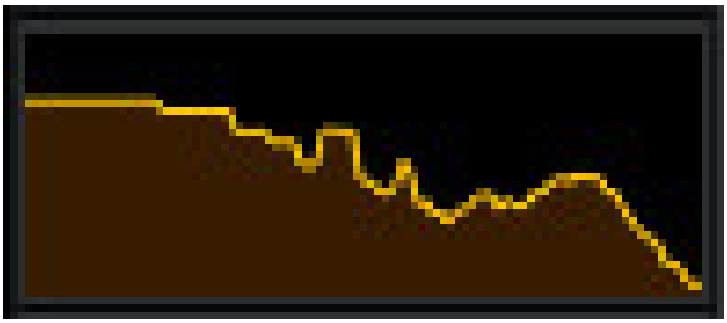
This pop-up selects a channel’s input source. For virtual instruments, this allows the selection of MIDI devices or a specific MIDI device; for audio channels, this selects physical inputs on an audio interface.

OSCILLOSCOPE



Displays the current audio waveform. This is most useful for individual sound sources such as synthesizer waves or pure electronic drums.

FREQUENCY VIEW



Displays audio energy throughout the frequency spectrum. Low frequencies appear toward the left, and high frequencies appear on the right, with vertical height representing the approximate level.

VOLUME/PAN

At the risk of explaining the obvious, the big slider sets the volume of the channel, with 0 db representing unity gain. The horizontal pan slider above it adjusts the position of the signal between the left and right channels (pan is short for “panorama,” which is also a really great record by The Cars).

Tip: Double-clicking on any Mixer control will revert it back to its default- handy for returning pan controls to the center position.

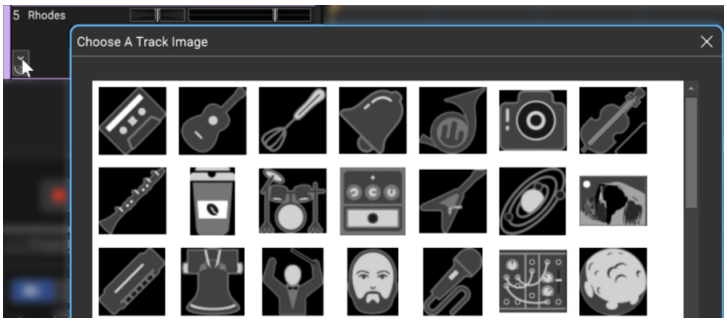
The stereo level meter indicates approximate signal level, and like just about every audio meter, should be set to avoid consistently being “in the red,” otherwise nasty digital clipping can occur.

TRACK IMAGE

Each track can have its own image beneath the track name for personalization as well as organization. Choose from Mixcraft’s included images or import your own.

To change the track image, double-click an existing track image or hover over the track image and click the pop-up button. You can also select *Track>Properties>Choose Image*... in the main window drop-down menus, or right-click on a track and select *Properties>Choose* Image...

The *Choose A Track Image* window opens:



To use an existing image, select one and click *OK*. To use a custom image, click *Add My Own Image File...,* navigate to the image to be added, select the desired image, and click *Open*. The image replaces the existing track image and is added to the list of thumbnail images.

JPG, BMP, PNG, and GIF formats are supported, and custom images are permanently added to the track image library for use in future projects.

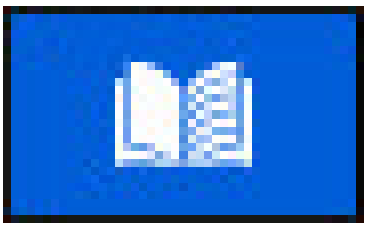
LIBRARY TAB

Mixcraft's Library tab contains thousands of loops, samples and sound effects, as well as number of song kits for royalty-free use within your own projects! Feel free to mix, loop, and edit them to your heart's content. Mixcraft also offers direct browsing of Freesound.org's massive online library of samples.

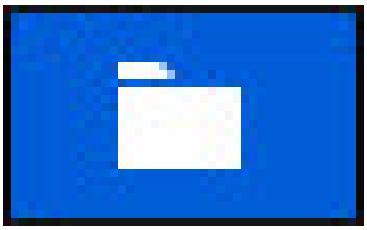
The *Library* tab includes categories and an easy-to-use search function that filter which sounds are currently displayed. This makes light work of navigating Mixcraft's vast sound library. Following is a brief overview of each, but you can learn about them in detail in the subsections that follow.

LIBRARY

Found at the top level of the Library's navigation are the Category Selection buttons. Here's what they do:

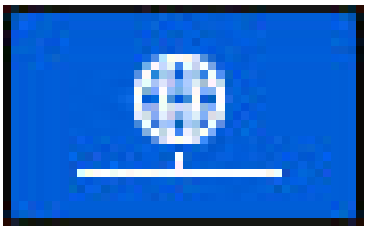


The *Book* icon accesses Mixcraft's huge onboard library of loops, samples, and sound effects. Book, library... get it? More info in the **Mixcraft Sound Library Button** section.

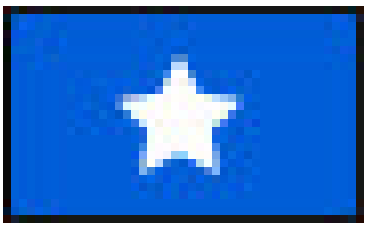


The *Folder* icon lets you add Windows Explorer directories, for fast and easy access to sound files for auditioning and adding to projects. More info in the **Folder Button**

section.

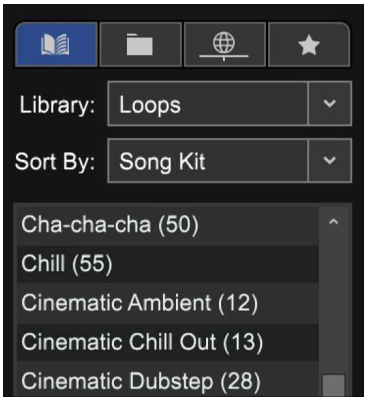


The *Freesound* icon allows online browsing of Freesound.org's immense (and free!) sample library. More info in the **Freesound.org Button** section.

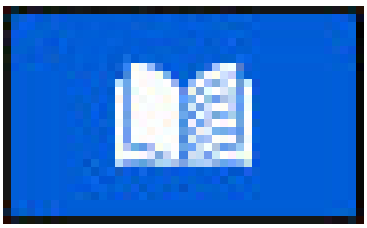


Clicking on the *Star* next to any sound in the Library marks it as a favorite; clicking the *Star* icon displays all favorited sounds. More info in the **Favorites Button** section.

MIXCRAFT SOUND LIBRARY BUTTON

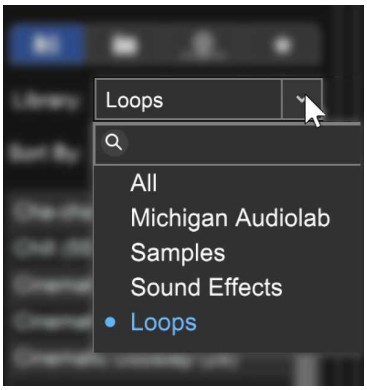


The Mixcraft Sound Library refers to all of the loops, samples, and sound effects included in Mixcraft. These will download as needed to your hard drive, but if you have even a moderately fast Internet connection, downloading will usually occur quickly enough that you won't notice it happening.



Click the *Book* icon to access the Mixcraft Sound Library.

LIBRARY



The Library pop-up menu displays the following choices:

- **All**

Mixcraft's included library and user-imported sounds.

• **Loops**

Only musical and rhythmic loops are displayed. Useful if you're creating a song by assembling loops in the Main Clip Grid or Performance Panel.

• **Samples**

The "one-shot" (i.e., not looped) acoustic and electronic drum samples included with Mixcraft's sound library. These are particularly suited for creating beats with Omni Sampler.

• **Sound Effects**

Only sound effects are shown. These are "non-music" sounds and usually don't loop in a rhythmic fashion.

• **Imported**

Any user or third-party sounds added to Mixcraft's library. Previously installed user or third-party sound libraries may show as Library categories.

SORT BY

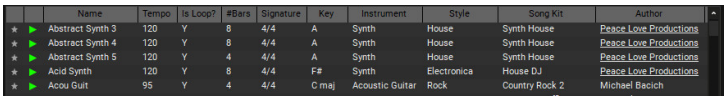
The *Sort By* drop-down menus allows filtering of sounds by category.

Choose from the following:

• Tempo
• Key
• Style
• Instrument
• Name
• Song Kit
• Date
• Imported Date

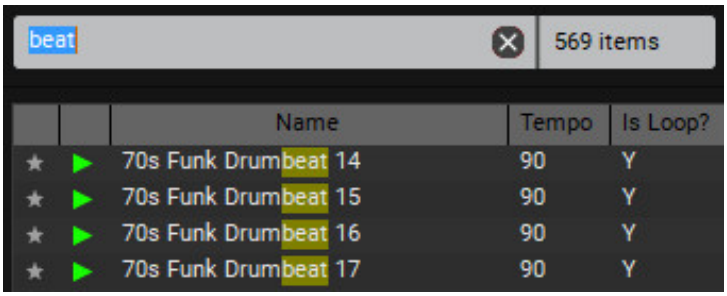
The list beneath the *Sort By* filter changes dependent on the currently selected *Sort By* category.

SOUND LIST



The Sound List on the right side shows all sounds meeting the current *Library* and *Sort By* criteria. Remember that selecting *Library > All* shows everything, so we recommend setting filters to simplify finding the right sound.

SEARCH FIELD



Searching lets you quickly locate specific sounds in the currently selected category and library. You can search using multiple terms and excluding certain words. Search terms display in yellow. For example, if you searched “Drums” and there were too many results, you could change the search to “Drums Snare.”

If you didn’t want to see a specific type of drum, you can add the exclusion “-” sign. “Drums -Snare” would show all drum sounds without the word “Snare” in it.

To delete/erase the current search term, either remove it or click the *X* button next to the *Search* box.

Following a search, Mixcraft displays how many items matched the search query.

AUDITIONING SOUNDS

Click the small green triangular *Play* button next to a sound to audition it. If the project is currently playing, the invisible superfly DJ inside Mixcraft automatically beat matches the previewed library sound to the current tempo. Use the scroll bar on the right to move the Sound List up and down.

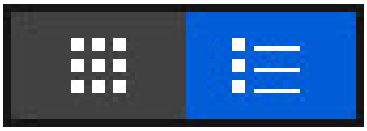
ADDING SOUNDS TO AN AUDIO TRACK

Add the last selected sound by clicking the blue *+ Add Sound* button or drag the sound onto an audio track.

• **[CTRL] key** - hold down the [CTRL] key to select specific sounds.

• **[SHIFT] key** - hold down the [SHIFT] key to select all sounds from the previous selection to the recently clicked sound.

SOUND LIST VIEW STYLE BUTTONS



The View Style buttons let you choose how to view sounds in the Sound List.

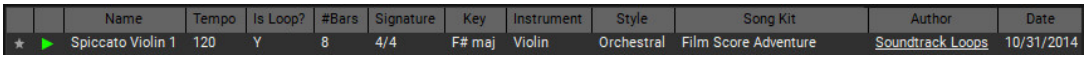
• **Phone Button**

Displays the sound name only (and the favorite star) with sound metadata in the far right column. Because of the lack of columns, you'll be able to see a lot of sounds simultaneously. Sounds can be previewed by clicking on them to start or stop preview playback. Use the scroll bar on the bottom to view more sounds by moving horizontally.

• **List Button**

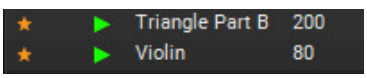
Displays sounds in a single-column list view. This shows far fewer sounds than the phone button, but you'll be able to see all metadata info columns for every sound.

SORTING AND COLUMNS



Sounds can be sorted according to particular column headers by clicking on the headers. To reverse the sort order, click the column a second time (A-Z becomes Z-A, for example). By default, Mixcraft the columns as shown above, but there are more column categories available. and they can be rearranged or hidden. For a power-user rundown of how to use columns and categories, see the "*Importing Sounds To The Library vs. Accessing From The Folder Button*" section below.

FAVORITE

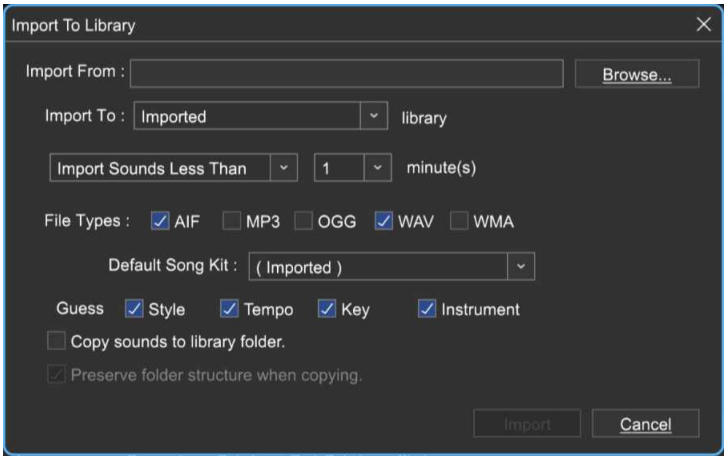


You can Favorite sounds by clicking on the *Star* next to its *Play* button. This turns the *Star* orange and makes the sound show up when the *Favorites* Library Mode button is clicked (see **Favorites** section for more on this).

ADDING SOUNDS TO THE MIXCRAFT LIBRARY

Sounds can be imported from your local hard drive, network locations, or loop CDs. You can also import sounds from the workspace. Supported file formats include AIF, MP3, OGG, WMA, and WAV.

To import sounds, click the *+Import...* button on the *Library* tab toolbar. This opens the *Import To Library* window.



- **Import From**

Specifies the directory to import from. Type its name or click the *Browse...* button to choose a folder.

- **Import To**

Choose or type in the Library name to import to. To create a new Library, type in a name.

- **Import Length**

Choose from criteria and a length in minutes. Choose a length in the drop-down menu to the right.

- Import All Sounds
- Import Sounds More Than (x minutes)

- Import Sounds Less Than (x minutes)

• File Types

This specifies which file types are to be imported.

- AIF
- MP3
- OGG
- WAV
- WMA

• Default Song Kit

Select or type in a name for a song kit if the imported sounds are to be associated with a specific Song Kit. This can be easily edited later if need be.

• Guess

If Mixcraft sees certain keywords within the file name, checking *Guess* criteria checkboxes will help Mixcraft automatically assign attributes. These are helpful when searching for sounds in the *Library* tab.

- **Style** - If a keyword is found in the file called “lib-styles-for-import.txt” this will be considered its style. For example, if a file has the word “Rock” in it, Mixcraft will set the sound’s style to Rock.

- **Tempo** - If a number in the range of 40-240 is found, Mixcraft will assume that this is the tempo.

- **Key** - If a key is found by itself, such as “Rock-G,” Mixcraft will assume that “G” is the key of the sound.

- **Instrument** - If a keyword is found in the file called “lib-insts-for-import.txt”, Mixcraft will consider that word to be its instrument. For example, if a file has the word “piano” in it, Mixcraft will set the sound’s instrument to “Piano.”

• Copy sounds to library folder

This creates a copy of the sound on the local hard drive under the folder

%programdata%\Acoustica\Mixcraft\UserLibrarySounds\. If importing from a CD, this option is on by default and cannot be turned off.

- **Preserve folder structure when copying**

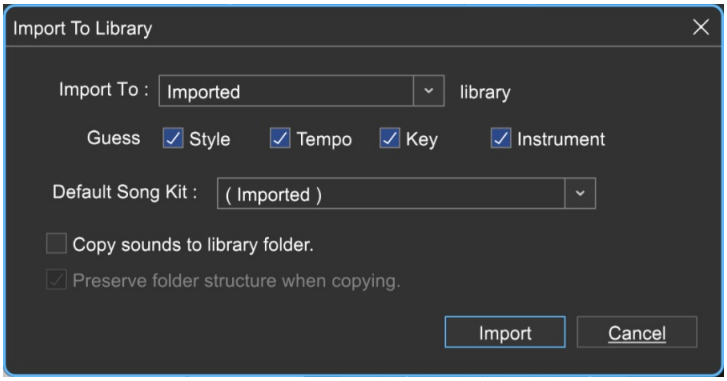
If this is checked, then the folders that contain the imported sounds will be mirrored in the *%programdata%\Acoustica\Mixcraft\UserLibrarySounds* folder if you are using the Copy sounds to library folder option. For example, if a sound is found at *C:\folder one\sub folder two*, then it will add the sound to %programdata%\Acoustica\Mixcraft\UserLibrarySounds\LibName\folder one\sub folder two\. If this is off, it will place all the imported sounds at the base level in the user library directory.

- **Import**

This begins the import. While an import is happening, you are free to edit sounds or use Mixcraft without interruption.

IMPORTING VIA DRAG AND DROP

To add a single audio file or folder, drag the files and/or folders into the Library window from Windows Explorer. After dragging them in, the import window appears. It's identical to the *Import To Library* window described previously for the *Import+* button, less the *Import From*, *Import Length*, and *File Type* parameters



- **Import To**

Choose or type in the library name to import to. To create a new library, type in a name.

- **Guess**

If Mixcraft sees certain keywords within the file name, checking *Guess* criteria

checkboxes will help Mixcraft automatically assign attributes. These are helpful when searching for sounds in the *Library* tab.

- **Style** - If a keyword is found in the file called “lib-styles-for-import.txt” this will be considered its style. For example, if a file has the word “Rock” in it, Mixcraft will set the sound’s style to Rock.

- **Tempo** - If a number in the range of 40-240 is found, Mixcraft will assume that this is the tempo.

- **Key** - If a key is found by itself, such as “Rock-G”, Mixcraft will assume that “G” is the key of the sound.

- **Instrument** - If a keyword is found in the file called “lib-insts-for-import.txt”, Mixcraft will consider that word to be its instrument. For example, if a file has the word “piano” in it, Mixcraft will set the sound’s instrument to “Piano.”

• Default Song Kit
Select or type in a name for a song kit if the imported sounds are to be associated with a specific Song Kit. This can be easily edited later if need be.

• Copy sounds to library folder
This creates a copy of the sound on the local hard drive under the folder %programdata%\Acoustica\Mixcraft\UserLibrarySounds\. If importing from a CD, this option is on by default and cannot be turned off.

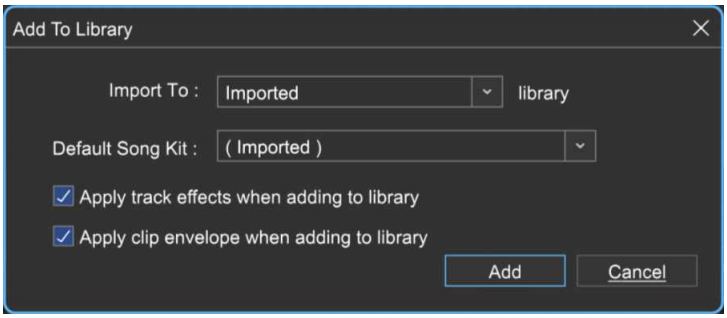
• Preserve folder structure when copying
If this is checked, then the folders that contain the imported sounds will be mirrored in the *%programdata%\Acoustica\Mixcraft\UserLibrarySounds* folder if you are using the Copy sounds to library folder option. For example, if a sound is found at *C:\folder one\sub folder two*, then it will add the sound to %programdata%\Acoustica\Mixcraft\UserLibrarySounds\LibName\folder one\sub folder two\. If this is off, it will place all the imported sounds at the base level in the user library directory.

• Import
This starts the import. While an import is happening, you are free to edit sounds or use

Mixcraft without interruption.

IMPORTING SOUNDS FROM THE CURRENT PROJECT

Any recording or sound in the current project can be added to the library. Right-click on an audio clip in the project and select *Add To Library*. This opens the following dialog:



This works much the same as the prior import options but allows the saving of sounds with plug-in effects and clip envelope parameters.

- **Import To**

Choose or type in the library name to import to. To create a new library, type in a name.

- **Default Song Kit**

Select or type in a name for a song kit if the imported sounds are to be associated with a specific Song Kit. This can be easily edited later if need be.

- **Apply track effects when adding to library**

Track effects will be applied to the final library sound.

- **Apply clip envelope when adding to library**

Clip envelope adjustments will be applied to the final library sound.

- **Add**

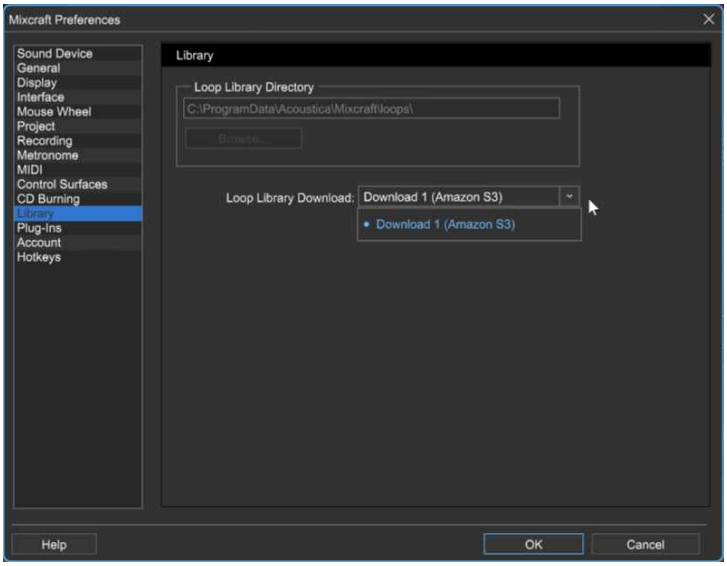
This starts the import. While an import is happening, you are free to edit sounds or use Mixcraft without interruption.

DELETING SOUNDS

Simply select the sound or sounds. Right-click and select *Delete* or press the [DELETE] button on the keyboard. Mixcraft's built-in sound library sounds cannot be deleted.

DOWNLOADING SOUNDS

One great Mixcraft feature is that loop library sounds are downloaded on demand from our servers. If you click the play or add an icon, and the sound does not yet exist on your computer, Mixcraft immediately downloads it from the Internet. (Of course, you'll need to be online to receive new sounds.)



If you experience download problems, try switching default download servers from *File>Preferences>Library>Loop Library Download* in the Main Window menus.

To download more than one sound at a time, right-click on the library and choose *Download All In View*. This downloads all sounds in the current view. To cancel all downloads, right-click and select *Cancel Downloads*.

SOUND LIST RIGHT-CLICK MENU

Right-clicking on a sound in the SoundList opens the menu shown.

- **Play**

Previews the sample the mouse pointer is currently hovering on.

- **Add**

Places the sound on a new audio track at the current Caret location.

- **Open Containing Folder…**

Displays the file and its containing directory in Windows Explorer.

• **Add Song Kit To Performance Panel**

This nifty command lets you add an entire preconfigured song kit to the Performance Panel in a single mouse click. Make sure Library is set to Loops, and *Sort By* is set to Song Kit.

Choose a song kit, right-click on one of its sounds in the Sound List, and choose *Add Song Kit To Performance Panel*. An entire pre-arranged “song” is automatically set up in the Performance Panel with tracks logically assigned by instrument type.

• **Download**

Initiates downloading of the sound to your hard drive if the sound hasn’t been downloaded yet.

• **Download All In View**

Initiates downloading of all sounds currently in view in the Sound List if sounds haven’t been downloaded yet. This is mainly useful if your Internet connection is on the slow side; for users with a slow connection, this means you’ll only have to wait once.

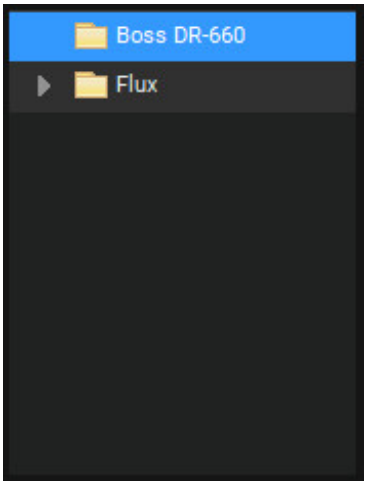
• **Show Columns**

Displays all available Sound List columns. Checking or unchecking columns will hide and display them in the Sound List. (See **Using Sound List Columns and Categories** for more information.)

• **Select All**

Selects all sounds in the current Sound List window.

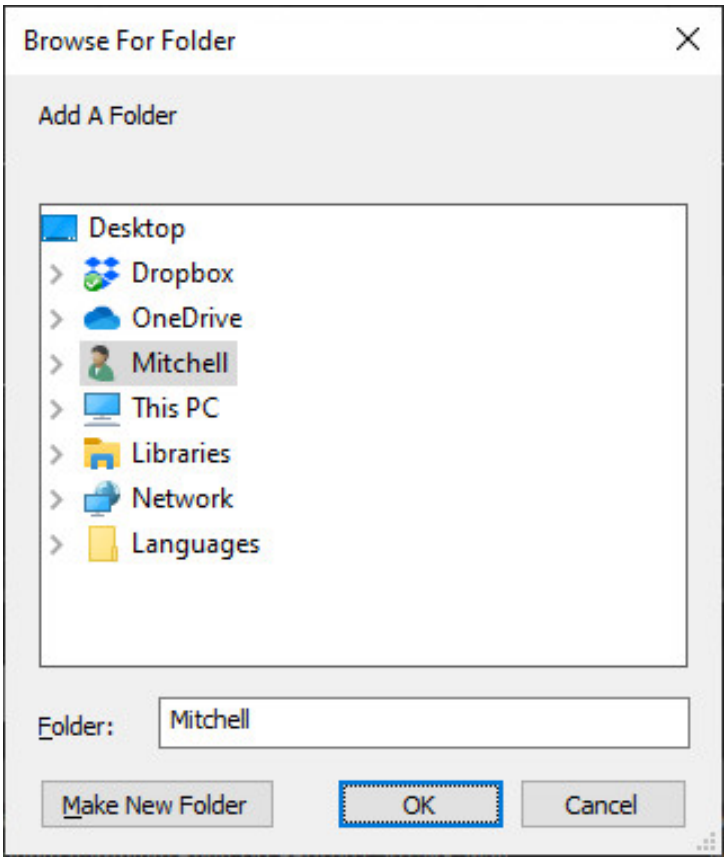
FOLDER BUTTON



The Folder button lets you add existing Windows Explorer directories. This offers fast and easy access to sound files for auditioning and adding to projects.

Most operations, such as searching, auditioning sounds, adding sounds, favorites, etc. operate the same as Mixcraft Sound Library mode with some minor differences (see **Mixcraft Sound Library**). **W**e'll touch on those in the following pages, but first, we'll show how to add folders.

To add a folder, click on the *+Add Folder* button.



At the risk of stating the obvious, make sure the folders you're adding contain sounds. Supported file formats include AIF, MP3, OGG, WMA, and WAV. Any folders you've added are permanently added and will be visible in all projects.

- **MAKE NEW FOLDER**

The *Make New Folder* button creates a new folder in Windows Explorer.

SOUND LIST

The Sound List is basically the same as when using the Mixcraft sound library, however, the column headers are slightly different; continue reading for more information.

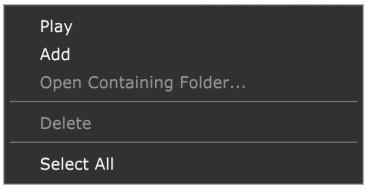
SORTING AND COLUMNS

This operates the same as with the Mixcraft Library, but the column names (and number of columns) are slightly different. This is because the sound data hasn't been imported as with Library sounds - *Folder* mode is essentially providing a "shortcut" to Windows

Explorer directories, resulting in less descriptive metadata being available for sorting and categorization (and to be clear, when we say “sound data,” we’re referring to data that describes the sound, *not* the sound itself).

For more information on using sorting and columns like a ninja, check out the **Using Sound List Columns and Categories** section.

SOUND LIST RIGHT-CLICK MENU (FOLDER MODE)



Right-clicking on a sound in the Sound List opens the menu shown. This is a little different than the Sound Library Right-Click Menu.

- **Play**

Previews the sample the mouse pointer is currently hovering on.

- **Add**

Places the sound on a new audio track at the current Caret location.

- **Open Containing Folder…**

Displays the file and its containing directory in Windows Explorer.

- **Show Columns**

Displays all available Sound List columns. Checking or unchecking columns will hide and display them in the Sound List. For more information on using sorting and columns, see the **Using Sound List Columns and Categories** section.

- **Select All**

Selects all sounds in the current *Sound List* window.

FREESOUND.ORG BUTTON

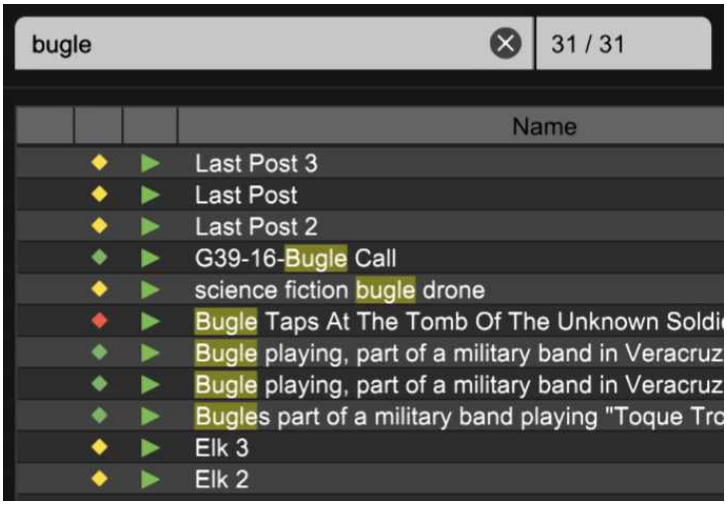
Click this for direct browsing of the immense (and free) online sample library, **freesound.org** (**requires an Internet connection**). Freesound.org is a collaborative repository of Creative Commons-licensed audio samples with a massive online library.

The sounds range from instrumental phrases and single notes to sound effects, field recordings, synthesized sounds, and a heck of a lot more.

There are three different types of Creative Commons licenses that affect how you'll be able to use downloaded sounds. For the full legal lowdown, please see Appendix 5: Freesound.Org Creative Commons License Terms.

Most operations, such as searching, auditioning sounds, adding sounds, favorites, etc. operate the same as Mixcraft Sound Library mode with some minor differences (see **Mixcraft Sound Library** section).We'll cover these in this section, but first let's look at Freesound.org's online search features.

SEARCH ONLINE



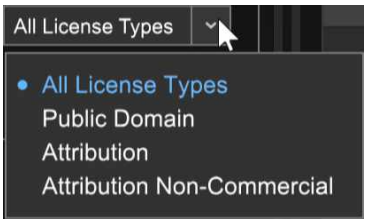
Freesound.org's massive online library can be searched from directly within Mixcraft by simply clicking the Freesound.org button and entering terms. The *Search Online* selector

narrows down searches as follows:

• Freesound.org Pop-up Menu

As of this writing, the only selection choice here is FreeSound.org, but Acoustica may add other sample download sites in the future.

• License Types Pop-up Menu



As the name implies, sounds on Freesound.org are indeed free to download, and use in your compositions. There are three different types of Creative Commons licenses each with different limitations on how sounds may be used. The *License Types* pop-up menu lets you filter sound searches by license type.

• All License Types

Searches display all three license types; essentially this means the License Type filter is turned off.

• Public Domain

You’re free to use these samples in your compositions however you like, totally free. Karmically speaking, you might want to keep track of the creator’s name and credit them appropriately.

• Attribution

No, this isn’t the name of a death metal band from Florida. You can use the samples

however you like, but **you must give credit to their creator, indicate if any changes were made to the samples, and include the following link in the work:**

https://creativecommons.org/licenses/by/3.0/

• Attribution Non-Commercial

You can use the samples however you like, but **you must give credit to its creator, indicate if any changes were made to the samples, and include the following link in the work:**

https://creativecommons.org/licenses/by-nc/3.0/

• Downloaded

This button changes the Sound List view to display only samples already downloaded from Freesound.org.

SOUND LIST

The Sound List is basically the same as when using the Mixcraft sound library, however, the column headers are slightly different; continue reading for more information.

• License Diamond/License Column

The little red, green, or yellow diamond next to the *Favorite* column indicates the type of license associated with a sound. This is only seen in the Freesound.org Sound List. The diamonds are as follows:

Diamond Color	Meaning
Green	public domain
Yellow	attribution
Red	attribution non-commercial

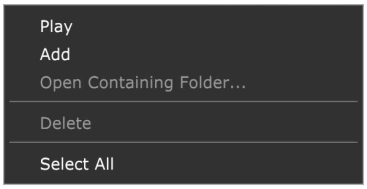
Black Diamond is a wicked jam from the first Kiss record, but that's not important right now.

In the middle of the Sound List, you'll see a License column that spells out each license type. Remember when we said you'd need to include a link to the license type for attribution and attribution of non-commercial licenses? These are URL links that open in a web browser when clicked.

SORTING AND COLUMNS

This operates the same as with the Mixcraft Library, but the column names (and number of columns) are slightly different. This is because the Freesound.org sounds don't have the extensive descriptive metadata as Mixcraft's sound library. For more information on using sorting and columns like a boss, check out **Using Sound List Columns and Categories**.

SOUND LIST RIGHT-CLICK MENU (FREESOUND.ORG MODE)



Right-clicking on a sound in the Sound List opens this menu. This is a little different than the Sound Library right-click menu.

- **Play**

Previews the sample the mouse pointer is currently hovering on.

- **Add**

Places the sound on a new audio track at the current Caret location.

- **Open Containing Folder…**

Displays the file and its containing directory in Windows Explorer.

- **Download**

Initiates downloading of the sound to your hard drive if the sound hasn't been downloaded yet.

- **Show Columns**

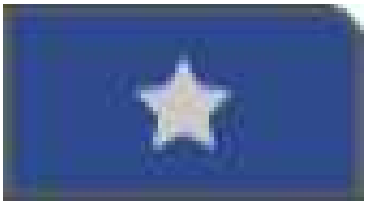
Displays all available Sound List columns. Checking or unchecking columns will hide and display them in the Sound List.

(See **Using Sound List Columns and Categories** for more information on columns and sorting trickery.)

- **Select All**

Selects all sounds in the current Sound List window.

FAVORITES BUTTON

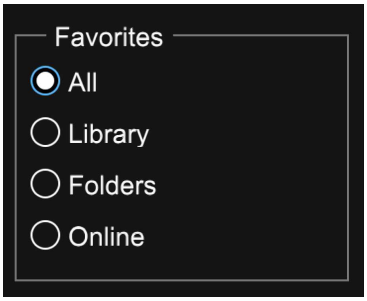


Clicking on the *Star* next to any sound in the Sound List marks it as a favorite; click the *Favorite* icon to access all favorited sounds.

Most operations, such as searching, auditioning sounds, adding sounds, favorites, etc. operate the same as Mixcraft Sound Library mode with some minor differences (see **Mixcraft Sound Library Button**.

First, we'll explain how the Favorites mode works.

FAVORITES SELECT



Use these buttons to narrow down which favorites are displayed in the Sound List.

- **All**

Displays all favorited sounds

- **Library**

Displays favorited sounds from the Mixcraft Sound Library.

- **Folders**

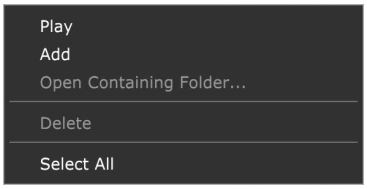
Displays favorited sounds added to Mixcraft using the *Folders* button.

- **Online**

Displays favorited Freesound.org sounds. These must be downloaded before they can be favorited - the Star column won't be visible for sounds that haven't yet been downloaded

(The *Online* category name refers to sounds that originated online, but once downloaded to your hard drive, they aren't technically "online." Cut us some slack, sometimes it's hard to name this stuff!)

SOUND LIST RIGHT-CLICK MENU (FAVORITES MODE)



Right-clicking on a sound in the Sound List opens this menu.

- **Play**

Previews the sample the mouse pointer is currently hovering on.

- **Add**

Places the sound on a new audio track at the current Caret location.

- **Open Containing Folder…**

Displays the file and its containing directory in Windows Explorer.

- **Delete**

Deletes the sound from your hard drive. Careful with this one!

- **Show Columns**

Displays all available Sound List columns. Checking or unchecking columns will hide and display them in the Sound List.

See "A Sorted Affair: Using Sound List Columns and Categories" bloew for more information.

- **Select All**

Selects all sounds in the current Sound List window.

USING SOUND LIST COLUMNS AND CATEGORIES

Sound List columns and categories offer a powerful way to search and sort sound libraries.

Columns and categories are actually the same things; we refer to them as “categories” when editing which types will be displayed in the sound list. These appear in the sound list as column headers; when displayed at the top of the Sound List, they’re referred to as “columns,” so don’t let this throw you. They’re one and the same.

Whatever you want to call them, they display “meta” data about sounds, which is a fancy way of saying, “descriptive information about sounds that helps to easily sort them.”

Depending on which Category Selection mode button is currently active, the Sound List shows a different default column set. This is because the metadata available for sounds is different depending on how they are imported (or possibly not yet imported) into Mixcraft.

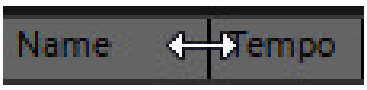
The following metadata columns are available. As explained above, not all metadata types can be attached or edited to all sounds.

- Name
- Instrument
- Is Loop?
- Imported Date
- Tempo
- Style
- Length
- Song Kit
- File Source
- #Bars
- Author
- File Location

- Signature
- Keywords
- Database
- Key
- Date
- Sound ID
- Sound Format
- Composer
- License Type
- Text Description

You'll notice that all of these columns aren't visible in the sound list by default. To customize which columns are visible, right-click on a column header or right-click on the sound view, choose *Show Columns*, and check or uncheck the columns you'd like to appear in the Sound List.

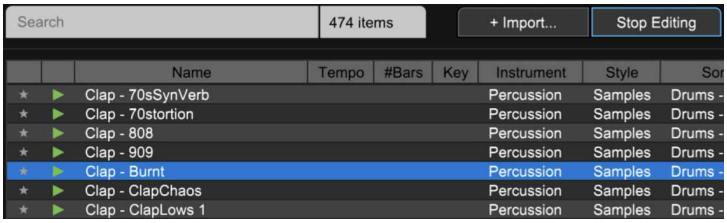
(You'll see all of the metadata categories on the screen, we just edited the screenshot above to show fewer categories so it wouldn't take up the whole darned page.)



To resize the width of columns, move the mouse over the black separator lines. The cursor turns into a left/right arrow; click and drag to resize the column width. Double-clicking the black separator bar automatically resizes the column to fit the largest text in the column.

EDIT LIBRARY

The sound library features editable parameters to assist with organization. Meta info including keywords, tempos, keys, and time signatures can be attached to sound files.



To modify sound info, click *Edit Library* in the *Library* tab toolbar. To edit a field, click it, and type in a new name or tempo. Mixcraft will auto-suggest based on previous entries and values. To move the cursor, use the arrow keys. Press [ENTER] to start editing a field. Standard copy [CTRL]+C and paste [CTRL]+V commands can be used for text. Click *Stop Editing* when done.

LIBRARY FILE FORMAT (ADVANCED)

User library files are stored in *%programdata%\Acoustica\Mixcraft\UserLibrarySounds* as .mldb files. Mixcraft reads all .mldb files stored in this folder upon launch.

These files may be edited. To edit a .mldb file, copy it, rename the copy, and make edits to the newly copied version. If you're not technically inclined, we recommend editing the library using Mixcraft as the "front end" as described in the preceding section.

LIBRARY MLDB FILE FORMAT

This file is a standard CSV file, aka a *comma-delimited spreadsheet*. Each text field is quote (“) delimited. Each column is comma (,) delimited.

You can view the MLDB file in MS Excel, OpenOffice.org, or Google Docs. Be sure to choose the Separated by Comma option with a text delimiter of a quote (“). You may need to change the file extension to CSV prior to editing.

MLDB FIELDS

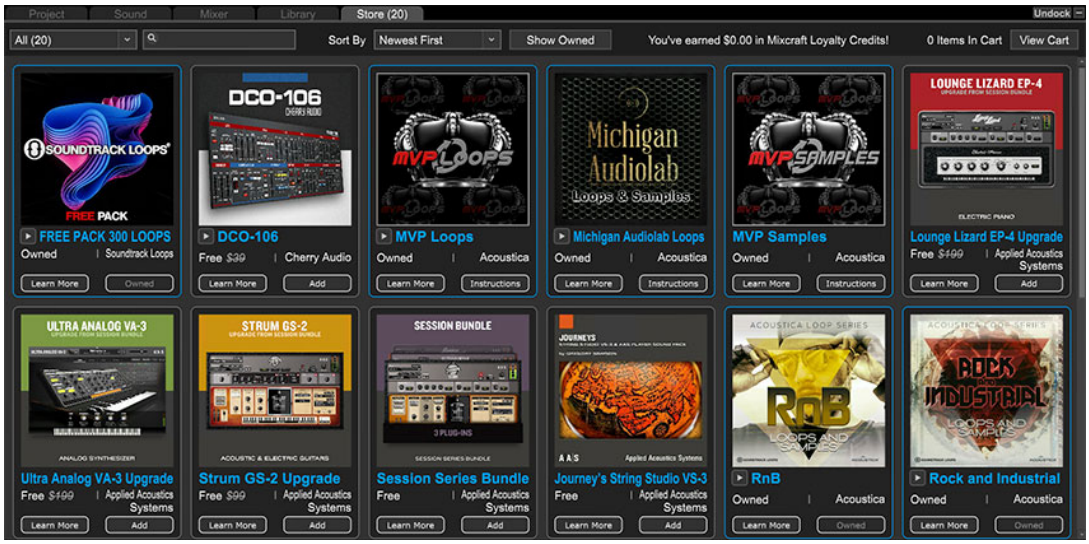
MLDB files contain a number of columns:

Field Name	Description	Valid Values
Genre	This is the genre	“Rock”, “Jazz”, etc.
Style	This is equivalent to the Song Kit	“Blues Shuffle”, “Death Metal Polka”, etc.
Final Loop File Name	The displayed loop name	“My Loop”
Instrument	Type of musical instrument	“Vocal”, “Bass”, “Guitar”, etc.
Keywords	This helps it pop up in the search results	Anything
IsLoop	A field to let the software know if it is a loop	“Y” or null
Number of Bars	The length of the sound in bars	null, 1 or greater
Has Key (Y/N)	Denotes if the sound has a key. For example, drum sounds do not normally have a key.	“Y” or “N”
Key (# for sharp)	The key, if applicable. The key should only be a A-G with an optional # for a sharp.	“A-G” with an optional “#”
IsMajor (Y/N)	Is the loop a major key?	“Y” or null for no.

Time Signature Numerator	If the sound has a time signature, this is the numerator or top portion.	null, 2 or greater
Time Signature Denominator	If the sound has a time signature, this is the denominator or bottom portion.	null, or a power of 2 >= 2, ie: 2, 4, 8, 16, etc...
Comments	Field for making notes	text of your choice
Artist	The name of the musician, creator, composer, etc.	John Smallberries The Great, or whatever you want.
URL	This is the URL of the artist’s web page.	A valid web page/address
Acoustica Sound ID	This is a special sound ID used internally for Mixcraft projects. It is a way of allowing projects saved on any computer to be loaded up without any problems.	
Tempo	The tempo of the loop if applicable.	null or valid tempo such as 120 or 141.23
Date	The date that the loop/sound was created/added.	A valid date such as 01/03/12 or mm/dd/yy format, where dd=the day, mm=month and yy=year
FilePath	The path to the file. If the path is relative to the library folder, you can use the variable %LIBRARY% before any. filepath. The %LIBRARY% variable maps to %programdata%\Acoustica\ Mixcraft\	
Costs Money	Not Used	Not Used
Imported Date	The day and time when the sound was imported.	A valid date time such as mm/dd/yyyy hh:mm:ss where mm=month, dd=day, yyyy=4 digit year, hh=hour in 24 format, mm=minute and ss=second.
Length	The length of the sound in milliseconds.	null or the number of milliseconds. For example, 2 seconds = 2000

		milliseconds.
Source	The place that the file was imported from. If it was a CD, a unique identifier will be at the start. In this way, it does not copy the same sounds from the CD more than once.	

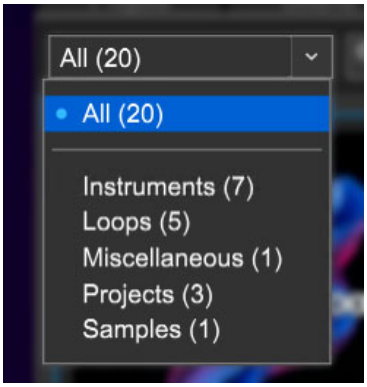
STORE TAB



New for Mixcraft 10, the *Store* tab allows super simple in-app purchases of virtual instruments, loop collections, and more. (We're still working on how to send a T-shirt through a Wi-Fi connection...)

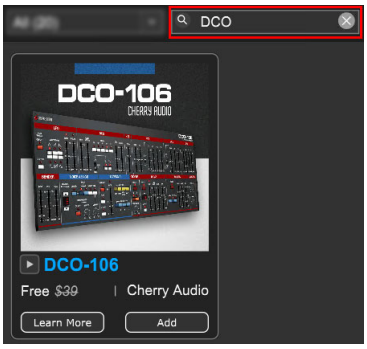
STORE TAB MENU BAR

FILTER POPUP MENU



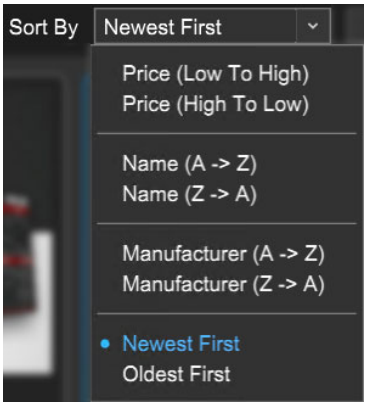
Click and select in this menu to filter what types of items appear in store window.

SEARCH FIELD



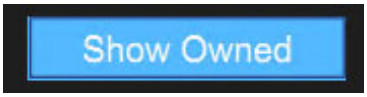
Click in the text field next to the magnifying glass icon, and type a keyword to search the online store.

SORT BY



This popup menu specifies how store items are displayed.

SHOW OWNED



Enabling this button displays only items you already own (and is fun to say quickly).

MIXCRAFT LOYALTY CREDITS

You'll see a message in the top menu that says "*You've Earned <dollar amount here> in Mixcraft Loyalty Points!*" As you make purchases, you'll receive credits that can be redeemed toward future Acoustica Mixcraft Store purchases. This display will show your current credit amount when logged in.

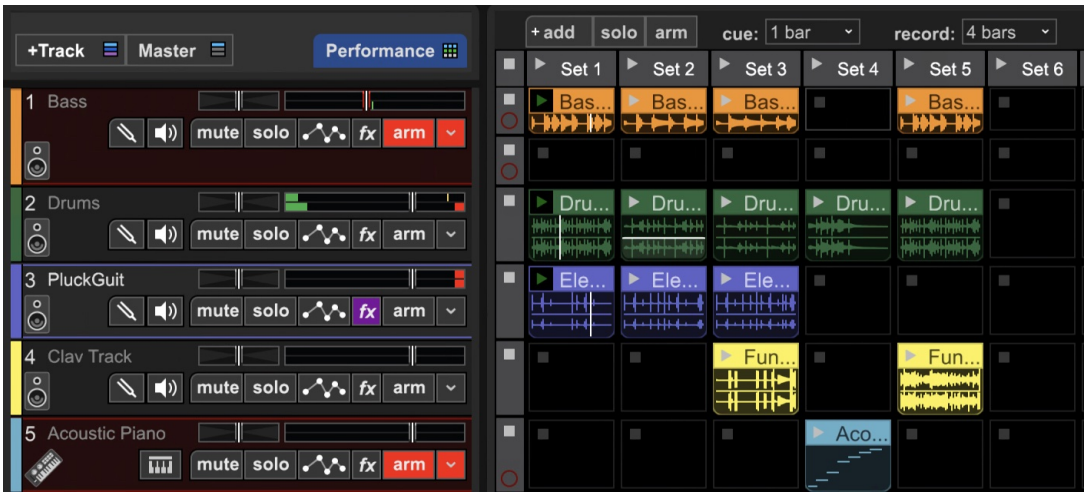
NUMBER OF ITEMS IN CART

Displays the number of items in your Mixcraft Store cart. You knew that.

VIEW CART

Displays the number of items in

PERFORMANCE PANEL



Mixcraft's Performance Panel allows for the fast and fun creation of entire tracks using MIDI and audio clips. Though it can be "played" with a standard MIDI keyboard controller (or no MIDI controller at all), it's best suited to a grid-style MIDI controller such as the **Novation Launchpad**. The Performance Panel is much more than a simple grid loop - it's a highly flexible real-time performance environment.

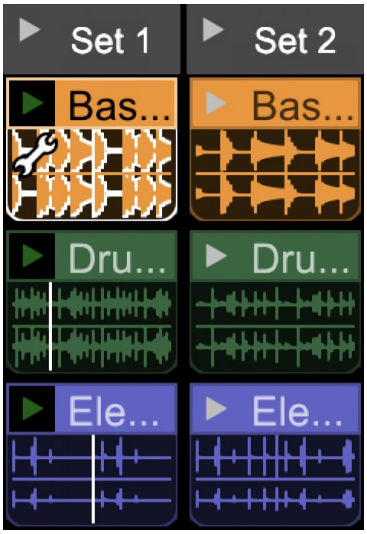
The Performance Panel can be thought of as a grid for simultaneous playback of multiple MIDI or audio clips (for this section, we'll interchangeably refer to audio and MIDI regions as "clips"). A project can have only one Performance Panel. Clips in the grid work similarly to standard clip playback in the main clip grid in that only one per audio track can play at any given time (i.e. horizontally). The track list to the left of the Performance Panel functions exactly the same as for "normal" clips in the Main Clip Grid: volume, pan, solo, mute, etc. all operate as usual. MIDI and audio tracks work the same as well, so be aware of whether a track is a MIDI or audio track when placing clips in the Performance Panel grid. It's usually sensible to keep audio and MIDI tracks grouped together to avoid confusion.

PERFORMANCE PANEL CONTROLS

PERFORMANCE BUTTON

Click the *Performance* button above the Track List to hide or view the Performance Panel grid (or press the *P* key).

SETS



A *Set* refers to a group of clips that play concurrently. Sets are arranged horizontally across the grid with each set consisting of one or more loops arranged vertically “on top of each other”. You can create as many sets as you like - to add more empty sets, simply click the *+add* button above the Performance Panel. To rename a *Set*, double-click on the text, type a new name, and press return (or click outside of the text box area).

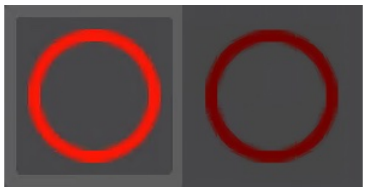
PERFORMANCE PANEL GRID

The grid where clips are dragged and dropped for playback.

GRID PLAY AND STOP BUTTONS

You'll find numerous play (right-facing black arrow) and stop (small black square) buttons along the top columns, left-side rows, in blank cells and in the corners of clips. These toggle the start and stop of playback of individual clips, entire sets, or tracks.

PERFORMANCE PANEL RECORD ARM/DISABLE ARM BUTTONS



When a track is Record Armed, square Performance Panel *Record Arm* buttons appear in the row next to the grid. These prepare all grid locations in that row for recording. If the track has more than one recording lane, you'll see Performance Panel *Record Arm* button for each lane. Clicking on the solid red button next to the track header disables grid recording; the solid red button turns into a red circle (no fill) and the cell record buttons turn into "standard" square stop buttons. This lets you record clips into the main track area as usual (i.e. not the Performance Panel).

When a track is armed for recording, tiny solid red Record buttons appear in all empty grid locations in the associated track row. If the track has more than one recording lane, you'll see Performance Panel Grid Record buttons in all empty grid locations in all recording lanes.

+ ADD

Clicking this adds more blank set locations to the right of the last set. **All set locations may not be currently visible depending on the Performance Panel view width**.

To view all current sets, scroll sideways, or enlarge the Performance Panel view width. To make the current view wider, position the cursor on the leftmost area of the main clip grid (the grid on the right side of the screen where you usually play and record clips, **not** the Performance Panel Grid); you'll know you're in the right place when the cursor turns into left/right arrows. Hold the mouse button and drag left or right.

SOLO

The Performance Panel *Solo* button mutes all clips in the main grid during playback. This allows you to use the *only* the Performance Panel for audio and MIDI clip playback. This is very useful in live performance applications. When the *Solo* button is clicked, all clips in the main clip grid will turn gray. To unmute them, click the *Solo* button again.

ARM

Clicking the *Arm* button causes any playback of sets to record in the main clip grid. This is a powerful tool for song creation, enabling continuous recording of set group performances, including changing sets, muting and soloing of clips and more. It's especially fun and creative when using a hardware USB grid controller. Keep in mind that Performance Panel "recordings" don't actually create new audio files on your hard drive,

they only create new clips in the Main Clip Grid that refer to existing audio files. This means you can go nuts creating songs without filling your hard drive!

CUE

The *Cue* button defines how long Mixcraft will wait to switch playback from one clip or set when play buttons are clicked during playback. Select from the following note values:

At any setting other than *Instant*, Mixcraft always switches exactly on the beat, which is tremendously helpful for keeping playback on the beat and in sync. When *Cue* is set to any value other than none, the clip's *Play* arrow will flash indicating it will begin playing following the length of time specified by the *Cue* setting. We recommend beginning with *1 Bar* or *2 Bar*.

If *Cue* is set to *Instant*, clips and sets will switch immediately upon pressing the play button. This isn't usually desirable when switching loops, because loops can easily get off time from the project metronome. There are times when you'll want to set *Cue* to trigger individual sounds in the grid immediately when clicked(for one-shot drums or sound

effects with an external pad controller, for example), but since the *Cue* button affects all clips in the Performance Panel, it's a better idea to set the *Cue* parameter individually for specific grid locations; this overrides the global setting.

(See *Performance Panel Sound Tab Parameters* in the next section.)

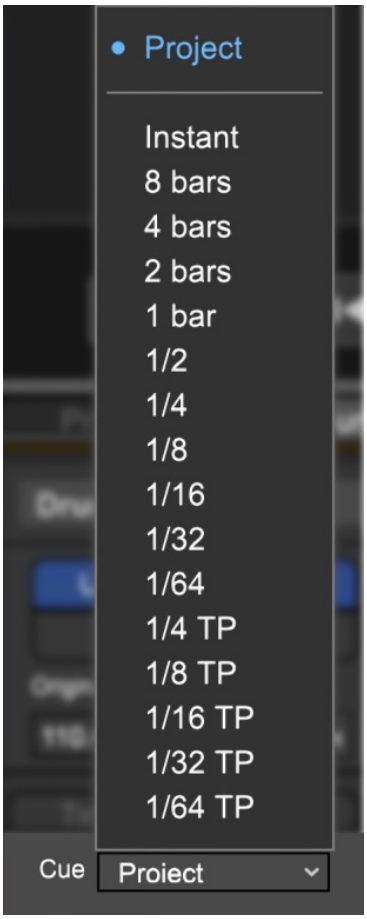
RECORD

Defines the length of recordings when recording directly to the Performance Panel. Clicking it opens a pop-menu where the recording length for Performance Panel clips can be set.

PERFORMANCE PANEL CLIP SOUND TAB PARAMETERS

In addition to the Performance Panel controls described above, most of which affect **all** clips simultaneously, **Mixcraft includes a number of parameters that let you customize the behavior of individual clips**. To access these parameters, double-click a clip in the Performance Panel. The Sound tab opens, and you'll see a number of options.

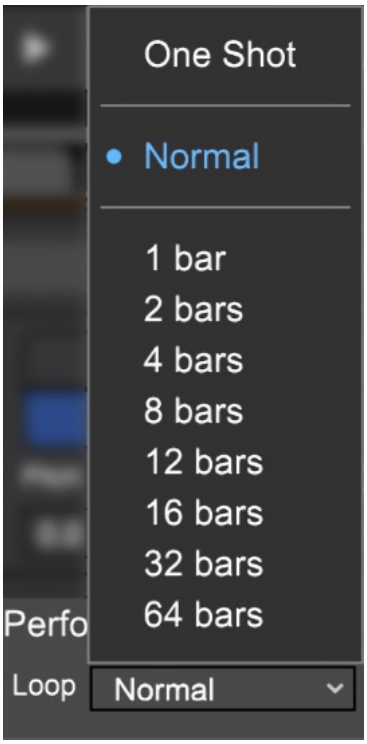
Cue (Sound Tab)



This works just like the *Cue* pop-up menu described in the *Performance Panel Controls* section - it defines how long Mixcraft will wait to switch playback from one clip to another when a play button is clicked for a new clip in the same column, but it applies **only to individual clips**. If the *Sound* tab Cue pop-up menu is set to *Project*, then the clip will behave as selected in the pop-up menu at the top of the Performance Panel controls (i.e. the clip won't behave differently than normal).

If the *Sound* tab *Cue* setting is set to any value other than *Project*, its setting will override the global cue setting for individual clips. This is pretty important, so let that sink in. In practical application, this offers a lot of flexibility for customizing the behavior of individual clips. Note that clips in the Performance Panel default to *Project* setting unless the setting is individually "customized" in the Performance Panel *Sound* Tab.

Loop



This determines the looping behavior for individual Performance Panel clips.

- One Shot
The clip plays one time only. This is useful for non-looping sound effects, drum sounds, or orchestra hits, in case you've time-travelled back to 1991. You'll likely want to set the *Cue* value to *Instant* to ensure that the sound triggers immediately (because it's a real buzzkill when that orchestra hit triggers four bars after you hit the button).

- Normal
Clip playback will loop when the clip reaches its end.

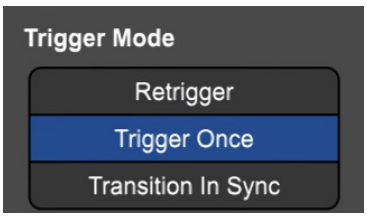
- Note Values
The clip will loop when it reaches the selected bar value. This is relevant if the clip's total length is *longer* than the chosen value setting.

Embedded Tempo and Key Information

Most of the clips in Mixcraft's included library contain "built-in" tempo and key information (the exceptions would be things like one-shot sound effects that don't have

discernible rhythmic timing or a musical key signature). This gives Mixcraft a timing and key “roadmap”, allowing multiple clips to automatically lock in time and play in musically relevant keys without user intervention - in other words, they just work. Yay for technology!

Trigger Mode



This lets you customize how loops trigger when their play button is pressed.

- **Retrigger**

The clip will repeat from its start each time the play button is clicked. If global or *Sound Tab>Perform Tab>Cue* is set to any value other than *Instant*, Mixcraft waits until the set note value has elapsed, then retrigger in time with the project metronome.

- **Trigger Once**

Once play has been initiated for a clip either with its own play button or with the *Set Play* button above, the clip continues to play until it is stopped with one of the stop buttons in the same row, the master stop button in the upper left corner, or Mixcraft’s transport stop button (or spacebar). *Trigger Once* is a good option for “foundation” beats intended to play continuously during performances.

- **Transition In Sync**

Similar to *Retrigger* mode, but instead of starting at the beginning of the clip when the play button is clicked (after the *Cue* value elapses), the newly selected clip continues playing **at the same position as the currently playing clip**. In other words, if the currently playing loop is at beat three at the transition point, the new clip will play from beat three.

Transition In Sync works well in live performance because it allows seamless transitions between clips and prevents multiple clips from becoming “turned around” in time from one another (i.e. the downbeat plays on the wrong count).

Performance Control

Specifies clip behavior when the mouse button is clicked or a button is pressed on a hardware USB controller.

- **Down**

Clicking a clip play button will start playback. Dependent upon *Trigger Mode* setting, the clip will continuously loop or play through one time. You can think of *Down* mode as similar to striking a note on a piano while holding down the sustain pedal.

- **Down & Up**

Clips only play when the play button is held down - pressing down initiates playback, letting up stops it. This works best with the *Cue* time set to *Instant*, for example, for temporarily dropping a fragment of a loop or musical passage into a mix. If *Cue* is set to any value other than *Instant*, you’ll need to hold the play button until the *Cue* note value time elapses, then clip playback begins.

- **Toggle**

This works like an on/off switch: press play to start a clip, and press again to stop it. Note that the *Cue* setting affects the clip’s start **and** end points - Mixcraft waits for the *Cue* value to elapse before starting to play, and if the play button is pressed again before the *Cue* value has elapsed, playback continues to play for the duration of the *Cue* value.

Instantly Add An Entire Song Kit To The Performance Panel

Here's a super-neato "hidden" right-click command that lets you add an entire pre-configured song kit to the Performance Panel in a single mouse click.

In the Library tab, make sure "Library" is set to "Loops", and "Sort By" is set to "Song Kit". Once you've selected a song kit, right-click on one of its sounds in the right-side column and choose "Add Song Kit To Performance Panel". An entire pre-arranged "song" is automatically set up in the Performance Panel with tracks logically assigned by instrument type.

MOVING, DUPLICATING, AND DELETING PERFORMANCE PANEL CLIPS

• Move clips

To move a clip or clips, simply click and drag to another grid location. To select multiple clips, click and drag a box around the clips by starting in a blank area of the grid (i.e. no clips in the grid).

• Duplicate clips

To duplicate a clip or clips, simply click and drag to another grid location while holding the [ALT] modifier key. To duplicate select multiple clips, click and drag a box around the clips by starting in a blank area of the grid and drag to empty grid locations while holding the [ALT] modifier key.

Dragging clips to an occupied grid location overwrites the existing clip, so careful, loopmaster!

• Selecting Sets

To select an entire set for editing, right-click in the set name area at the top of the Performance Panel grid and click *Select* in the pop-up menu.

• Duplicating Sets

To duplicate a set, right-click in the set name area at the top of the Performance Panel grid and click *Duplicate*. The entire set (i.e. all clips in the vertical column) will be copied to the next column over to the set's right. *Duplicate* behaves as an "insert" function, so if there is a set (or sets) to the right of the one being duplicated, existing sets will be shifted over one column, and Mixcraft automatically creates new sets if necessary.

• Delete Set

Sets can be deleted by right-clicking in the set name area and selecting *Delete* in the pop-up menu. Existing sets to the right of the deleted set will shift over. Just like a spreadsheet, but more fun!

- **Resizing the Performance Panel Grid**

Column widths can be adjusted by hovering the cursor between the set names at the top of the Performance Panel - when the cursor becomes left/right arrows, simply hold down the mouse button and slide horizontally to resize.

Vertical grid size follows a track’s vertical sizing. You can resize tracks vertically by hovering between track names in the track list; click and drag vertically when the mouse becomes up/down arrows. To reset to default height, right-click a track and select *Properties>Height>Small/Normal/Large* in the pop-up menu.

CLIP AUTOMATION WITH THE PERFORMANCE PANEL

Clips in the Performance Panel have all the same automation attributes as clips used within the main track area. In fact, clips dragged between the Performance Panel to the main track area (and vice-versa) maintain all of their automation. To be clear, we're only referring to clip automation - track automation has no effect on Performance Panel clips.

All clip automation editing is the same as well - for full information, please refer to the **Clip Automation** section.

PLAYING AND RECORDING WITH PERFORMANCE PANEL CLIPS

PLAYING AUDIO AND MIDI SOUND CLIPS WITH THE PERFORMANCE PANEL

To use to the Performance Panel, simply drag clips into individual grid locations. You can drag in loops from the Mixcraft loop library (click the *Library* tab at the bottom of the screen to view and audition loops), the main playback grid, or even directly from the Windows File Explorer. Loops from the Mixcraft loop library contain information about the tempo and key of the sound embedded into the file - this means clips will play back in perfect time with project tempo. (see sidebar: *Embedded Tempo and Key Information*)

Once you've dragged loops into the Performance Panel set, initiate playback by clicking the playback arrow to the immediate left of the set number (i.e. *Set 1*, *Set 2*, etc.). You'll notice small playback heads - these move at different speeds dependent upon the length of the loops. Though loops in a set do not need to be the same length, we strongly recommend using even loops lengths in units of two or four. Mixcraft will play back loops of any length in time, but repeat and cycles may become difficult to keep track of.

(*Actually, If a clip is a really odd size, Mixcraft rounds its length to the nearest quarter-note and tacks a little silence on the end before looping back around. This happens transparently, but trust us, unless you want your music to sound like a bag of rocks poured down a steel slide, this "rounding off" helps to keep things sounding musical.)*

You can switch which set of loops is playing by simply clicking another set or loop's play button while the current set or loops is playing. Dependent upon the *Cue* setting, the Performance Panel will transition to the next set or loop either immediately, or wait until the *Cue* setting note value elapses. Clips can be stopped by pressing a row's dedicated stop button located at the far left of the Performance Panel, or by pressing the stop button in an empty cell in the same row. You can stop all clip playback either by pressing the master stop button in the Performance Panel's upper-left corner, or by pressing the stop button in Mixcraft's transport controls (or by pressing the space bar).

RECORDING AUDIO AND MIDI SOUND CLIPS TO THE PERFORMANCE PANEL

In addition to just dragging existing clips into the Performance Panel grid, new clips can be recorded **directly** to the Performance Panel. In other words, it's not necessary to record to the Main Clip grid first. This is super useful for instantly creating layered live loop performances, initially made famous by English chanteuse, Imogen Heap (check out her YouTube vids of "Just For Now" for a mindblowing demo).

Recording can be initiated when the Performance Panel is stopped, or "on-the-fly" while a Performance Panel set is playing.

RECORDING CLIPS WITH THE PERFORMANCE PANEL STOPPED

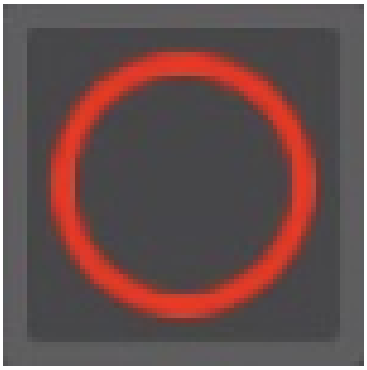
1. Open the Performance Panel by clicking the *Performance Panel* button, or by pressing *P* on your computer's keyboard.

2. Click the metronome button and check that *Recording* and *Recording Count-In Measures* are enabled; you may want to change the number of count-in measures while you're here (you can skip this step if you already have the metronome configured to your liking).

3. Select a track in the track list for recording by clicking on it. If you need to set the Recording Mode, enable or disable Auto Quantization, or MIDI input settings, click the down arrow next to the track's *Arm* button.

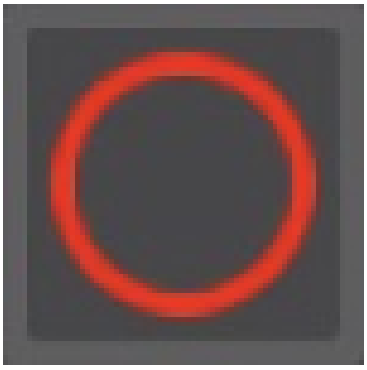
4. Unlike standard recording, you'll need to set the clip length **prior to recording**. Use the *record* pop-up menu above the Performance Panel to select a recording length.

5. Click the track's *Arm* button to ready it for recording. If you're recording audio, now is a good time to check that you're getting a solid input signal on the track input meter.

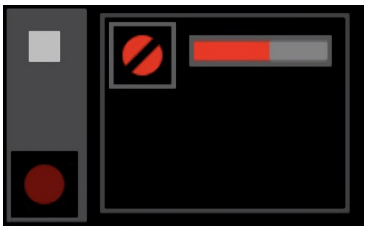


6. Click the Performance Panel's *Mini Arm* button. It's the gray square at the bottom of the column; it turns red to show the row is armed for recording. The small *Record* buttons in the Performance Panel grid locations turn red as well.

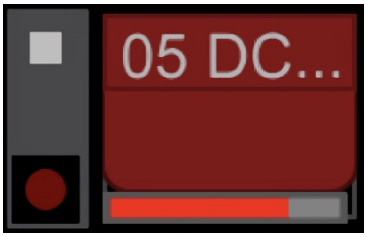
Important: If the *Mini Arm* button is enabled on a track, standard recording for that track (i.e. in the Main Clip Grid, **not** the Performance Panel) is disabled.



7. To begin recording, click a *Record* button in the same row as the record-enabled track. Mixcraft counts in according to the selected value of the Metronome Count-In Measures.



A progress bar moves across the top of the grid location as the count-in measures go by; when the progress bar gets all the way to the right, recording begins.



Once recording, a clip appears in the grid, and a progress bar makes its way across the bottom of the clip, showing the duration of the recording.

When the progress bar arrives at the right of the clip, Mixcraft stops recording. The newly created clip continues to loop, playing back the recorded passage.

RECORDING CLIPS WHILE THE PERFORMANCE PANEL IS PLAYING

Here's where things start getting wild. Mixcraft lets you easily record new clips while the Performance Panel is playing. This opens up myriad possibilities for improvised (or semi-improvised) live performances. Because recording automatically disengages at the end of the selected recording length, newly recorded clips can rapidly be muted and unmuted, moved or copied between sets, and more. Add in Performance Panel Lane recording, and the possibilities rapidly get crazy!

Recording MIDI and audio clips during Performance Panel playback works almost exactly as with the Performance Panel stopped, as described in the preceding section, with one major difference:

If the Performance Panel is currently playing and a Record button is clicked, Mixcraft ignores the *Count-In Measures* setting altogether and instead waits for the duration of the Performance Panel Cue setting before recording begins.

This makes sense because there's no way to know what point in the loops' cycles the user is going to whack a *Record* button.

The "countdown to record" progress bar discussed in step 7 on the previous page is displayed at the top of the selected grid location. This let you know when recording will begin.

Note: Mixcraft does its best to intelligently determine the musician's intentions, but setting *Cue* to *Instant* can have some squirrely results, in terms of clip recording start and end points. Though you won't hurt anything, we recommend sticking with *Cue* settings of standard note values for more predictable recording results.

LANE PLAYBACK AND RECORDING WITH THE PERFORMANCE PANEL

Multiple Lanes are available when playing and recording clips in the Performance Panel as with the Main Clip Grid. Besides the added flexibility of playing back multiple clips within a single track, using Lanes speeds up recording clips because the Mini Arm button is global for each track. In other words, clicking the Mini Arm button for a track will arm recording for **all** Lanes in the track simultaneously.

- **Adding Lanes**

Empty lanes can be added by right-clicking on the Track Header or an empty cell in the Performance Panel grid and selecting *Lanes>Add* (or with the shortcut [ALT]+L).

• **Deleting Lanes**

Lanes can be deleted by right-clicking on the Track Header or an empty cell in the Performance Panel grid and selecting *Lanes>Delete*. To delete unused lanes, right-click and select *Lanes>Delete Empty Lanes* (or with the shortcut [ALT]+K).

• **Muting and Unmuting Lanes**

All clips on any lane can be muted or unmuted by right-clicking on the Track Header or an empty cell in the Performance Panel grid and clicking *Lanes>Mute All* or *Lanes>Unmute All*.

RECORDING PERFORMANCE PANEL PERFORMANCES TO THE MAIN CLIP GRID

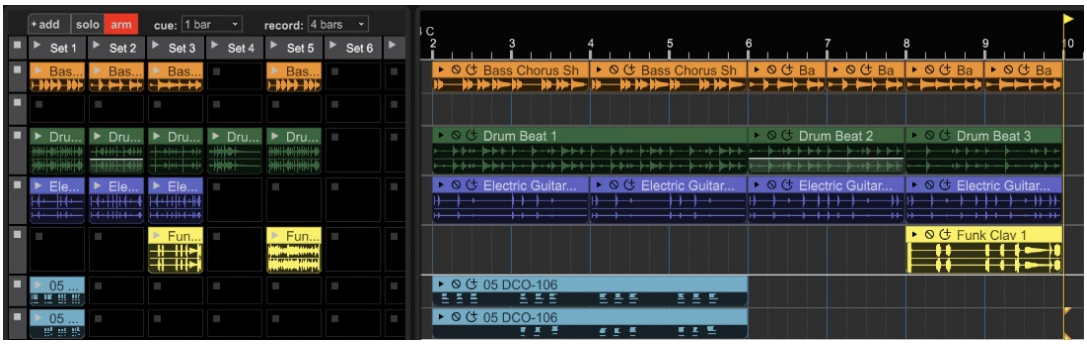
Performance Panel performances can be recorded directly to their corresponding tracks in the Main Clip Grid. This is a super nifty way to create entire songs, in real-time, *really* fast. It’s also very easy to do!

A few things you should know before you let it rip:

- Clips will retain their format. In other words, MIDI clips won’t be converted to audio, they’ll remain MIDI instrument clips.

- Clips also retain their size. If a clip is two bars long in the Performance Panel, it will “record” to the Main Clip Grid as a two-bar clip and create additional copies as it loops in the Performance Panel. This makes it easier to edit the resulting “song” in the Main Clip Grid. (You can always merge the clips later if you’re into the large- continuous-clip thing.)

- All Audio and MIDI clip automation in Performance Panel clips will transfer to newly recorded clips in the Main Clip Grid. **The effects of the Clip Automation will not be “burned-in” to the Main Clip Grid audio clips**.



To record the Performance Panel to the Main Clip Grid, begin by positioning the song pointer line where you'd like the recording to start. Click the *Record* transport button (or press the *R* key). During the recording count-in, click one of the *Set Play* buttons in the Performance Panel. The Set will begin playing/recording *exactly* on the downbeat following the recording countdown. "Playing" the Performance Panel as normal will be recorded for as long as desired. When you're done, click the *Record* button again or the *Stop* button to quit recording. Song done!

Note: If there are existing clips in the Main Clip Grid prior to recording, you'll hear the existing clips playback during recording, and Mixcraft will happily overdub new clips "on top" of the existing ones. You won't hurt anything, but it'll kind of make a mess.

We can't imagine a scenario where this would be desirable, so it's a good idea to record only to empty sections of the Main Clip Grid.

Hey, Another Note: We recommend setting *Metronome>Recording Count-In Measures* to two or more measures prior to recording, that way you'll have a little time to click the *Set Play* button in the Performance Panel. This can be set by clicking the metronome icon in the transport.

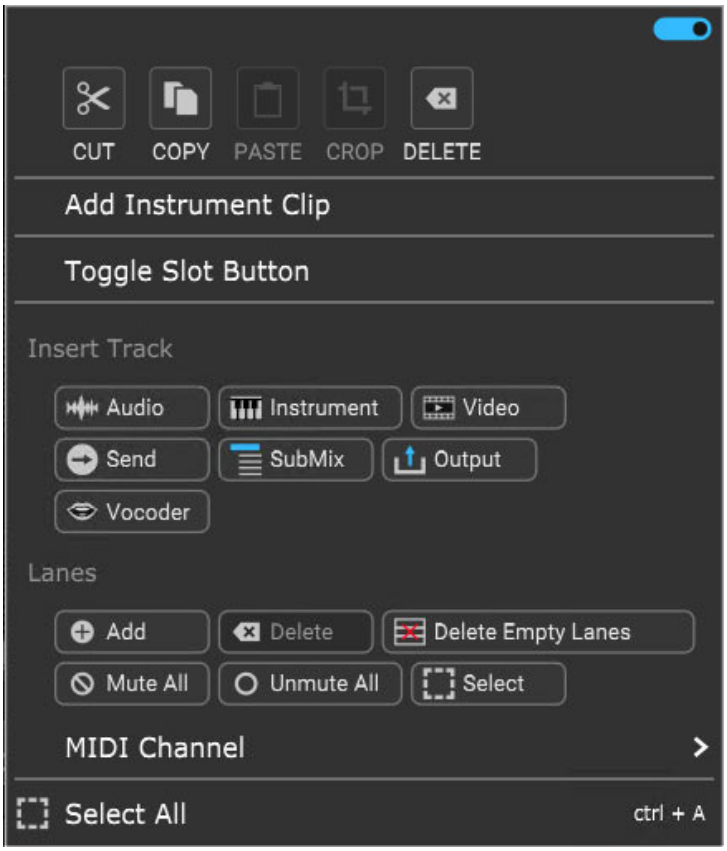
PERFORMANCE PANEL RIGHT-CLICK COMMANDS

These are almost identical to the "standard" clip grid, audio clip, and virtual instrument clip right-click windows, with a few additional commands geared toward working with Performance Panel clips.

PERFORMANCE PANEL EMPTY CELL RIGHT-CLICK COMMANDS

This section covers the right-click popup menu that opens when clicking in empty Performance Panel cells (i.e., not on a clip).

EMPTY CELL RIGHT-CLICKING MENU - AUDIO TRACK



- **Menu Persist Switch**

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• **Cut, Copy, Paste**

Allows cutting, copying, and pasting of currently selected clips.

• **Crop**

The *Crop* button doesn't do anything in this context and is grayed out.

• **Delete**

Since the cell is already empty, the *Delete* button doesn't do anything in this context and is grayed out (I'm pretty sure there's a 1974 Billy Preston hit that elaborates on this concept).

• **Add Instrument Clip**

Creates an empty new Instrument Clip and opens the *Sound* Tab Piano editor allowing notes to be added to the clip.

• **Toggle Slot Button**

Hides or displays the cell's stop button.

• **Insert Track**

These handy buttons add a new *Audio*, *Instrument*, *Video*, *Send*, *SubMix*, *Output*, or *Vocoder* track directly above the current track.

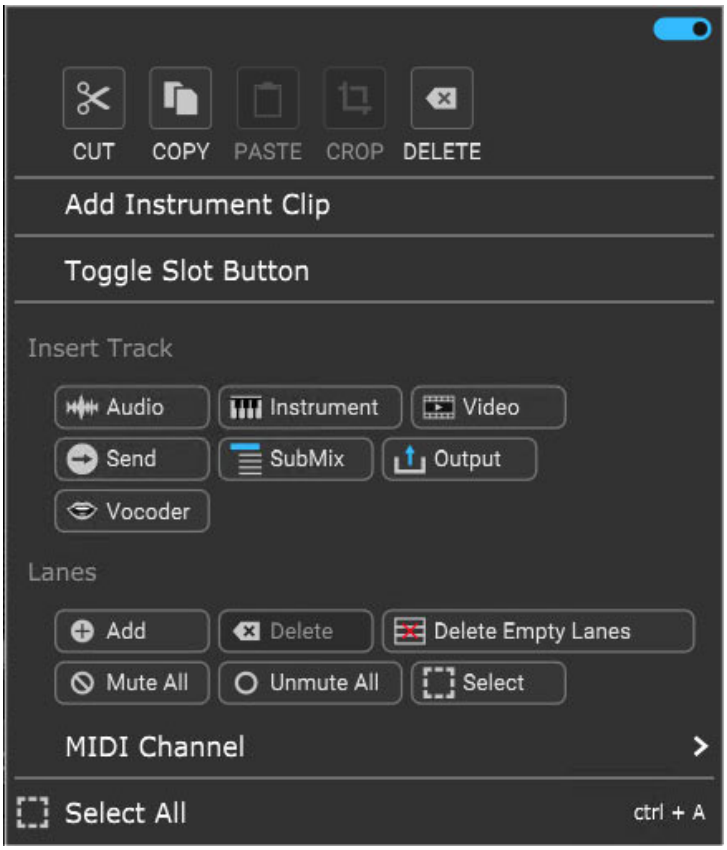
• **Lanes**

These buttons enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All,Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

• **Select All**

Selects all clips in the Performance Panel.

EMPTY CELL RIGHT-CLICKING MENU - VIRTUAL INSTRUMENT TRACK



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- **Lanes**

These buttons enable various track lane operations including *Add*, *Delete*, *Delete Empty Lanes*, *Mute All,Unmute All*, and *Select*. For more information on how to use lanes, check out the **Lanes** section in Recording MIDI Tracks.

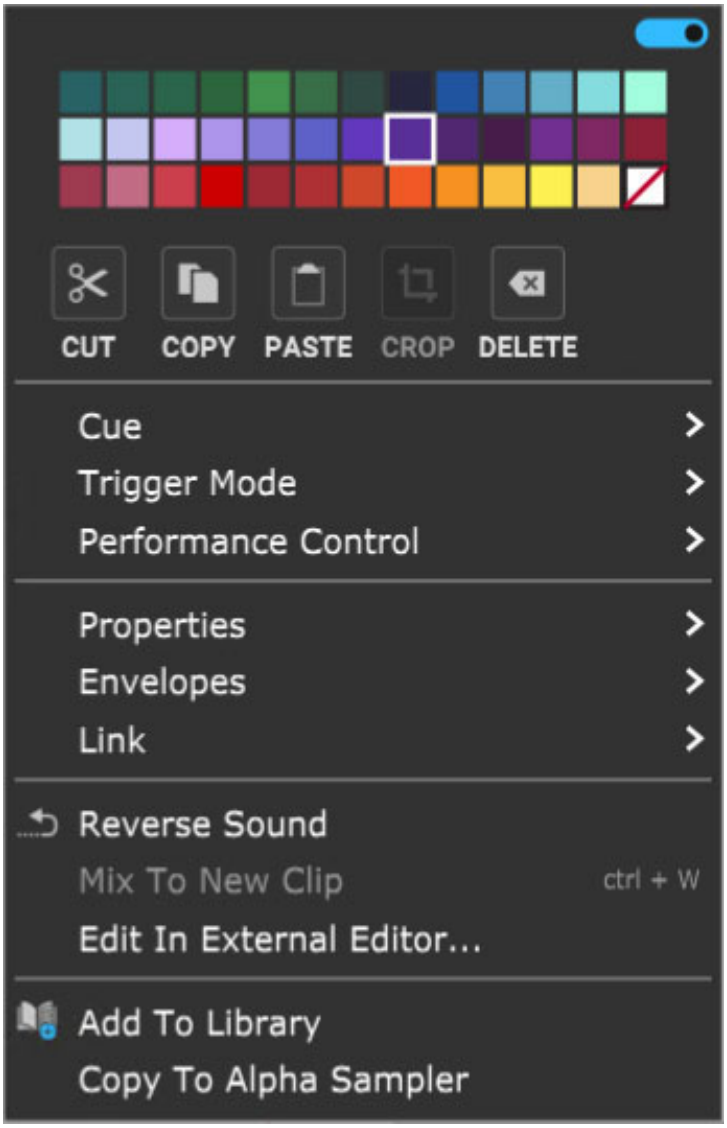
- **MIDI Channel**

Selects the channel MIDI data will be transmitted on.

- **Select All**

Selects all clips in the Performance Panel.

PERFORMANCE PANEL AUDIO CLIP RIGHT-CLICK COMMANDS



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If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• Clip Color Palette

Use this to select a color for the clip.

• **Cut, Copy, Paste**

Allows cutting, copying, and pasting of the clip.

• **Crop**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Crop* removes any part of the clip outside of the selection range. (It's generally easier to start the highlight part of the clip from outside the clip.)

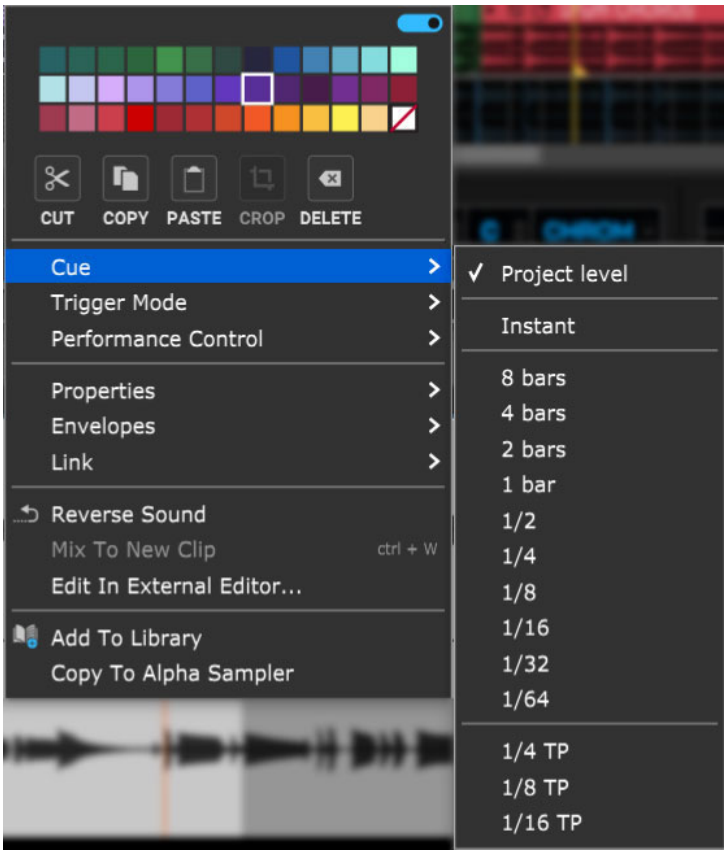
• **Delete**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Delete* removes the selected part of the clip - essentially the opposite of the *Crop* command. This often results in splitting the clip into two clips.

• **Split**

Splits the clip into two separate clips at the current Playhead location. *Split* has no effect if the Playhead isn't atop the clip.

• **Cue**



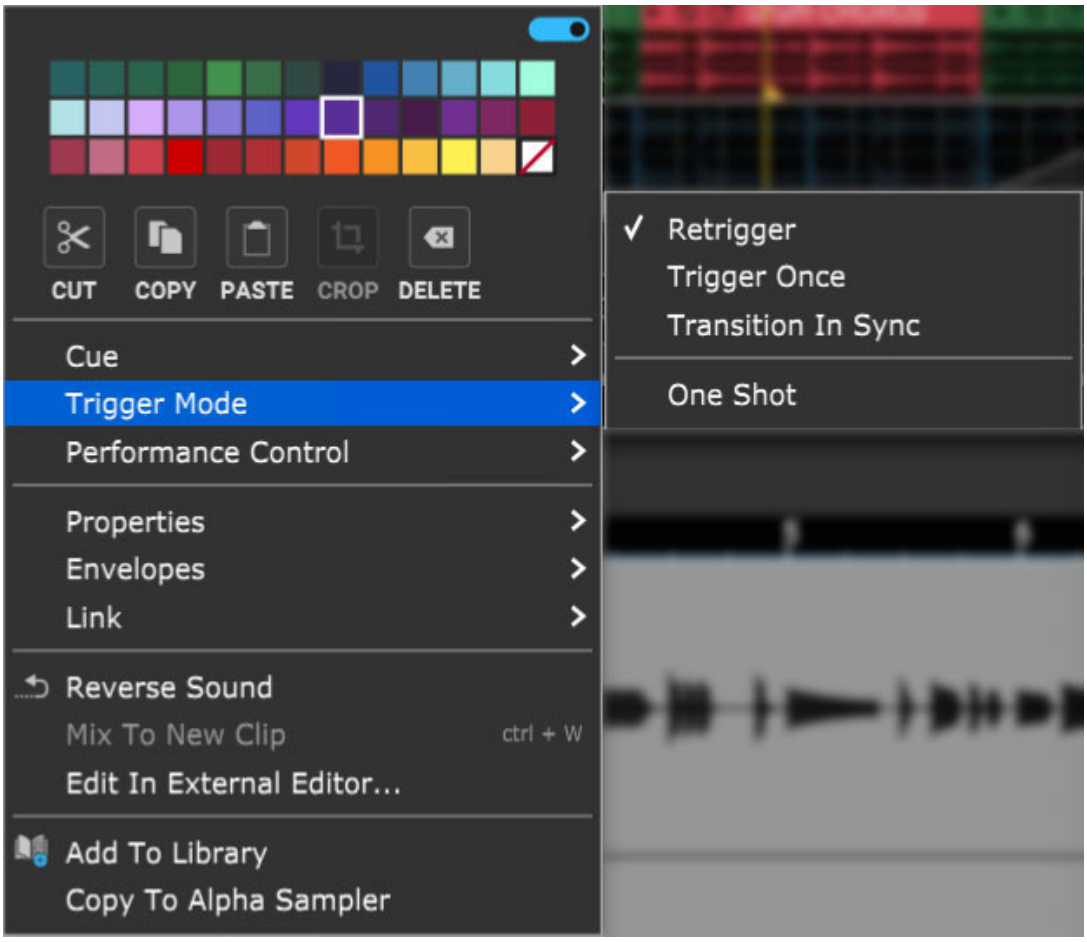
The *Cue* button defines how long Mixcraft waits to switch playback from one clip or set when play buttons are clicked during playback.

At any setting other than *Instant*, Mixcraft always switches exactly on the beat, which is tremendously helpful for keeping playback on the beat and in sync. When *Cue* is set to any value other than none, the clip's *Play* arrow will flash indicating it will begin playing following the length of time specified by the *Cue* setting. We recommend beginning with *1 Bar* or *2 Bar*.

If *Cue* is set to *Instant*, clips and sets will switch immediately upon pressing the play button. This isn't usually desirable when switching loops, because loops can easily get off time from the project metronome. There are times when you'll want to set *Cue* to trigger individual sounds in the grid immediately when clicked(for one-shot drums or sound effects with an external pad controller, for example), but since the *Cue* button affects all clips in the Performance Panel, it's a better idea to set the *Cue* parameter individually for specific grid locations; this overrides the global setting.

Selecting the Cue is via right-click menu is the same as the Cue popup in the Sound Tab *Perform* sub-tab at bottom left.

- **Trigger Mode**



This lets you customize how loops trigger when their play button is pressed.

- **Retrigger**
  Clip will repeat from its start each time the play button is clicked. If global or *Sound Tab>Perform Tab>Cue* is set to any value other than *Instant*, Mixcraft waits until the set note value has elapsed, then retrigger in time with the project metronome.
- **Trigger Once**
  Once play has been initiated for a clip either with its own play button or with the *Set Play* button above, the clip continues to play until it is stopped with one of the stop buttons in the same row, the master stop button in the upper left corner, or Mixcraft's transport stop button (or spacebar). *Trigger Once* is a good option for "foundation" beats intended to play continuously during performances.
- **Transition In Sync**
  Similar to *Retrigger* mode, but instead of starting at the beginning of the clip when the play button is clicked (after the *Cue* value elapses), the newly selected clip continues playing **at the same position as the currently playing clip**. In other

words, if the currently playing loop is at beat three at the transition point, the new clip will play from beat three.

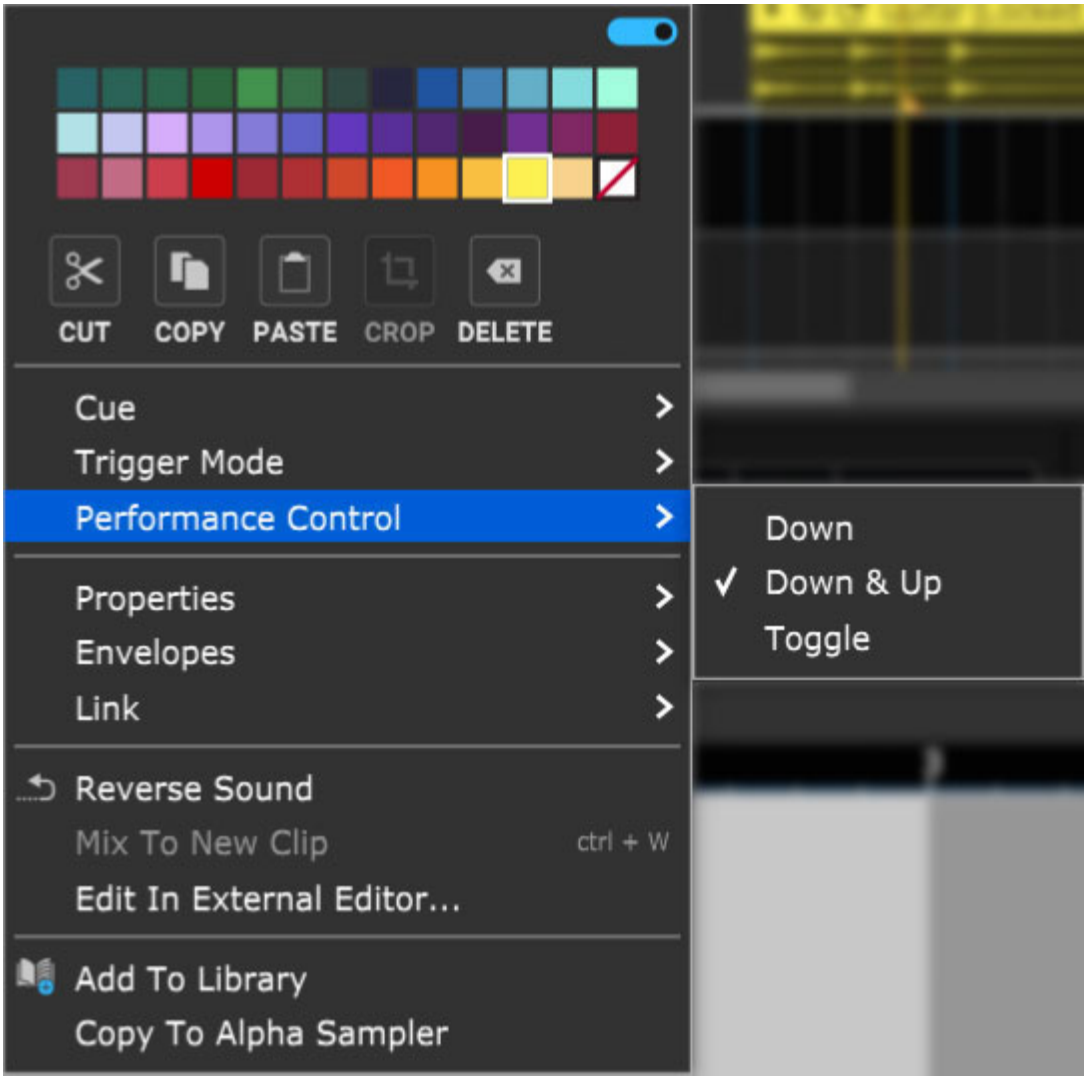
Transition In Sync works well in live performance, because it allows seamless transitions between clips and prevents multiple clips from becoming “turned around” in time from one another (i.e. the downbeat plays on the wrong count).

- **One Shot**

  Clip plays one time then stops.

• Performance Control

Specifies clip behavior when the mouse button is clicked or a button is pressed on a hardware USB controller.

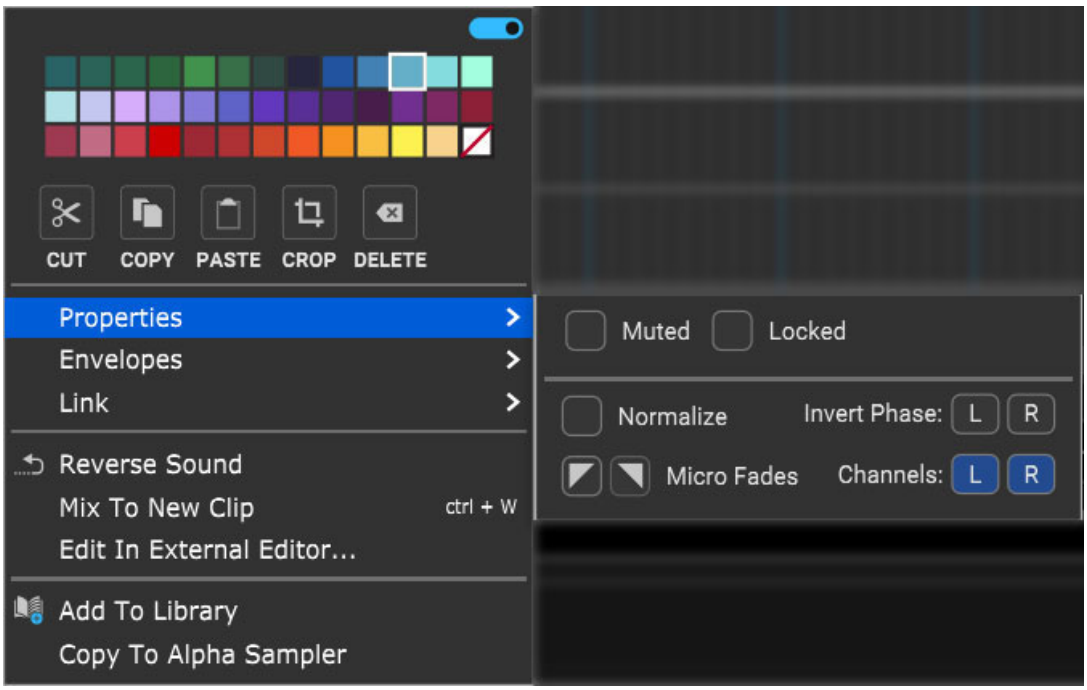


- **Down**

  Clicking a clip play button will start playback. Dependent upon *Trigger Mode* setting,

the clip will continuously loop or play through one time. You can think of *Down* mode as similar to striking a note on a piano while holding down the sustain pedal.

- **Down & Up**
  Clips only play when the play button is held down - pressing down initiates playback, letting up stops it. This works best with the *Cue* time set to *Instant*, for example, for temporarily dropping a fragment of a loop or musical passage into a mix. If *Cue* is set to any value other than *Instant*, you'll need to hold the play button until the *Cue* note value time elapses, then clip playback begins.
- **Toggle**
  This works like an on/off switch: press play to start a clip, and press again to stop it. Note that the *Cue* setting affects the clip's start **and** end points - Mixcraft waits for the *Cue* value to elapse before starting to play, and if the play button is pressed again before the *Cue* value has elapsed, playback continues to play for the duration of the *Cue* value.



• Properties

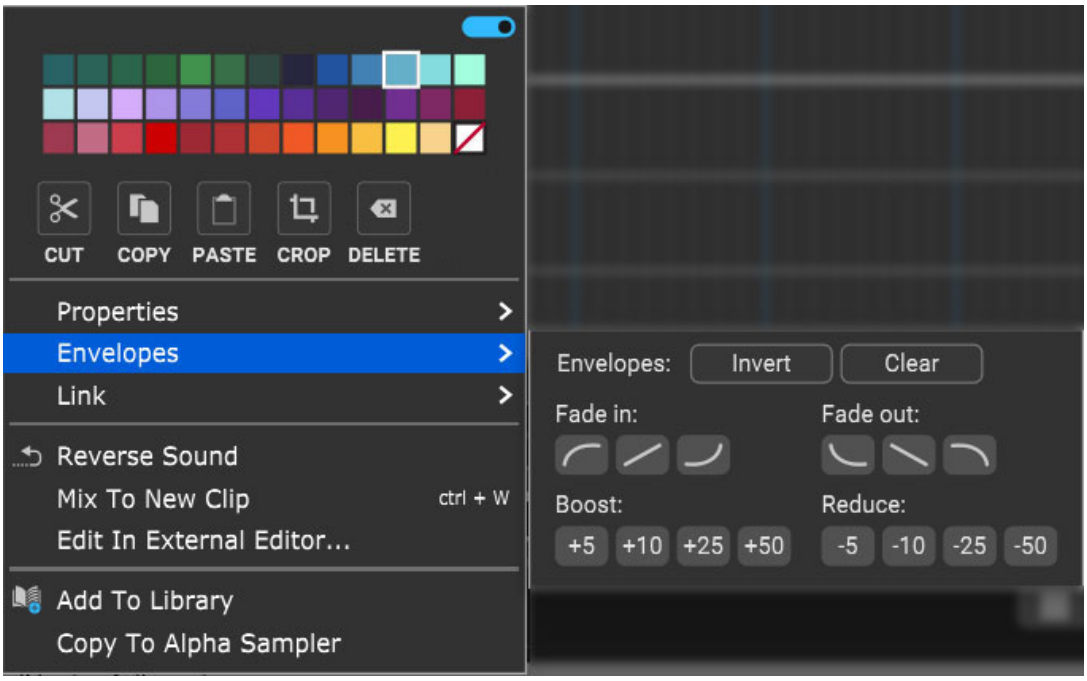
- **Muted**- Checking this mutes clip audio output. Muted clips will appear grayed out and *[Muted]* text will be added to the onscreen clip name.
- **Locked**- Freezes all location and clip size/length parameters. *[Locked]* text will be added to the onscreen clip name. Clips can be unlocked by unchecking the *Locked* check box.

- **Normalize**- Raises the overall volume of the clip so that the loudest peak is at zero dB. This it not a destructive process, that is, the audio isn't permanently edited, it's strictly a playback parameter. Normalization differs from compression or limiting in that dynamic relationships of the audio aren't altered; it just increases the overall volume of a clip if there's any unused headroom. *[Normalized]* text will be added to the onscreen clip name.
- **Invert Phase L/R**- Flips the polarity of the left or right channel of a clip. Typically you'd use this to reduce the phase cancellation that can occur when stereo mics are used to record a source (overhead drum mics, for example). The admittedly non-scientific procedure is generally to flip one channel's phase and see what sounds better. *[Invert L]* or *[Invert R]* will be added to the clip name.
- **Micro Fades-** Besides being the hairdo of choice for *Boyz II Men* in 1991, *Micro Fades* adds a tiny volume fade at the beginning or end of audio clips. This helps to eliminate clicks if the clip is begins or ends at a non-zero crossing in middle of an audio waveform. A tiny inverted triangle will appear in the upper-left corner of the clip if Micro Fade in is selected, or in the upper-right corner if a Micro Fade out is selected.
- **Channels**- Sets the clip to play back either left, right, or both audio channels for stereo clips. If only *L* or *R* is selected, only one side of the audio plays back monophonically - in other words, it will be center-panned in the stereo image. The clip waveform display will show a single waveform and *[Left Channel]* or *[Right Channel]* will be added to the clip name.

• Envelopes

These add a preset-configured volume adjustments to individual clips in the form of fade-ins, fade-outs, or overall level. Envelopes do not permanently alter the wave data and can easily be removed.

Envelope settings are reflected in the volume curve line that's superimposed on top of the clip waveform display and clips will always default to a volume setting of 100%. Envelopes can adjust clip volume between a range of 0-200%.

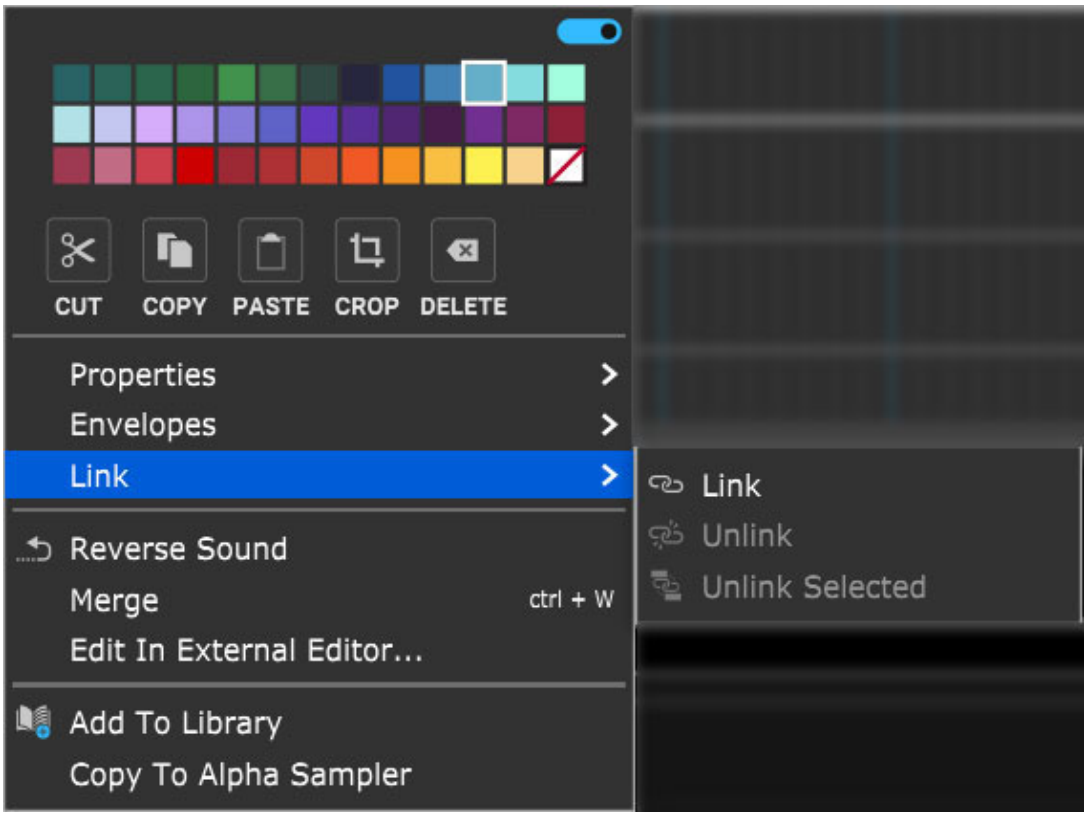


- **Invert**- Vertically "flips" the current Envelope curve. For example, if a clip has a fade that begins at minimum volume and gets louder, *Invert* will make the clip begin at maximum volume, and get quieter. *Invert* even works on static volume settings; for example, if the clip is at 80% volume, *Invert* will change the clip volume 20%. Note that *Invert* can be undone by simply clicking a second time.
- **Clear**- Initializes the clip volume setting to 100%
- **Fade In/Fade Out buttons**- These six buttons automatically apply logarithmic, linear, or exponential fade in or fade out volume curves.
- **Boost/Reduce**: These buttons add or subtract overall clip volume in 5, 10, 25, or 50% increments.

When the blue *Menu Persist* switch is enabled (at the top of the right-click window), the *Envelopes* window remains open, making it easy to experiment with various volume curves. You can always hit the *Clear* button and start over if things get crazy.

• Link

Related clips can be linked together letting them move as a single unit. This is useful when moving video clips with associated audio, multiple-mic drum recordings, or layered background vocals.



- **Link**- Links clips together. Multiple clips must be selected (otherwise the *Link* command will be grayed out).
- **Unlink**- Unlinks only the clip that's being right-clicked.
- **Unlink Selected**- Unlinks all linked clips in the group.

Linked clips will add *[Linked]* to the clip name and display an "interlocked rings" icon.

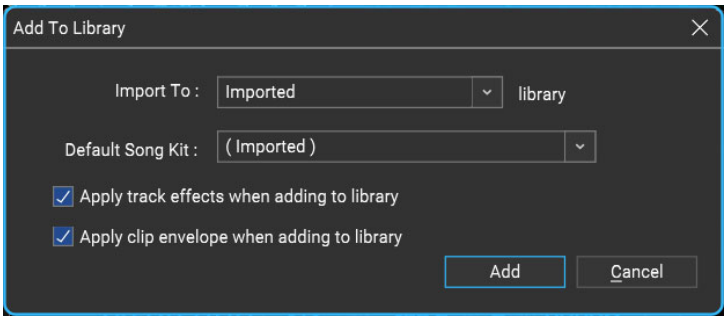
• Reverse Sound

Audio in the clip plays backwards.

• Edit In External Editor...

Allows clips to be edited using dedicated sample editing software for advanced editing of clip audio. To use this function, you'll need to define which audio editing app you'd like to use. This is set in *Mixcraft Preferences>General>External Wave Editor*.

If no audio editing app has been set and theEdit In External Editor... command is selected, the *Mixcraft Preferences>General>External Wave Editor* menu is automatically opened.



- **Add To Library**

Allows clips to be added to Mixcraft's onboard sound library for future use.

- **Import To**
  Choose or type in the library name to import to. To create a new library, type in a name.
- **Default Song Kit**
  Select or type in a name for a song kit if the imported sounds are to be associated with a specific Song Kit. This can be easily edited later if need be.
- **Apply track effects when adding to library**
  Track effects will be applied to the final library sound.
- **Apply clip envelope when adding to library**
  Clip envelope adjustments will be applied to the final library sound.
- **Add**
  This starts the import. While an import is happening, you are free to edit sounds or use Mixcraft without interruption.
- **Cancel**
  Closes the *Add To Library* window with no import occurring.

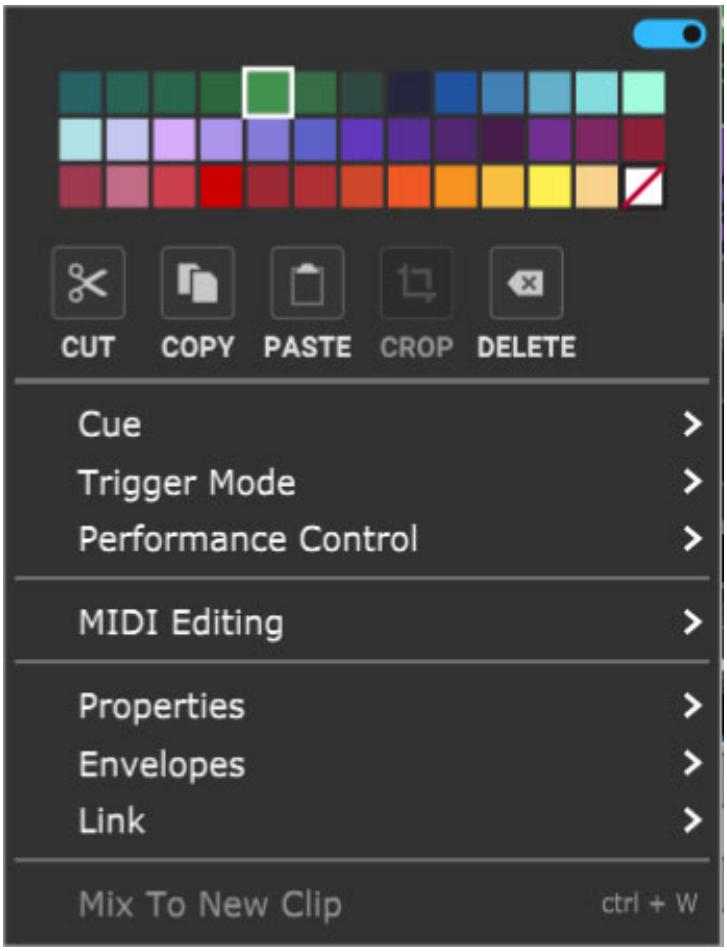
- **Copy To Alpha Sampler**

This super fun and easy-to-use feature automatically creates a new instrument track with an Alpha Sampler instrument and loads the clip audio into the Alpha Sampler. This lets you play and record the clip as a sampler instrument with a single mouse click. Hooray for computers!

The existing audio track and clip will be unaffected, and the clip/sound automatically saves with the Alpha Sampler in the project.

For more information on using Alpha Sampler, please check out the **Alpha Sampler** section.

PERFORMANCE PANEL VIRTUAL INSTRUMENT CLIP RIGHT-CLICK COMMANDS



• Menu Persist Switch

The blue horizontal slider at the top-right of the menu enables persistent menus. When enabled, the right-click menu stays open while multiple functions and options are selected; to close the right-click window, simply click anywhere outside of it.

If the *Menu Persist* slider is disabled, the right-click window automatically closes when a single action or option is selected.

• Clip Color Palette

Use this to select a color for the clip.

• Cut, Copy, Paste

Allows cutting, copying, and pasting of the clip.

- **Crop**

If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Crop* removes any part of the clip outside of the selection range. (It's generally easier to start the highlight part of the clip from outside the clip.)

- **Delete**

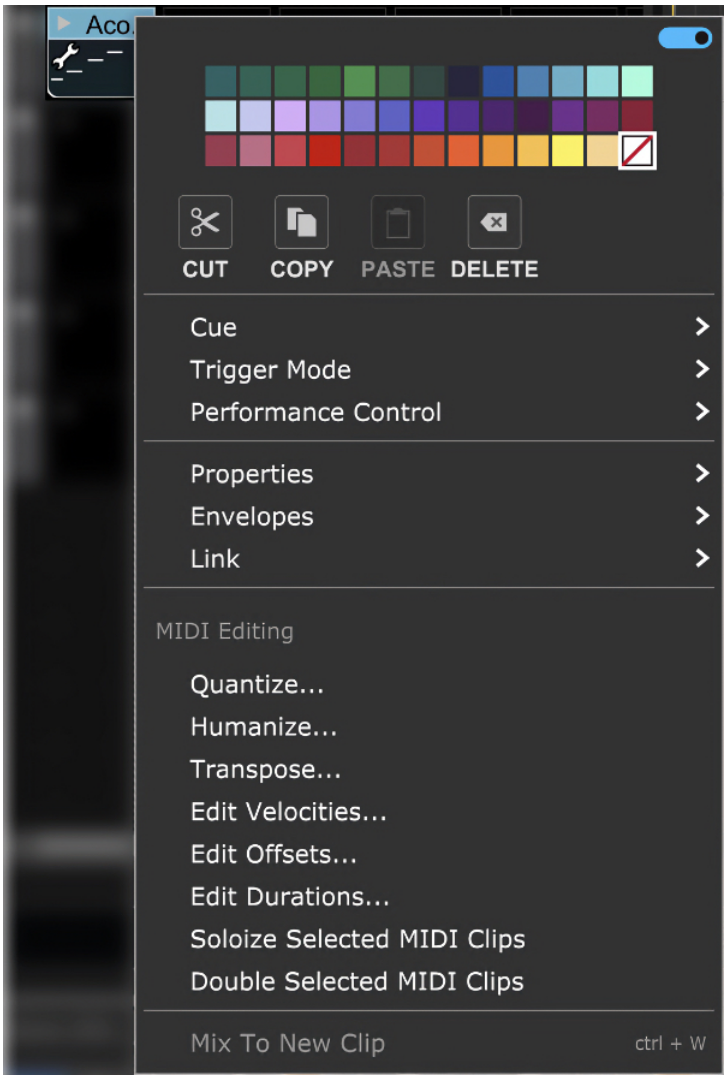
If a portion of a clip is currently selected by clicking and dragging, either on or outside of the clip, *Delete* removes the selected part of the clip - essentially the opposite of the *Crop* command. This often results in splitting the clip into two clips.

- **Split**

Splits the clip into two separate clips at the current Playhead location. *Split* has no effect if the Playhead isn't atop the clip.

- **MIDI Editing**

These submenus allow precise editing of MIDI note and controller data. The same menus can be accessed from the right-click menu, or via the *Sound>MIDI Editing* menu at the top of the Mixcraft UI. For full details on MIDI Editing functions, have a look at the **MIDI Editors: Clips** section.



- **Quantize...**
  Quantization is the process of moving notes closer to a set note value or “grid,” in order to tighten the timing of sloppy performances. To access the Quantize menu, right-click on a MIDI clip or MIDI data in the Piano Roll Editor and select MIDI *Editing>Quantize...*

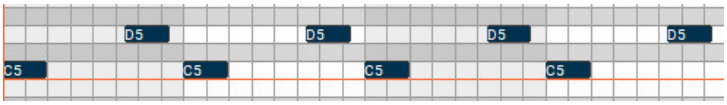
  - **Note Type** - Specifies the snap setting to quantize to.
    - If this is set to eighth-note but you’re actually quantizing a whole note, it will not adjust the length of the note to an eighth-note, but rather align it to the closest eighth-note.
    - If the *Start Times* box is checked, then the start times of each note will be quantized to this note type.
    - If the *Note Ends* box is checked, then the end times of each note will be quantized to this note type.

- **Start Time -** Click the checkbox next to *Start Time* and then choose a *Note Type* setting. Mixcraft adjusts all notes to the closest beat or partial beat, based on the *Note Type*.
- **Note Ends -** Mixcraft adjusts the note endings to the closest beat or partial beat, based on the *Note Type*.
- **Swing -** If you want to quantize with swing, click *Swing* and choose an intensity %. *Swing* will offset every note that is on an odd beat, depending on the quantize note start setting.

  For example, if you had a recording of eighth notes, set the Note Type to eighth-notes and then set swing to 30%; every other eighth-note would be offset by 30%.
  Before: “Unswung” eighth notes:

After: Quantized eighth notes with a 35% swing. Swingin’, baby!

- **All / Selection** - Choose whether to quantize the selected notes or all the notes in the current virtual instrument clip. (Only apples if a region is highlighted within the Piano Roll Editor.)
  Before quantizing:



*After*quantizing *Start Times* and *Note Ends* to 1/8 Note:

Humanize...

Humanizing is the process of adding a random and more “humanized” feel. When

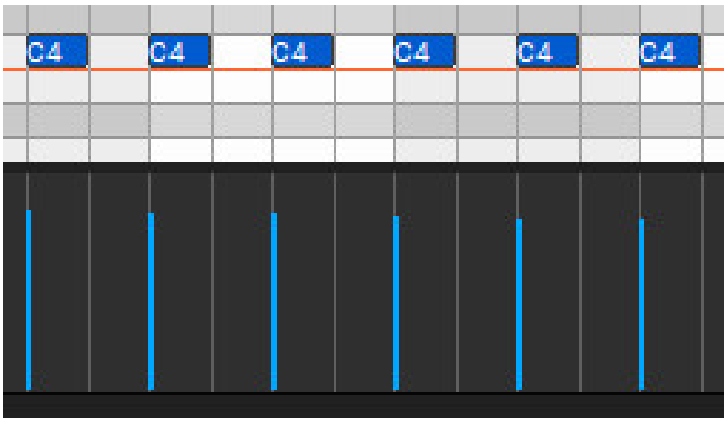
entering MIDI data via the mouse and using snap, music can sound stiff and artificial; Humanize lends a more natural feel.

- **Note Start and Duration**
- **Max Adjustment** - The maximum note duration to humanize towards.
- **Start Time** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.
- **Duration** - Specifies humanizing the start time with options for *Random*, *Early*, or *Late* timing.

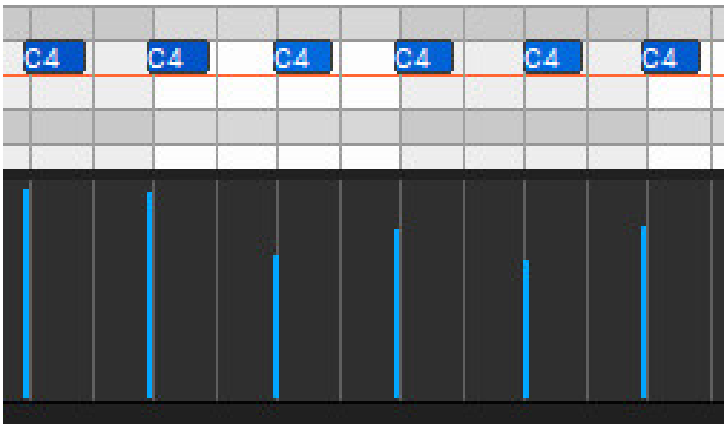
Note Velocities

Allows randomization of note velocities with the following options:

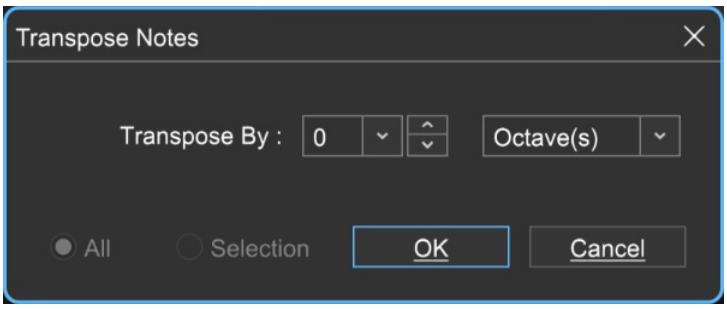
- **Randomize by** - A percentage of the original note value.
- **Randomize in range** - A new note velocity is randomly chosen in the range entered.
- **All / Selection -** Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)
  Before humanizing - velocities are the same on every note:



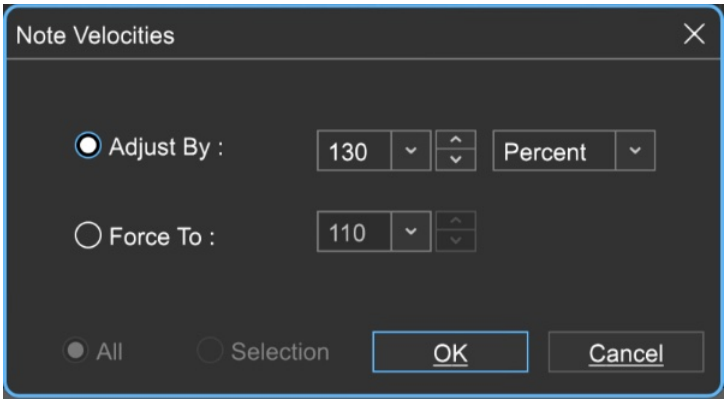
After humanizing - randomized velocities:



- **Transpose...**
  The *Transpose* dialog allows shifting of all notes or selected notes in a clip by octaves or semitones. Right-click a MIDI clip or MIDI data in the Piano Roll and select *MIDI Editing>Transpose*...

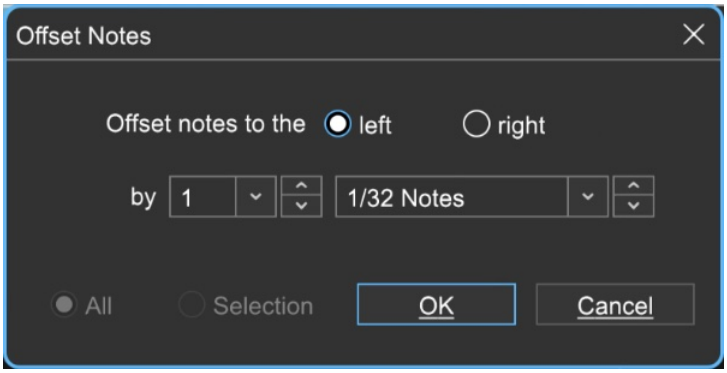


- **Transpose By** - Choose *Octave(s)* or *Semitone(s)* from the *Transpose By* drop-down menu, then enter the amount and click *OK*. To transpose selected notes only, click the *Selection* radio button.
- **Edit Velocities...**
  The *Note Velocities* dialog allows adjustment of all or selected note velocities. A MIDI velocity indicates how hard the note has been struck. The range is from 1 to 127.

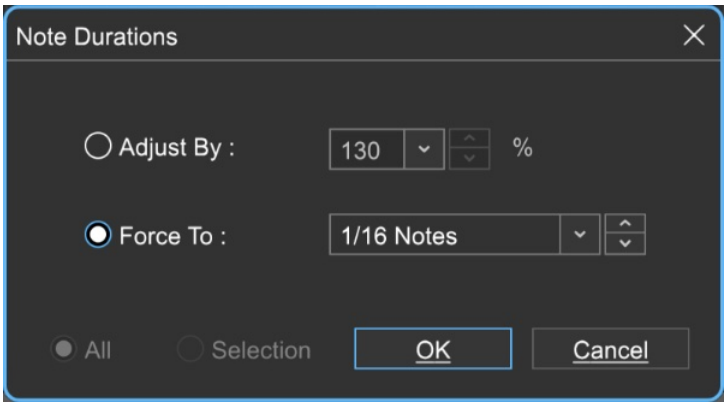


- **Adjust By**
  Adjust velocities by a specific percentage.

- **Force To**
  Specify a velocity to adjust all notes to. The valid range is from 1 to 127.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)
- **Edit Offsets...**
  Allows adjustment of all notes or the selected notes time offsets.



- **Offset Direction**
  Choose left or right.
- **Offset Amount**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the *Piano* Editor.)
- **Edit Durations...**
  Note Durations allows adjustment of all notes or selected note durations.

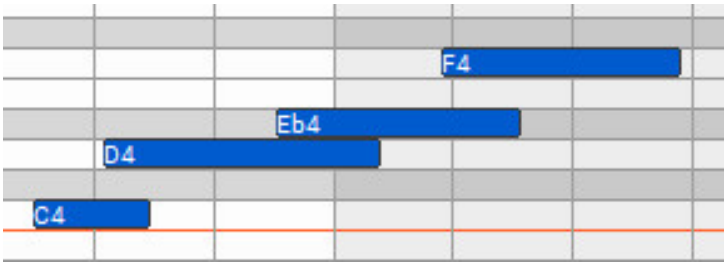


- **Adjust By**
  Adjusts notes durations by a percentage.
- **Force To**
  Select the desired note value here.
- **All or Selection**
  Choose whether to edit the selected notes or all the notes in the current virtual instrument clip. (This applies only if a region of notes has been highlighted within the Piano Roll Editor.)

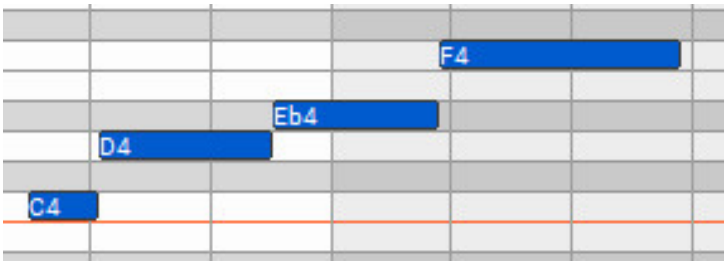
Soloize Selected MIDI Clips

Soloize is a unique function that modifies the note data in a MIDI clip by forcing it to play one note at a time - in other words, it eliminates legato overlaps.

Before soloizing:



After soloizing:



Double Selected MIDI Clips

Duplicates the current clip and merges them, creating one large double-length clip.
Before doubling:

After doubling:

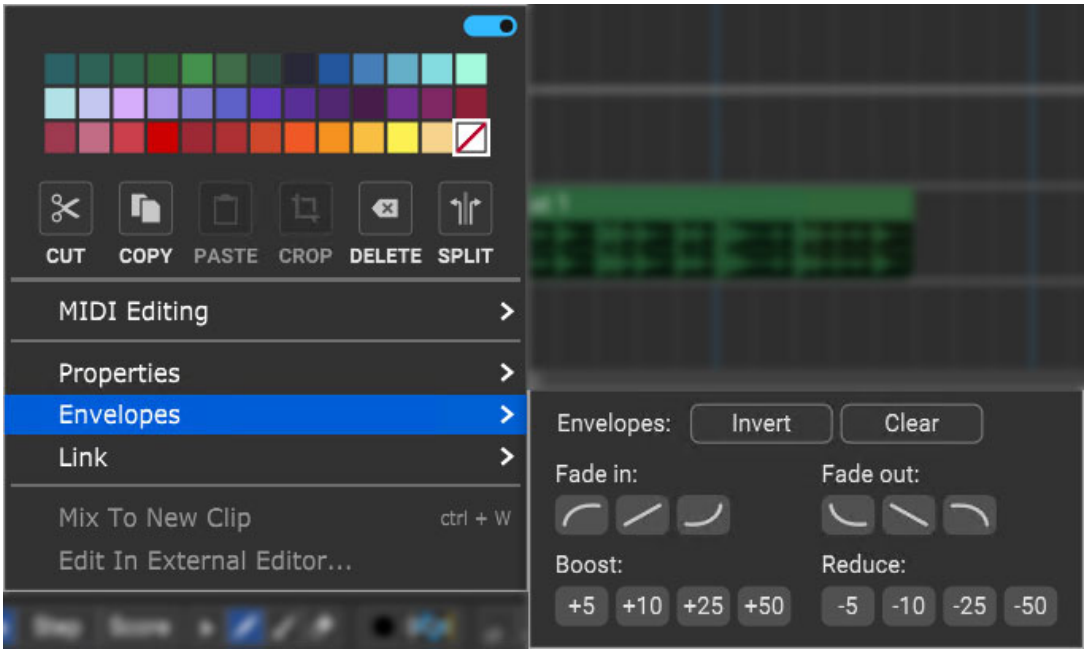
• Properties

- **Muted**- Checking this mutes the clip MIDI note output. Muted clips will appear grayed out and *[Muted]* text will be added to the onscreen clip name.
- **Locked**- Freezes all location and clip size/length parameters. *[Locked]* text will be added to the onscreen clip name. Clips can be unlocked by unchecking the *Locked* check box.

• Envelopes

These add a preset-configured volume adjustments to individual clips in the form of fade-ins, fade-outs, or overall level.

Envelope settings are reflected in the volume curve line that's superimposed on top of the clip waveform display and clips will always default to a volume setting of 100%. Envelopes can adjust clip volume between a range of 0-200%.



- **Invert**- Vertically "flips" the current Envelope curve. For example, if a clip has a fade that begins at minimum volume and gets louder, *Invert* will make the clip begin at

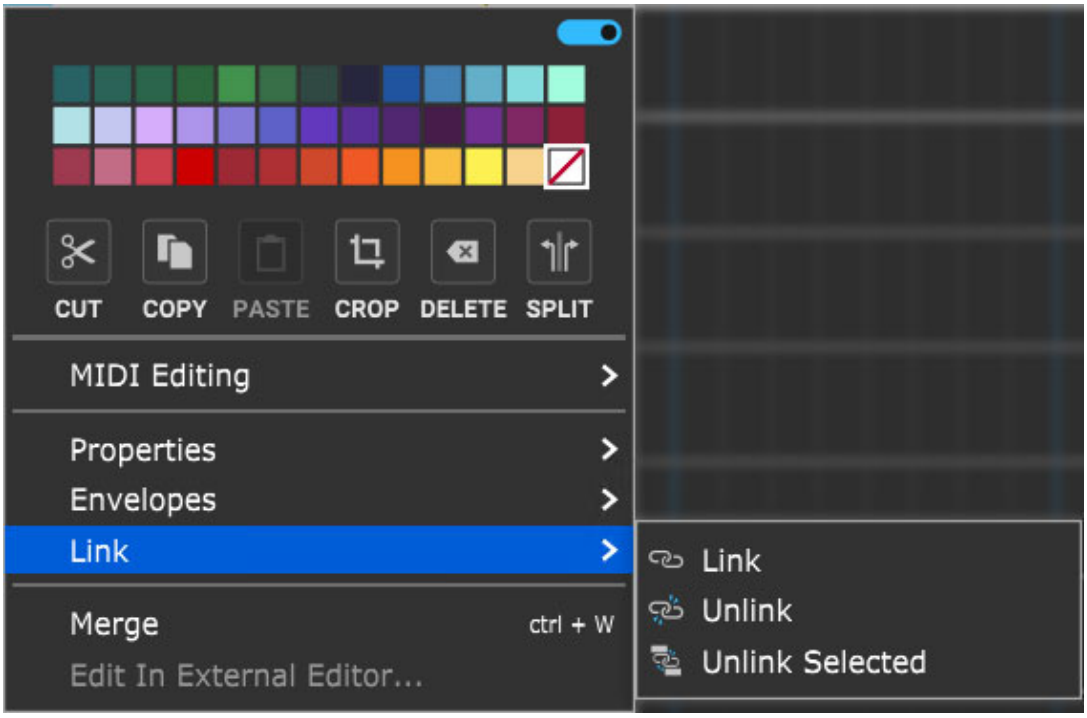
maximum volume, and get quieter. *Invert* even works on static volume settings; for example, if the clip is at 80% volume, *Invert* will change the clip volume 20%. Note that *Invert* can be undone by simply clicking a second time.

- **Clear**- Initializes the clip volume setting to 100%
- **Fade In/Fade Out buttons**- These six buttons automatically apply logarithmic, linear, or exponential fade in or fade out volume curves.
- **Boost/Reduce**: These buttons add or subtract overall clip volume in 5, 10, 25, or 50% increments.

When the blue *Menu Persist* switch is enabled (at the top of the right-click window), the *Envelopes* window remains open, making it easy to experiment with various volume curves. You can always hit the *Clear* button and start over if things get crazy.

• Link

Related clips can be linked together letting them move as a single unit. This is useful when moving video clips with associated audio, multiple-mic drum recordings, or layered background vocals.



- **Link**- Links clips together. Multiple clips must be selected (otherwise the *Link* command will be grayed out).
- **Unlink**- Unlinks only the clip that's being right-clicked.
- **Unlink Selected**- Unlinks all linked clips in the group.

Linked clips will add *[Linked]* to the clip name and display an "interlocked rings" icon.

- **Merge**

Combines multiple clips into one.

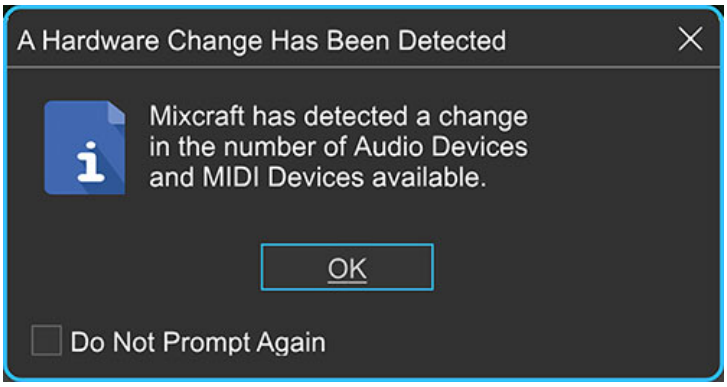
USING THE PERFORMANCE PANEL WITH THE NOVATION LAUNCHPAD

The Performance Panel can be used with a standard USB keyboard controller (see **Using Generic MIDI Controllers and Control Surfaces**)or even just your computer's mouse or trackpad, but it really shines when paired with a Novation Launchpad USB grid controller. Instead of controlling set and cell playback with individual mouse clicks, the Launchpad features a multicolor 64-button grid for rapid control of cell playback and recording, as well 16 additional buttons for controlling set playback and navigation. Mixcraft includes some special features designed to specifically take advantage of the Launchpad controller.

CONFIGURING THE LAUNCHPAD CONTROLLER

The Novation Launchpad doesn't need any special drivers. Here's how to get it up and running in a jiffy:

1. Plug the small end of the included USB cable into the the Launchpad, and the big end into an open USB port on your PC.



2. Upon plugging in the Launchpad, Mixcraft will display the above window. This acknowledges that you've plugged in a new piece of hardware. Click *OK*.

3. In the upper-left corner, click *File>Preferences*, then select *Control Surfaces*. In the left column, choose *Launchpad*. In the *Input* and *Output* columns to the right, select *Launchpad* in each of these. Click *OK* at the bottom of the *Preferences* window and you're ready for Launchpad rock!

LAUNCHPAD BUTTONS

- **Main 8x8 Grid** - The main 8x8 button grid functions just as the corresponding onscreen set, clip, and grid play, stop, and record buttons. The following table describes button color and states (like Idaho and Vermont).

button color	state	cell activity
off	-	no clip present in cell*
amber	solid	clip present, not currently playing
green	solid	clip currently playing
green	flashing	clip plays following *Cue* duration
red	solid	track/lane is record armed, press to begin recording
red	dim	count-in measures or *Cue* duration currently elapsing
red	flashing	currently recording

* Pressing an unoccupied grid button during playback will stop playback for clips in the same row, following the duration of the *Cue* setting (if any). The button flashes red during the *cue* duration, indicating clips playing in this row will stop following the *cue* duration.

- 1 - 8 Buttons

These start and stop sets just like the play/stop buttons along the top of the Mixcraft's onscreen Performance Panel.

- A - D Buttons

Though there are Launchpad's main grid buttons "only" comprise an 8x8 grid, Mixcraft's onscreen grid has no size/cell number limit. When Mixcraft detects a Launchpad controller, a 8x8 cell blue box appears in the Performance Panel; this surrounds the current corresponding cells represented on the Launchpad controller.

The 8x8 cell grid represented on the Launchpad can be shifted up and down with the A and B buttons, and left and right with the C and D buttons. The blue box surrounding the 8x8 grid moves accordingly.

(This only becomes relevant if the Performance Panel grid is larger than 8x8 cells.)

- H Button

The H button in the bottom-right corner acts as a master stop button. It glows solid red whether the Performance Panel is stopped or playing. If it's pressed while the Performance Panel is running, it flashes for the *Cue* setting duration, then all currently playing clips are stopped. This is the same as clicking the onscreen stop button in the upper-left corner of the Performance Panel.

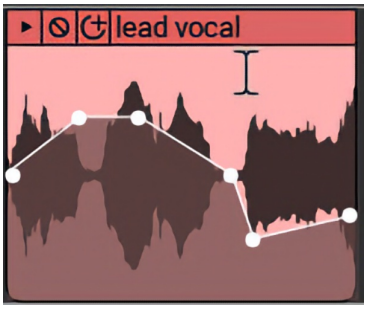
AUTOMATION AND CONTROLLER MAPPING

AUTOMATED MIXING 101: INTRO TO AUTOMATION

Mixcraft's automation features are super comprehensive while being easy to learn and use. Though automation can be used for basic volume and pan moves, once you dig in, you'll find oodles of great ways to use it, resulting in pro-quality, "how'd they do that?" final mixes.

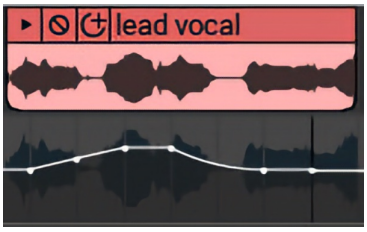
First, we'll explain Mixcraft's two different types of automation, then later in the chapter we'll go over MIDI/USB hardware controller setup and mapping, as it's closely tied into recording automation moves. To save on valuable screen pixel resources, we'll abbreviate clip-based automation down to "clip automation," and likewise with lane-based automation.

DIFFERENCES BETWEEN CLIP AND TRACK AUTOMATION



Mixcraft features two different types of automation: *clip* and *track*. As its name implies, **clip automation operates individually on each clip**. It allows automation of volume, pan, low pass filter cutoff frequency and resonance, high pass filter cutoff frequency and resonance for audio and MIDI clips. Pitch automation is also available for audio clips only. Clip automation is useful for automation moves that you'd like to repeat for a number of clips, or if you need to reduce or increase volume or change panning on just a couple of clips. As you'll see, clip-based automation is fast and easy and has many applications.

Track-based automation differs in a number of ways. Most significantly, **track automation functions independently of clips** - it's essentially "laid across" multiple clips that make up a project. Because it functions independently of clips, it's possible to create, for example, a slow volume fade spanning numerous clips. In fact, it doesn't even care if there *is* a clip beneath it, it just does its automatin' thing. And instead of being visually superimposed onto the clips themselves, lane-based automation is displayed separately from the clips it affects in parallel horizontal "lanes" beneath clips.



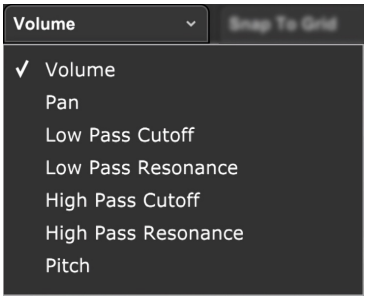
The other important difference is that **clip-based automation does not affect control positions in the Mixer** - it simply adds or subtracts parameters "on top" of the current control positions. Conversely, if an automation lane's *Lock* button is engaged, automation behaves like a "third hand," causing mixer controls to move. This makes it more suitable for use with moving fader hardware control surfaces, as the onscreen controls and physical controls will move together in lockstep.

Finally, clip and lane automation can be used simultaneously, but we don't recommend using both types to control the same parameter (like volume), as things can get confusing quickly.

CLIP AUTOMATION

Clip automation is initially displayed by a horizontal line that appears when hovering over the bottom half of audio or MIDI clips. The current parameter represented by the automation line is selected with the drop-down menu at the top of the screen in the main menu tool bar. (Click the menu that says *Volume* to view all clip automation parameters.) The drop-down menu parameter selection is global for the entire project - for example, if the *Pan* parameter is selected, **all** clips display *Pan* automation.

Each audio clip has its own independent automation line for the following parameters:



- Volume
- Pan
- Low Pass Cutoff
- Low Pass Resonance
- High Pass Cutoff
- High Pass Resonance
- Pitch

All parameters are simultaneously available for any clip, including clips in the Performance Panel. Here’s a breakdown of what each does.

- **Volume**

Volume can be set to values from 0% to 200% (-Inf dB to +6 dB).

- **Pan**

Pan is the volume balance between the left and right channel (i.e. left and right speaker).

By automating pan settings, sounds can move from left to right or vice-versa. Pan can be set to values from 100% left to 100% right.

- **Low Pass Cutoff**

A low pass filter is an audio filter that allows low frequencies to “pass” while removing high frequencies. Sounds below the cutoff frequency can be heard, while sound above the cutoff frequency is reduced or removed entirely. The cutoff frequency is set to maximum by default, i.e. all frequencies pass. As the automation line is lowered, additional high frequencies are removed.

- **Low Pass Resonance**

Resonance emphasizes frequencies in the vicinity of the cutoff frequency. If the cutoff frequency is set to 2000 Hz along with a high resonance value, frequencies above 2000 Hz will be removed, frequencies below 2000 Hz remain, and frequencies at and directly around 2000 Hz are emphasized. Resonance is a simple concept, but it can be a dramatic effect, especially if resonance is high and the filter’s cutoff frequency is changing. This effect is what’s known as a “filter sweep,” and produces a familiar “weeoow” sound often heard from analog synthesizers and in EDM music builds.

- **High Pass Cutoff**

A high pass filter is the exact opposite of a low pass filter, meaning that high frequencies above the cutoff point are allowed to pass, while frequencies below the cutoff point are reduced, resulting in a thinning out of the sound.

- **High Pass Resonance**

High Pass resonance parameter works exactly as in the low pass filter, but in reverse with frequencies below the cutoff frequency being attenuated, frequencies at or in the vicinity of the cutoff frequency emphasized, and frequencies above the cutoff frequency passing through.

- **Pitch**

The pitch of any audio clip can be statically changed or automated within a range of +/- 24 semitones. Playback speed remains constant, making it especially useful for drum loops, and as you might guess, the results can get pretty wild! Note that pitch envelopes only work on audio clips. Pro tip: apply pitch envelopes subtly to vocal and guitar tracks and accuse musician friends of tone deafness.

Fun and Useful Clip Filter Applications

A clip's low pass filter can be used as an EQ effect, reducing certain high frequencies, such as acoustic guitar finger squeaks. You can also use them to create filter sweeps, by adding resonance while the cutoff frequency moves up or down. The cutoff frequency and resonance amount are each controlled via an envelope, and these values can change over time, in the same way, a volume or pan envelope can be used to change volume and pan amount over time.

In addition to a different flavor of the sweeps described above, High Pass filters are useful for getting rid of undesirable low-frequency noises, such as air conditioners, refrigerators and bass players (just kidding on that last one!).

ADJUSTING CLIP AUTOMATION

To create and adjust clip automation points, hover the mouse cursor over the lower section of a clip. The clip's automation line will appear, and the cursor will turn into crosshairs. Click to create new automation points, and drag to position new or existing points.

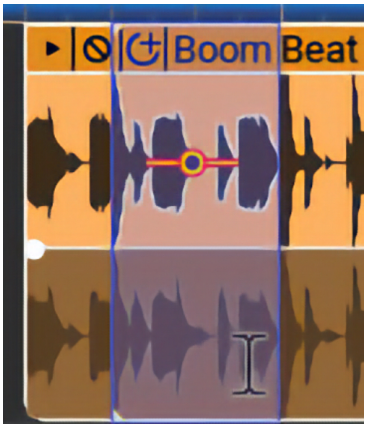
FADES, BOOSTS, AND REDUCTIONS

- **Fades, Boosts, and Reductions Using The Sound Menu**

These sound like surgical procedures for rich old ladies, but they’re actually convenient shortcuts that add multiple envelope points at a time. Click+drag across an area of a clip and choose one of the following predefined options from the *Sound* menu in the Main Window. If a region of the clip isn’t selected, these get applied across the entire clip.

- Sound>Envelopes>Fade Out
- Sound>Envelopes>Fade In
- Sound>Envelopes>Reduce
- Sound>Envelopes>Boost

- **Boosts and Reductions Using The Line Adjuster Tool**

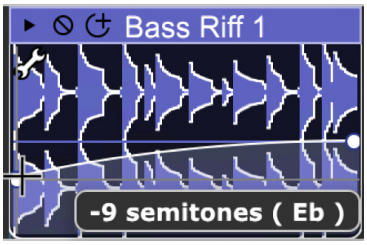


Here’s another slick way to boost or reduce segments in a clip. Click+drag across a purple highlight across a section of a clip. Now click and drag the Line Adjuster tool up or down (the little orange and yellow icon that looks like an incoming propeller plane from an Atari game) to automatically create four automation points and set an automation “shelf.” Remember that the preceding adjustments can be used for any type of clip automation, not just volume!

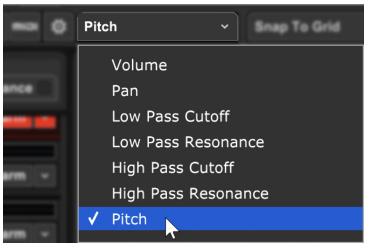
PITCH AUTOMATION (CLIP AUTOMATION ONLY)

The pitch of any audio clip can be statically changed or automated within a range of +/- 24 semitones using clip automation. Playback speed remains constant, making it especially useful for drum loops, and as you might guess, the results can be pretty wild! Note that pitch envelopes only work on audio clips.

Pitch automation only works in conjunction with clip automation (i.e., it doesn’t work with lane automation), and only works with clips containing audio content.



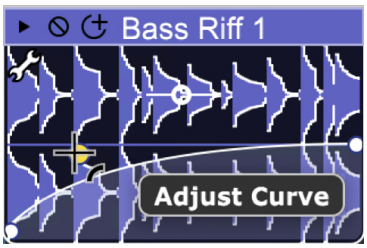
To apply a pitch envelope to a clip, click the clip automation parameter pop-up menu at the top center of the Mixcraft window (by default, it will say Volume), and choose Pitch.



Now click on a clip's automation line (located horizontally at the center of the clip by default) and set the automation points and curves as with any other automation type.

AUTOMATION CURVES

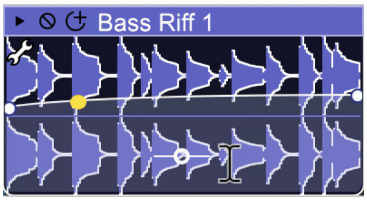
In addition to the usual "straight line" automation, curves can also easily be adjusted for logarithmic and exponential response. Amongst other uses, these are especially useful for accurately creating "record-style" fade-ins and fade-outs.



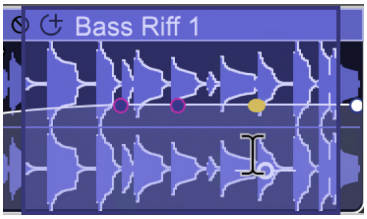
To adjust an automation line's response curve, hover the mouse pointer over an automation line. A yellow dot appears toward the middle of the automation line. Click and drag the yellow dot up or down to "bend" the line toward a logarithmic or exponential curve. Curves can also be biased toward the beginning or end of the automation section by dragging the yellow dot left or right.

ADJUSTING MULTIPLE AUTOMATION POINTS WITH THE LINE ADJUSTER TOOL

The Line Adjuster tool lets us do a couple of more convenient tricks.



When the cursor is hovering between two automation points, you'll notice that the Line Adjuster appears above or below the automation line. Clicking and dragging it up or down moves the closest automation points to its left and right.



To move more than two automation points simultaneously, click and drag a purple highlight square over multiple automation points. Highlighted points will show a magenta circle around them. Moving the Line Adjuster tool up and down moves all of the highlighted automation points.

KEYBOARD RIGHT-CLICK MODIFIERS

• **Move Line**: Hold the [SHIFT] key down and click down on an automation line to move the line up or down.

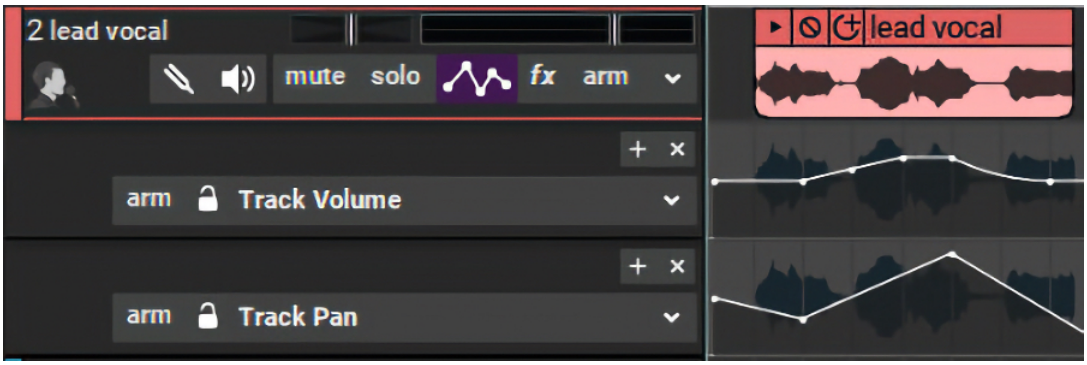
• **Delete Points**: Hold the [ALT] key down and click points to remove them or right-click a point and select *Delete Point*.

• **Edit Exact Value**: Precise values can be entered by right-clicking on the point and choosing Edit Exact Value...

TRACK AUTOMATION

Mixcraft's track automation allows automation of volume, pan, and send tracks, as well as all parameters of a track's plug-ins and virtual instruments. You can view or hide as many parameters as you like, with each parameter occupying its own "lane," until you run out of screen space. It's also compatible with Mackie Control, TranzPort, and other hardware control surfaces.

AUTOMATION LANES EXPLAINED

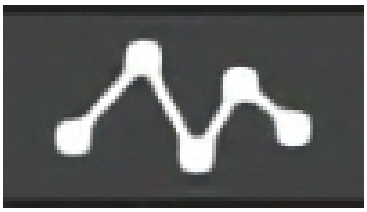


Automation is displayed as a continuous jagged horizontal line (that's a fabulous title for an Alanis Morissette record). Since Mixcraft allows the automation of multiple simultaneous parameters, it would get confusing if the automation line were superimposed directly atop audio and MIDI clips. Thus we give you... automation lanes! Automation lanes are areas *beneath* a track's clips where automation lines for the track are displayed and edited. To make viewing and editing multiple parameters easy, there's no limit to the number of lanes that can be viewed simultaneously, but lanes may also be hidden to conserve screen real estate.

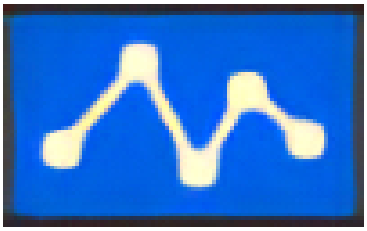
TRACK LIST AUTOMATION CONTROLS

- **Track Automation Button**

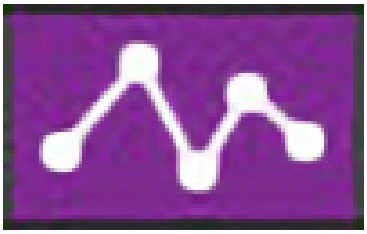
The Track Automation button displays and hides automation lanes for individual tracks. If a track has no prior automation, a single automation lane opens displaying volume automation when the button is clicked. If a track has existing automation, you'll see all automation lanes with views currently enabled (using the + and *x* buttons described below). The track automation button colors change as follows:



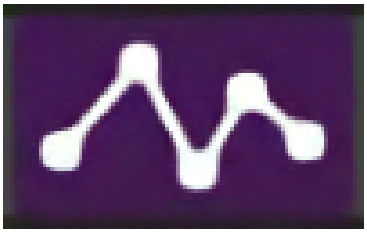
Track Automation lanes are hidden, the track contains no automation.



Track Automation lanes are displayed, the track contains no automation.



Track Automation lanes are hidden, the track contains automation.



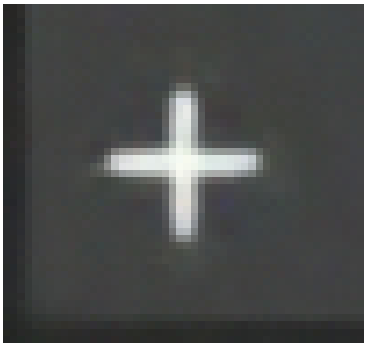
Track Automation lanes are displayed, and the track contains automation.

The *Toggle Automation* button only hides and displays the automation lanes, but has no effect on automation playback. In other words, lane automation still happens even if the lanes are hidden with the *Toggle Automation* button.

You can view as many automation lanes for a single track, or tracks, as you like. This makes it easy to edit numerous parameters simultaneously. To open additional automation lanes for a track, click the + sign, then click the *Automation Parameter* drop-down menu to select the desired parameter for editing. To hide an automation lane, click the *X* sign. When an automation lane is hidden, the automation still remains active - it's simply hidden from view.

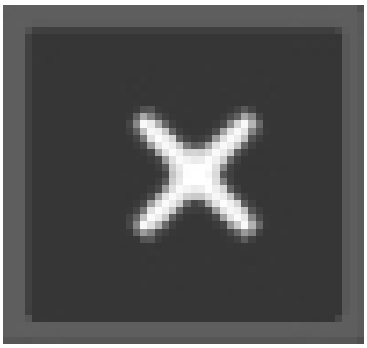
To simplify remembering which track parameters contain automation data, the text for parameters containing automation data is displayed in blue in the *Automation Parameter* drop-down submenu.

- **[+] Button**



Adds a new automation lane to the track.

- **[X] Button**



Hides the automation lane.

- **Arm**

This is the automation Arm button to the left of the lock icon in the automation track header, not the record Arm button above it. Clicking

this allows recording of automation data either via the onscreen control associated with the lane’s automation parameter, or by using a hardware controller assigned to a

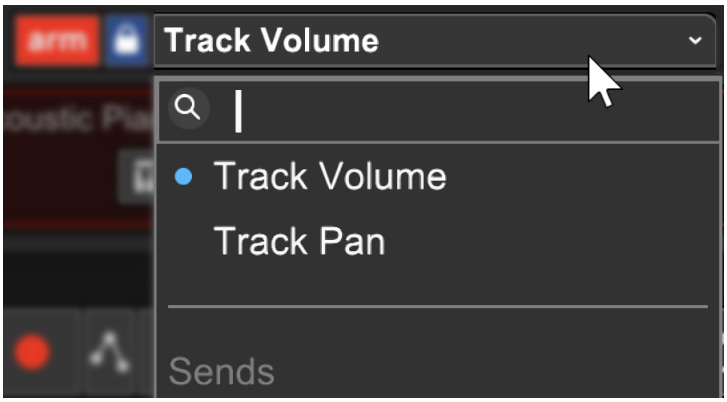
parameter. (See “Recording Automation Using Hardware Controllers.”)

- **Lock Button**

Synchronizes the movements of lane automation with onscreen displays of channel volume and pan, as well as submix, send, output bus, and master track volumes. As these parameters are being controlled by lane automation in lock mode, the onscreen controls for these parameters will be disabled when in lock mode - you’ll see them shrink slightly and “go dark.” Automation parameter lock is especially useful when using hardware control surfaces with motorized faders, as it keeps onscreen and hardware controls locked together at all times.

If an automation lane’s Lock button **is not** engaged, mixer controls will not move, and their control positions act as “master” controls **in addition** to automation data. In other words, if lane automation contains a volume curve, moving a channel fader will cause the entire volume curve to become louder or quieter, but the automated volume will still occur.

SELECTING PARAMETERS FOR AUTOMATION

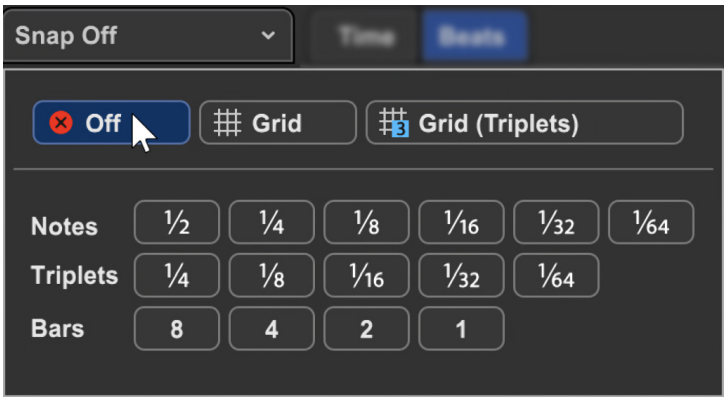


This drop-down selects which parameter the automation lane will control. These can be Mixcraft mixer parameters such as channel volume, pan, or send levels or individual parameters of a plugin or virtual instrument; clicking the name of a plugin or virtual instrument will display a drop-down submenu displaying all automatable parameters for the plug-in or instrument.

To select a parameter for automation, click a track's *Automation Parameter* drop-down lane in the track list - by default it will say *Track Volume*. You can click it or the downward-facing arrow next to it.

ADDING AND EDITING AUTOMATION POINTS

To add automation points, simply click on an automation lane's automation line and drag the point up and down. The position of newly created automation points conforms to the current snap setting.



In most situations, you won't want automation point positions to "quantize" to a note value, so it's best to set the Snap setting to S*nap Off*.

To move a horizontal section of the automation line, hold down the [SHIFT] key while dragging. The cursor turns into an up/down arrow and moves the entire line between the two closest points. This is super handy for increasing or decreasing the volume for a word or group of words in a vocal track, a specific musical phrase, etc.

Dragging an automation point over other automation points will cause them to be "overrun" and deleted upon mouse release.

FINE-TUNING AND DELETING AUTOMATION POINTS

- **Edit Exact Value**

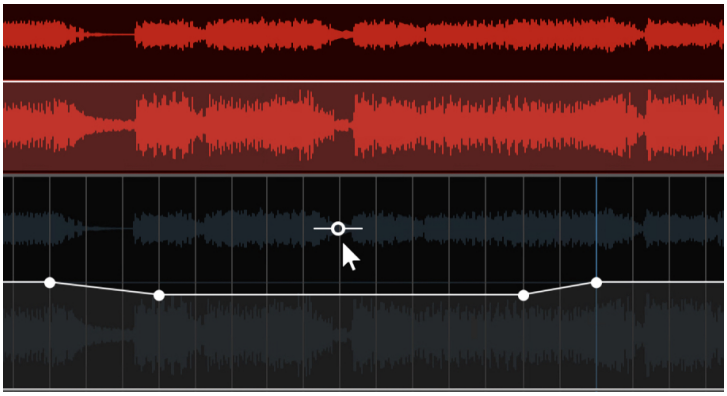
To precisely set automation point values, right-click it and choose *Edit Exact Value*.

- **Delete Point**

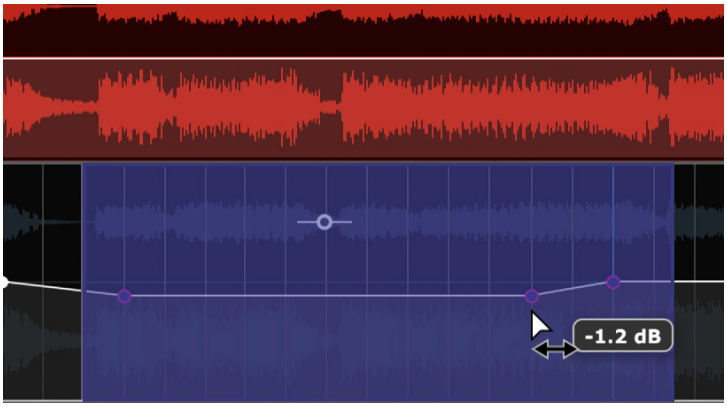
To delete an automation point, right-click on it and choose *Delete Point*.

ADJUSTING MULTIPLE AUTOMATION POINTS WITH THE LINE ADJUSTER TOOL

The Line Adjuster tool lets us do a couple of more convenient tricks.



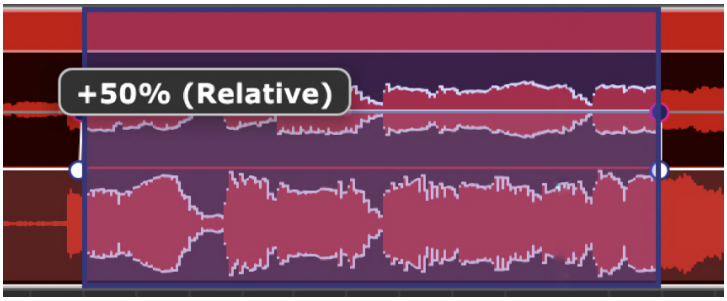
When the cursor hovers between two automation points, you'll notice that the Line Adjuster appears above or below the automation line. Clicking and dragging it up or down moves the closest automation points to its left and right.



To move more than two automation points simultaneously, click and drag a purple highlight square over multiple automation points.

Highlighted points will show a magenta circle around them. Moving the Line Adjuster tool up and down moves all of the highlighted automation points.

INSTANT BOOST/INCREASE AUTOMATION LINE ADJUSTER



To quickly and easily add boost or decrease automation to clips or track regions with no existing automation nodes, click and drag a purple highlight region over the desired region. You'll see an orange automation line adjuster when hovering over the selected area. Moving this up or down will instantly create four automation nodes, creating a new horizontal automation line. Once created, this automation line can be manipulated like any other automation line. This feature can save a fair amount of mouse clicking!

CUTTING, COPYING, PASTING, AND MOVING AUTOMATION DATA

To *Cut* a section of automation, highlight the section of automation to be cut by clicking and dragging over the area to be cut. Now select [CTRL]+X either in Mixcraft's file menu or by right-clicking the mouse to copy. You can paste the cut automation data to a new location by positioning the Caret marker in the desired new location, then selecting [CTRL]+V either in Mixcraft's file menu or by right-clicking.

To *Copy*, highlight the section of automation you'd like copied by clicking and dragging over the area to be copied. Now select [CTRL]+C either in Mixcraft's file menu or by right-clicking the mouse to copy. Position the Caret marker in the desired copy location, and paste by selecting [CTRL]+V either in Mixcraft's file menu or by right-clicking.

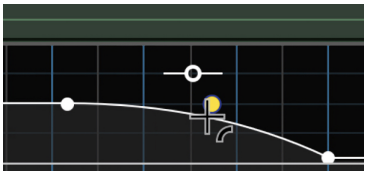
Track automation curves can also be moved by highlighting the desired automation area (i.e. purple highlight) [OPTION] dragging, or copied by [ALT]+dragging.

Automation data may be freely copied between tracks, and even to different parameter lanes. You can also copy multiple automation lanes or automation lanes and clips simultaneously. The only limitation is that Mixcraft will only copy automation data to visible lanes, e.g., if volume and pan lanes are copied to track with only a volume lane

visible, **only the volume controller data will be copied**. This is done to prevent automation data from copying to an “invisible” location and causing confusion.

AUTOMATION CURVES

In addition to the usual “straight line” automation, curves can also easily be adjusted for logarithmic and exponential response. Amongst other uses, these are especially useful for accurately creating “record-style” fade-ins and fade-outs.



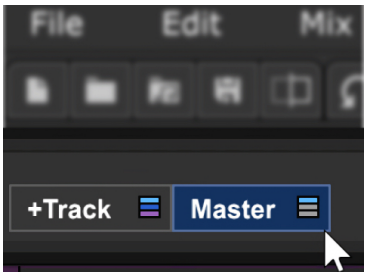
To adjust an automation line’s response curve, hover the mouse pointer over an automation line. A yellow dot will appear toward the middle of the automation line. Click and drag the yellow dot up or down to “bend” the line toward a logarithmic or exponential curve. Curves can also be biased toward the beginning or end of the automation section by dragging the yellow dot left or right.

Fading Out Again

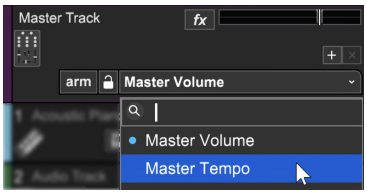
To end a project with an automated fadeout, display the Master Track and select Master Volume in the automation drop-down. Scroll to the end of the project and add volume automation points to lower the volume for the whole project. Learn more in the “Automation and Controller Mapping” section. **LINK HERE**

TEMPO AUTOMATION

Tempo automation uses standard automation-style curves tp control tempo changes graphically in the *Master Track*. This makes gradual tempo increases or decreases a cinch. **The tempo automation lane is only visible with the Master Track view enabled.**

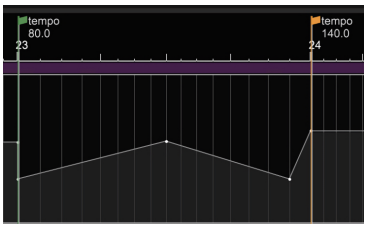


Click the *Master* button at the top of the Track List to show the Master Track.



To view the tempo automation lane, click the pop-up next to the *Arm* button (this defaults to *Master Volume*) and select *Master Tempo*. You'll see the tempo change in the display area of the transport as the song position pointer is moved. All standard automation line operations work as with any other type of automation including adding and deleting points, adjusting overall amounts, or adjusting curve types.

USING TEMPO MARKERS WITH TEMPO AUTOMATION ENVELOPE



If a marker containing a tempo change is created, the tempo automation line will reflect this by creating two nodes automation line nodes, occurring at the same time - one is an "anchor," at the previous tempo position, and the other reflects the new tempo.

MANUALLY ENTERING TEMPO IN THE TRANSPORT TEMPO DISPLAY WITH AUTOMATION

When tempo automation is used, **new tempos can only be entered via the Transport tempo display if the current Song Position Pointer line is a "flat" area of tempo automation**, i.e., a position where tempo automation isn't currently ramping up or down.

The Transport tempo display numbers are dimmed slightly to indicate when the Song Position Pointer is currently atop an automation ramp.

ADDITIONAL AUTOMATION PARAMETERS

Right-click in the track automation header to display additional parameters.

- **Clear**

Deletes automation data in the currently selected lane.

- **Invert**

Reverses the positions of automation data in the currently selected lane. This is useful for reversing the channels with pan automation.

- **Boost**

Raises automation data value in the selected lane by 5%, 10%, 25%, or 50%.

- **Reduce**

Lowers the value of automation data in the currently selected lane by 5%, 10%, 25%, or 50%.

- **Clear All Automation**

Deletes all automation in all lanes for the current track. Be careful with this one!

- **Hide Automation Lane**

Hides the current automation lane - the same as clicking the X in the lane’s header.

RECORDING REAL-TIME AUTOMATION

“Real-time automation” is a fancy way of saying that Mixcraft will record parameter changes as you’re moving a knob or slider, or pressing a button. Upon playback, all of these automation “moves” will dutifully be recreated, as if a swarm of magical elves were obediently working inside Mixcraft (don’t worry, they don’t eat much).

Parameter changes can be recorded using onscreen controls or with the physical controls on a hardware MIDI/USB controller or dedicated control surface.

RECORDING AUTOMATION USING ONSCREEN CONTROLS

The most straightforward way to record automation moves is to use your mouse or trackpad to move onscreen sliders and knobs. There a couple of ways to arm Mixcraft for recording automation. We’ll start with the easiest way... which is super-duper easy!

• Global “Record All Effect and Instrument Automation”

This nifty command essentially tells Mixcraft to look out for any and all incoming automation moves once the *Record* button has been pressed. All channel volume, pan, or send knob moves are recorded, as well as knob or slider movements in effects or Virtual Instruments.

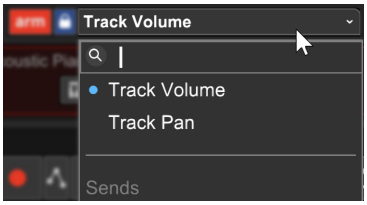
1. In the Main Window menus, check mark *Mix>Record All Effect and Instrument Automation*.

2. To begin automation recording, place the Caret in the desired starting location, and click Record. During automation recording, a new track automation lane for the associated parameter is automatically created and displayed whenever a knob or slider is moved. You can record as many separate controls as desired during automation recording.

• Enabling Automation Recording for Specific Effects or Instruments

This is “Method #2.” Instead of globally enabling automation recording for all possible Mixcraft automation parameters, here we’ll enable automation recording for just one effect or instrument. We’ll demonstrate this with an effect plug-in, but the procedure is the same whether you’re automating an effect or an instrument.

1. Click on the track you'd like to automate a parameter on in the track list. Click on the Automation button to open an automation lane.



2. Click on the automation parameter in the track header next to the automation lane you just opened (by default it will say *Track Volume*). Scroll down to the name of the effect or instrument and click *Record All* in the submenu. When recording is engaged, all automatable parameters for this effect or instrument will be recorded. Control movements on all other effects or instruments are ignored.

Really Important Note: When you've finished recording automation for a particular parameter, remember to click the *Arm* button to disable arming for the automation lane, otherwise the automation will be overwritten (that's a nice way of saying "erased") if automation recording of a different automation parameter is initiated in the same section of the song. Along the same lines, be careful if *Loop* mode is engaged because the automation moves that you record may be instantly overwritten when Mixcraft "comes back 'round."

• Enabling A Single Parameter For Automation Recording aka, Keepin' It Old School

The third method for recording automation is a holdover from older Mixcraft versions and requires the most setup. It's still pretty easy though!

1. Click on the track you'd like to automate a parameter on in the track list.

2. Click the track's automation button. The automation button turns purple (or blue for a MIDI track), and an automation lane opens beneath it. The default automation parameter will be *Track Volume*; to choose a different parameter for automation, click the down

arrow next to the default automation parameter. (When virtual instruments and plug-ins in the list are clicked, submenus display automatable parameters.)

3. Once the appropriate parameter has been chosen, click the *Arm* button beneath and to the left of the automation parameter display; this tells Mixcraft to record controller data for the selected parameter. (The track's main *Record Arm* button does not need to be armed; it **can** be, but this means Mixcraft will record automation data **and** audio or MIDI note data depending on the track type.)

4. Position the playhead where you'd like the automation recording to begin by clicking on the ruler at the top of the project.

5. Press *Record*. If you're recording volume, pan, send level, or other parameters with a parameter control on the main screen or in the Mixer tab, you can simply move these onscreen controls, and Mixcraft records their movements. If you're recording automation for virtual instrument or plug-in parameters, make sure to open up their interface prior to recording (right-click on the keyboard icon or the *fx* icon) for access to controls. Either way, newly recorded automation will appear as it's recording. Remember that you can add as many automation lanes and parameters as desired.

Remember to hit the Stop button when you're done, and be careful not to enable Loop Mode, otherwise, the movements you record may be instantly overwritten when Mixcraft "comes back 'round."

Super Helpful Shortcut

If a virtual instrument or plug-in effect is already loaded into a channel, its user interface can be accessed directly by right-clicking on the keyboard instrument icon or FX button. This is a useful shortcut, and in this case, it will immediately get you to the "gear" icon for MIDI mapping.

TRACK AUTOMATION KNOB

This extra little doodad is easy to miss, but it's really handy. If an automation lane for a track is displayed and the currently selected automation parameter is an instrument or effect parameter, a knob will be displayed to the left of the automation parameter pop-up menu. This knob can be used during automation recording just like the control in an instrument or plug-in. This may seem redundant, but there are a few good reasons to use the track automation knob:

• If you're using a plug-in or instrument with a large user interface and your computer has limited screen real estate, the plug-in interface can be closed and the desired automation parameter can be manipulated using the track automation knob.

• If the plug-in or instrument's onscreen control knob is tiny or awkward, thus making it difficult to accurately control with a mouse or trackpad, the track automation knob is easier to control.

• If you're using a plug-in or instrument with tons of controls jam-packed into its user interface, and you'd like to quickly automate multiple parameters, it can be a lot easier to wrap your brain (and eyeballs) around a couple of neatly arranged knobs in the track list.

AUTOMATING EFFECTS ON NON-CLIP TRACKS

A non-clip track is any track that doesn't have audio or MIDI clips associated with it. The primary track does not have an *X*, because these tracks only display automation in the main clip grip. However, if you choose to display additional parameters for a non-clip track (by clicking the + button), these will have an *X* allowing the extra parameters to be displayed or hidden. The following track types are non-clip tracks:

• SubMix
• Send

- Output
- Master
- Instrument Mix Output
- ReWire

RECORDING AUTOMATION USING HARDWARE CONTROLLERS

This works almost exactly as described in the **Recording Automation Using Onscreen Controls** section but instead of moving or clicking the mouse on virtual on-screen controllers, you'll be able to record the movements of the knobs, sliders, or buttons on a hardware controller, which is really fun and more impressive for studio bystanders.

To record automation using a dedicated hardware controller such as the Mackie MCU or Novation Launchpad, see Using Natively Supported Hardware Controllers**.**

PLUG-IN AND VIRTUAL INSTRUMENT CONTROLLER MODULES

Controller Modules allow MIDI controllers to manipulate plug-in and virtual instrument parameters in a number of ways, and appear between the menu bar and plug-in interface sections of all plug-ins and virtual instruments. We'll explain what each of the three modules does below.

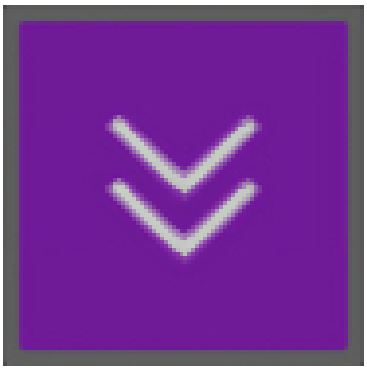
You can create as many Controller Modules as desired. If the number of visible Controller Modules created exceeds the width of the current plug-in, a scroll bar appears beneath, allowing horizontal scrolling to view all Controller Modules.

SHOW/HIDE CONTROLLERS BAR

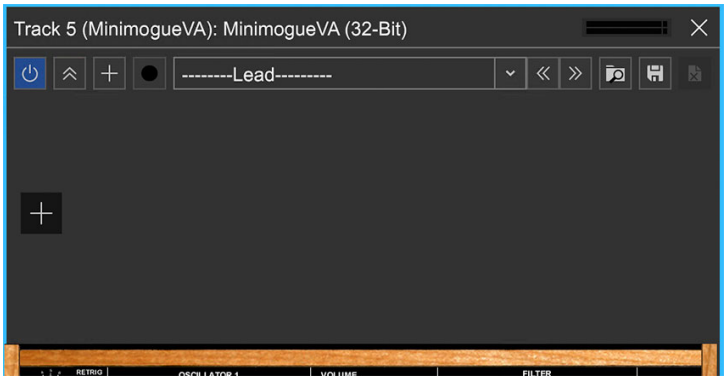
The Controllers Bar is an area above all plug-ins and virtual instrument UI's where the following MIDI parameter Controller Modules can be created: *MIDI Controller*, *Audio Controller*, and *LFO*'s. (red outline added for clarity).

The *Controllers Bar* is also a hoppin' watering hole where air traffic controllers hang out between flights at the St. Paul Downtown Airport, but that's not important right now.

CONTROLLER MODULE BASICS



To show or hide the Controller Bar click the double arrows at the top of a plug-in (for this section, “plug-in” will refer to an effects plug-in or virtual instrument interchangeably).



If no Controller Modules have been created, the bar will appear as a blank gray space with a + sign.

Clicking the + sign next to the show/hide button or the one in the blank Controller Module area opens a pop-up menu to add Controller Modules.

All module types are enabled or bypassed with the tiny power button icon in the upper-left corner and can be deleted with the X button in the upper-right corner. Let’s go over the functionality of each Controller Module Type:

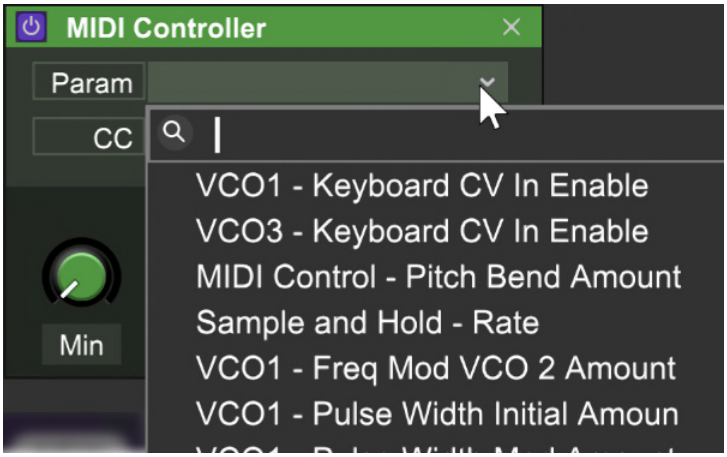
MIDI CONTROLLER MODULE

The MIDI Controller module is used to assign hardware knobs, faders, buttons, etc. to plug-in parameters. This, in turn, allows the recording of plug-in and virtual instrument automation moves into Mixcraft.

• Setting Up The MIDI Controller Module

The *Learn* button does double-duty in the MIDI Controller module, which makes setup very easy.

To set the parameter you'd like to control, click the *Learn* button, then move the control you'd like assign in the plug-in's onscreen user interface. The *Param* box will instantly show the selected parameter, and learn mode will be disabled (the *Learn* button will say *Stop* while it's in *Learn* mode, i.e. waiting for you to move a control).



Parameters can also be assigned manually by clicking in the Param box. This displays a pop-up menu displaying all of a plug-in's parameters. The desired parameter can be selected by clicking on it.

Hardware controllers are assigned to the chosen parameter in a similar fashion-click the *Learn* button and move a knob/slider/switch/button on your hardware controller. When waiting for a controller move, the *Learn* button will say stop; when a signal is received from the hardware controller, a MIDI controller # appears in the CC box and Mixcraft automatically exits *Learn* mode. The *Value* knob moves when the controller moves, as does the assigned control in the plug-in interface.

If nothing happens when you move the controller during assign mode, click Stop to escape Learn mode. This usually means your hardware MIDI controller isn't communicating with Mixcraft - this can be checked in *Preferences>MIDI* or *Preferences>Control Surfaces*.

The incoming MIDI controller can also be manually assigned by double-clicking the number next to CC or changed using the up/down buttons, but learn mode is the fastest and easiest in most situations.

Assigning the parameter to be controlled as well as the hardware controller can be done at the same time while in Learn mode, which makes the setup super-duper quick.

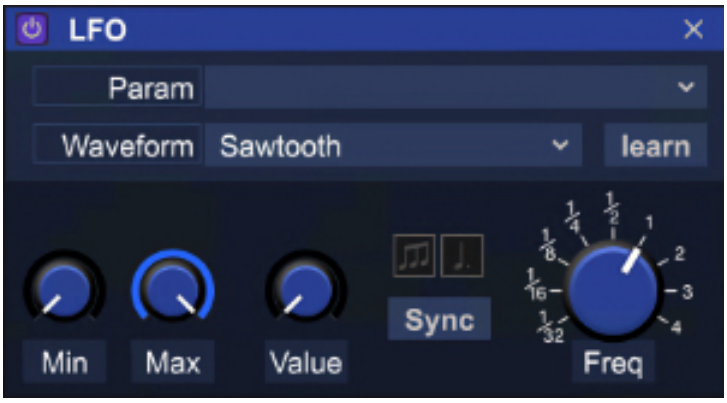
- **Min and Max controls**

The *Min* and *Max* knobs limit the lower and upper limits of incoming hardware controls. This is useful for utilizing the entire range of a hardware control to precisely manipulate a parameter's "sweet spot."

- **Value**

The *Value* knob reflects the current position of incoming controller data and moves in lock step with the currently assigned parameter.

LFO



LFO is short for “low-frequency oscillator.” Generally seen in synthesizers, LFOs use a slow-moving repeating waveform to modulate (fancy word for “change over time”) a parameter. For example, using a sine wave to modulate pitch at around 6 Hz (cycles per second) creates the familiar sound of vibrato. Using a square wave to module pan position results in a ping-pong delay - the possibilities are vast.

Mixcraft’s LFO Controller Module is really simple to use and can be synced to the master project tempo with the click of a button, meaning those modulation waveforms can do their cycling thing in perfect time with the music.

• Setting Up The LFO Module

To set the parameter you’d like to control, click the *Learn* button, then move the control you’d like assigned in the plug-in’s onscreen user interface. The *Param* box will instantly show the selected parameter, and *Learn* mode will be disabled (the *Learn* button will say *Stop* while it’s in *Learn* mode, i.e. waiting for you to move a control).

Parameters can also be assigned manually by clicking in the *Param* box. This displays a pop-up menu displaying all of a plug-in's parameters. The desired parameter can be selected by clicking on it.

• Waveform

Choose from *Square*, *Sawtooth*, *Ramp*, *Triangle*, *Sine*, or *Random*. Because the LFO is always running, the *Value* knob constantly runs and its movement clearly illustrates the unique motion of each waveform.

• Min and Max controls

These determine the depth of the LFO sweep and are useful for zeroing on a portion of the control’s span. The best way to get a feel for how the *Min* and *Max* control

parameters is to assign an LFO Controller to a parameter (preferably one controlled by a knob), then set *Min* and *Max* both to 50%; this essentially shuts the LFO off. Now try gradually reducing the *Min* knob setting and increasing the *Max* knob setting.

• Value

The *Value* knob displays the motion of the current LFO settings and mirrors the motion of the currently assigned plug-in parameter.

• Frequency / Sync

This controls the speed of the LFO. By default, the *Sync* button is enabled, which synchronizes the LFO cycles to the current project tempo.

When in *Sync* mode, the *Frequency* knob can be set to note values ranging from 1/32 to four bars. The tiny buttons above the *Sync* button allow triplet and dotted note values.

Disabling the *Sync* button puts the LFO's in free-run mode. The note values around the *Frequency* knob disappear as well as the *Triplet* and *Dotted* value buttons, and the knob can be freely adjusted from 0.02 Hz up to 20 Hz.

AUDIO CONTROL

Instead of using a knob or slider on a MIDI hardware controller, *Audio Control* lets the relative level of any Mixcraft audio channel control plug-in and virtual instrument parameters. The source Audio Control track can be a standard audio track, a Virtual Instrument track, or even live audio from an armed audio track.

• Setting Up The Audio Control Module

To set the parameter you'd like to control, click the *Learn* button, then move the control you'd like assigned in the plug-in's onscreen user interface. The *Param* box will instantly

show the selected parameter, and *Learn* mode will be disabled (the *Learn* button will say *Stop* while it’s in *Learn* mode, i.e. waiting for you to move a control).

Parameters can also be assigned manually by clicking in the *Param* box. This displays a pop-up menu displaying all of a plug-in's parameters. The desired parameter can be selected by clicking on it.

The *Tracks* pop-up selects the audio source used to control the MIDI controller value. This can be any current audio, submix, or instrument track.

• Type
This pop-up menu determines where the control signal is tapped inside Mixcraft, which can have a great impact on its behavior as a control source.

Post-Fader- Audio Control signal is tapped *after* mixer fader level, channel EQ, and insert effects. This means all these parameters will affect the control signal.

Pre-Fader- Audio Control signal is tapped *prior* to the fader level but after insert effects and EQ. Fader level adjustments have no effect on the control signal, but inserted effects - keep this in mind if you use this setting with delay or reverb insert effects.

Dry- Audio Control signal is tapped *prior* to fader level, insert effects and EQ. Fader-level adjustments have no effect on the control signal. The safest choice for most situations.

• Level Meters
Not actually a control, but they visually indicate incoming Audio Control signal level. Helpful for making sure everything’s working as it should.

• Min and Max controls
The *Min* and *Max* knobs limit the lower and upper limits of incoming audio control signals. This is useful for utilizing the entire range of a hardware control to precisely manipulate a parameter’s “sweet spot.”

• Value
The *Value* knob reflects the current position of Audio Control data and moves in lock step with the currently assigned parameter.

• **Linear/Logarithmic**

This defines the “taper” of how audio level affects control amount. Think about it sort of like setting the velocity curve on a MIDI keyboard controller.

Linear- An even one-to-one relationship between level and signal modulation amount.

Logarithmic- Applies a greater amount of modulation as levels go up (this works more like the hearing curve of the human ear. Science is rad.) Pretty sure Logarithmics did that creepy 80s song with the cows in the video, but don't quote us on it.

• **Attack**

Much like the attack knob on a compressor, *Attack* slows down the effect a loud or quick transient in the audio signal has on parameter control. Setting the *Attack* knob at zero equates to an instant effect on the control parameter; higher *Attack* settings slow the effect of loud or fast transients.

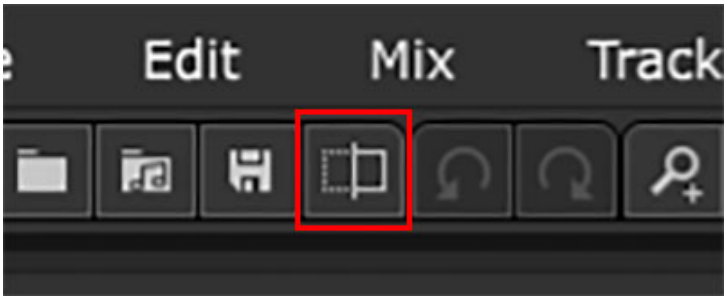
• **Release**

When a loud signal quickly loses amplitude, *Release* slows down the effect it has on parameter control. Setting the *Release* knob at zero equates to an instant effect on the control parameter; higher *Release* settings slow the effects of audio signals that quickly get softer.

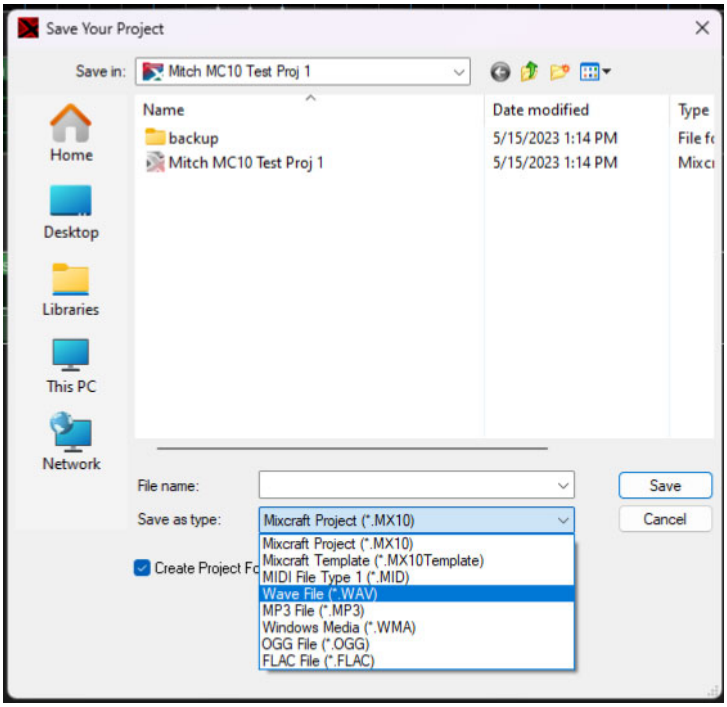
MIXING DOWN TO AUDIO AND VIDEO FILES

Projects can be mixed down to any of the following audio file types:

- MP3
- OGG
- WAV
- WMA
- FLAC

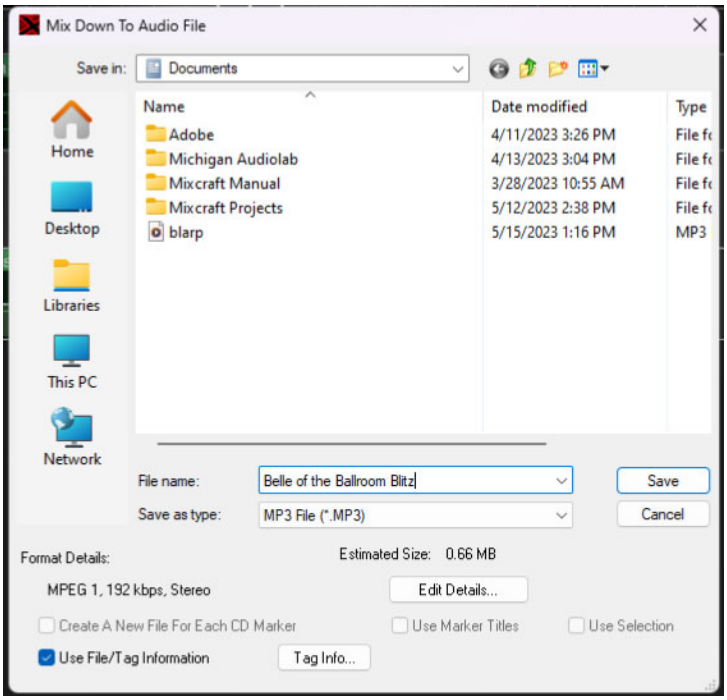


Being by clicking the *Mix Down To Audio File* button on the toolbar or select *File>Mix Down To* from the Main Screen menus, followed by selecting the desired format.



Alternatively, you can choose *File>Save As...* from the Main Screen menus and then click the *Save as* type drop-down menu to select the desired format.

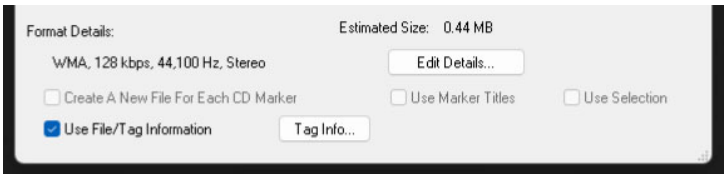
Once you're viewing the *Mix Down Project* window with the correct format, you'll see the following dialog window:



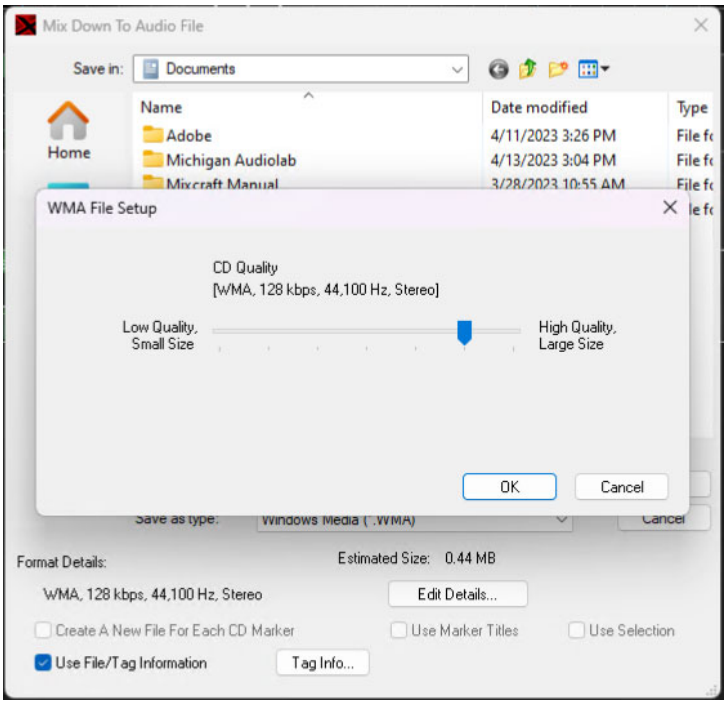
Give the file a name, and choose the preferred audio file format.

FORMAT DETAILS

Displays current format details such as bit rate and number of audio channels (i.e. mono or stereo).



- **Edit Details...**



This opens a window where you can set the audio quality of files. Generally speaking, higher quality settings will create larger file sizes. Selecting the *Preset Quality* radio button simplifies audio quality settings with a single slider. If you're knowledgeable about audio compression, the Specify Settings radio button lets you set individual digital compression parameters for the selected file type.

- **Estimated Size**

This shows the approximate size of the resulting mix down file in megabytes.

- **Create A New File For Each CD Marker**

If you've added CD markers to the project, this causes the mix down to create multiple files, one for each CD marker encountered.

- **Use Marker Titles**

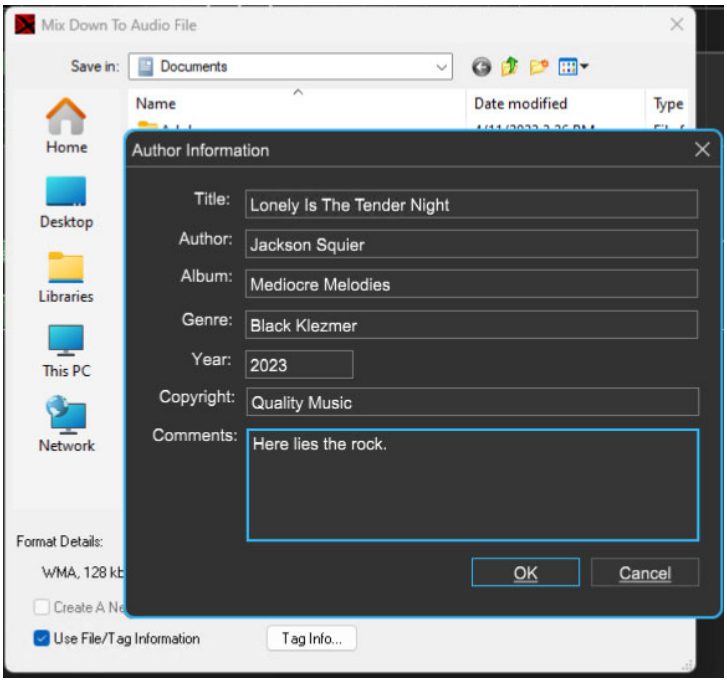
If you've chosen Create A New File For Each CD Marker, this option uses the titles in the marker for the name of the file and tag.

- **Use Selection**

This lets you create a file from a selected region in a project.

- **Use File/Tag Information**

Choose this option if you want the audio file(s) to be tagged with the project's author information and CD track names (if set).



- Click Tag Info... to edit the project's author information.

• Mix Down To Video

Projects containing video can be mixed down to a new video file. Mixcraft supports mixing down to AVI, WMV, and MP3 formats. (Shouldn't they just call it "MP4-mat?")

You Down With OGG?

OGG is a lossy audio compression format that delivers better sound quality than MP3 (we think, but this can be debated on your favorite audio forum) and potentially saves

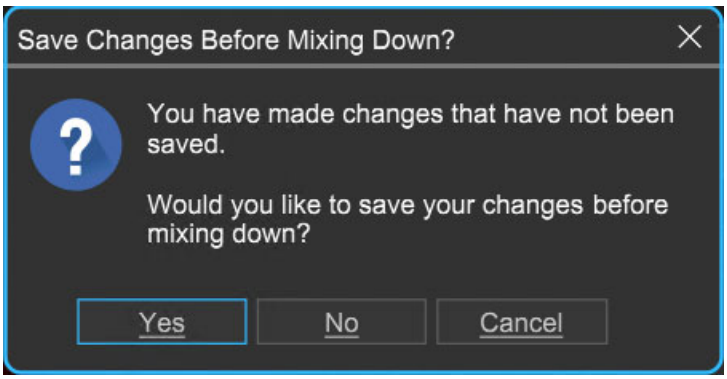
a lot of disk space. Its full name is actually "Ogg Vorbis". We're not sure what that means, but we're pretty sure its creators watched a lot of Star Trek.

For tons of information on how to render and mix down with video please see the **Rendering Videos** section.

MIX DOWN TO STEMS...

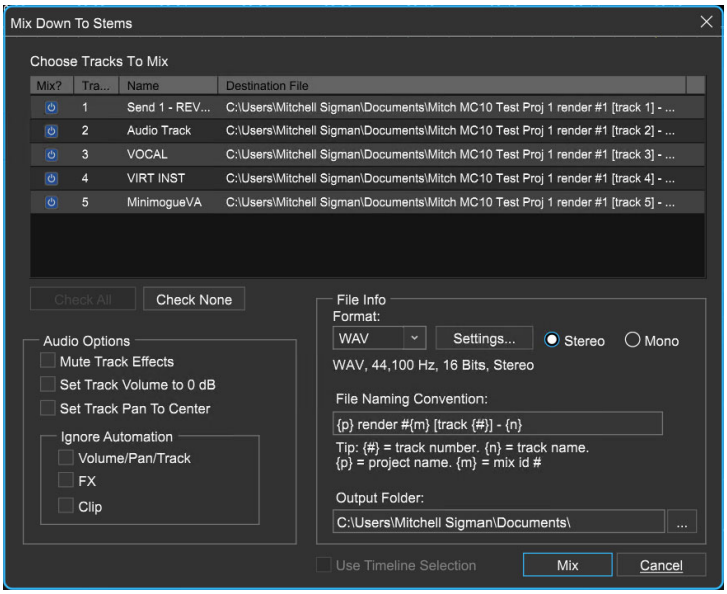
Mix Down To Stems is similar to the standard *Mix Down To Audio File* function, but instead of creating a single mix file, it creates separate audio files for each individual track. This is useful if you're handing off a project for mixing (or further composition) to someone who isn't using Mixcraft; they can simply import the individual audio files into empty tracks in their DAW of choice. Mixing to individual stems can also be useful if you're producing music for TV or film, as some editors and audio producers prefer to receive music and effects in a separated, unmixed state.

To use *Mix Down To Stems*, click the *File* menu in the top-left corner and select *Mix Down To Stems*.



Mixcraft will ask if you'd like to save any changes made to the current project; it's usually a good idea to do so. Next, you'll see the impressively thorough *Mix Down To Stems* window.

CHOOSE TRACKS TO MIX



The top portion of the window displays all standard audio tracks, send tracks, submix tracks, and virtual instrument tracks within the current project.

- **Mix?**

These checkboxes select which tracks will be output to new audio files.

- **Track#**

This column shows the track numbers in the same order as the tracks in Mixcraft's main track window.

- **Name**

Displays the track name.

- **Destination File**

This column displays where the mixed file will land as well as its full name, as specified in the File Info section below. (the scroll bars at the bottom and right side of the *Choose Tracks To Mix* window will make it easier to see file names and info).

- **Check All**

Use this button to quickly check all tracks in a project for export.

- **Check None**

Conversely, this button unchecks all tracks in a song. This can save a lot of mouse clicks if the song contains many tracks but you'd only like to select a couple of them.

AUDIO OPTIONS

• Mute Track Effects

Selecting this disables insert effects for all exported tracks. If you're handing off tracks for mixing, it's good to find out what the mix engineer needs. Most often, mix engineers won't want compression or EQ types of effects "burned-in" to the files, but they may want time-domain effects such as synchronized delays. As an alternative to simply clicking the *Mute Track Effects* button, you can customize which tracks retain their insert effects by clicking a track's *fx* button and check boxing which effects to engage or bypass.

• Set Track Volume To 0db

This automatically sets all fader volumes to 0db for more uniform levels in the resulting files. Be careful though, because this can potentially create clipped files. Note that Mixcraft's onscreen faders won't move; this only affects files as they're being exported.

• Set Track Pan To Center

Like *Set Track Volume To 0 dB*, checking this pans mixer channels to center when files are being created. This is useful in couple of ways depending on whether you're creating mono or stereo files. Let's say you have a mono tambourine that's panned hard left. If you output a mono file, the hard left panning could cause the overall mono level to be lower than if it were panned to the center. If you're outputting a stereo file, the tambourine would retain its hard left orientation in the resulting file, which could potentially be bad for a mix engineer. In a nutshell, *Set Track Pan To Center* is the safest choice if you'd like to leave panning decisions to the recipient of the individual files.

• Ignore Automation

These checkboxes allow you to temporarily disable all volume, pan, or other track automation, automation applied to effects parameters, or clip automation as applied to individual clips. Again, this can be really important if you're handing off a project for someone else to mix - they'll most certainly want automation disabled in order to create their own.

FILE INFO

Here you'll specify file formats, naming conventions, and the destination folder for newly created files.

• **Format**

Choose the audio file format here. Options include Wave, FLAC, mp3, OGG, and WMA. For the greatest flexibility and fidelity, Wave is the best choice as it's a full-fidelity, uncompressed audio format, and can be read by almost any DAW software. But Wave's uncompressed nature can make for large file sizes, so be aware of this.

• **Settings**

Opens a window where format-specific preferences can be set. Most of these relate to file size vs. audio fidelity (i.e., larger file sizes = better fidelity and vice-versa. It's always a tradeoff, right?). The good news is that unless the project is excessively large (like, 100 tracks), uncompressed audio files aren't considered all that large by today's standards, so it's usually best to lean toward quality over compact file sizes.

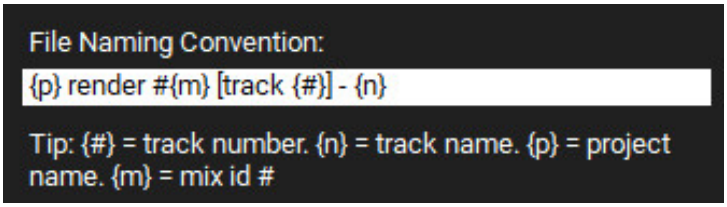
• **Stereo/Mono Radio Buttons**

These buttons let you choose whether the outputted files will be mono or stereo.

• **Filing Naming Convention**

I went to the File Naming Convention in Davenport, Iowa back in '87, and boy could those guys party! Kidding aside, if you've ever had to rename dozens of files because your dumb computer kept adding useless footers or characters, you'll love this handy feature.

It looks a little scary, but it's actually pretty easy to use. You can type any text you like into the white box. Characters inside the brackets will automatically be filled in with the appropriate information as shown in the *Tip* guide beneath the window.



Let's say we left the *File Naming Convention* settings as shown above, and our project was called "Hokey Love Song". If we were to output the first four tracks, the file names would be as follows:

Hokey Love Song render #1 [track 1] - drums

Hokey Love Song render #1 [track 2] - bass

Hokey Love Song render #1 [track 3] - Funk Clav 2

Hokey Love Song render #1 [track 4] - Acoustic Piano

You can rearrange regular text or the location of the bracketed variables however you like. You can also delete any of the bracketed variables, though we recommend keeping at least one so you don't end up with a bunch of files with the same name.

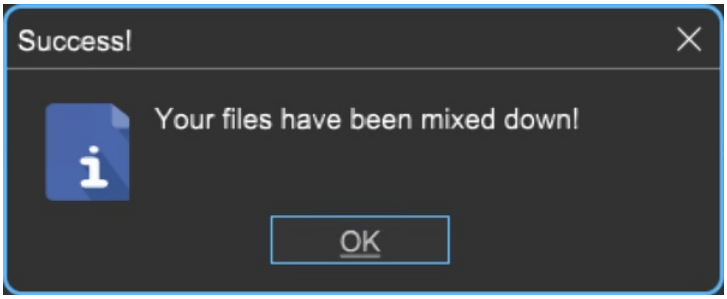
- **Output Folder**

Here's where you'll set the destination folder for mix stem files. If you're one of those whiz bang computer genius-types, you can manually type the file path in the field, or if you're like the rest of us, click on the ellipsis (i.e. three dots) button to the right for a standard file dialog where you can specify a destination directory or create a new one.

USE TIMELINE SELECTION

If you only need to output a section of a project, check the *Use Timeline Selection* box and highlight a section by click-dragging in the clip area or the ruler above.

TIME TO MIX DOWN!



When you've set all the necessary parameters, click the *Mix* button, and soon you'll see the *Success!* window below. If you change your mind, you can always click the Cancel button prior to mix down.

Too Much Time On My Hands

By default, Mix Down To Stems outputs all selected audio files beginning at bar one, regardless of clip locations. If a clip doesn't begin until a later offset, Mixcraft "fills in" the empty space with silence.

If you're handing off files to someone using a different DAW, this greatly reduces the possibility of timing issues, because they'll be able to drop all the files on bar number one in their DAW, and the files will play in time (it's a good idea to let them know the tempo, to insure that bar lines and click will work properly). Because clip locations aren't stored with audio files,if Mixcraft simply output clips beginning at their actual location in a project (i.e. not at bar one), the recipient would have no way of knowing the proper locations of each file, and the result would be an out-of-time disaster.. I'm talking to you, everybody-who-ever- gave-me-a-ProTools-file to mix!

RENDERING VIDEOS

Once the editing of a video is completed, it needs to be output to a single file for playback. Because videos typically contain a large amount of data representing moving picture and audio, video is usually “compressed” as it renders for output using special algorithms designed to reduce file size and required processor power for playback. This compression process can take a while, dependent on your computer’s processor speed.

Mixcraft supports saving video in MP4, WMV, and AVI formats. AVI is an uncompressed format, so the files it creates will be larger than files created using WMV or MP4 format. If you’re uploading video to YouTube, you should choose WMV or MP4 format (to avoid potentially excessive upload times, dependent upon the speed of your Internet connection).

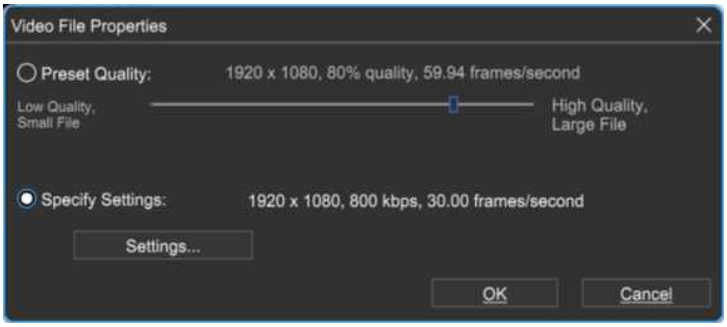
Note: MP4 format is only available with Windows 7 or higher.

To save the current project as a video, click *File>Mix Down To>*, then select MP4, WMV, or AVI.

MP4 RENDER SETTINGS

To render a movie using the MP4 format, click *File>Mix Down To>MP4* in the Main Window menus.

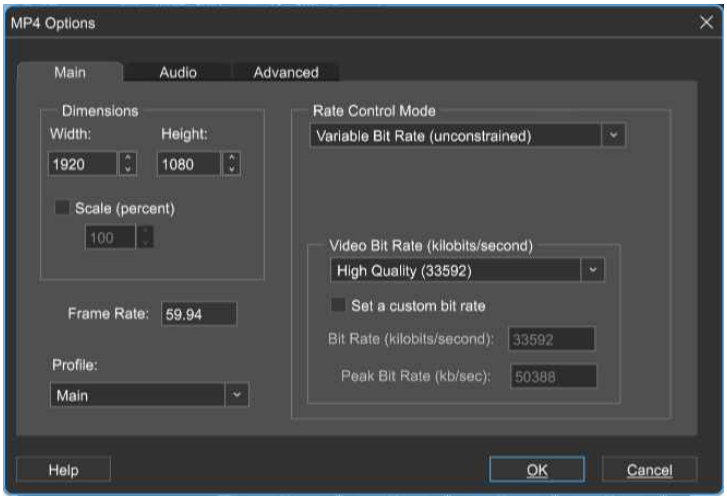
To customize MP4 render settings, click the *Edit Details* button in the file save window.



When creating a movie file, you’ll generally need to choose between quality and final file size (i.e., a larger file size equals better quality). If you’re not a video compression guru,

simply choose the *Preset Quality* radio button and move the Quality slider left to choose a preset resulting in a smaller file size at lower quality, or right to choose presets with larger file sizes at higher quality.

If you're a little more familiar with video compression and want to further customize MP4 rendering parameters, choose the *Specify Settings* radio button and click the *Settings* button. This opens the only-slightly-scary *MP4 Options* window:



MP4 Compression Settings In The Modern World

Generally speaking, saving every last bit of file size is far less important than it was in the past due to faster Internet connections and larger hard drives. If you're creating video content for a video upload site such as YouTube, keep in mind that they will compress the file size (and therefore the quality) on their end, so it's often a better idea to render larger, better-quality videos to maintain fidelity.

MAIN TAB

- **Dimensions**

The *Dimensions* drop-down menu allows the selection of the most common standard definition and high-def (HD) sizes. The *Set Custom Dimensions* checkbox allows a custom video size to be specified.

• **Scale**

Checking this box lets you scale output dimensions from 1 - 100% of the original video size, with a few restrictions (videos must be at least 40 x 40, for instance).

• **Frame Rate**

Allows selection of the most common frame rates used in video, film, and TV. The Set Custom Frame Rate checkbox allows a custom frame rate to be used (odd frame rates sometimes don’t play nice with some playback platforms, usually showing up as weird sync issues).

• **Profile**

Controls the degree of sophistication in encoding and decoding with *High* resulting in the best quality (and largest file size), and *Base* resulting in the smallest file size with the lowest fidelity. *Main* is an intermediate setting between *Base* and *High*.

RATE CONTROL MODE

• **Variable Bit Rate (Unconstrained)**

The unconstrained part means that while the encoder tries to maintain the average bit rate you’ve specified, the bit rate could temporarily hit peak values of any amount. This is the default mode.

• **Quality Level Mode**

A quality level from 1 - 100% can be specified and the encoder chooses bit rates to match. Lower values result in smaller files and lower quality, higher values result in larger files and higher quality. Microsoft suggests a default value of 70%. We’ve found that setting the quality level at 100% doesn’t guarantee a lossless video. If videos show rendering artifacts at 100% quality, try *Variable Bit Rate (Constrained)* for improved quality.

• **Constant Bit Rate**

This generally produces larger file sizes than the VBR options but could be useful if a video needs to be streamed at a specifically limited bit rate and you want to be sure the video’s bit rate never exceeds that.

• **Variable Bit Rate (Constrained)**

Similar to *Variable Bit Rate (Unconstrained)* but in addition to setting an average bit rate,

you can pick a peak bit rate the encoder isn't to exceed. There's a peak bit rate edit control on this tab that will only be enabled if you've selected this option.

Note: Constant Bit Rate and Variable Bit Rate are only available when using Windows 8 or higher.

• Video Bit Rate

Influences how large the rendered file will be; additionally, larger files will require a higher-speed Internet connection for smooth streamed playback. A higher bit rate will result in a larger file size, but better fidelity. Click the pop-up menu to choose from standard rates, or set a custom bit rate by checking the *Set a custom bit rate* box and entering a bit rate.

AUDIO TAB

These settings determine audio quality. Like video settings, higher kbps (kilobyte-per-second) settings result in larger files with improved fidelity. If the audio quality is non-critical (the audio content is spoken word or really really boring), you can reduce this and save file size.

ADVANCED TAB

These options require Windows 8 or higher. If you're running Windows 7, you won't see these. All *Advanced* tab parameters have checkboxes to enable them, so if you're not sure what to do, just leave everything unchecked and Mixcraft automatically uses the default values.

• Use CABAC Compression

CABAC (Context-adaptive binary arithmetic coding) is a type of lossless compression that may be applied in addition to lossy video compression. It won't affect video quality and usually results in a smaller file size. It won't result in smaller file sizes 100% of the time, but it's likely enough to help that we leave it enabled by default.

If you've selected the *Base* profile on the main tab, CABAC compression won't be used. If you uncheck this option or you're using the *Base* profile, the encoder will use an older and usually less efficient variety of lossless compression called CAVLC instead. To read more about this, see **https://en.wikipedia.org/wiki/Context-**

adaptive_binary_arithmetic_coding. (We recommend listening to the Genesis tune "*Abacab*" playing while reading it.)

• Adaptive Frame Rate

Checking this allows the encoder to change the frame rate throughout the file; like variable bit rate, but for frame rate instead. We've found that this option rarely impacts the rendered file, but it will sometimes produce slightly smaller files if the input video has lots of non-moving video (such as with a slide show).

• Set Max Consecutive B Frames

B frames are non-key frames that can extract data from both the preceding and following frames (as opposed to normal non-key frames, which just get data

from preceding frames) to optimize compression. For more about frame types, see **https://en.wikipedia.org/wiki/Video_compression_picture_types**

This setting shouldn't affect output quality, but could increase the amount of processing required for encoding and decoding. The default value is zero, but it can also be set to one or two. We've found setting this to non-default values sometimes reduces output file size and sometimes increases it - but we haven't noticed a repeatable pattern.

• Set Quantization Parameter

Roughly speaking, this sets the amount of fine detail that can be compressed out of the video. The eye notices less detail in frames containing motion than in still frames, for instance, so given a higher *Quantization Parameter* setting, an intelligent compression algorithm has free reign to remove more detail from those frames.

The valid range is from 0 - 51, with smaller values meaning larger, higher quality files and higher values meaning smaller, lower quality files. However, 18 - 28 is considered the normal range, with 18 considered near-lossless and values above 28 having unacceptably low quality, and 23 a reasonable default value. In testing, we've found this to be generally accurate, with the additional caveat that values above 26 actually result in larger files to go with the lower quality.

• Set Rendering Complexity Factor

Microsoft describes this as a quality option, but in practice, we've found that higher

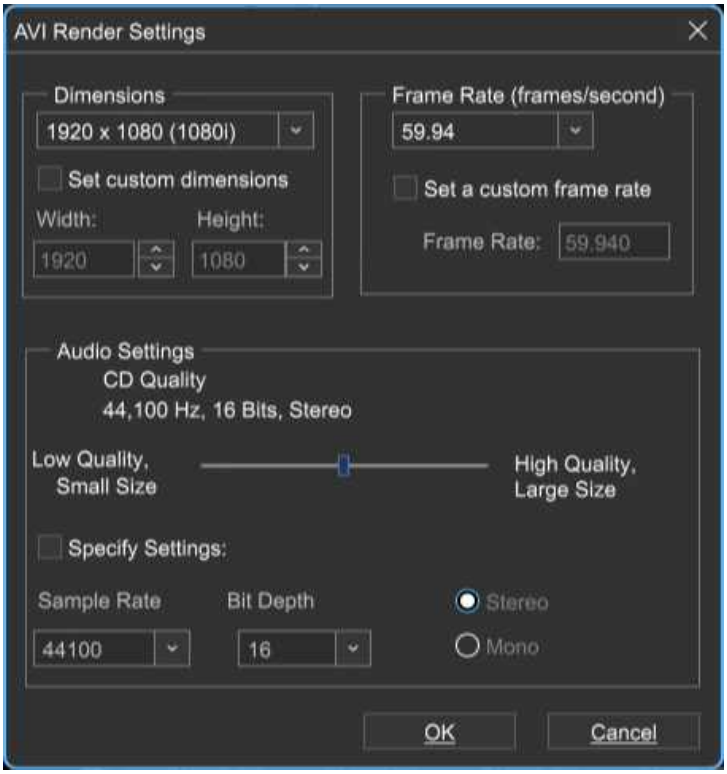
values result in more compression and lower values result in less compression. The trade-off for high compression is slightly longer render times and potentially lower quality. The valid range is 0-100, with the high values leading to more compression.

AVI RENDER SETTINGS

To render a movie using the AVI format, click *File>Mix Down To>AVI* in the Main Window menus.

To customize AVI render settings, click the *Edit Details* button in the file save window.

When creating a movie file, you'll generally need to choose between quality and final file size (i.e., larger file size will be better quality). Following are the settings in the AVI Render Details window:



- **Dimensions**

The Dimensions drop-down menu allows the selection of the most common standard definition and high-def (HD) sizes. The *Set Custom Dimensions* checkbox allows a custom video size to be specified.

- **Frame Rate**

The *Frame Rate* drop-down menu allows the selection of the most common frame rates used in video, film, and TV. The *Set Custom Frame Rate* checkbox allows a custom frame rate to be used (careful, funky frame rates sometimes don't play nice with some playback platforms, usually showing up as oddball sync issues).

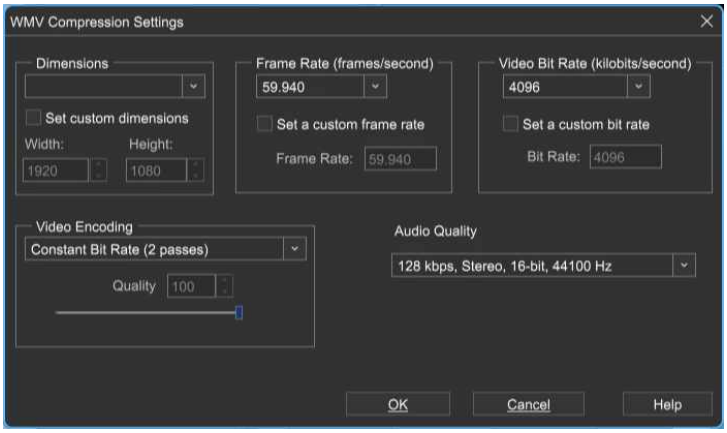
WMV RENDER SETTINGS

To render a movie using the WMV format, click *File>Mix Down To>WMV*.

To customize WMV render settings, click the *Edit Details* button in the file save window. This lets you choose specific compression settings when you're rendering a video project to a WMV video.

If you're not a video compression guru, select *Preset Quality* and adjust the slider for the best compromise of file size vs. playback quality. Move it all the way to the left for the smallest possible file size, or all the way to the right for the highest-quality video.

WMV ADVANCED SETTINGS DIALOG



For more detailed control over WMV compression characteristics, select Specify Settings and click *Settings...* Now would be a good time to put on your propeller cap!

- **Dimensions**

Specifies the height and width of the video. It defaults to the same resolution as the smallest video in the current project. The dimensions combo box holds a variety of standard settings, or the *Set Custom Dimensions* box can be set to any desired size.

A few things to remember when setting custom dimensions: height and width must both be even multiples of four, or DirectShow will refuse to render. If the dimensions you choose are too large, DirectShow may not have enough memory to render the video. If the chosen dimensions are a different aspect ratio than the original videos, the resulting video may look stretched or squashed.

- **Frame Rate**

Specifies how many frames per second the video contains. The frame rate defaults to the highest frame rate found in the project's video clips. (To find a video's native frame rate, right-click on the video clip and select *Properties*.) The *Frame Rate* combo box contains a variety of standard frame rates, but if you don't see the frame rate needed, check the *Set a custom frame rate* box and type in a specific frame rate.

Should I change the default frame rate?

Probably not. Increasing the frame rate to one higher than any of the project's video clips won't improve the final video quality while decreasing the frame rate will usually lower the quality. Even if the primary concern is video size, changing the frame rate is not necessarily useful; depending on the chosen encoding method, lowering the frame rate can potentially increase the file size. If you're trying to alter the frame rate to produce smaller file sizes, you'll need to experiment to find the best setting.

- **Video Encoding**

This setting specifies approximately how much bandwidth video playback will require, in kilobits per second. It's one of the primary factors affecting compression. A higher bit rates mean larger files and higher quality, while lower bit rates result in smaller, lower-quality video files. The right bit rate to use will depend on the dimensions and frame rate. A bit rate that produces a high-quality 720 x 480 video may result in a grainy, pixelated video at 1440 x 1080. Again, you'll likely need to experiment for the best results.

Microsoft provides a handful of encoding methods for WMV creation. Which one to use depends on your priorities (quality vs. file size) as well as the video content. In practice, an encoding method that produces the best results for one video may not produce the best results for another.

• Constant Bit Rate (One Pass)

This method was designed to handle live streaming video and will usually produce the lowest quality results when rendering to a file. Because it’s a one-pass method, though, it takes half as long to render to file as the two-pass methods, so it might be the choice for you if the world’s ending in a few minutes and you really want to be able to watch the video before it’s all over.

• Constant Bit Rate (Two Pass)

This method will usually produce good-quality video if you’ve set a sufficiently high bit rate. Because it’s a two-pass method, it’ll take twice as long to create the video as one-pass methods will. Since the bit rate will be consistent for the entire video, it should work well for videos intended to stream over a network or the Internet.

• Variable Bit Rate with Quality Setting

Using this encoding method with the quality slider at its highest setting usually results in higher-quality videos than the aforementioned encoding methods. However, the resulting video files tend to be about three times larger. Use this method if quality is the highest priority. This is a one-pass encoding method, which means it will take roughly half as long to create

the video as with two-pass methods. (The number of passes refers only to the creation of the video, and doesn’t affect the speed of video playback.)

• Variable Bit Rate with Bit Rate Ceiling

This two-pass method uses a variable bit rate, which means that it’s likely (but not guaranteed) to produce smaller file sizes than the constant bit-rate methods. With variable bit rate encoding, the bit rate you choose will be the average bit rate, but actual bit rate during playback may vary depending on how complex the video is. (Sections of video with lots of motion will probably have a higher bit rate, and sections with little motion will have lower rates.) This method has a max rate ceiling, which means that it’ll keep the highest bit rates from exceeding the average bit rate. Consequently, this

method is better suited to streaming than the Unconstrained Variable Bit Rate method, but may not produce video of quite as high a quality.

• **Variable Bit Rate (Unconstrained)**

This method is similar to the VBR with Bit Rate Ceiling method but lacks the bit rate ceiling. This means that, while your specified bit rate will be the average bit rate for the video, the bit rate could reach infinitely high (or at least really, really high) levels during short sections of the video. This could cause choppy playback during these sections during streaming, but can also result in higher quality for these sections, making it a better choice for video to be played back from a hard drive.

• **Audio Quality**

This section lets you choose the quality sound. It will list all WMV-compatible audio quality options installed on the computer. Audio almost always uses far less disk space than video, so choosing a high audio quality setting will rarely have much relative effect on overall video size. A setting of 128 kbps usually produces acceptable audio quality.

DIMENSION DEMENTIA...

You think audio has lots of format options? We music people have it easy. Video can have a myriad of options with regard to size, frame rate, compression, and more. Just to simplify things a bit, “dimensions” refers strictly to a movie’s size, vertically and horizontally on the screen, expressed in pixels. Here’s a quick primer on sizes and their typical application:

• **320x240**

Really small, from back when computers and Internet connections had a tough time handling video content. Rarely used these days.

• **640x480**

This was the standard for full-screen video on computers for many years but has fallen by the wayside with faster processors and online connections.

• **720x480 NTSC**

Remember that big heavy thing with a glass screen that used to reside in your living room? Me neither. Before high-def, 720x480 was the standard for televisions in the US. NTSC is an acronym for, “a bunch of guys who used to argue about US analog TV standards and are probably now unemployed.” Actually, it stood for “National Television System Committee.”

• **720x576 PAL**

The European equivalent of the NTSC, with slightly different dimensions and a different number of resolution lines, so you couldn't play your Fellini and Truffaut VHS tapes in the US.

• **1280x720**

Referred to as 720p, this is the smaller of high-definition formats, generally seen in the "first wave" of flat-panel LCD TVs and digital cameras with video capabilities.

• **1440x1080**

Referred to as 1080p, this is super high-def, butterfly-wings-in-your-face-at-the- store resolution. The difference between 1080p and 1080i gets a little confusing, but the basic idea is that the "p" stands for "progressive scan," meaning that displays are drawn one after the other for more realistic motion. Progressive scan presents the most realistic motion.

• **1920x1080**

Referred to as 1080i, the difference between this and 1080p is that the display line drawing is "interlaced." Content is broadcast at 30 frames per second, but it's displayed at 60 frames per second by drawing lines in two passes; one for even lines and one for odd lines. This is done to reduce perceived flicker.

OPTIMIZING VIDEO OUTPUT

If you're using the *WMV Compression Settings* dialog, you'll probably want to dig in and read all the details, but here are a few quick answers to help assist with some common goals:

How do I achieve the highest quality video?

Using the *Variable Bit Rate* with the quality setting encoding option and then setting its quality slider to the highest setting (by sliding it all the way to the right) will almost always produce the highest quality results, but it will also produce files that are about

three times larger than other methods. If that’s too big, try reducing the quality slider a bit or choosing a different encoding method. (That said, we don’t recommend the *Constant Bit Rate (1 pass)* method, as it usually produces low-quality results.) Which encoding method works best generally differs depending on the video content; you might have to experiment with multiple methods.

Bit rate also has a large impact on video quality. Higher bit rates will result in higher video quality, albeit with larger file sizes. There will usually be a point at which a higher bit rate won’t have any noticeable effect, but raising the rate won’t hurt video quality.

How can I create the smallest video files?

Video dimensions and bit rates will usually impact file size the most, with smaller dimensions and lower bit rates producing the smallest files. The encoding method can also be important - don’t choose the *Variable Bit Rate* (unconstrained) method, and if you choose the *Variable Bit Rate* with a quality setting method, don’t set the quality slider to its highest setting.

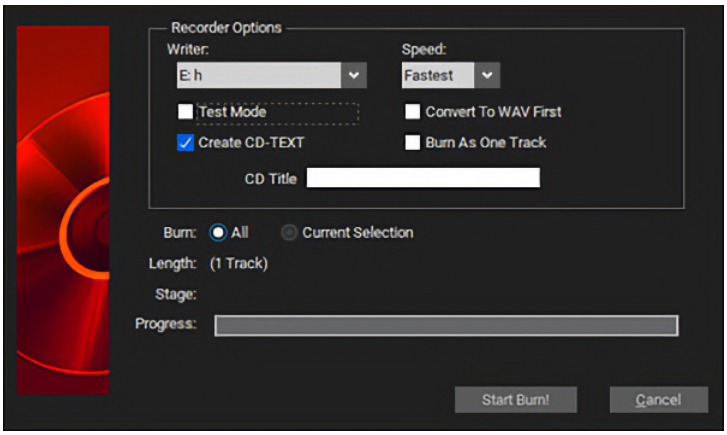
What video settings should I use for YouTube uploads?

YouTube recommends using the same resolution and frame rate as the original video. Unless the file size exceeds YouTube’s limits, it’s best to use bit rates that err on the side of quality rather than file size (in other words, higher bit rates), since YouTube can compress video to produce smaller file sizes but can’t “re-add” quality removed by low bit rates. To view the video clip’s original resolution and frame rate, right-click on the clip and then select *Properties*.

BURNING AUDIO CD’S

For those of us who still appreciate Physical Objects That Contain Music, Mixcraft supports CD-R burning. It should go without saying that your PC will need to have a CD drive capable of burning CD-R's.

To burn an audio CD, select *File>Burn CD...* ([CTRL]+B) from the Main Window menu, insert a blank CD-R and click the *Start Burn* button.



• Writer

Selects a CD burner if more than one is available.

• Speed

Choose a CD writing speed. In some cases, burning at a slower speed may improve the success rate of burning and may be more compatible with older CD players. If the CD writer features Burn Proof-type protection, you can burn at maximum speed without worrying about a burn failure.

• Test Mode

In this mode, the CD writer will go through the process of transferring the data to the CD without turning its laser on for writing. This lets check if your computer can send data to the CD writer at the desired speed. If you’re having problems burning a CD, see the “Troubleshooting” section.

• Convert To WAV First

This converts the mix to one or more WAV files on your hard drive. CD-quality WAV files require around 8 MB for every minute of audio burned. Therefore, a 74-minute mix will

require about 650 MB of hard drive space. The advantage to converting to WAV first is that it may help the success rate of burns for some older CD recorders, especially if the CD writer does not have Burn Proof.

- **Create CD-TEXT**

If the CD writer supports CD-TEXT, you should be able to check the CD-TEXT box. When the CD is played on a player that supports CD-TEXT, the titles and names of each track are visible. Sony CD players often support CD-TEXT.

You can enter a CD-TEXT title for the CD’s title. Track names will be derived from CD track markers.

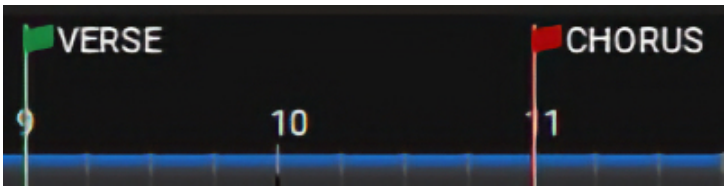
- **Burn As One Track**

This option essentially skips CD track markers created in the project and burns the whole project as one track. If your burner is only supported in IMAPI mode this is a good option for a seamless mix, because IMAPI mode places a two-second gap between tracks. (The main drawback is that you can’t skip to specific tracks when playing the CD.)

- **Burn All Or Selection**

Choose Burn All to burn up to 80 minutes of audio, depending on the blank CD capacity. Choose Burn Selection to burn the current selection of audio. This can be useful if the mix goes beyond 74 or 80 minutes and you want to burn extended sections. (Note that it simply uses the selected area to define a time range to burn.)

MARKERS



Markers serve a variety of purposes. They can be used simply for adding notes such as “Chorus Here!” or “fix the guitar effects at mix time,” or they can perform functions such as changing the project tempo, key, or time signature. Markers are really easy to use, so we encourage you to use them!

EDIT MARKER

To insert a Marker into the Timeline at the current Caret position, double-click in the Timeline or right-click and select *Add Marker.* Markers can also be added by selecting *Mix>Markers>Add Marker* or *Mix>Markers>Add Tempo/Key Change* from the Main

Screen menus. You can also add a Marker at the current Caret location with the shortcut [CTRL]+ /... (that's Control plus the slash key). Using the key shortcut is especially handy, because markers can be added "on-the-fly" during playback.

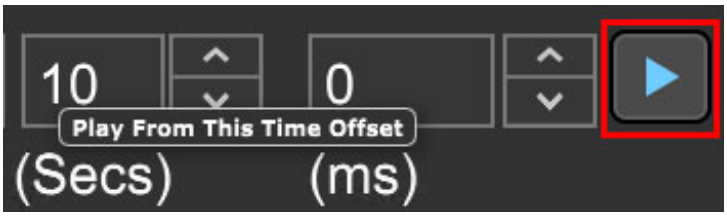
If *Snap* is on, Marker placement will conform to the current Snap setting. (Remember this if the Marker doesn't seem to be landing where you want it.) Markers set to alter the current time signature always snap to a measure, otherwise adding a time signature change in the middle of a measure would wreak havoc with the project's timing!

• Title

The Marker name. Use this for notes in the Timeline.

• Offset

Defines the exact position of the Marker in the Timeline. Markers can be repositioned by altering these numbers, either by clicking in the fields and entering a number or by using the up/down arrows to change the numbers.



• Marker Play Arrow

Clicking the *Marker Play Arrow* (highlighted in red above) begins playback of the project from the location of the Marker. Clicking again stops playback and returns the playhead to the Marker location.

• Color

This drop-down menu can be used to select a color for the Marker "flag." One useful application would be to use different colors to indicate song sections, such as green for verses, red for choruses, etc.

• Create Track For CDs or Audio Files

Creates track numbers if the project is to be burned to an audio CD using Mixcraft's *Burn Audio CD* function. A CD icon will appear on the timeline.

- **ISRC**
  The International Standard Recording Code (ISRC) is an international standard code for uniquely identifying sound recordings and music video recordings. If you have an ISRC number for a CD track, check the box and add it here. (This is only important if you intend to mass-produce a CD.)

• Tempo

Check this box to change tempos in a project. Tempo changes will affect the metronome and cause any sounds set to *Adjust To Project Tempo* mode to follow the new tempo.

The *Tap Tempo* button lets you set a new tempo by clicking quarter notes with the mouse.(Tempo checkbox must be checked.)

• Key

Check this box to change the project key signature. Any sounds set to Adjust To Project Key mode will switch to the new key.

- **Scale Popup**
  When the Key checkbox is enabled a scale can be selected for notes to conform to.

• Signature

Check this box to change the project time signature. The numerator and denominator can be set using the up/down arrows.

Time signature changes will affect the metronome. This will also force the time signature to have a tempo change, even if it’s the same tempo as the previous tempo change.

Markers’ Effect On Tempo, Key, and Time Signature

Keep in mind that using Markers to set tempo, key, and time signature always overrides any settings made by clicking these controls in the transport display window. If the tempo, key, or time signature remains constant for the entire project, this won’t matter, but if you’re using markers to change the project tempo, key, or time signature, setting them in the transport display window effectively only functions from the first

(permanent) Marker at the beginning of the project until the location of the second "user-added" Marker.

• **Play Metronome Every X Beat**

This lets you alter which beats sound the metronome click. When using common time signatures such as 3/4 or 4/4, it's usually desirable to hear a click for every beat, but for time signatures with a large numerator (like 12/8, for example), the incessant clicking might drive you mad (or sound like one of those silly "Exotica Percussion" lounge records from the 60's). *Play Metronome Every X Beat* instructs Mixcraft to click on fewer beats. Set this using the up/ down arrows.

MOVING MARKERS

To move a marker, position the mouse over the Marker's flag and click and drag horizontally. You'll see the cursor turn into a left/right arrow when the mouse is in position. Markers can also be moved by double-clicking the flag and entering a position with the number dialog in the *Edit Marker* window.

DELETING A MARKER

To delete a Marker, right-click a Marker flag and select *Delete*.

Note: You cannot delete the first marker and may only edit it.

DELETE ALL MARKERS

Select *Mix>Markers>Delete All Markers* in the Main Window menus. This deletes all Markers except the first one.

MARKER LIST

The *Marker List* window lets you conveniently view and edit all markers in a project in one place, as well as allowing a couple of nifty and useful tricks. To open the *Marker List*, click the *View* menu at the top of Mixcraft and select *Marker List*. To hide the *Marker List*, you can reselect it in the *View* menu but it's easiest to just click the *X* in the upper-right corner.

You can set most of the same marker parameters as when clicking on individual marker setting windows, but the *Marker List* window allows configuring markers for an entire project with far less mouse clicking. Here are the available parameters for markers in the *Marker List* window moving left to right, and top to bottom.

- **Marker Play**

Clicking the *Marker Play* arrow begins playback of the project from the location of the Marker. Clicking again stops playback and returns the playhead to the Marker location.

- **Color**

This drop-down menu can be used to select a color for the Marker "flag." One useful application is to use different colors to indicate song sections, such as green for verse, red for choruses, red, yellow, and green stripes for reggae, etc.

• **Black Flag**

Opens the parameter window for individual markers, in case you need to adjust parameters not present in the *Marker List*. Will not make your music sound like an angry 80’s punk rock band with Henry Rollins (you *knew* we’d make that joke).

• **Title**

The Marker name. Use this for notes in the Timeline.

• **Offset**

Defines the exact position of the Marker in the Timeline. Markers can be repositioned by altering these numbers, either by clicking in the fields and entering a number or by using the up/down arrows to change the numbers.

• **Tempo**

Check this box to change tempos in a project. Tempo changes will affect the metronome and cause any sounds set to *Adjust To Project Tempo* mode to follow the new tempo.

• **Key**

Check this box to change the project key signature. Any sounds set to *Adjust To Project Key* mode will switch to the new key.

• **Signature**

Click these boxes to change the project time signature. The numerator and denominator can be set using the up/down arrows. Note that time signature changes can affect metronome clicking. This also forces a tempo change, even if it’s the same tempo as the previous tempo change.

• **X Button**

Click *X* to delete the marker.

MIDI Control Tricks With the Marker List

As you may already know, Mixcraft lets you assign a huge number of its functions using external MIDI hardware devices with knobs, buttons, and sliders. One not-so-obvious use

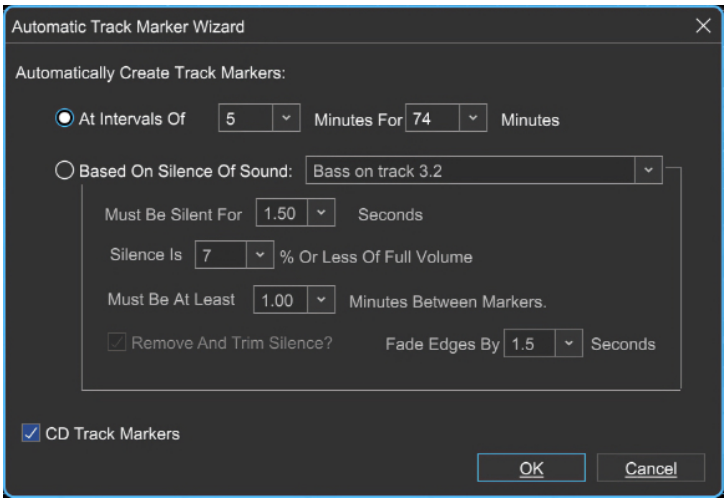
is to assign MIDI buttons or keyboard keys to the Marker Play arrow buttons in the Marker List. This is great for looping beats or song sections in a live setting. If you have Loop Mode engaged, Mixcraft automatically loops playback between the selected marker and the following marker. Along with the Marker List's tempo and time signature settings, this effectively puts an infinite number of beats and tempos immediately under your fingers.

Another use for Marker Play button controller assignment would be for live playback of stereo mixes of entire songs or backing tracks, effectively turning your computer into a very fast and easy-to-control iPod. Simply import all songs for a live set, create markers, then assign playback for each to a MIDI key or button control.

Here's how to assign controllers to the Marker List. With the Marker List window open, click the MIDI button in Mixcraft's task bar.

All assignable parameters will turn purple. Click on a Marker Play arrow in the Marker List, then press a button on your MIDI controller. The button is now assigned to trigger the Marker Play arrow. To assign multiple buttons or keys, simply leave Mixcraft in MIDI Learn mode. When you're done assigning buttons or keys, click the MIDI button in the task bar again. To reassign to a different hardware button or key, click the MIDI task bar button, reselect the desired Marker Play arrow, and hit a different hardware controller button or key.

AUTOMATIC TRACK MARKER WIZARD



The automatic track marker wizard is a handy way to quickly add multiple track markers. Markers may be added at specific time intervals, or in areas of silence - you can even remove silence! This can be handy for breaking up the tracks of entire albums recorded as a continuous audio file.

To use the *Automatic Track Marker Wizard*, select *Mix>Markers>Automatic Marker Wizard* in the Main Window Menus.

• Automatically Create Track Markers: At Intervals Of

This creates Markers at the specified intervals. Select the number of minutes between intervals with the *At Intervals Of* drop-down menu, and the total duration over which Markers will be added with the *For* box drop-down menu.

• Automatically Create Track Markers: Based On Silence Of Sound

Choose *Based On Silence Of Sound* to create markers based on silent gaps in a recording. (Or choose *Based On The Sounds of Silence* if you want markers arranged to sound like Simon & Garfunkel - we know, too easy.)

• Based On Silence Of Sound

This drop-down menu lets you choose from all audio clips in a Project.

• Must Be Silent For

Specifies the length of silence that must elapse before a new Marker is created.

• Silence is X% Or Less Of Full Volume

This lets you choose how low the volume of audio content must fall to be considered

“silence,” expressed in percentage (0% is full silence, 100% would be full-scale volume). The default silence setting is 7% of full volume.

- **Must Be At Least X Minutes Between Markers**

Set the minimum time between markers using the *Must Be At Least X Minutes Between Markers* drop-down menu. This parameter helps prevent ending up with an excessive number of markers.

- **Remove and Trim Silence**

This automatically cuts out silences between audio content. It’s good for getting rid of long pauses in continuous recordings.

- **Fade Edges By X Seconds**

This adds a gentle fade-in and fade-out at the beginning and end of audio sections when using the *Remove* and *Trim Silence* features.

- **CD Track Markers**

Adds CD Track Markers at each Marker. This is useful when converting existing audio content to be burned to a CD with individual tracks. (Unless you want to be like Prince’s “Black Album,” which was notoriously mastered as one really long purpley song.)

USING EFFECTS

Mixcraft includes a large suite of real-time audio effects that can be applied to audio clips or virtual instruments. These are usually referred to as “plug-ins.” Mixcraft also supports user-installed third-party plug-ins in VST and VST3 formats.

64-BIT vs. 32-BIT EFFECTS

Mixcraft 10 is a native 64-bit application, so you'll want to use 64-bit plugin effects whenever possible. Mixcraft can still run older 32-bit plugins - these will automatically load in a shell and operate like any other plugins.

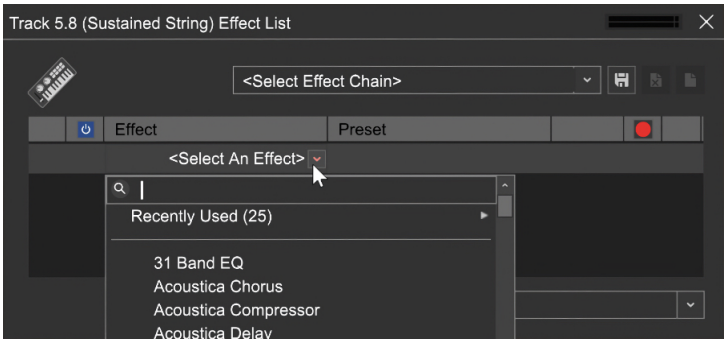
With recent advances in processor technology, all new PC's feature 64-bit processors. It's a little confusing, but **the number of processor bits is totally separate from the bit-depth of audio files**. **Unlike higher bit-rate audio, there is no difference in the sound quality of 32-bit plugins vs. 64-bit.** It isn't necessary to understand all the technical nitty-gritty, but the important takeaway is that a 64-bit system is capable of moving far more data, far more quickly than a 32-bit system. In regard to audio plugins and instruments, this means they'll run more efficiently and will be able to address much more system RAM if needed (e.g., if you're using large sample library-based instruments).

Older 32-bit plugins will still run in Mixcraft, but you may encounter stability issues. If possible, we strongly recommend updating to 64-bit versions if available.

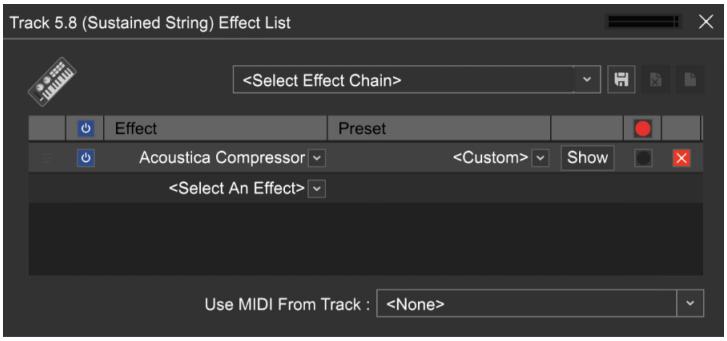
ADDING EFFECTS

To open an effect on any Audio or Virtual Instrument Track, click the *FX* button in the track list or in the appropriate Mixer channel. To the left is the audio track FX button. Below is the FX button in the Mixer.

Either button opens the *Effect List* window:



Now click the *<Select An Effect>* drop-down menu and choose an effect. Once you've selected an effect, the Effect List should look something like this:



• **Move Handle**

The three little horizontal lines at the very left let you drag effects vertically to rearrange their order if there are multiple effects in the list.

• **Active/Off Icon**

Effects can be toggled on or off by clicking the green check mark to the left of the effect name. The blue “power button” icon next to *Effect* toggles all effects on and off. (See *Effects Chains* below.) This allows auditioning of effects without losing settings.

• **Effect (Name)**

Click *<Select An Effect>* to add new effects, or click an existing effects name to replace an effect with a different one.

• **Preset**

The *Preset* drop-down menu lets you select from included presets. These are very handy for speedy mix setups (or if you’re not sure how to operate a particular effect).

• **Show/Hide**

The *Show* and *Hide* buttons open and close the effect’s user interface for individual parameter tweaking.

• **R (Record Effect) (*Mixcraft Pro Studio only*)**

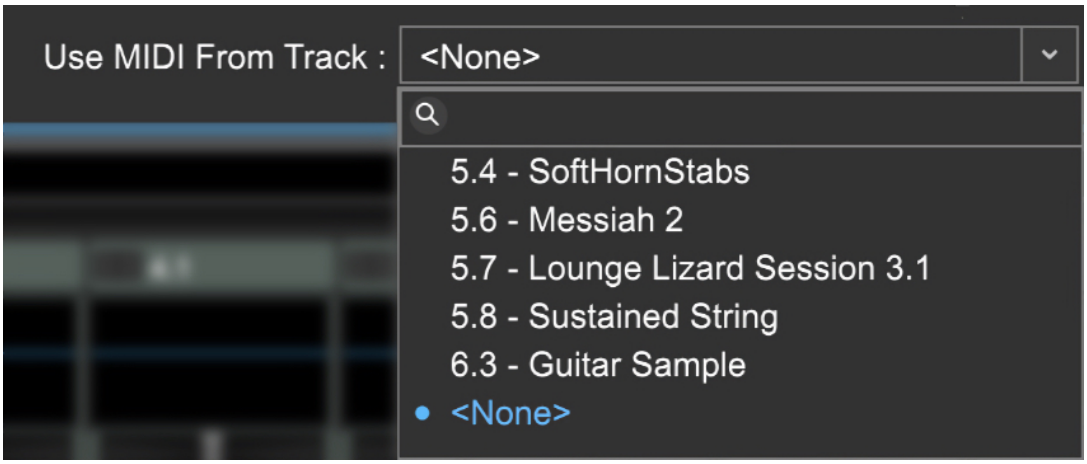
This crafty feature allows effects to become their own Mixcraft recording input sources.

When the *R* box is checked, a red dot appears, and the effect will appear in the track record arm dialog as a recording source.

• **X**

Removes an effect and returns its slot to the *<Select An Effect>* dialog.

• **Use MIDI From Track**

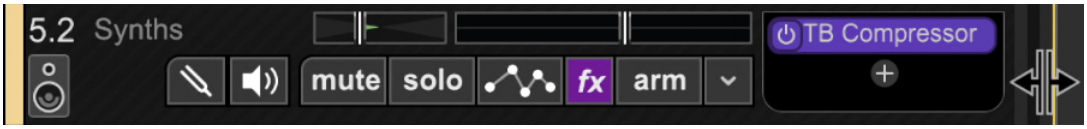


The *Use MIDI From Track* pop-up menu lets you route the playback of MIDI note data to a VST effect. This is most commonly used in conjunction with vocal tuning plug-ins (like Mixcraft's *GSnap Pitch Correction*) or vocoder plug-ins.

To choose a MIDI source track, click the pop-up menu and select the desired MIDI track. The *Use MIDI From Track* setting applies to all effects in the track's effect chain, but plug-ins that don't make use of MIDI data will simply ignore it.

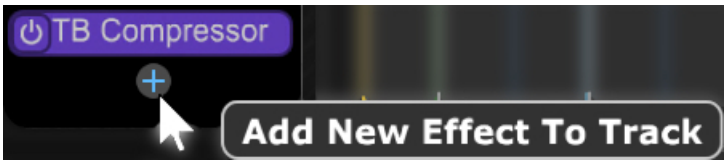
DIRECTLY ADDING EFFECTS TO THE TRACK LIST OR MIXER

Effects can be added directly to tracks and mixer channels without opening the Effects List window first. As with the Effects List, effects may be added in the Track List, or from the Mixer.

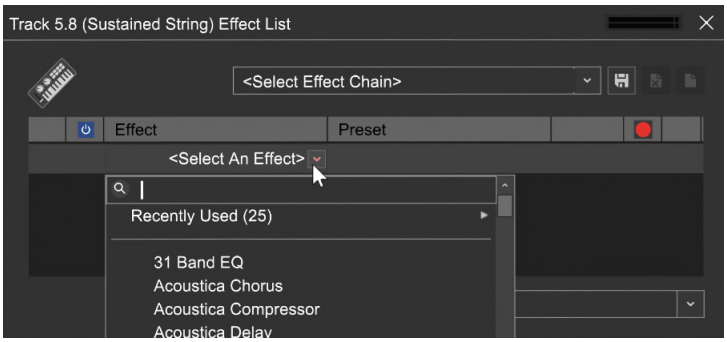


The Track List effects slots are hidden by default; to view them, select *Track>Show Effects On Tracks* from the Main Window menus or right-click on the track header. You can also position the mouse cursor over the right edge of a track and slide the left/right arrows to reveal or hide effects slots. Clicking *+fx* opens a pop-up menu where you'll be able to choose effects.

Effects in the Track List effects area can be enabled and disabled by clicking on the small "power" button at the left.



Effects can be added by clicking the *+fx* button in the Track List or the Mixer and selecting from the pop-up window.

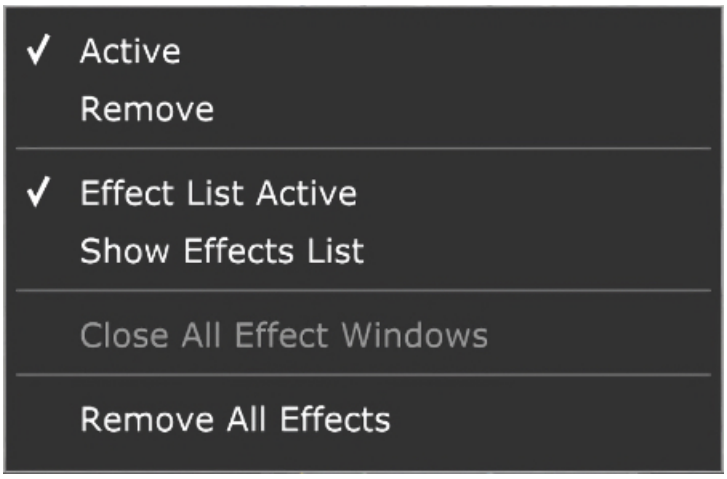


If more than two effects are added, the track's vertical height increases to accommodate additional effects (you can optionally reduce the track's height, but effects slots may become hidden).

Display Virtual Instruments and Effects, Right Now!

Right-clicking a channel's FX button instantly displays the user interface for all effects on a channel, skipping the Effects List Window. This is really handy if you've already decided on which effects are to be used and just want to tweak their parameters. This works exactly the same for Virtual Instruments by right- clicking a track's Virtual Instrument button. To hide all effects or Virtual Instruments for a channel, press [CTRL] + right-click on the "fx" button.

EFFECTS SLOT RIGHT-CLICK FUNCTIONS



Oh, how we love to stash commands beneath the right-click button! These menus are the same for the Mixer and Track List effects slots.

• **Active**
Use the check mark to bypass or engage an effect. Useful for A/B'ing purposes.

• **Remove**
Deletes the current effect from the list.

• **Effect List Is Active**
Just like the *Active* command, but this bypasses or engages all effects slots for the current track.

• **Edit Effects List...**
Opens the track's *Effects* List. Exactly the same as clicking the *fx* button in the track header or mixer.

• **Remove All Effects**
Deletes all effects for the current track in one fell swoop.

EDITING EFFECTS

To edit an effect's individual parameters, click the *Show* button to the right of the effect name.

Every effect has a unique user interface and controls, but the top section will be the same for all effects in Mixcraft. Let’s go over these:

- **Level Meter**

In the top-right corner of every VST Effect and Virtual Instrument is a stereo VU meter. This is helpful when adjusting input and output levels, and in those inevitable “what the heck?@#?” moments, it’ll let you know signal is present.

- **Active/Off Button**

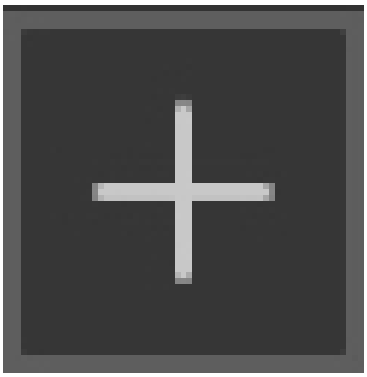
Exactly the same as the *Active/Off* button in the Effect List window, just replicated in the effect interface for convenience.

- **Show/Hide MIDI Controllers/Audio Control/MIDI Control Bar**

This reveals the header section where MIDI controllers, Audio Control, and MIDI Control functions are assigned. (See “Plug-In and Virtual Instrument Controller Modules” for info on this super cool feature.)

• **Add MIDI, Audio Control, and MIDI Controller**

Creates a new MIDI controller assignment, or an Audio or MIDI Control object in the header.



• **Select Preset**

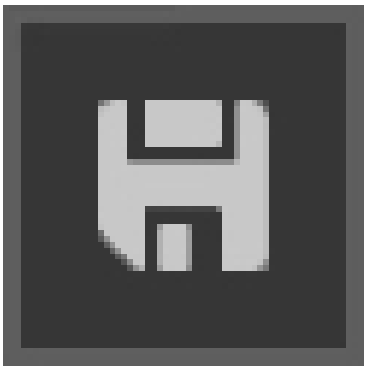
Allows selection of Mixcraft and user presets. This is the same as the preset selection menu in the Effect List window.

• **Load VST Preset File (VSTi Plug-Ins only)**

Some VST effect and instrument manufacturers distribute additional sound banks in the form of .fxb files, replacing current presets with new presets.

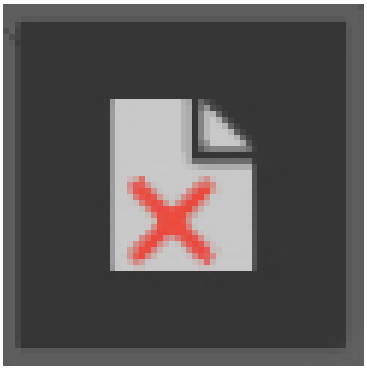
• **Save A New Preset**

Saves the current plug-in settings to a new preset. You'll be prompted to enter a preset name. The preset will then appear in the preset list.



• **Remove A Selected Preset**

Permanently removes the currently selected preset. Factory presets cannot be deleted.

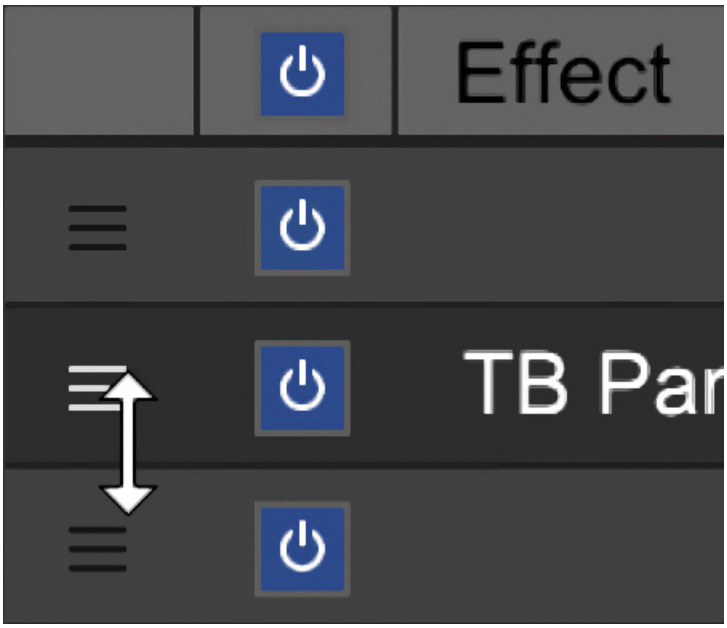


Note: If a track is frozen, its effects will not be editable until the track is unfrozen. Objects in mirror are behind you.

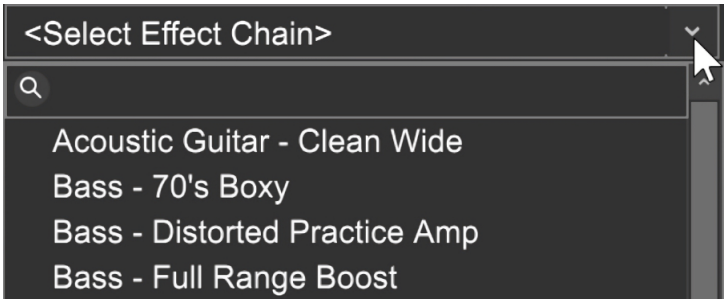
EFFECTS CHAINS

A series of effects can be configured in the Effect List window by adding effects using the <Select An Effect> dialog.

REARRANGE EFFECTS ORDER



To rearrange the order of effects in a chain, simply click on an effect anywhere in the list and drag it to the desired location in the chain. It’s easiest to do on the left side as the cursor will turn into up/down arrows, and you won’t risk accidentally clicking something else.



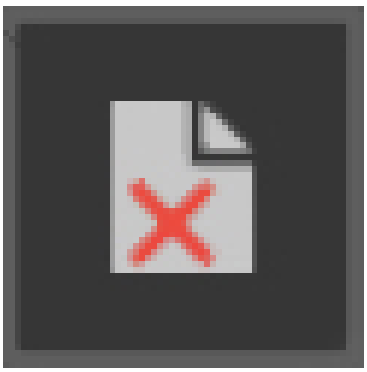
Mixcraft includes many useful effects chains optimized for common applications. To load an effects chain, click on the Effects Chain drop-down menu at the top of the *Effect List* window. To search for effects chains with a particular term (“drums” for example), simply type in a keyword next to the magnifying glass icon. You can add as many effects as desired to an Effects Chain.

The icons to the right of the Effects Chain drop-down menu perform the following operations:

- **Save A New Preset**

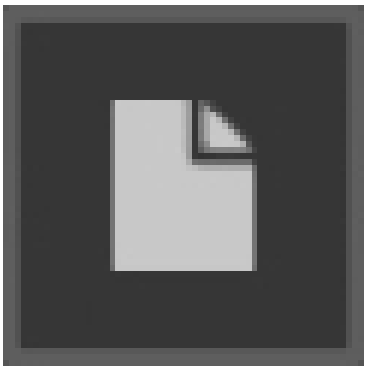
Saves the current Effects Chain setup to a new preset. You'll be prompted to enter a preset name. The presets will then appear in the Effects Chain presets.

- **Remove A Selected Preset**



Permanently removes the currently selected preset. Careful with this guy! (You'll get an, "Are you sure?" prompt.)

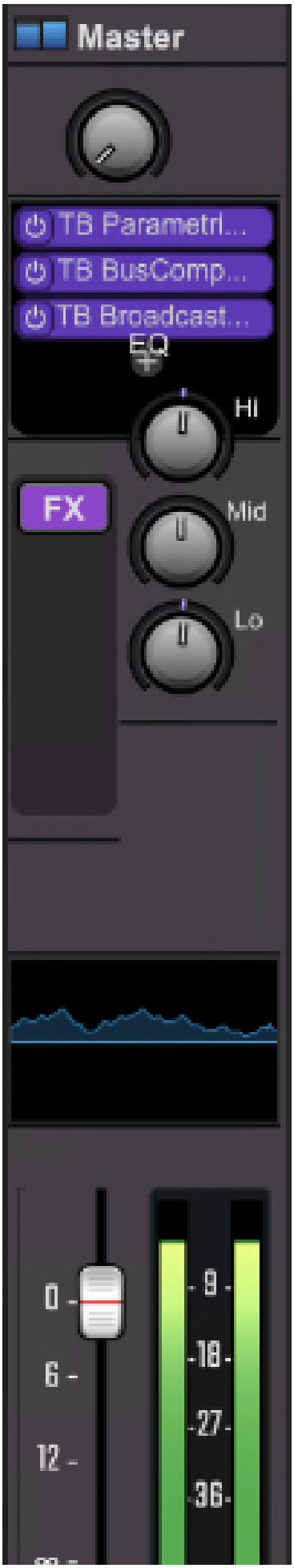
- **New Preset**



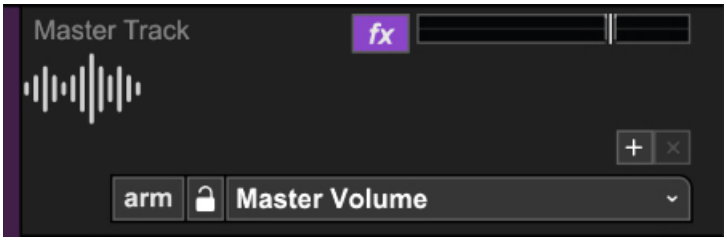
This clears all current effects if you'd like to start with a clean slate.

MASTER EFFECTS

This is the effect insert on the Main Mix bus. Use this for adding master effects to be applied to the entire mix such as bus compression, EQ, volume maximizers, etc.


Master
TB Parametri...
TB BusComp...
TB Broadcast...
EQ
HI
Mid
Lo
FX
0
6
12
9
18
27
36

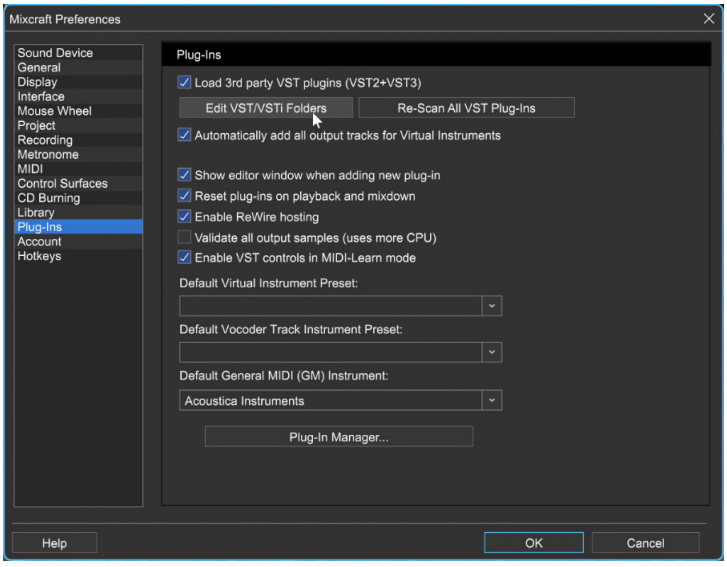
Master Effects can be added either by clicking the *FX* button next to the Master output slider in the Main Window, by clicking the Main Mix *FX* button in the Main Mix channel, or by clicking the *FX* button in the Master Track in the track list (if it's currently displayed).



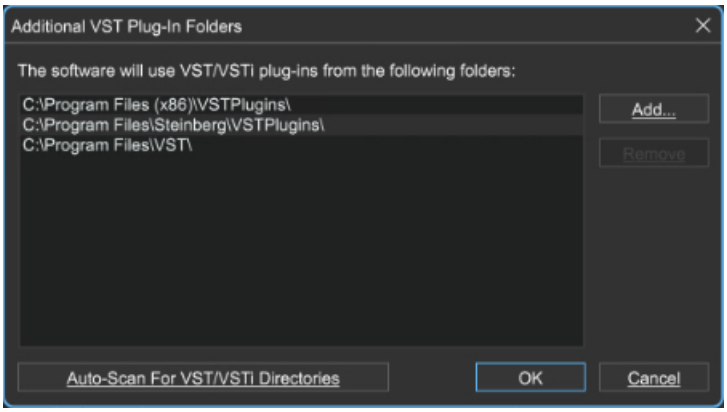
ADDING THIRD-PARTY VST EFFECTS

Mixcraft supports standard Windows VST as well as VST3 effects plug-ins. If you've installed a third-party VST effect and you're not seeing it in Mixcraft's effects menu, you'll need to add the VST effect folder. There are two ways to accomplish this.

The super-duper easy way is to simply drag-and-drop its DLL file into Mixcraft's main window. Mixcraft automatically installs the file in the correct location and adds it to the VST search path list (in other words, it'll just work!). The alternative method is to "manually" add VST effects to Mixcraft's VST/VSTi folders.



Select *Preferences>Plug-Ins* and click the *Edit VST/VSTi Folders* button.



Click the *Add...* button, navigate to the VST effect in Windows Explorer, and click *OK*. If you're not sure where the new VST plug-in is, click the *Auto-Scan For VST/VSTi Directories* button for assistance finding VST plug-ins.

EFFECTS SIDECHAINING

Sidechaining allows an audio track to control the parameters of a VST plug-in on a *different* track. This may sound a bit esoteric and complex but once you wrap your head around the concept, it's easy to do and can be a real lifesaver.

Sidechaining is often used to "drive" a compressor. This is referred to as "ducking." A common trick in techno and EDM music is to insert a compressor into the master mix bus and route the kick drum to the compressor's sidechain input. This briefly reduces the overall mix volume with every kick drum hit for a dramatic increase in perceived impact.

A far more pedestrian, but equally useful application of ducking is to reduce the volume of a background music track when an announcer speaks. The sidechained compressor is inserted into the background music track while the sidechain input is driven by the announcer's voice. When the announcer is silent, the music plays at a nominal level; when the announcer speaks, the music bed level is reduced. Unlike our techno kick drum example, the compressor's attack and release to slower settings would be set to act slowly to prevent the music bed volume from rapidly jumping up and down between words.

Sidechain inputs aren't limited to just compressors. Expanders and gates (essentially the opposite effect of a compressor) frequently feature sidechain inputs; these are often used for stuttering synchronized gating effects (the rock band Garbage is fond of applying this effect to guitars; check out the track "Vow"). Other VST effects that often feature sidechain inputs include filters and vocoder plug-ins.

Can I Sidechain Any VST Effect?

Unfortunately no, because only certain VST effects feature a sidechain input. If the effect has this capability, you'll see the Sidechain Source menu, plain-as-day on the right side, at the top of its edit window.

As of this writing, Mixcraft 10 doesn't include a sidechain-capable compressor, but we really dig Variety Of Sound's Density mkIII. It sounds great, includes tons of cool

features, and it’s totally free. We encourage you to find it on the Intergoogle and add it to your plug-in collection.

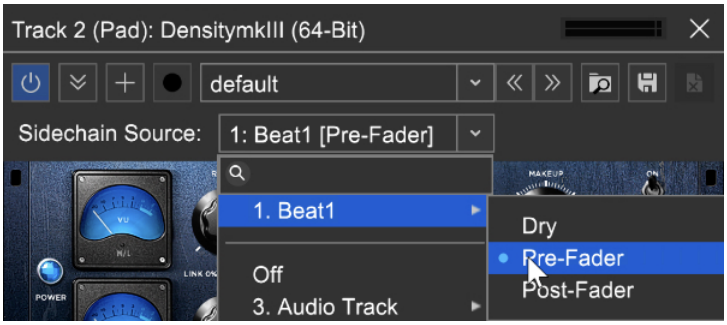
BTW, the included Acoustica Vocoder has a sidechain input (and needs it to do its thing properly). Technically it’s not a compressor, but configuring it is almost identical to setting up a compressor with a sidechain, detailed below.

HOW TO USE THE EFFECTS SIDECHAIN INPUT

Since effects numerous effects types include sidechain inputs, the sidechain input can influence effects parameters in varying ways, but sidechain routing operation is the same regardless. In this example, we’ll insert a sidechained compressor into a MIDI virtual instrument track playing sustained synth pads, and we’ll impart the rhythmic groove of a drum pattern from a different track upon the synth pad by routing the drum track audio into the compressor’s sidechain input.

The main track window looks like this:

Click the Synth Pad *fx* button in the track list, then click the <*Select An Effect*> down arrow in the Effect List window. Select a sidechain-capable compressor (in this case, we’ve used the aforementioned Density mkIII, which is not included with Mixcraft, but it’s free to download it).



Click the *Edit* button in the Effect List window, then click the *Sidechain Source* pop-up menu. This is where you’ll choose an audio track to influence the VST effect. The list will display all current tracks usable as sidechain audio sources, including standard audio tracks and SubMix tracks. The current track with the sidechain effect inserted will display

Off in the *Sidechain Source* menu. When the mouse is positioned over a track input selection, a submenu appears. Here are your options:

• **Dry**
As its name implies, the source track audio is sent into the effect's sidechain completely unadulterated. In other words, its current volume level, mixer EQ, and insert effects are bypassed and have no effect on audio sent to the sidechain input.

• **Pre-Fader**
As with *Dry*, the channel's current fader volume has no effect on the sidechain input signal, but mixer settings and insert effects will be "in the chain."

• **Post-Fader**
Post-Fader is just like *Pre-Fader*, with mixer EQ and insert effects active, but here the current fader volume will affect the audio level sent to the sidechain input. This can be useful because some sidechain-enabled effects won't have any provision for adjusting the signal level entering the sidechain input.

Let's get back to our drums-adding-rhythmic-groove-to-constant-synth-pad example... If you're using the Density mkIII compressor, you'll need to set the SC (i.e., sidechain) switch to *Ext*. (Some VST effects will automatically respond to a sidechain input signal, while others won't.)

For our *Sidechain Source*, we've chosen the Drums track, set to *Pre-Fader*. Using the *Dry* or *Pre-Fader* setting makes setup especially easy because the fader volume for the sidechain source track can be set to zero, making it easier to hear how the sidechain signal alters the sidechain-compressed track.

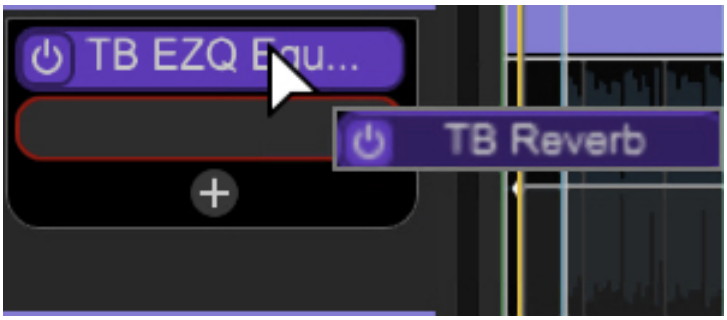
If you're digging all the things you can do with compressor sidechaining, we think you'll love Mixcraft's innovative Audio Control feature. It works in a somewhat similar fashion, but instead of using audio to manipulate plug-ins with sidechain inputs, Audio Control lets you use ANY audio track to control ANY MIDI-controllable plug-in or instrument parameter. See "Audio Control" for more information on how to set this up.

EDITING, ARRANGING, AND MOVING INSERT EFFECTS

• **Opening Effects Edit Windows**

To open the edit window for an effect, click on it in the mixer. Effects edit windows can be closed either by clicking the *X* in the upper corner or by clicking a second time on the insert effect in the mixer channel. You can open as many simultaneous effects editing windows as you like.

- **Rearranging Insert Effects**

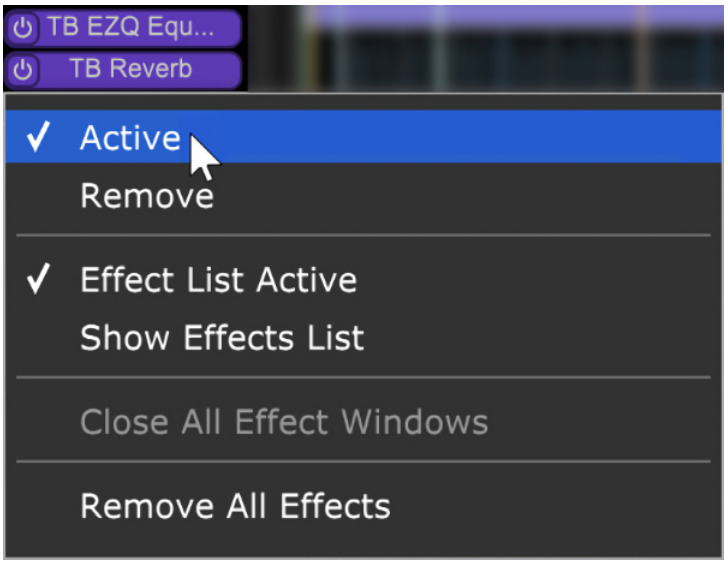


Audio signals flow from the top of the channel strip downward through each insert effect. To change the position of an effect in the chain, simply grab the effect insert block and drag it up or down. But that's not all… insert effects can also be moved to different audio channels by dragging sideways. Holding down the [ALT] key while dragging will make a copy of the effect. This can be a major time saver. As an example, if you've layered numerous vocal tracks, and you'd like to use the same compressor, EQ, or perhaps a GSnap Pitch Corrector with the same settings, [ALT]-dragging allows easy duplication of effects across multiple channels.

ADDITIONAL EFFECTS INSERT FUNCTIONS

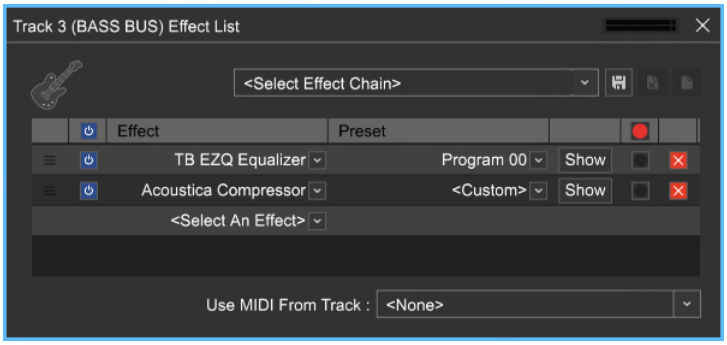
Right-clicking an effects insert offers a few more options:

- **Active**



Right-clicking an effects insert and clicking *Active* toggles the effect between active and bypass modes. A check mark is displayed next to the word Active when an insert effect is active. The effects insert background turns dark gray when an effect is in bypass mode.

•Effects Chain



Right-clicking this opens the channel's effects list; this is the same as clicking the *fx* button in the channel strip or track list. Most insert effect-related tasks can be accomplished directly from the mixer window, but the effect list allows you to open and edit effects chains as well as assign MIDI hardware controllers to effect parameters.

• Remove

Right-click and select *Remove* to delete an insert effect. So long!

• Remove All Effects

Right-clicking and selecting *Remove All Effects* deletes all current insert effects on the channel.

MIXCRAFT 10 RECORDING STUDIO INCLUDED EFFECTS

TB BARRICADE

Barricade is a mastering-grade true-peak compressor and limiter. It’s super useful for maximizing the output level of mixdowns without nasty, squashy side effects.

TB BUS COMPRESSOR

TB Bus Compressor is a full-featured stereo bus comp that can be used for glueing together completed mixes, subtly (or not subtly) crushing drum busses and more. Its extensive graphical displays offer plenty of visual feedback.

TB COMPRESSOR

Compared to the TB Bus Compressor, the TB Compressor is intended as more of a general- purpose compressor and works great on individual tracks such as vocals, bass guitar, piano, etc.

TB DE-ESSER

Does the TB De-esser reduce sibilant vocal “S” sounds? De-yes it does! It’s also very easy to use and includes extensive metering for excellent visual feedback.

TB PARAMETRIC EQUALIZER

The key to a good mix is proper EQ’ing, and this graphic parametric equalizer features a gorgeous interface, six color-coded frequency bands, six filter types, spectrum analysis, and the ability to independently EQ the mono (Mid) and stereo (Side) portions of stereo material.

TB MULTI FX

The TB MultiFX plug-in is a seriously capable effects processor! In addition to flanging, chorus, phasing and other types of mod effects, it can also do tons of delay, filter, decimation, and bit reduction effects, in all manner of combinations.

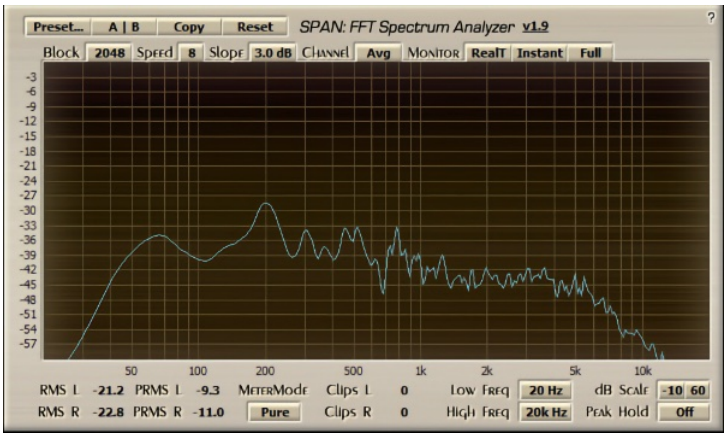
TB REVERB

TB Reverb is a silky smooth, warm, lush reverb for creative and all-purpose use.

VOXENGO BOOGEX AMP SIMULATOR

Voxengo Boogex Amp Simulator is a carefully modeled guitar amp simulator with extensive boost and cut filtering, and numerous guitar cab and mic emulations.

VOXENGO SPECTRUM ANALYZER



Voxengo Spectrum Analyzer is a supremely powerful tool for viewing the frequency spectrum of audio content. This is great for learning about audio frequencies and refining mixes. (Voxengo Spectrum Analyzer needs to be currently viewed to use it, so remember to click the Edit button in the Effects List or double-click the channel's FX button.)

EZQ EQUALIZER

There's no easier way to EQ tracks! Instead of adjusting numeric parameters or spinning virtual knobs, EZQ lets you move a dot within a 2D plane to quickly impart brighter,

darker, warmer, or tinnier sound characteristics.

GTUNE GUITAR TUNER

GTune guitar tuner can be used for guitar and bass tuning or for tuning other monophonic instruments such as flutes, violins, and synthesizers. This effect does not alter audio in any way.

MIXCRAFT 10 PRO STUDIO INCLUDED EFFECTS

Mixcraft Pro Studio 10 adds the following plug-ins:

CHERRY AUDIO GALACTIC REVERB

Galactic is an algorithmic reverb that captures the "larger-than-life" sound of coveted classic hardware vintage digital reverbs. With a maximum decay time of 35 seconds, it's raison d'etre is to create huge, beautiful aural spaces, making it a natural for ambient styles and large pads.

It'd designed to be fast and simple with very musical results, can be used as an insert or bus effect, and it's fully compatible with mono or stereo input sources.

CHERRY AUDIO STARDUST

VOCALZAP

VocalZap removes vocals and other center-panned content from stereo recordings. It’s ideal for creating karaoke tracks. Rumor has it that an early version was used during production of the 1982 Scott Baio cinematic masterpiece, “Zapped.” (talk about your, "movies that didn't age well")

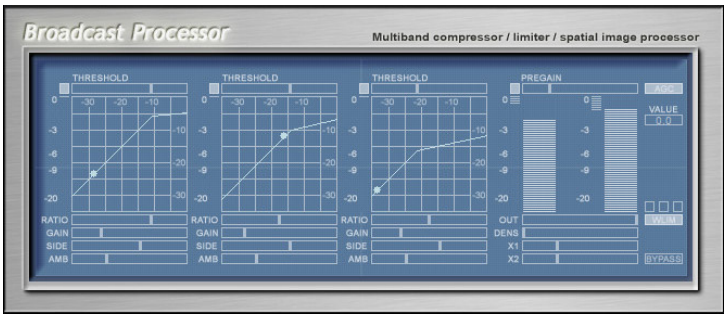
PULTRONIC TUBE EQ

G-Sonique’s Pultronic Tube EQ is a detailed recreation of a classic vintage vacuum-tube based equalizer found in top studios throughout the world. Warm up tracks or add a completely new character with the Pultronic Tube EQ’s array of tube models and presets.

SHRED AMP SIMULATOR

Shred Amp Simulator by AcmeBarGig is a complete guitar amp and cabinet suite including five classic amp heads, 17 cabinet models, and six powerful effects. Shred faithfully models classic British and American tube heads, and includes powerful room modeling technology.

BROADCAST MULTIBAND COMPRESSOR



Broadcast Processor is a multiband compressor/limiter designed to impart maximum overall volume to a mix by breaking up audio into separate frequency bands, and then compressing these bands individually to make them louder or quieter. It can also lower louder audio parts with downward compression for a more dynamically balanced mix. This tool is essential for creating loud, dynamically balanced, professional mixes for dance, electronica, pop, and other genres where “loud” mixes are needed.

GSNAP PITCH CORRECTION

GSnap is a state-of-the-art pitch correction plug-in that's ideal for subtly (or not-so-subtly) tuning vocal performances in real-time (i.e. as they play back in a project). Note choices may be limited to preset or user-specified scales, and the speed and amount of pitch correction can be adjusted.

EU PROMIXEQ-10A

EI PromixEQ-10A is a high quality five-band parametric EQ, optimized for final mastering. Its straightforward interface and superb fidelity make it a natural for all mastering applications.

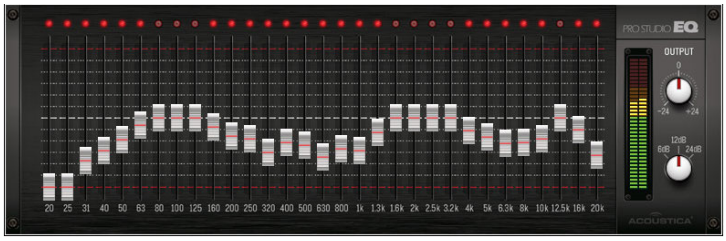
DTC-1 DISCRETE ULTRA TRANSPARENT VCA BUS & TRACK COMPRESSOR

G-Sonique DTC-1 is modeled after a legendary analog VCA-based analog bus compressors known for its transparency. It allows significant gain reduction (10dB or more) without undesirable pumping, distortion, or compression artifacts. DTC-1 is perfect for tracking/mixing and excels in mastering applications.

ORB7000 OCTAVE REVERB

ORB7000 is a special, artistic and creative octave/pitch-shifting reverb system for creating special sound and space effects, new sound colors and unique experimental sounds. Using “particle-based pitch shifting,” ORB7000 splits the signal into three signal paths: octave down, normal, and octave up, creating unique sounds including classic “Eno shimmer” effects.

ACOUSTICA 31 BAND EQ

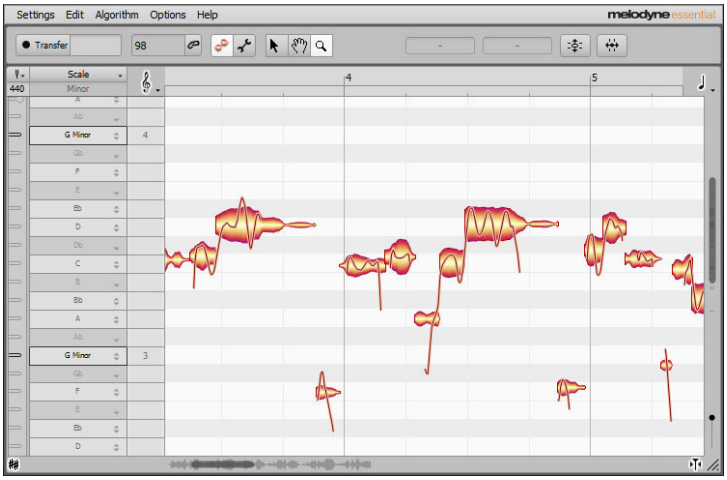


Acoustica 31 Band EQ is a 1/3-octave graphic equalizer offering precise control over frequency content. Slider range is adjustable from 6dB to 24dB of boost and cut, and many presets are included to get you started.

ACOUSTICA PRO STUDIO REVERB

Acoustica Pro Studio Reverb takes the lush, crystal-clear reverb used in our award-winning Pianissimo grand piano virtual instrument and expands it into a great- sounding, flexible standalone effect.

CELEMONY MELODYNE ESSENTIAL



Melodyne is a vocal and audio tuning powerhouse that lets you move and edit notes on a grid similar to the one used Mixcraft's Piano Editor. It excels at fast and natural- sounding vocal pitch correction. Melodyne is integrated into Mixcraft 10's Sound edit window, but we also include the standard plug-in for legacy projects. (Check out **Appendix 1: Using Melodyne For Basic Vocal Tuning** for more info on Mixcraft's integrated Melodyne functionality.)

DUBMASTER LIQUID DELAY

Dubmaster Liquid Delay combines tempo-synced rhythmic liquid delay with powerful LFO-driven filtering and phase effects to add atmosphere and a unique sound to tracks.

FAT+

FAT+ mixes all of the essential ingredients for truly huge sounds into one powerful plug-in, combining analog warmth, vacuum-tube distortion, and tape saturation into a single effect that’ll make your tracks sound enormous!

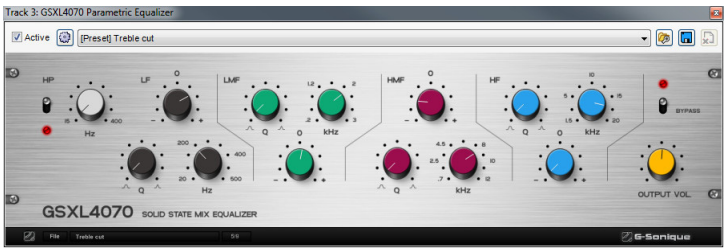
FEROX TAPE EMULATOR

There's something about the sound of tape, and Ferox captures that intangible “something.” The unique combination of authentic tape hiss, saturation, and compression brings personality and classic feel to tracks.

FSQ1964 TRANSIENT VITALISER

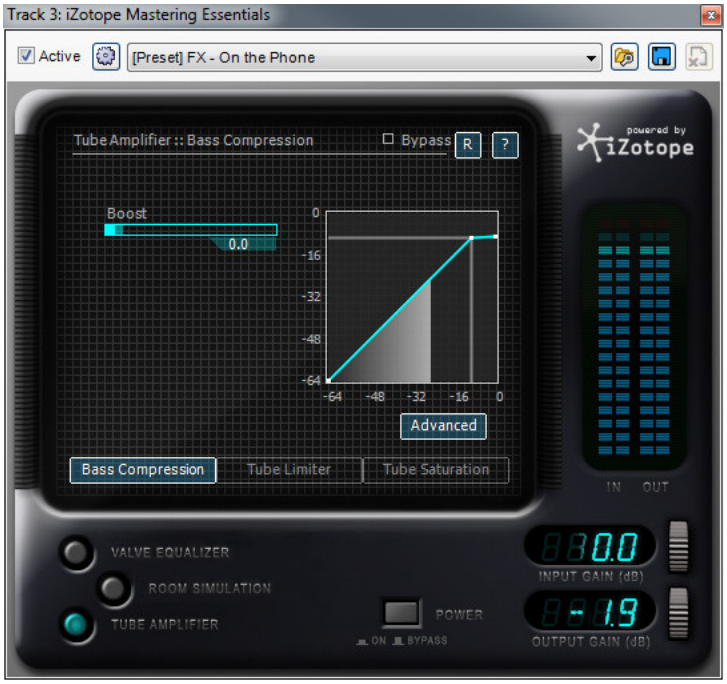
This powerful mastering tools adds sweet high frequencies, analog colors, crystal and transparent transients, and boldness to any mix.

GSXL4070 VINTAGE PARAMETRIC EQ



Four bands of parametric equalization plus a high pass filter emphasize the sizzle and bass in tracks, cut out noise and mud from the mix, and dial in the perfect tone. Inspired by the EQ section of one the world's most coveted studio mixing consoles.

IZOTOPE MASTERING ESSENTIALS

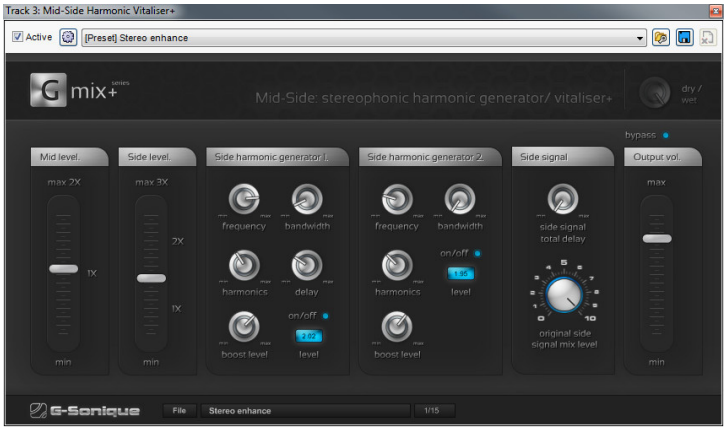


Mastering Essentials delivers Izotope’s world-class mastering tools to Mixcraft with a gorgeous-sounding parametric EQ, spectrum analyzer, a phenomenal room simulation, vacuum-tube compression, limiting, and saturation.

MID-SIDE ENVELOPE FOLLOWER+

An envelope follower using the dynamics and amplitude of the incoming audio to modulate the cutoff frequency of a filter… the result is a funky, liquid filtering effect that dynamically responds to music content. The signal is split into mono (*Mid*) and stereo (*Side*) signals. Each part can be boosted or attenuated, enabling the creation of panoramic 3D effects.

MID-SIDE HARMONIC VITALISER

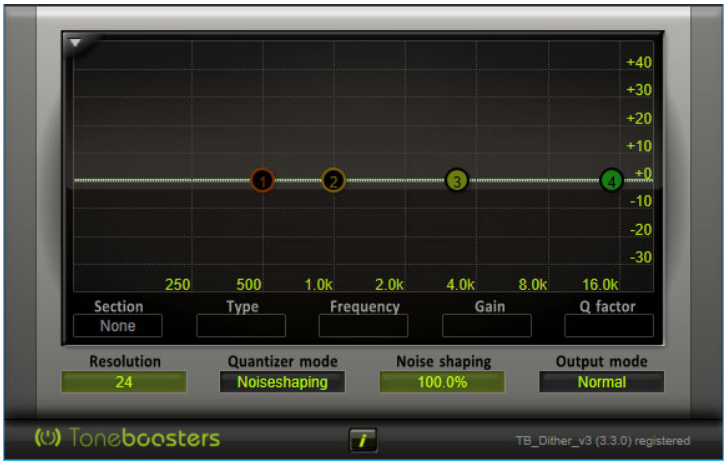


Mid-Side Harmonic Vitaliser+ is a stereo enhancer featuring a new technology for vitalizing, coloring, controlling, adjusting, and widening stereo audio content (the *Side* part of a signal), as well as adding space, width, and depth to mixes.

MID-SIDE STEREOPHASE FILTER+

Offers new, creative methods of modulating stereo sound by creating special 3D modulation effects with phasing and filtering, and creates the illusion of effected sound flying around your head, while the center audio content (mid) remains untouched.

TB DITHER

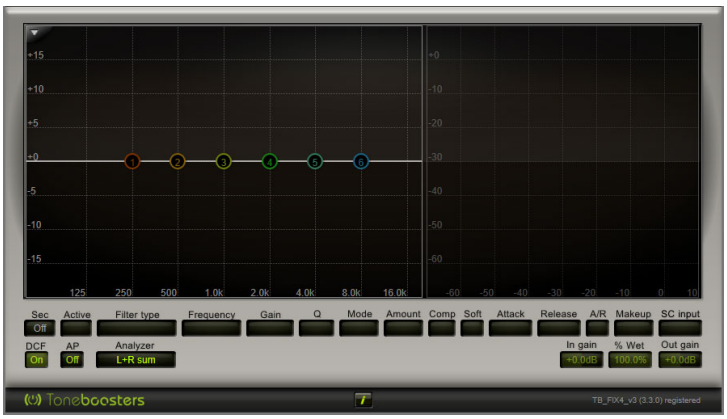


TB Dither modifies the bit depth of audio signals, by applying dithering, quantization, and noise shaping, and is an essential tool for maximizing the audio quality of 16-bit master audio files.

TB GATE

TB Gate is a very functional and simple to use gate. With its attack, hold and release parameters it can accommodate almost any gating requirements.

TB FIX



TB FIX (“Flex”) combines equalization and dynamics processing in one processor. It features six filter sections with more than 30 filter types including classic analog peaking and shelving filters and resonating low- and high-pass filters, plus powerful frequency-dependent compression for taming difficult material.

TB TIMEMACHINE BIT CRUSHER

Recreate the sound of 8-bit video games, 12-bit samplers, or trash audio by transforming it into 2-bit noise! TimeMachine simulates the effect of A/D and D/A aliasing, re-sampling, and bit reduction (both linear and mu-Law quantization).

TWISTHEAD VS-206 PREAMP

Adds subtle analog warmth or fierce overdriven tube grit to tracks. This vintage tube preamp adds 1960’s charm and character to vocals, guitar, drums, and more.

XBASS 4000L BASS ENHANCER

XBass 4000L adds the warm, fat bass tone found in vintage tube circuits to your projects. XBass 4000L combines two unique algorithms to enhance the bass spectrum of tracks, adding emphasis to the audible bass content, enriching the bass and sub-bass spectrum, and boosting higher harmonic frequencies.

DUBSHOX MULTI-BAND DISTORTION

DUBSHOX Multi-Band Distortion is a multi-band distortion and waveshaping unit with over 40 types of distortion and shapers, from analog, transistor/diode and tube distortions, to crazy digital waveshapers. Every band has a knob for drive and output level for adding heavy distortion without excessive volume boost. DUBSHOX Multi- Band Distortion is ideally suited to aggressive modern dance styles including Dubstep, Drum and Bass, and EDM.

POD4500 PARTICLE DELAY

The POD4500 Particle Delay expands upon standard beat-synced delays with wildly unique “particles” that can be delayed, tuned up and down by octaves, filtered, and modulated. A fantastic addition to any type of music, POD4500 Particle Delay especially shines in experimental and dance music styles.

PSEQ-1 VACUUM TUBE PASSIVE EQ

The PSEQ-1 Vacuum Tube Passive EQ faithfully replicates the sweet and warm “undoctored” tonality of passive EQ circuits. Even with large boosts at narrow-Q settings, the PSEQ-1 Vacuum Tube Passive EQ avoids the harshness that often plagues conventional active EQ topologies. The perfect EQ for individual channels or two- channel final mix busses.

TREBLECREAM

TrebleCream is a unique new master bus plug-in intended to minimize the effect of screaming or distorted mid-treble frequencies and transients resulting in more pleasing final mixes.

TRW-1 VACUUM TUBE TRIODE WARMER

The TRW-1 Vacuum Tube Triode Warmer is a plug-in with an inner structure similar to real blocks of vacuum tube studio devices, including emulation of physical phenomena like small positive inner feedback, tube softening of transients, compression, and generation of both odd and even harmonics.

VBE-1 VACUUM TUBE BASS ENHANCER

VBE-1 Vacuum Tube Bass Enhancer is vacuum tube analog bass enhancer. When standard equalization does not bring the massive fatness and warmth you’re seeking, VBE-1 Vacuum Tube Bass Enhancer delivers real vacuum tube warmth, saturation, and drive to bass lines and kick drums.

VTC-1 VACUUM TUBE COMPRESSOR

Pentode Audio VTC-1 Vacuum Tube Compressor is an analog-modeled virtual VST compressor with a warm analog and transparent sound. Compared to modern compressors, Pentode Audio VTC-1 operates differently: VTC-1 doesn’t have a threshold knob; the amount of compression is set by increasing or decreasing input level as with old analog tube compressors.The Compression amount knob is similar to the ratio knob on modern compressors.

ZENER LIMITER LM-2Z

The Zener Limiter LM-2Z models rare and unique compressors utilizing a zener-diode as a gain-reduction element. Compared to classic digital brickwall limiters,the Zener Limiter LM-2z offers a more transparent, liquid, and airy sound with significantly less distortion and unwanted artifacts.

FUSION FIELD

Fusion Field is a smooth diffusion reverb that sits beautifully in a mix. Designed to imitate complex, natural spaces, it's also very easy to use. Using an innovative "cloud" display to represent reverb spaces, Fusion Field offers powerful control with few controls to hamper your creativity.

STUDIO DEVIL VIRTUAL BASS AMP

Studio Devil Virtual Bass Amp is loaded with fantastic features for strikingly realistic emulations of legendary bass amps including a vacuum-tube preamp, power amp drive control, variable-knee limiter, seven-band EQ, two speaker cabinet emulations (plus D.I.), and numerous presets.

VTD-42 PSYCHEDELIC DELAY

VTD-42 Psychedelic Delay replicates the warm, smooth, trippy textures of early tape-based delay systems without the hassle of cranky tape transports! With tape speed and wow and flutter controls, you'll get all the subtle (or not-so-subtle) pitch undulation and tonality that only a tape delay can deliver, plus the rhythmic complexity of multiple tape heads.

MIXCRAFT LEGACY EFFECTS

The following older effects were included with previous Mixcraft versions. Mixcraft 10 doesn’t install these by default, but you can choose to install them if you like. Generally speaking, these have been superseded by newer and better effects plugs; we only recommend installing them if you have older project files that use them.

ACOUSTICA CHORUS

Chorus is used to thicken up a sound, by adding tiny variations in pitch as well as small amount of delay. It’s often used to give the impression of more than one instrument or vocalist performing the same part.

ACOUSTICA COMPRESSOR

Compressors reduce the differences in volume between quiet sounds and loud sounds in a recording. This effect is often used on vocals and drums, where some portions of the sound are very quiet, and other portions are very loud. Reducing a recording’s dynamic range makes mixing far easier and, dependent upon settings, can impart “punch” and impact.

ACOUSTICA DELAY

Also known as “echo,” delay is one of the oldest and simplest effects. Delay takes incoming audio, waits a specified amount of time, and replays the audio, creating an echo effect. The *Feedback* parameter allows a portion of the signal to be sent back into the delay effect, creating additional repeats of the echo.

ACOUSTICA DISTORTION

Acoustica Distortion adds audio distortion similar to that used on electric guitars. This effect can range from subtle grit to extreme destruction of the original audio. Note that adding distortion can severely affect the volume of the recording. A little distortion goes a long way, so experiment with very low settings to see how the audio is affected and increase the amount gradually.

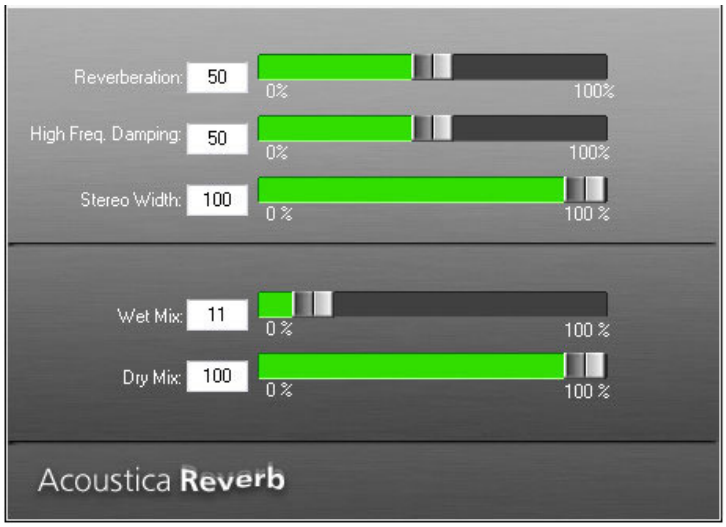
ACOUSTICA EQ

Acoustica EQ is a ten-band graphic equalizer that allows boosting or cutting of audio frequency regions. If a recording sounds thin, bass frequencies may be boosted. If a recording sounds too bright, high frequencies can be reduced. The Output Gain control is used to raise or lower overall volume after EQ processing.

ACOUSTICA FLANGER

Flangers delay the signal by a small amount while slowly varying the delay time, producing a swept comb-filter effect, commonly referred to as a “jet swooshing” sound (because of its similarity to the sound of a jet plane flyby).

ACOUSTICA REVERB



Used to recreate the subtle echoes and reverberation of a natural room, reverb effects are some of the most useful in music. A single violin or piano playing in a large church or auditorium takes on new life when the last note bounces around the room and fades away.

Acoustica Reverb effect can be used to recreate the ambience of many different environments, ranging from small spaces to exceptionally large chambers. The decay of high frequencies can be set High Frequency Damping control; carpeted rooms, for example, absorb most high frequencies, but large empty houses with marble floors sound extremely bright and echoey because high frequencies are not damped.

CLASSIC AUTO-FILTER

Produces filtering effects that change over time, most commonly used for automated “wah-wah” effects. However, Auto-Filter’s extensive parameters allow many more musical variations including triggered effects (where the filter follows the dynamics of a sound) or synced LFO effects (where the filter opens and closes at note values locked to the project tempo).

CLASSIC CHORUS

Similar to the Acoustica Chorus effect, but with some additional features and a unique sound.

CLASSIC COMPRESSOR

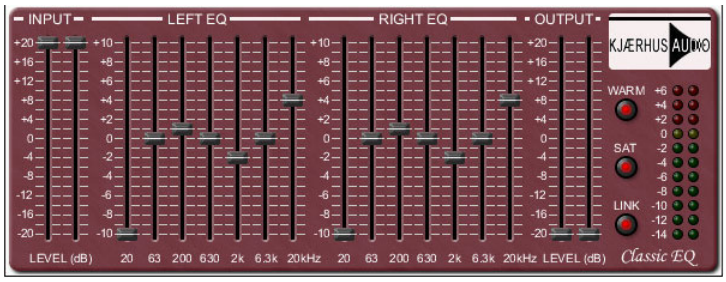
Similar to the Acoustica Compressor effect, but with additional parameters and a different tonality. (There are many different compressor types in the software and hardware world; pro audio engineers prefer different compressors for different source material.)

CLASSIC DELAY

Like the Acoustica Delay effect, this offers echo and delay effects, but goes much further with several outstanding features. Most exciting is Sync, which automatically synchronizes delay times to note-values derived from the project tempo.

Synced delay effects are a fun and musically useful way to spice up parts. Classic Delay's *Sound* and *Type* parameters make it a great choice for replicating the sound of vintage analog and tape delay effects.

CLASSIC EQ



Similar to the Acoustica EQ effect, Classic EQ offers individual control of the left and right channels. This can be used to create unique stereo effects or to correct audio anomalies in one side of the stereo image.

CLASSIC FLANGER

Similar to Acoustica Flanger but with added controls and a unique tonality. The modulation of the sweep can also be synced to the project tempo.

CLASSIC MASTER LIMITER

Similar to the Acoustica Compressor in function, the Classic Master Limiter is intended to be used in the Master Effects bus to smooth out and increase overall project level for a professional “sheen.”

CLASSIC PHASER

Similar to a Flanger with a less metallic and more “swooshing” tonality, phasing is often added to guitar and synth pad sounds, adding animation, depth, and character.

CLASSIC REVERB

Similar to the Acoustica Reverb effect, with some additional features and a unique sound. Reverbs are another example of an effect where each brand and type has its own unique audio “fingerprint,” so it’s often good to have a few different types for different characters.

USING VIRTUAL INSTRUMENTS

Virtual instruments are like having a keyboard instrument within Mixcraft that can be played and recorded using a USB or MIDI keyboard controller. The Instrument Preset Window offers powerful layering, splitting, and more (oh, how we love some “and more”). Mixcraft supports VSTi and VST3 formats.

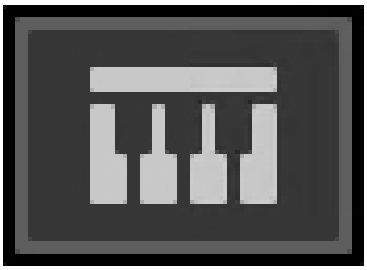
64-bit vs. 32-bit Effects

Mixcraft 10 is a native 64-bit application, so you'll want to use 64-bit virtual instruments whenever possible. Mixcraft can still run older 32-bit virtual instruments - these will automatically load in a shell and operate like any other instruments.

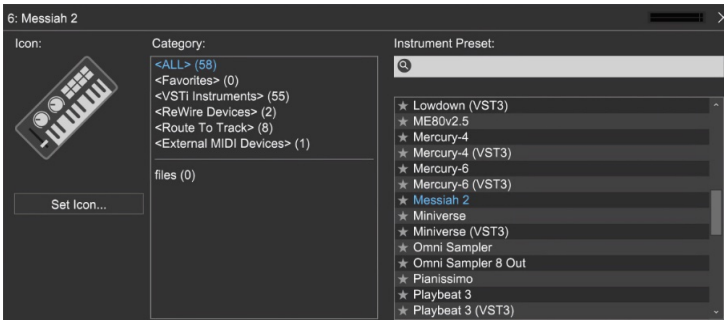
With recent advances in processor technology, all new PC's feature 64-bit processors. It's a little confusing, but **the number of processor bits is totally separate from the bit-depth of audio files**. **Unlike higher bit-rate audio, there is no difference in the sound quality of 32-bit plugins vs. 64-bit.** It isn't necessary to understand all the technical nitty-gritty, but the important takeaway is that a 64-bit system is capable of moving far more data, far more quickly than a 32-bit system. In regard to audio plugins and instruments, this means they'll run more efficiently and will be able to address much more system RAM if needed (e.g., if you're using large sample library-based instruments).

Older 32-bit plugins will still run in Mixcraft, but you may encounter stability issues. If possible, we strongly recommend updating to 64-bit versions if available.

INSTRUMENT PRESET WINDOW



Click the piano keyboard icon in the track header to open the Instrument Preset window.



This opens the Instrument Preset window. On the left side you'll see numerous categories. For now, we'll leave this on the default <All> setting and explore some Instrument Preset sounds.

Instrument Presets

Click on a category on the left, then choose an Instrument Preset on the right. The main default categories include:

Bass	Percussion
Brass	Reed
Combinations	Sound Effects
Ethnic	Strings
Guitar	Synth
Hits and Stabs	Voice
Keyboard	Wind

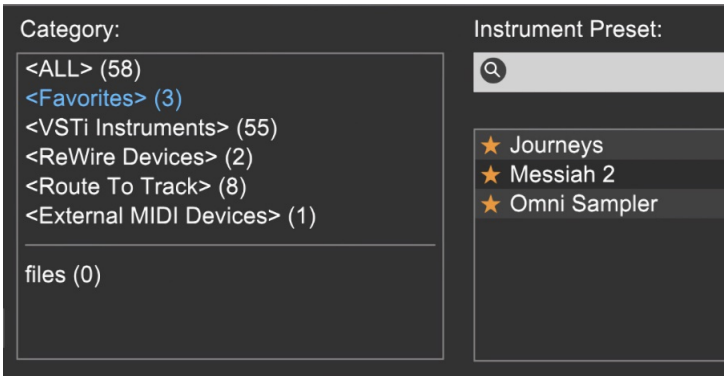
Click the *X* button at the top right of the window to close the instrument dialog. Alternatively, click the instrument button on the track header to toggle viewing the

instrument preset window.

ADDITIONAL INSTRUMENT WINDOW CATEGORIES

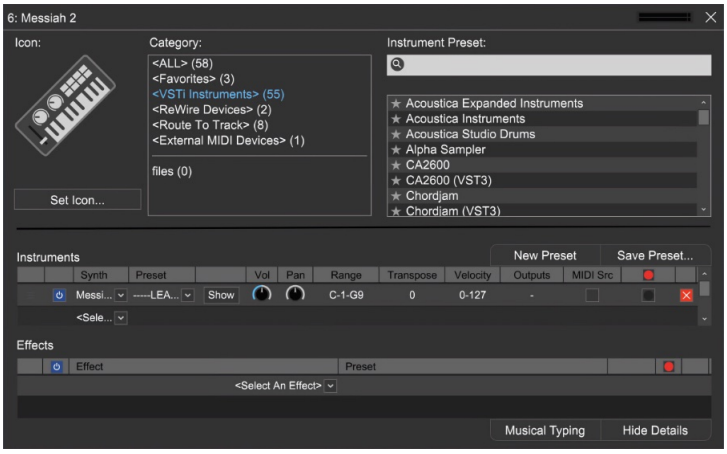
There are five additional preset categories: *<Favorites>*, *<VSTi Instruments>*, *<ReWire Devices>*, *<Route To Track>*, and *<External MIDI Devices>*. Here's what they do:

- **FAVORITES**



Frequently used *Instrument Presets* can be tagged by clicking on the star next to an *Instrument Preset* name. Choosing *Favorites* from the category displays all starred selections in the *Instrument Preset* list.

VSTi INSTRUMENTS

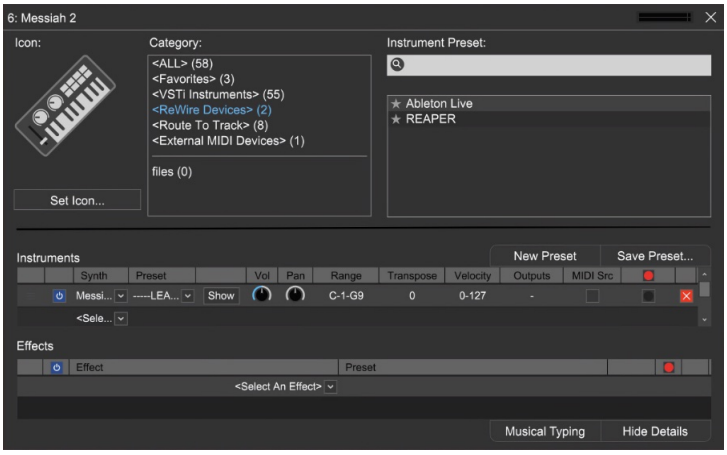


This shows all available virtual instruments including user-installed instruments.

(VSTi and VST3 are the only supported third-party instrument formats. If you have a Virtual Instrument that is not showing up, you may have to edit the plug-in folders in *Preferences>Plug-Ins>Edit VST/VSTi* Folders.)

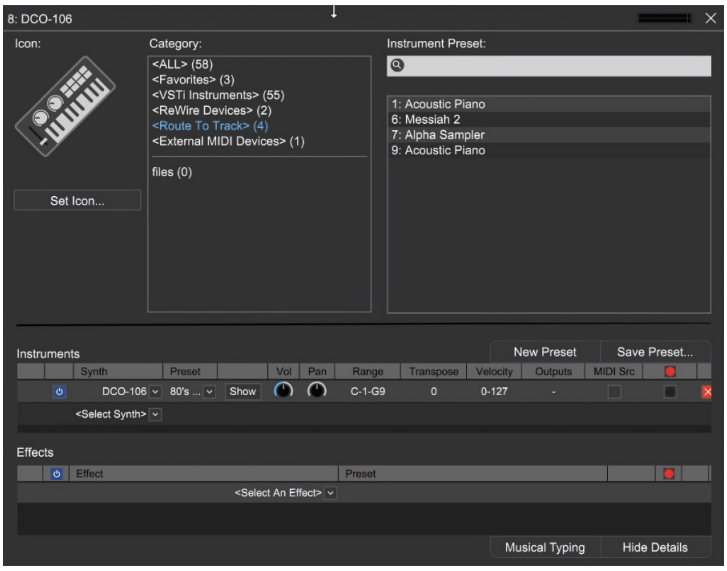
Clicking a Virtual Instrument expands the window downward (you can also expand the view by clicking the *Show Details* button). Click the down arrow in the *Preset* column to browse presets for the selected instrument.

REWIRE DEVICES



This section displays available ReWire applications. Selecting a ReWire application automatically creates a ReWire track for that application. In the *Show Details* view, available ReWire instrument sources can be selected (under *Presets*). Played or recorded MIDI data from the Virtual Instrument track, will be routed to the ReWire application. Audio generated by the application appears on the ReWire track in the Main Window.

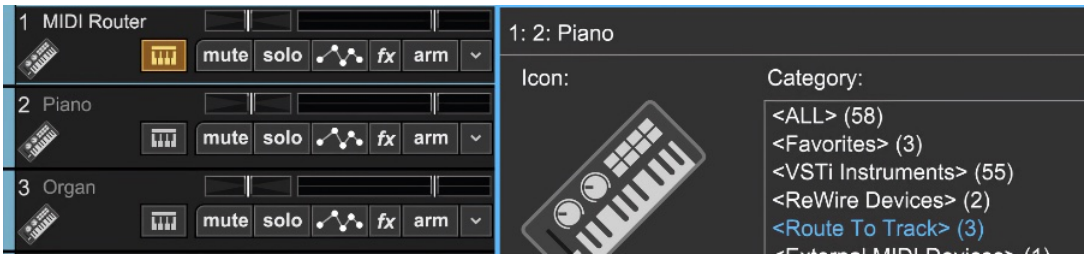
ROUTE TO TRACK



Route To Track is a specialized instrument type that functions as a MIDI router. Specifically, it lets you route MIDI from one Mixcraft track to another. That may not sound like a big deal, but it's super useful, particularly if you'd like to take advantage of Virtual Instruments with multi-timbral capabilities. Here are some ways to make use of *Route To Track*:

- **Ex. 1: Play Multiple Instruments From A Single Track**

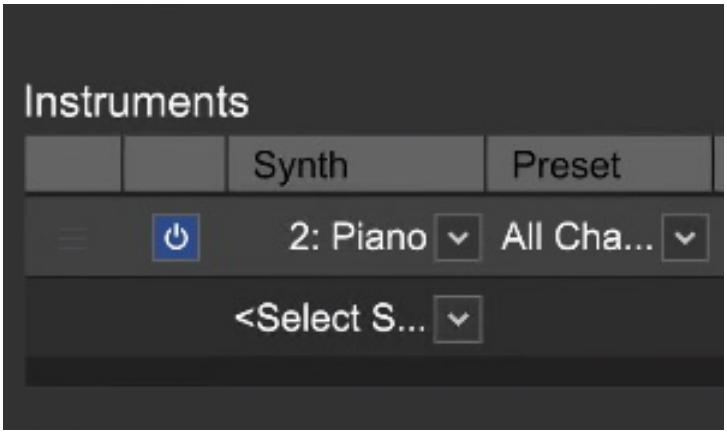
1. Begin by setting up a couple of instruments on instrument tracks. Here we've set up a piano on one track, and an organ on another.



2. Add a Virtual Instrument track (click *+Track*), then click the track's keyboard icon to open the *Instrument Preset* window. Select *Route To Track* from the Category list. The

track has been renamed *MIDI Router*.

3. The *Instrument Preset* list on the right shows all instrument tracks in the current Project. In this example, these are the *Piano* and *Organ* instrument tracks. Click on *Piano* in the *Instrument Preset* list.



If we click on the *MIDI Router* track to select it and play notes on a USB or MIDI controller, the *Piano* track plays. If we click *Organ* in the Instrument Preset list, the *Organ* track gets played.

We can also play both instruments simultaneously. Click on *Select Synth* in the *Instruments* area below and scroll down to the *Route To Track* section. Here you can choose from any of the instrument tracks in the current Project.

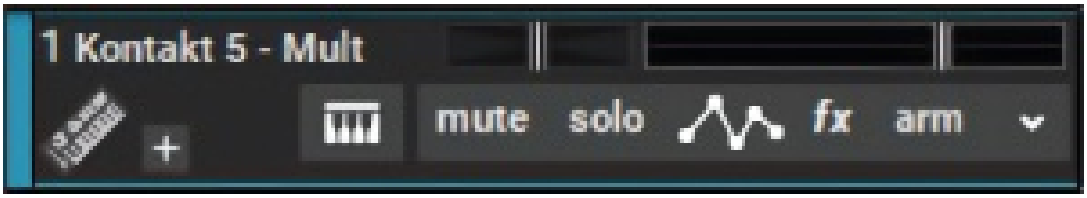
(You may have to scroll down a bit to see the *Route To Track* section).

• Ex. 2: Play and Record Multi-Timbral Virtual Instruments On Separate Tracks

A multi-timbral virtual synth or sampler allows the setup of different sounds on up to 16 MIDI channels within one instance. If you were to use “regular” instrument tracks in Mixcraft, there would be no way to play each MIDI channel (i.e. each instrumental sound)

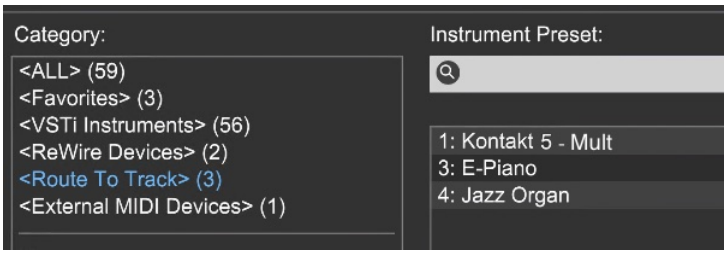
individually; there would also be no way to play or record separate MIDI clips for each MIDI channel.

We can get around this by creating a “master” multi-timbral instrument with separate sounds on each MIDI channel, and then creating individual Virtual Instrument tracks set to *Route To Track*. These all get routed to the master multi-timbral instrument track, but we can separately play each of its sounds by setting a different MIDI channel output for each of the *Route To Track* Virtual Instruments. Here’s how:

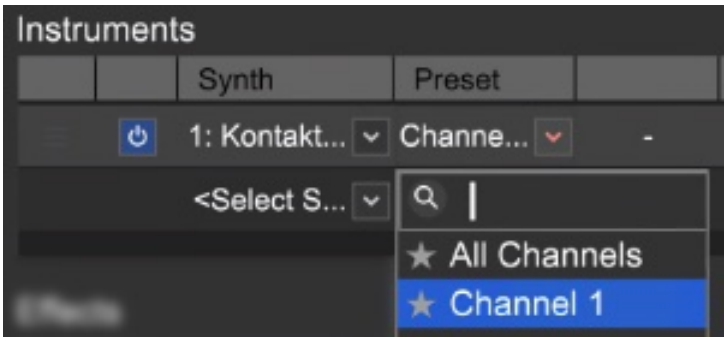


1. Create a Virtual Instrument track (*+Track*), open up a multi-timbral Virtual Instrument, and set up multiple instruments on separate MIDI channels. In this example, we’ve added *Upright Bass* on MIDI channel 1, a *Jazz Organ* on MIDI channel 2, and a *Mute Trumpet* on MIDI channel 3.

2. Create new Virtual Instrument tracks for each instrument/MIDI channel you’d like to use in the multi-timbral Virtual Instrument. We’ve named the newly created Virtual Instrument tracks *Upright Bass*, *Jazz Organ*, and *Mute Trumpet*.



3. Now we'll click the keyboard icon in the track header of the *Upright Bass* track to open the Instrument Preset window. Select *Route To Track* from the *Category* list. Click the name of the multi-timbral Virtual Instrument in the *Instrument Preset* list, which would be *Kontakt 5* in our example.



4. Here's the important part: select the appropriate MIDI channel for the instrument you'd like to hear in the *Preset* column of the *Instruments* section. (If you don't see the *Instruments* section, click the *Show Details* button.) Make sure you don't leave it on *All Channels*, or else **all** the multi-timbral instrument channels will play at once, making your tune sound like a Michael Bolton ballad from 1989, and no one wants that.

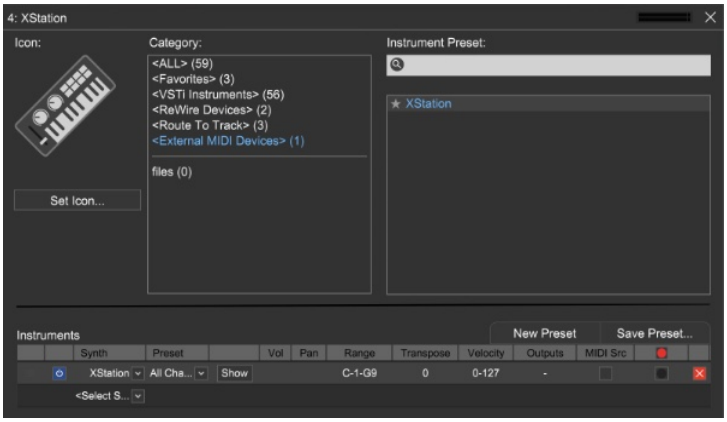
5. Repeat steps 3 and 4 for each separate multi-timbral instrument part. The only setting that will be different will be the MIDI channel. You'll now be able to play and record clips of the individual "sub" instruments on each track.

Super Quick Multi Timbral Sub Track Creation

Since the only parameter that gets changed is the MIDI channel, one quick way to create many "sub" Route To Track instrument tracks is to create one and set it up as described at left. Now right-click the Route To Track instrument track and choose Duplicate. Make additional duplicates for as many sub-instruments as needed. Now select each track

individually, click the keyboard icon in the track header, and set the appropriate MIDI channel in the Preset column. Now name each sub track as needed.

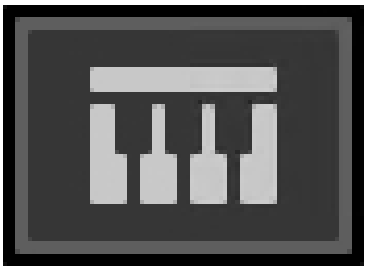
EXTERNAL MIDI DEVICES



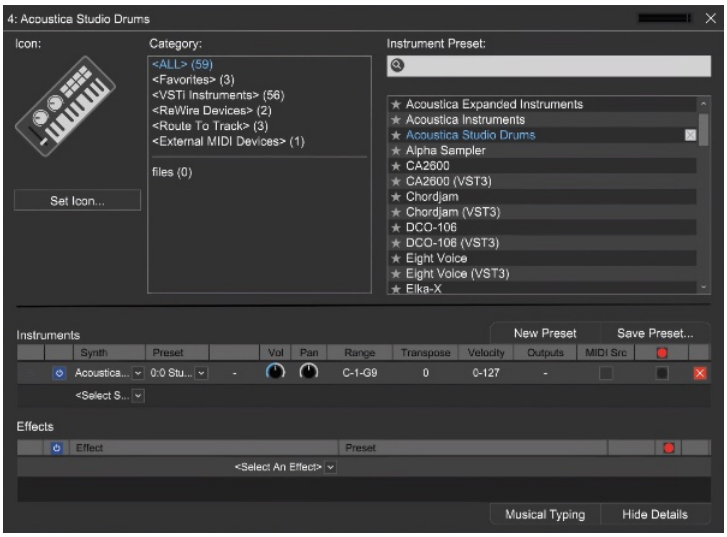
This category displays all external MIDI outputs and sound card MIDI synthesizers. Typically you'd use this to send MIDI to hardware keyboards or sound modules, like that DX7 that's been collecting dust in Uncle Mike's coat closet.

If an external synthesizer is connected via a MIDI interface, select the appropriate MIDI output interface. Please note that you will not be able to render or burn the audio made by external synthesizers unless they are first recorded to an audio track (because they aren't magically living inside Mr. Computer like Virtual Instruments).

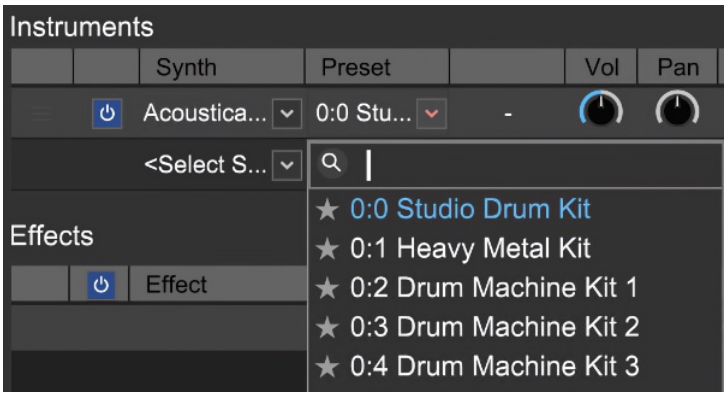
VIRTUAL INSTRUMENT PARAMETERS



Custom Virtual Instrument presets featuring multiple layered synthesizers, edited presets, custom key ranges and more can be created. Begin by clicking a Virtual Instrument track's Instrument icon.



This opens the Instrument Preset window shown above. Click the *Show Details* button to extend the instrument window and display more details about the preset.



You can either modify the current preset or begin with a "blank slate" by clicking the *New Preset* button. To add a virtual instrument, click *<Select Synth>* and choose a synthesizer from the drop-down list.

After selecting an instrument, the following parameters can be set.

• Preset
Selects a preset or patch from individual instruments.

• **Edit**
If the synthesizer has an editable user interface, click the Edit button to view and adjust its parameters.

• **Volume**

Click on the Vol column and type in a value.

• **Pan**

Click on the Pan column and type in a value -100% to 100%.

• **Range**

The range of MIDI notes the synthesizer responds to. Click and select a range of notes from the pop-up keyboard. The synthesizer will respond only to notes in the specified range.

• **Transpose**

Type in a transposition value for this synthesizer. For example, if transpose is set to 12, playing C4 will actually sound C5.

• **Velocity**

Type in a velocity range the synthesizer will respond to including a low and high note limit, e.g.1-
127). Make sure to include a dash so the software understands the range. For example, if you wanted it to respond to velocities from 120 to 127, you would type in 120-127.

• **Outputs**

If the virtual instrument supports multiple output channels, click the *Outputs* field to configure which output channels to use.

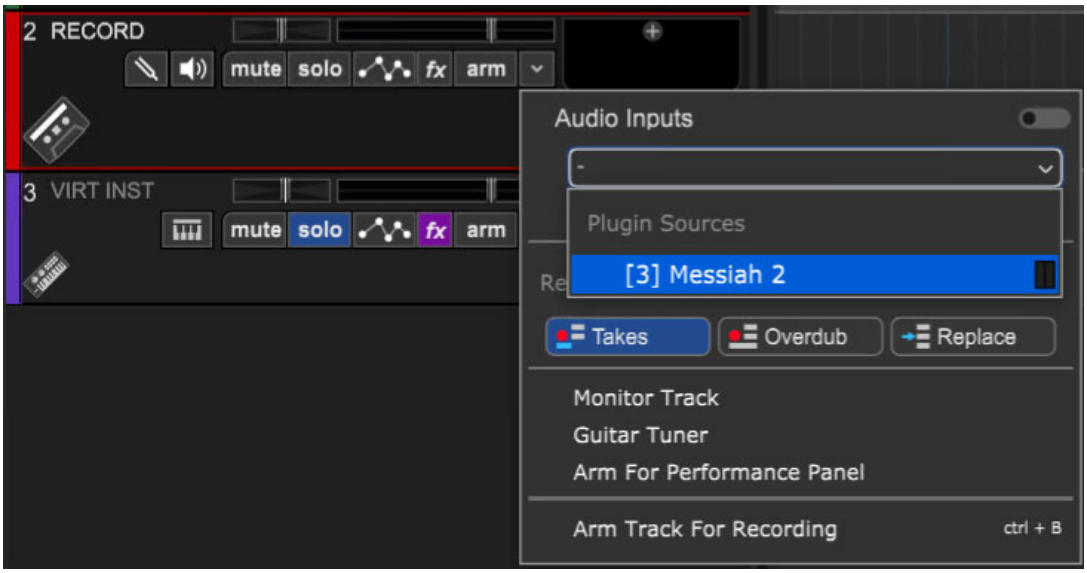
• **MIDI Source (*Mixcraft Pro Studio only*)**

Checking this box allows the routing of MIDI data directly from one virtual instrument to the one beneath it in the plug-in list. **Most virtual instruments don't actually output MIDI data, but this feature is primarily intended for MIDI arpeggiator/sequence/pattern generator plug-ins.** Typical instrument plug-ins may or may not output MIDI data, so be please aware of this. (See the *Using a Third-Party Arpeggiator Plug-in* section at the bottom of the page.)

Checking the *MIDI Source* box will effectively block MIDI data from clips for the track, so don't enable it unless you're sure the plugin outputs MIDI data.

• **Record Source (*Mixcraft Pro Studio only*)**

Allows virtual instruments to become Mixcraft recording input sources. This is useful for converting virtual instrument MIDI clips to pure audio files.

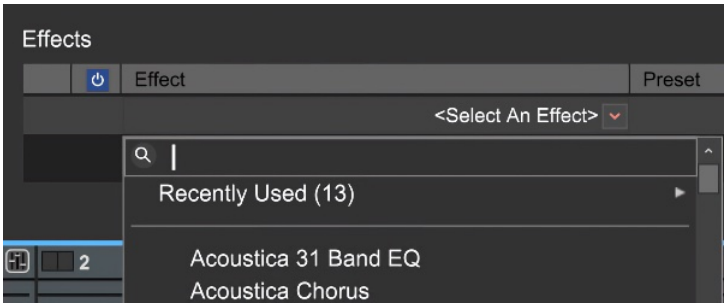


When the *Record Source* box is checked, a red dot appears, and the instrument will appear in the track record arm dialog as a recording source.

• **X**

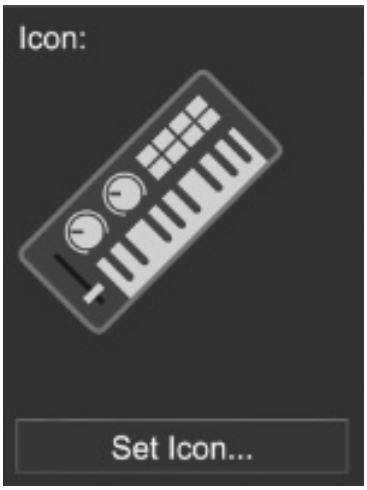
Removes an instrument and returns its slot to the *<Select Synth>* dialog.

ADDING EFFECTS TO INSTRUMENT PRESETS



To add effects to Instrument Presets, click *<Select An Effect>*. Once an effect is chosen, an effects preset can be selected from the *Preset* column. To customize effects settings, click the effects *Edit* button. An effects chain can be created with as many effects as desired.

SETTING AN INSTRUMENT PRESET ICON



To add a custom icon to an Instrument Preset, click the *Set Icon* button and select an icon (or add a custom icon using the *Add My Own Image File...* button).

CREATING AND SAVING CUSTOM INSTRUMENT PRESETS

Custom Instrument Preset can easily be saved and recalled. This saves all parameters of the Instrument Preset including effects.

To create a new Custom Instrument Preset, click the *New Preset* button.

To save a custom instrument preset, click the *Save Preset* button.

Type a preset name and select a category from the *Category* drop-down menu. To save the currently selected instrument icon, check the *Embed Icon* checkbox.

INSTRUMENT PRESET FILE LOCATION

Instrument Preset files are located in the Mixcraft folder in a directory called *InstPresets*. Preset files have a *.instrument* extension and may be traded and sent between

computers and users. Please note that you'll need the same VSTi's and virtual synths installed.

Custom presets will be saved under *%appdata%\Acoustica\Mixcraft\InstPresets*

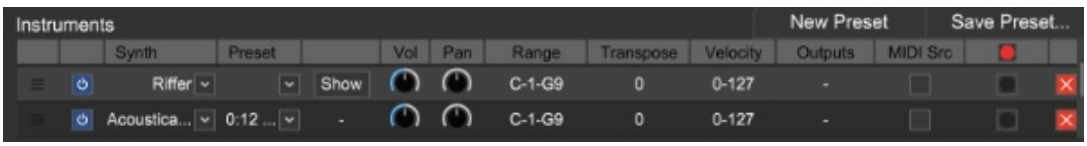
(*%appdata%* is a Window's shell variable that is expanded to something like *C:\Users\UserName\AppData\Roaming*)

EDITING INDIVIDUAL VIRTUAL INSTRUMENT PARAMETERS

Many Virtual Instruments feature extensively editable control panels. To access these parameters, click the *Edit* button.

On the preceding page is the Minimogue VA virtual instrument. Use the mouse to create custom sounds by turning virtual knobs, switches, etc.

VIRTUAL INSTRUMENT PRESET MANAGEMENT



Though each Virtual Instrument will have a unique user interface, they share the same controls on the top of the instrument window. These controls work exactly like the ones for effects.

• **Level Meter**

In the top-right corner of every VST Effect and Virtual Instrument is a stereo VU meter. This is helpful when adjusting input and output levels, and in those inevitable “what the heck?@#?” moments, it’ll let you know the signal is present.

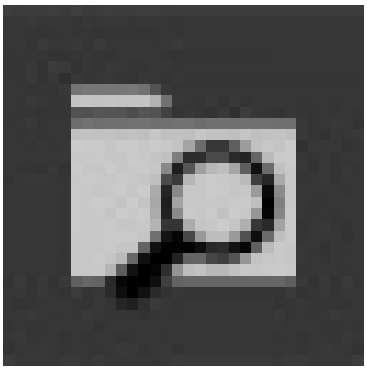
• **Active Checkbox**

Exactly the same as the *Active/Inactive* checkbox in the Effect List window, just replicated in the effect interface for convenience.

• **Select Preset**

Allows selection of Mixcraft and user presets.

• **Load VST Preset File**

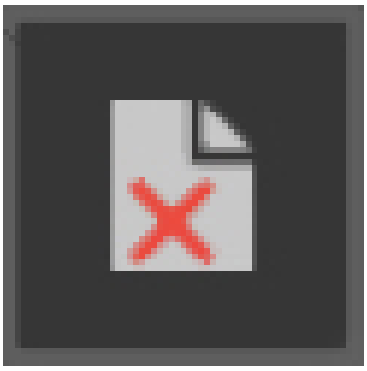


Some VST effect and instrument manufacturers distribute additional sound banks in the form of .fxb files, replacing current presets with a new presets.

• **Save A New Preset**

Saves the current instrument settings to a new preset. You’ll be prompted to enter a preset name. The preset will then appear in the preset list.

- **Remove A Selected Preset**



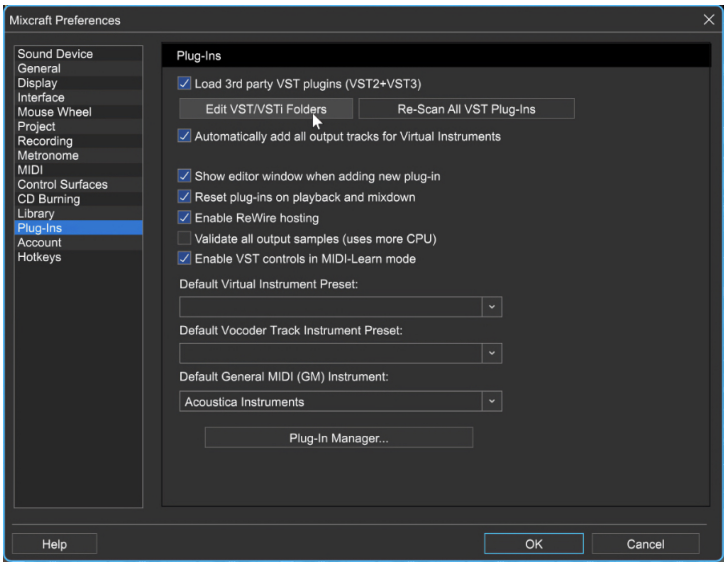
Permanently removes the currently selected preset. Factory presets cannot be deleted.

Note: If a virtual instrument track is frozen, its controls will not be editable until the track is unfrozen.

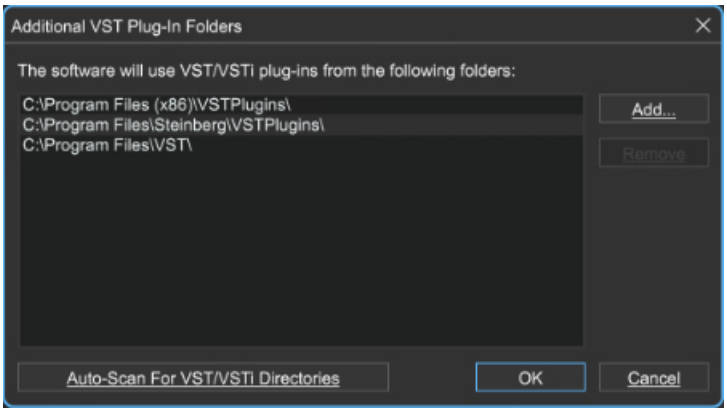
ADDING THIRD-PARTY VIRTUAL INSTRUMENTS

If a VSTi instrument has been installed and it's not visible in the Instrument List, you'll need to add the folder that stores the VST instrument. There are two ways to accomplish this:

The simplest way is to drag-and-drop its DLL file into Mixcraft's main window. Mixcraft automatically installs the file in the correct location and adds it to the VSTi search path list (in other words, it'll just work!). The alternative method is to "manually" add VSTi instruments to Mixcraft's VST/VSTi folders.



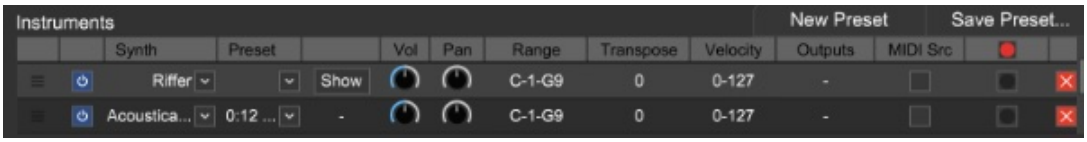
Select *File>Preferences>Plug-Ins* from the Main Window menus., then click *Edit VST/ VSTi Folders* and navigate to the folder containing the Virtual Instrument.



Add the folder by clicking the *Add...* button. If you're having trouble locating installed Virtual Instruments, click *Auto-Scan For VST/VSTi Directories*. Mixcraft will attempt to locate folders containing VSTi instruments.

USING A THIRD-PARTY ARPEGGIATOR PLUG-IN

A number of third-party software companies offer arpeggiator plug-ins that can be used to "play" VST either Mixcraft's included instruments or installed third-party VST instruments.



To use an arpeggiator plug-in, open the Instrument Preset window and select the arpeggiator as an instrument in a slot above the instrument you'd like it to control. No other fancy setup is necessary!

MIXCRAFT 10 RECORDING STUDIO INCLUDED INSTRUMENTS

ACOUSTICA INSTRUMENTS

A huge library of carefully sampled orchestral instruments, drums, synthesizers, pianos, organs, guitars, basses, and more, all mapped to the General MIDI specification.

MESSIAH

This incredibly accurate recreation of the famous Sequential Circuits Prophet-5™ synthesizer takes the concept even further, with increased polyphony, added effects, and more. This classic analog synthesizer dominated the music of the late 70s and early 80s. These amazing instruments are difficult to find, highly collectible, and are worth thousands of dollars, but Messiah nails the tone and experience of using a real Prophet-5™.

MINIMOGUE VA

The Moog Minimoog™ is the most famous analog monophonic synthesizer in history. Invented by the late Dr. Robert Moog, this instrument took the intense sonic power of a Moog™ modular synthesizer and put it in a portable instrument that revolutionized music. The MinimogueVA is a detailed recreation of the Minimoog™ sound, complete with huge bass sounds, powerful lead sounds, and a whole lot more.

VB3 ORGAN

The Hammond Organ, invented by Laurens Hammond in the 1930s, has had a major impact on nearly every popular music genre, from gospel and blues to rock and pop. Paired with a Leslie™ speaker, there may be no more expressive and powerful musical instrument in the world. The VB3 Organ recreates the sound and controls of the famous Hammond B3™ organ, paired with a Leslie™ speaker.

ALPHA SAMPLER

Alpha Sampler is an easy-to-use basic sampler that's fast and fun. It's so easy, it almost doesn't need any instructions; just drag an audio clip into the sample display window and play! Alpha Sampler lets you load one sound that can be played up and down the keyboard, but it's polyphonic, so you can play as many notes as you like. Alpha Sampler is included with all versions of Mixcraft.

There are several ways to load a sound into Alpha Sampler:

• Press the Load Sound button in the Sample Display window. This opens a standard dialog box which can be navigated to any sound. Select the sound, then press the Open button to load in the sound. Mixcraft 10 automatically saves sounds loaded into Alpha Sampler in the current song project folder.

• Drag and drop any audio clip from Mixcraft's clip Library (click the Library tab at the bottom of the Track View Window to select and preview clips) or directly

from the Track View window. Audio clips dragged in from the Track View window retain their start and end points as set in the Track View window, allowing easy editing of the sample's start and end points.

• Export a selected audio waveform region from the *Sound* tab by selecting a region, clicking the Copy Selection To button in the Sound Tab toolbar and choosing *Alpha*

Sampler. (see “Copy Selection To> Alpha Sampler”)

• An entire clip can be added to Alpha Sampler by right-clicking and selecting *Copy To Alpha Sampler*.

SAMPLE DISPLAY WINDOW

This displays the name of the currently loaded sample.

LOAD SOUND

Opens a dialog box for loading a sample. Since Alpha Sampler can only have one sound loaded at a time, newly loaded sounds will erase previously loaded sounds. The display beneath *Load Sound* displays the file name of the currently loaded sound.

MIDI ACTIVITY

On the right side is a wee LED light that flashes when MIDI note info is received. This can be helpful when tracking down a problem if Alpha Sampler isn’t making any sound. (A likely scenario would be if you loaded an audio clip with silence at the beginning.)

VOLUME ENVELOPE

This is a simple attack/release envelope generator affecting the sample’s volume.

ATTACK

Regulates the onset of a sound; at zero, the sound begins immediately, as the attack setting is increased, the sound takes longer to reach maximum volume.

RELEASE

Affects the volume of the sample after the key is released. Set at zero, the sample will stop as soon as the key is released. As the release setting is increased, the sample fades away gradually. Higher settings increase the length of time.

While we’re talking about volume, we should mention that samples loaded into Alpha Sampler are velocity-sensitive. In other words, play the keyboard softly and samples will play quietly. Conversely, playing hard causes samples to play loudly.

PITCH

FINE TUNE

Allows adjustment of the sample's pitch + or - 100 cents. You can quickly restore the *Fine Tune* control to zero by double-clicking the knob.

RUBBER

A fun and unique feature especially suited to drum loops or snippets of entire mixes. When set to the middle position, the *Rubber* effect is off. Turning the knob to the left of center will make the sample begin at a high speed and pitch, then slow down as it plays. Turning the *Rubber* knob to the right of center position has the opposite effect: samples will start at a low pitch and get faster (and higher) as they play.

FILTER

If you've ever played with filter controls on an analog synthesizer, this should be familiar; Alpha Sampler's filter is a modeled classic lowpass filter.

CUTOFF

Sets the lowpass frequency of the filter. In other words, all frequencies beneath the cutoff knob setting are allowed to pass through, but frequencies above it are blocked. (Hence the name: low pass… get it?)

RESONANCE

Emphasizes frequencies close to the cutoff frequency. The higher the setting of the

Resonance knob, the greater the emphasis, resulting in the familiar “ringing” and (when the cutoff is modulated as described below), “wah-wah” sounds.

MOD WHEEL

Consists of a low-frequency oscillator (LFO) capable of controlling Alpha Sampler’s pitch or filter cutoff frequency, resulting in vibrato, wah wah effects, and more. One good way to think of a modulation LFO is a “third hand” to automatically turn controls up and down.

The amount of modulation (aka, “mod depth”) can be altered by using your controller’s mod wheel (or another physical controller set to transmit MIDI controller #1).

SPEED
Adjusts the rate of the LFO.

FILTER AND PITCH BUTTONS
Selects the modulation destinations. Pressing *Filter* causes the LFO to modulate the cutoff frequency of the filter. Pressing *Pitch* causes the LFO to modulate the pitch. Both can be selected simultaneously if you really want to get crazy!

TRIANGLE/SQUARE SLIDE SWITCH
Selects between triangle and square LFO waves. The triangle waveform cycles up and

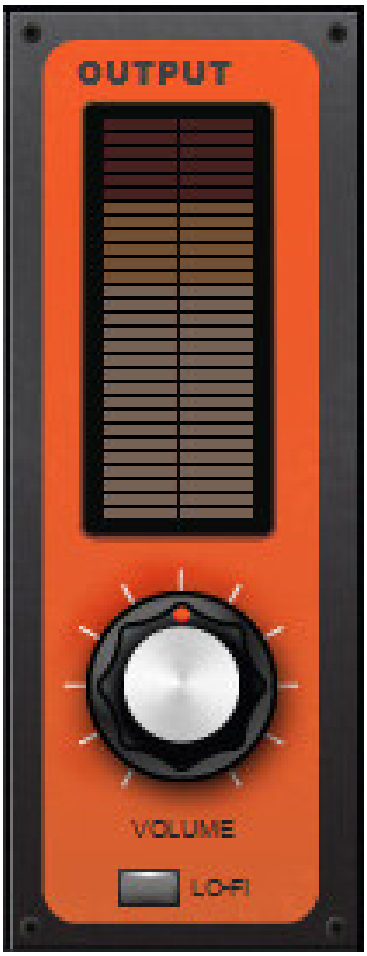
down in a smooth and uniform fashion, making it good for subtle vibrato or, at

extreme settings, swooping sirens or extreme wah effects (when modulating the filter). The square waveform jumps back and forth abruptly, making it good for sirens with alternating pitch, or when used with the *Tempo Sync* switch, “synchro-sonic” type rhythmic effects.

TEMPO SYNC

Syncs the LFO rate to the tempo of the current project and causes the speed knob to switch between musically relevant values, making the LFO modulate in “lock-step” with the beat. The synced note values range from a whole-note to sixteenth-notes.

OUTPUT



The Output section contains a big stereo level meter. Like any meter, you'll want to make sure this isn't slamming into the red, otherwise, you'll get nasty digital clipping.

VOLUME

Adjusts the master volume level of Alpha Sampler. Its middle setting represents unity, i.e. Alpha Sampler isn't adding or subtracting gain, but turning the master volume up can add some juice to very quiet samples, and dialing back will prevent super loud samples from distorting - this can be especially helpful when the filter's resonance control is cranked up.

LO-FI

Processes Alpha Sampler's output down to an 8 kHz sample rate and eight-bit word depth for a crunchy, aggressive sound similar to classic vintage 8-bit hardware samplers and drum machines.

ADDITIONAL FUNCTIONS

MONOPHONIC

Limits Alpha Sampler to playing one note at a time. Mono mode is "last-note priority," i.e., If a new note is played while another is held, the most recently struck note will sound and cut off the last one. Newly played notes will always retrigger the sample from its beginning.

LOOP

This causes the sample to repeatedly loop back to its beginning if a key is held longer than the entire duration of the sample.

REVERSE

Plays the sample backward, but be careful as you might invoke the spirits of sneaky classic rock bands.

ROOT KEY

Adjusts the base note of the sample - think of this as the “home base” key where the sample plays at standard pitch (i.e. not transposed). Adjusting the root key is useful for transposing the range of samples.

MIXCRAFT 10 PRO STUDIO INCLUDED INSTRUMENTS

Mixcraft 10 Recording Studio adds the following instruments:

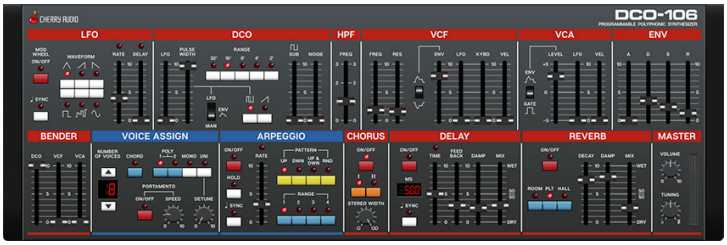
ACOUSTICA EXPANDED INSTRUMENTS

A rich addition to the Acoustic of deep synth pads, ethereal voices, haunting strings, and more.

ACOUSTICA STUDIO DRUMS

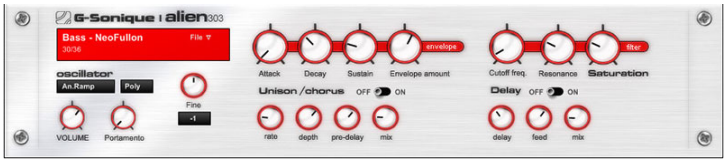
A large collection of acoustic and electronic drum sounds, recorded professionally in a world-class studio.

CHERRY AUDIO DCO-106



DCO-106 is a virtual polyphonic synthesizer that precisely models every aspect of the beloved classic Juno-106 synthesizer, from its self-oscillating filter to its dreamy chorus effect. The original feature set is augmented with an arpeggiator, more extensive LFO features, and delay and reverb effects, the quick "hands-on" Juno interface is has been retained for fast and fantastic analog sounds.

ALIEN 303 BASS SYNTHESIZER



A deep, biting bass synthesizer inspired by the famous Roland TB-303™ bass synthesizer. Ideal for authentic acid bass tones and other electronic dance music.

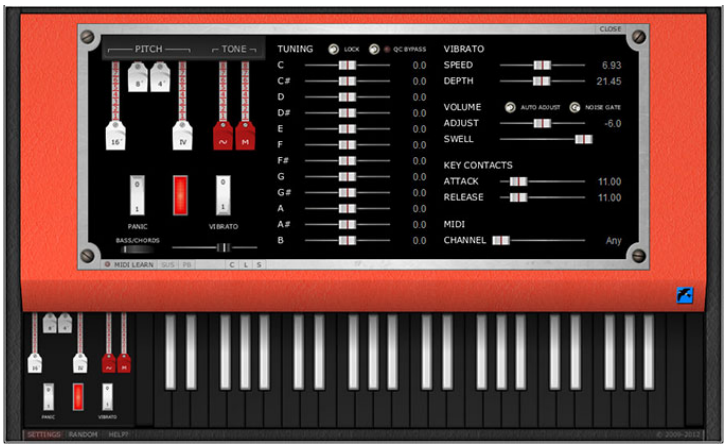
LOUNGE LIZARD ELECTRIC PIANO

The Rhodes™ and Wurlitzer™ electric pianos defined much of the sound of the 1970s. Featured in songs like Billy Joel's "Just The Way You Are," and Supertramp's "The Logical Song," these electric pianos have a warm, unique sound that works as well in jazz as it does in rock 'n' roll. These sounds are as popular today as ever, and Lounge Lizard perfectly recreates the sound and nuance of these classic instruments, as well as the effects they often were often paired with.

COMBO ORGAN MODEL F

A spot-on recreation of the classic Farfisa™ transistor combo organ. Great for 60s rock, surf rock, and more!

COMBO ORGAN MODEL V



A recreation of the classic Vox Continental™ transistor combo organ. Great for 60s rock, surf rock, and more! (Especially famous for The Doors' "Light My Fire.")

RENEGADE

Renegade combines the warm and organic sound of vintage analog synths with the sharpness, toughness, and precision of modern digital synths. With a Supersaw oscillator, vintage analog filters, and robust digital filters, Renegade provides tough, well defined lead sounds, fat basses, and juicy organic analog sounds. The perfect synth for aggressive Trance, Dance, Drum and Bass, Breakbeat, Electro, and more.

JOURNEYS

With A|A|S String Studio VS-2's sound engine running "under the hood," Journeys is master sound designer Gregory Simpson's endeavor on sounds that evoke the essence of other times, places, or cultures. Indeed, this collection will get you travelling from the ancient centuries to modern times, from Asia to Africa, and everything in between. Truly inspiring and totally unique!

MIXCRAFT 10 PRO STUDIO ADDITIONAL INSTRUMENTS

Mixcraft 10 Pro Studio adds the following instruments:

ME80 v2 VINTAGE ANALOG SYNTHESIZER

An incredibly realistic recreation of the Yamaha CS80 analog synthesizer, among the most powerful and coveted analog synthesizers ever made. This amazing recreation supports polyphonic aftertouch (just like the original) and has the same rich creamy tone as the original.

Mixcraft 10 includes both ME-80 Version 1 and Version 2. Version 2 features improved sound engine and graphics as well as 64-bit compatibility. Version 1 is included for legacy users, as Version 1 patches are not cross-compatible.

MEMORYMOON ANALOG SYNTHESIZER

No analog poly synthesizer in history has ever sounded more massive than the legendary Moog Memorymoog, and Memorymoon perfectly captures the enormous analog sound of the classic original. Loaded with presets and knobs, this three-oscillator polyphonic powerhouse will blow you away.

ACOUSTICA PIANISSIMO VIRTUAL GRAND PIANO

High-quality, award-winning grand piano featuring 250MB of Steinway Model D piano samples combined with powerful piano modeling technology.

GLASS VIPER

Expanding on classic 80s and 90s digital synths such as the Yamaha DX7 and Roland D-50, Glass Viper features unique waveform shaping, offering a deep and natural sense of movement. Going beyond analog simulation into a truly organic sound, Glass Viper’s tones span simple old synths, grungy filthy basses, delicate pianos, strange unnatural film effects, and much more.

CHERRY AUDIO VOLTAGE MODULAR IGNITE

Voltage Modular is a virtual modular platform, designed from the outset to be the best sounding, most powerful, flexible, and easy-to-use virtual modular instrument available. Voltage Modular opens the door to the audio playground of modular synthesis, not just as a traditional “keyboard” instrument, but its flexible audio ins and outs transform it into an immensely powerful signal processor within Mixcraft.

KASTELHEIMER VELDBERG XD

Veldberg XD is new virtual analog synthesizer based on algorithms from hardware VA synthesizers with immense programming possibilities. Including 137 preset sounds ranging from classic massive analog to experimental and innovative digital sounds, Veldberg XD is new virtual analog synthesizer based on algorithms from hardware VA synthesizers with immense programming possibilities. Veldberg XD is a world-class powersynth!

IMPULSE (LEGACY)

The Impulse poly synth virtual instrument was included with previous Mixcraft versions. Mixcraft 10 doesn’t install it by default, but you can choose to install it if you like.

OMNI SAMPLER

Omni Sampler expands Alpha Sampler's simple drag-and-drop concept to a familiar 16-pad drum machine grid sampler with easily switchable "grids," allowing up to 128 simultaneously loaded samples. Better still, Omni Sampler features independent pitch, filter, and envelope settings for each pad location. Mixcraft Pro Studio 8 also includes

Omni Sampler 8 Out, featuring up to eight individually assignable outputs for superior mixing and effects flexibility.

SAMPLE PAD GRID

Omni Sampler can have up to 128 simultaneously loaded samples, with 16 sample pads viewable at any time. The matrix grid on the left allows quick selection of which 16 sample pads are currently viewable in the 4x4 pad grid. The currently selected 4x4 pad grid is represented in the pad bank selector either by yellow squares indicating pads with samples currently loaded, or gray pads indicating visible pads with no sample currently loaded. To change which pads are currently visible in the 4x4 pad grid, click within the pad bank selector. Keep in mind that sample pads always have a one-to-one relationship with MIDI notes, and the MIDI note number of each pad is fixed, starting at C-1 for the top left pad, going up to G9 for the bottom right pad.

If you'd like to play the same sample on separate pads, simply reload the sample at a different pad location. Be aware that Mixcraft 10 automatically saves sounds loaded into

Omni Sampler into the current song project folder, so you don’t need to worry about sounds getting “lost” if you move or archive the project folder.

PAD SELECTION

Pad locations can be selected for loading or deleting samples, or sound editing by clicking on them. Empty or occupied pad locations will highlight in light gray when selected. Multiple pads may be selected by clicking on them while holding the [CTRL] key, or by clicking and dragging a rectangle over the desired pads. (Be sure to initially click either outside the grid area or on one of the lines dividing the grid, not an actual pad.) You can even select pads by dragging a rectangle over sections of the pad bank selector on the left.

LOADING SOUNDS INTO OMNI SAMPLER

There are a couple of ways to load sounds in Omni Sampler:

• **Method 1**: Select the destination pad in the 4x4 sample grid by clicking on it. The pad will turn gray. Press the “Load Sound” button in the Sample Display window. This opens a standard dialog box which can be navigated to any sound. Select the sound, then press the Open button to load.

• **Method 2**: Drag and drop any audio clip from Mixcraft’s clip Library (click the Library tab at the bottom of the Track View Window to select and preview clips) or from the Track View window directly to a pad in the 4x4 grid.

• **Method 3**: Drag and drop any audio clip from Windows File Explorer to a pad in the 4x4 grid.

Audio clips dragged in from the Track View window will retain their start and end points as set in the Track View window, allowing easy editing of the sample’s start and end points. This is handy if you’d like to use just a portion of one of Mixcraft’s included loops or sound effects - first, drag the clip to an open audio track in the Track View window, adjust the start and end points, *then* drag the clip into Omni Sampler.

Samples loaded into Omni Sampler are velocity-sensitive. In other words, play the keyboard softly and samples will play quietly. Conversely, playing hard will cause samples to play loudly.

Beat Slicing Sounds from the Sound Tab with Omni Sampler

In addition to the import methods shown at left, any sound can be imported into Omni Sampler directly from the Sound Tab window. The simplest option is the use the “Copy Selection To” menu. This adds the currently selected wave region to an existing or newly created Alpha or Omni Sampler.

The far more interesting and flexible Sound Tab import method is the “Slice To...” menu. “Slice to...” automatically “cuts up” the sound by beats, measures, transients, or warp markers. Each “slice” is then automatically imported to an Omni Sampler pad location. The “Create MIDI Loop” check box will even create a MIDI clip that consecutively “plays” each slice. This is manna from heaven for cutting up and rearranging beats, and with Mixcraft’s immense beat loop collection, there’s enough material to keep beat fanatics busy for years!

PERFORMANCE CONTROLS

Omni Sampler's performance controls include Pitch, Filter, Envelope, and Output settings and are set separately for *each pad individually* (it's easy to remember because "pad specific" controls have a gray background).

PITCH

FINE TUNE

Allows adjustment of the sample's pitch + or - 100 cents. You can quickly restore the Fine Tune control to zero by double-clicking the knob.

RUBBER

This is a fun and unique feature especially suited to drum loops or snippets of entire mixes. When set to the middle position, the *Rubber* effect is off. Turning the knob to the left of center will make the sample begin at a high speed and pitch then slow down as it plays. Turning the *Rubber* knob to the right of center position has the opposite effect: samples will start at a low pitch and get faster (and higher) as they play.

TRANSPOSE

Changes the pitch of samples in half-step increments with a maximum range of two octaves, up or down. Click the up/down arrows to move pitch in half-step increments, or click on the number to directly type a number value (add a "-" before the number for downward transposition). After entering a number value, click again.

FILTER

Omni Sampler’s filter is a modelled classic low pass filter.

CUTOFF

Sets the lowpass frequency of the filter. In other words, all frequencies beneath the cutoff knob setting are allowed to pass through, but frequencies above it are blocked.

RESONANCE

Emphasizes frequencies close to the cutoff frequency. The higher the setting of the Resonance knob, the greater the emphasis, resulting in the familiar “ringing” and (when the cutoff is modulated as described below), “wah-wah” sounds.

VOLUME ENVELOPE

This is a simple attack/release envelope generator affecting the sample’s volume.

ATTACK

Regulates the onset of a sound; at zero, the sound begins immediately, as the attack setting is increased, the sound takes longer to reach maximum volume.

RELEASE

Affects the volume of the sample after the key is released. Set at zero, the sample will stop as soon as the key is released. As the release setting is increased, the sample fades away gradually. Higher settings increase the length of time.

OUTPUT

VOLUME

Adjusts the level of each pad individually, letting you obtain an optimum mix. Its middle setting represents unity; Omni Sampler won’t add or subtract gain, but turning the master volume up make quiet samples louder, and dialling back will prevent super loud samples from distorting, which can be helpful when the filter’s resonance control is cranked up.

PAN

The pan control lets you set the position of each pad in the stereo field from left to right. You sooo knew that already.

Output Channel Selector (Multi-Out version only)

This control is only visible if you’ve chosen the multi-out version when opening a new instance of Omni Sampler. It allows each sample pad to route its audio to one of eight stereo child track mixer channels. For more information, see “Omni Sampler 8 Out.”

You’ll notice a few extra buttons beneath the Sample Display window as well. Like other performance parameters, these can be set individually for each sample pad.

- **Loop**

Makes the sample indefinitely loop back to its beginning if a key is held longer than the entire duration of the sample.

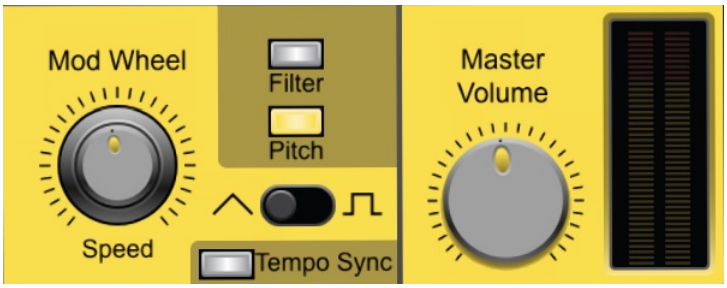
- **Reverse**

Plays the sample backward in case you’re doing a dope cover of The Beastie Boys’ “Paul Revere.”

- **Lo-Fi**

Processes samples down to an 8 kHz sample rate and eight-bit word depth for a crunchy, aggressive sound similar to classic vintage 8-bit hardware samplers and drum machines.

MASTER SECTION



The master section's controls affect *all pads simultaneously* - these controls have a yellow background.

GLOBAL

The *Global* button makes the Performance Controls (*Pitch*, *Filter*, *Envelope*, *Output, Loop*, *Reverse*, and *Lo-Fi*) affect all currently loaded sounds simultaneously. This is handy when multiple loops or drum sounds are playing and you want to modify everything at once (such as a filter sweep on everything). *Global* mode is toggled on and off by clicking the button; when global mode is active, the Performance Controls background turns yellow. When *Global* mode is switched off, the background returns to gray and the Performance Controls become independently settable for individual pad locations.

If you've already set Performance Control parameters for individual pads prior to engaging *Global* mode, the settings for that parameter will remain *until that parameter is adjusted* at which point it will affect all pads equally. For example, let's say the filter cutoff is set to differing amounts for multiple pads, then the *Global* is engaged. The individual filter cutoff settings for each pad will remain *until the cutoff knob is adjusted*. At that point, all pads will jump to the current setting. Keep in mind that this becomes the "current" knob position - changed knob positions won't return to their old values if the *Global* button is disengaged.

MODULATION

The Modulation section consists of a low-frequency oscillator (LFO) capable of controlling Omni Sampler's pitch or filter cutoff frequency, resulting in vibrato, wah wah effects, and more. One good way to think of a modulation LFO is a "third hand" to automatically turn controls up and down. The modulation amount is controlled using your keyboard controller's mod wheel (or any other physical controller set to transmit MIDI controller #1).

SPEED

Adjusts the rate of the LFO.

FILTER AND PITCH BUTTONS

These buttons select the modulation destination. Pressing *Filter* causes the LFO to modulate the cutoff frequency of the filter. Pressing *Pitch* causes the LFO to modulate the pitch for vibrato effects. Both can be selected simultaneously.

TRIANGLE/SQUARE WAVE SWITCH

Toggle between triangle and square LFO waves. The triangle waveform cycles up and down in a smooth and uniform fashion, making it a good choice for subtle vibrato or, at extreme settings, swooping sirens or extreme wah effects (when modulating the filter). The square waveform jumps back and forth abruptly, good for sirens with alternating pitch, or when used with the *Tempo Sync* switch, "synchro-sonic" type rhythmic effects.

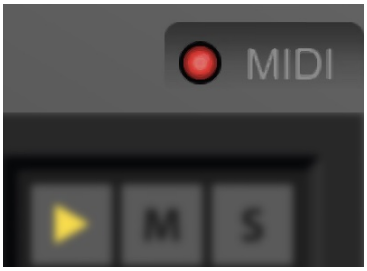
TEMPO SYNC

When the *Tempo Sync* button is on, the LFO rate is synced to the tempo of the current project and, now, the speed knob snaps to musically relevant values, making the LFO modulate in lock-step with the beat. The synced note values range from a whole note to sixteenth notes.

MASTER VOLUME

Adjusts the volume level of all samples at once. Its middle setting represents unity. The digital meter indicates relative level; for optimum gain, set it so that it stays strongly in the green and doesn't go into the red often.

MIDI



Though it’s not located in the yellow master section, you’ll see a MIDI light to the left of the Sample Display window. This indicates incoming MIDI data, and can be helpful in those inevitable, “why the heck isn’t this making any noise?” situations.

WORKING WITH SAMPLES IN OMNI SAMPLER

Sample pads can be played and recorded in Omni Sampler by playing pads or keys on a MIDI controller. Each sample pad also has three buttons across the top:

- **Play Button**

This is a handy way to preview a pad’s current sample. It will play the sample as long as it’s held (or until the sample runs out).

- **M (Mute) Button**

This toggles muting for the selected pad. It’s handy if you’ve sequenced a lot MIDI elements and would like to temporarily remove a sample.

- **S (Solo) Button**

Opposite of muting above; it toggles all other pads off when pressed. Multiple pads can be soloed as well. If you’re having a “why won’t this thing make any noise?!?” moment, make sure none of the solo buttons are pressed.

MOVE A SAMPLE PAD

To move a sample from one pad to another, simply click and drag it.

DUPLICATING A SAMPLE PAD

To duplicate a sample to a different pad right-click and choose *Duplicate Selected*. A copy of the sample will appear at the next available pad. You can also copy to another pad by option-dragging the selected sample pad.

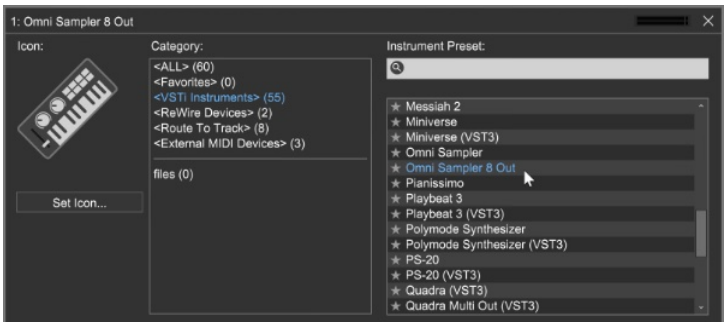
RENAMING A SAMPLE PAD

To rename a sample pad, right-click and choose *Rename*. The current name will be highlighted; type a new name and hit the return key, or click anywhere outside the current pad.

DELETING A SAMPLE PAD

To delete a sample, highlight a pad, right-click and choose *Delete Selected*, then click *Yes* at the next dialog box. Don't worry, this won't actually erase the sample from your hard drive, it just removes it from the Omni Sampler pad location.

OMNI SAMPLER 8 OUT



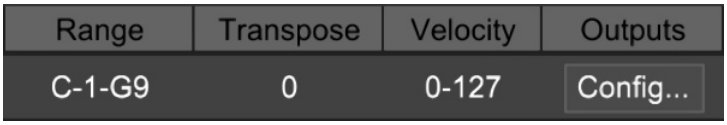
(MIXCRAFT PRO STUDIO 10 ONLY)

When opening a new instance of Omni Sampler, you'll see two choices: Omni Sampler - Stereo and *Omni Sampler 8 Out*. Like any other standard VST instrument, the stereo version mixes all audio output to one stereo fader mixer channel. Omni Sampler 8 Out is a multi-out version allowing the routing of each pad to one of eight stereo child track mixer channels.

This is particularly useful for advanced mixing and effects processing. You could accomplish the same thing by using multiple instances of Omni Sampler, but it's often

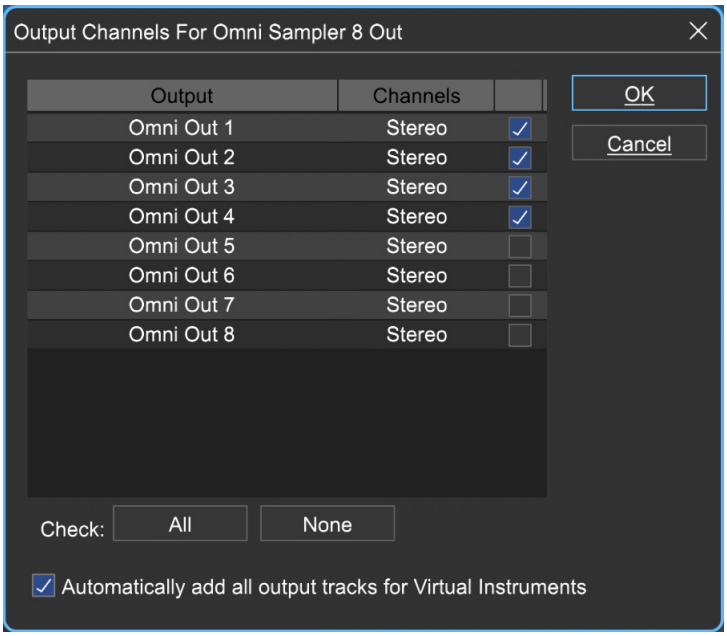
easier to have samples “all in one place,” especially if the samples are related in some way (they’re all used in one beat, for example).

To use a multi-out Omni Sampler, create a new track by clicking the *+Track* button, then selecting *Insert Virtual Instrument Track*. Click the piano keyboard icon on the track, then click *<VSTi Instruments>* in the left column. In the right column, scroll down and click *Omni Sampler 8 Out)*.

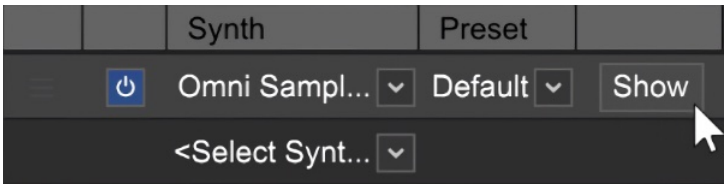


A newly opened *Omni Sampler 8 Out* defaults to standard stereo output.

Enable additional output pairs, by clicking on the *Config* button in the Instrument Window.



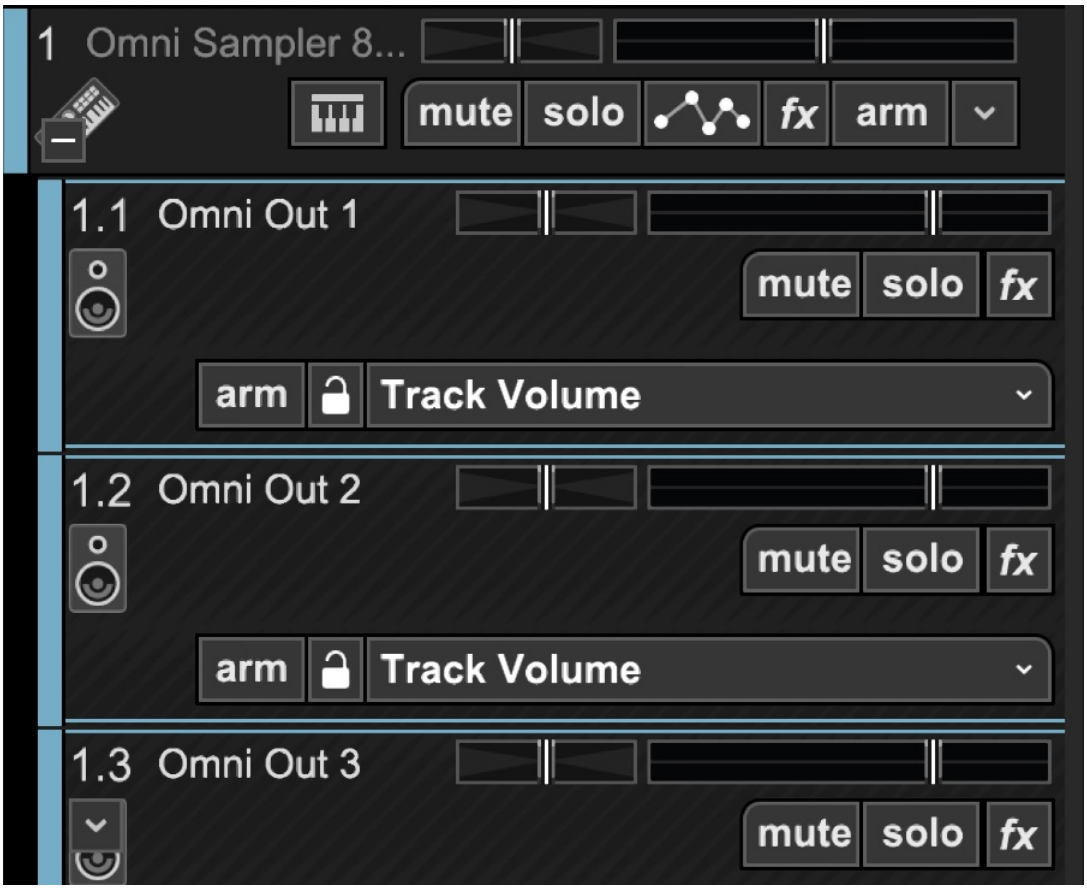
This opens the Output Config window. Here you can enable additional output pairs by clicking the checkboxes on the right. The *All* and *None* buttons will enable or disable all additional outputs, respectively. Automatically add all instrument output tracks for Virtual Instruments does just that... it enables all outputs for newly added multi-out capable instruments. If you’re only using a few separate outs, child channels can be disabled to save screen real estate.



Click the *Show* button in the *Instruments* area next to *Omni Sampler 8 Out* to open its controls. You can close Mixcraft's instrument window by clicking the *X* in the upper-right corner.

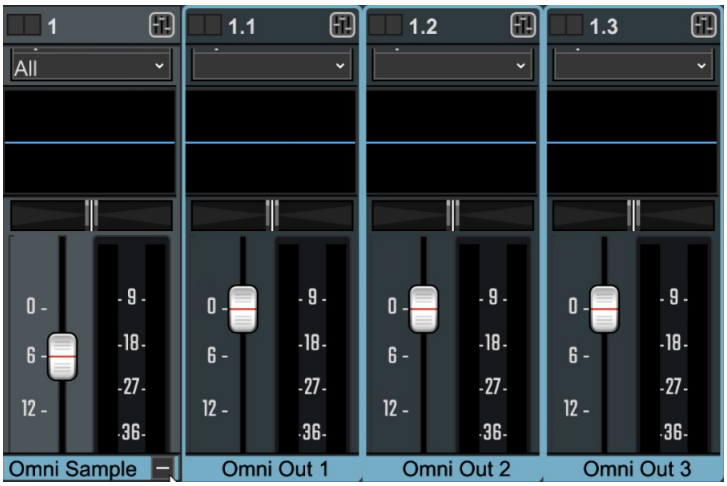
You'll find the *Output* selector increment buttons beneath the *Pan* control in the *Output* section in Omni Sampler's controls. This lets you choose from eight separate stereo "child" mixer channels for each pad. Nifty, eh? To see these channels in the main arrange window, click the + sign directly to the right of the instrument's track icon. To hide child channels, click again on the - sign (that's a dash).

To see the multi-out child channels in the track list, click the + sign in the track.



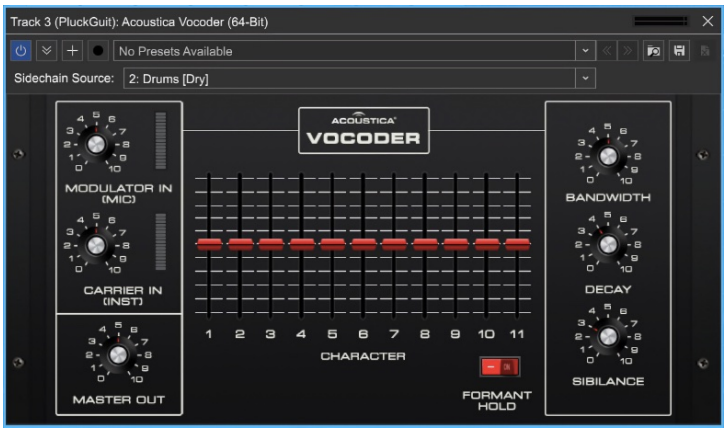
Separate outs will be visible in the track as list as child tracks.

The Mixer Tab shows Omni Samplers multiple outs in a similar fashion:



The separate out child tracks are hidden by default in the mixer but can be viewed by clicking the + sign in the main Omni Sampler channel. Click the - (minus) sign in the main Omni Sampler channel to hide the mixer child tracks from view.

ACOUSTICA VOCODER



A vocoder is a specialized type of multi-filter bank that imparts the tonal characteristics of one sound upon another. Vocoders are commonly used to create robot voice or choir effects by imparting the spectral character of a spoken or sung source (aka, the “modulator”) to a full-spectrum constant tone (aka, the “carrier”).

Generally speaking, the carrier audio should be something relatively constant with a lot of frequency content (e.g. a full synth wave, or white noise), and the modulator should contain constantly changing frequency and/or rhythmic content (e.g. a voice speaking or a drum loop).

QUICK START USING A MIXCRAFT VOCODER TRACK

Because they don’t make any sound on their own, vocoders can initially be confusing to set up, but we’ve greatly simplified configuration by providing the *Vocoder Track* type. This instantly sets up everything you’ll need for robota-matic vocoder bliss. Vocoder tracks are fully explained in the “Vocoder Track“ **LINK HERE** section, but we’ll cover them here as well.

The basic idea is that the modulator signal input imparts its character upon the carrier signal input. A crude analogy would be humming a pitch while cupping your hand over your mouth to change the sound - the constant hum would be the carrier signal, and the modulator would be your hand on your mouth.

The carrier and modulator signals must be properly routed for the vocoder to work correctly. You could manually set up the same configuration, but Mixcraft's Vocoder Track makes this really easy by setting up everything in one step. Here's a list of exactly what happens when a *Vocoder Track* is created:

• A *Submix Track* containing an audio track (Vocoder Modulator) and an Instrument Track (Vocoder Carrier) is created.

• Software Monitoring is enabled for the audio track. This lets you use a microphone or other input source for real-time modulation.

• The Mixcraft instrument preset *Vocoder Saw* is opened in the instrument channel, and the Acoustica Vocoder is inserted into the first effects slot.

• The *Vocoder Modulator* audio track is routed to the Acoustica Vocoder sidechain input. This is the secret sauce because the microphone audio (aka, the modulator) needs to control the vocoder.

VOCODER CONTROLS

Here we'll go over what all of the Vocoder controls do.

MODULATOR IN (MIC)

Use this knob to set the input level of the modulator signal. The bar meter should be set as with any other input level VU meter - keep it in the green and out of the red. Unlike a typical audio input, setting the input too hot won't distort, but dynamic range and intelligibility will suffer.

Though this input is labelled *Mic* for clarity, any audio signal can be used, such as a pre-recorded vocal track, a drum loop, a rhythm guitar, or even an entire song. Signals with constantly changing frequency and/or amplitude tend to work best.

CARRIER IN (INST)

Use this to set the input level of the carrier input signal so it nominally sits in the full green/occasionally yellow region. This one **will** distort if the input is too hot, and probably not in a desirable way.

Because the constantly changing filter bank is effectively removing different areas of harmonics, the best choices for carrier audio are sources with a full-frequency spectrum and constant sustain. In synth world, this typically translates to wide-open sawtooth, pulse waves, or white noise. In real-instrument world, this would mean full-bodied string and brass sections, or even an organ (with all drawbars out). Dark, dull, or small sounds usually don’t make good carrier signals.

MASTER OUT

Sets the master output level.

BANDWIDTH

Sets the width or “Q” of all bandpass filters. Narrow bandwidths let less audio through, whereas wider bandwidths let more audio through for a denser sound. A good analogy would be to imagine water running through a comb with wide or narrow teeth.

DECAY

This sets how quickly the carrier's signal envelope followers recover to zero amplitude. Lower settings have a snappier, tighter sound (good when using drums or percussion as a modulator); higher settings are looser (a good choice when using vocals as a modulator).

SIBILANCE

This adds high-passed white noise into the final signal when S sounds are detected. This helps speech intelligibility, because vocoders aren’t inherently good at detecting S sounds, and many carrier sources don’t have much energy in the S sound spectrum.

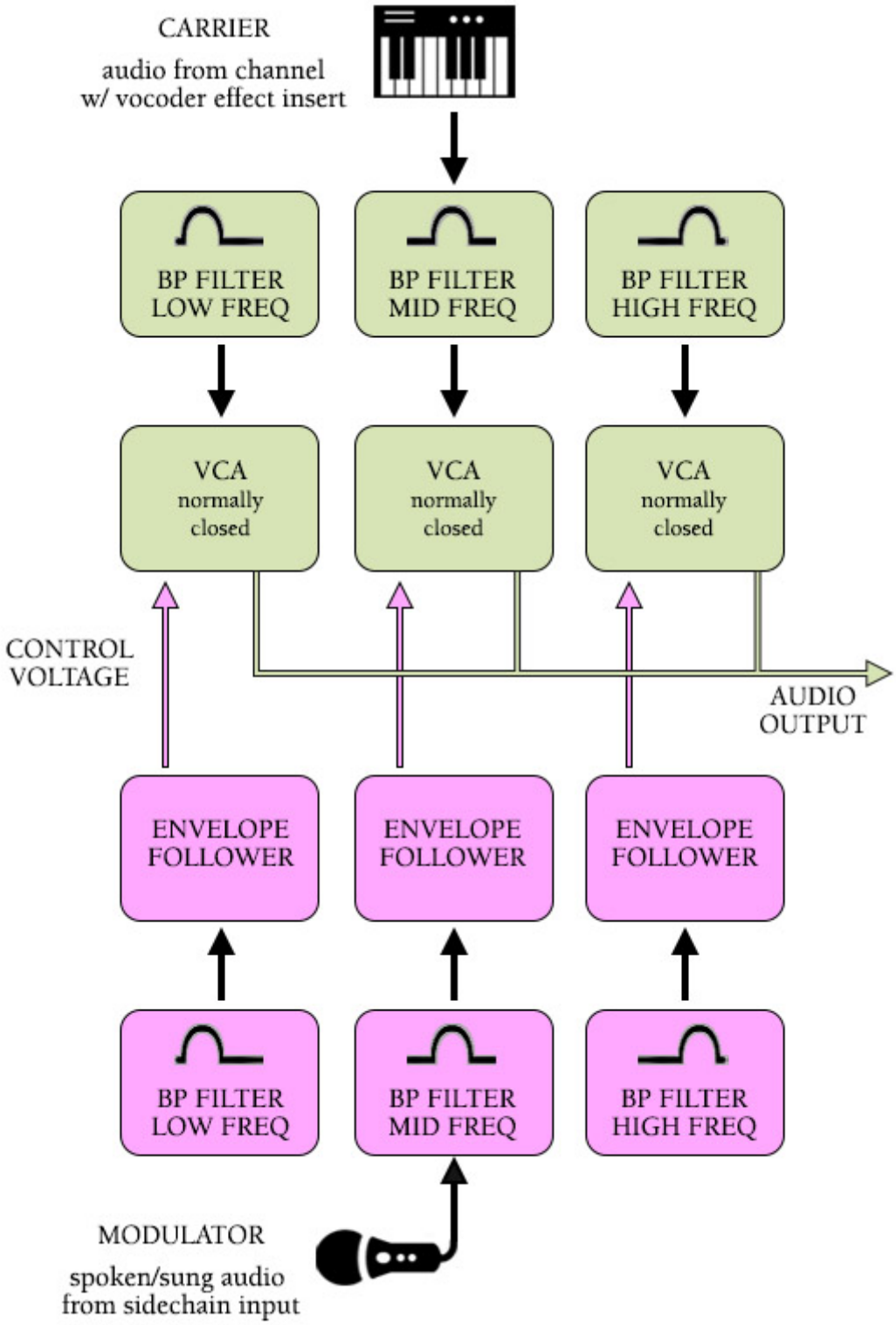
FORMANT HOLD

When the Formant Hold switch is on, MIDI sustain pedal messages will “freeze” the current positions of the carrier bandpass filters. This is useful if you’re speaking/singing into it, and you’d like a chord to sustain its current tonality curve for long durations (as opposed to speaking/singing until hyperventilation occurs.

CHARACTER SLIDERS

These controls act as individual volume controls for each of the carrier filter bands, and act as a graphic EQ of sorts. Unlike most other vocoders, bands can be turned down to zero, effectively turning them off completely for unique effects.

HOW THE VOCODER WORKS



The Mixcraft Vocoder consists of two matching sets of ten bandpass filters (plus two highpass filters): one set for the modulator signal, and the other set for the carrier signal. Each bandpass filter covers a small “slice” of the audible audio spectrum - the eleven bands you see on the panel logically go from low frequencies to high frequencies. The number 11 slider is a highpass filter that handles the top end of the audio spectrum from 8k-20k.

The modulator signal is split and runs through all eleven filters. Each filter only allows a small area of the audio frequency range through. Immediately following each filter is an envelope follower, which is a special type of amplifier that converts incoming audio levels to a corresponding control voltage. So far, we have the incoming modulator signal being split into eleven separate control voltages, all changing independently and in real-time dependent upon the modulator audio's energy across the frequency spectrum. Complexicated, right?

For the sake of clarity, we've simplified this to show only three bands in the block diagram on the preceding page, but the principle of dividing audio into "slices" is the same (more frequency bands/bandpass filters results in greater sound quality).

Now let's move up to the carrier signal side and talk about what's going on with its filters. The carrier signal also gets split and runs through the second set of eleven bandpass and highpass filters. These filters each route to the audio input of a standard voltage-controlled amplifier (or "VCA" for short). Remember all those control voltages from the modulator's envelope followers? Those are connected to the carrier's individual corresponding VCA control inputs.

If there is no signal present at the sidechain input, the carrier's VCA's are all closed. If the sidechain modulator signal contains audio energy in the 400 Hz area, the carrier filter/amp combos will "open up" in the same area of the audio spectrum, thus letting carrier audio in the 400 Hz area through. In reality, though, this is much more complex and nuanced, because different audio signals contain different energy levels across their frequency spectrum. This complexity is why vocoders can create such unique sounds (and also why a relatively simple set of filters can produce recognizable speech).

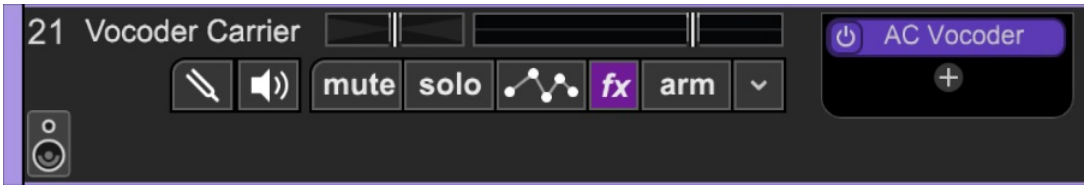
VOCODER SIGNAL ROUTING IN MIXCRAFT

We partially explained this in the *Quick Start* section, but here we'll get down to the nitty-gritty.

As mentioned earlier, a vocoder needs a carrier (constant-ish sound) and a modulator (the sound gets imparted upon the carrier) audio signal.

THE CARRIER TRACK AND VOCODER PLUG-IN PLACEMENT

To be clear, the Acoustica Vocoder is an effects plug-in, not an instrument. Because it's effectively applying a complex filter to the carrier signal, you'll want to insert it into the first effects insert slot of the carrier track.



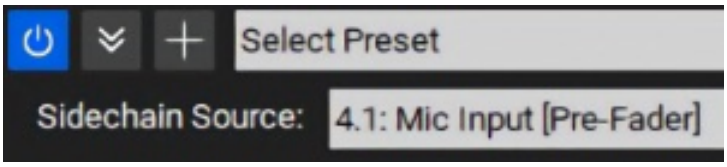
In the basic Vocoder Track setup, the carrier signal is a Mixcraft Synth String instrument - a MIDI instrument track with the vocoder inserted into its first effects slot. But the carrier track doesn't *have* to be a MIDI instrument track; it could also be an audio track containing any kind of audio (a recording of some kind of steady-state audio with a broad frequency spectrum, for example). In this case, the vocoder plug-in would still be inserted into the first effects slot.

You don't *have* to insert the vocoder in the first effects slot. It will work in any of the slots, but placing other effects before it in the chain may not produce desirable effects. It might be helpful to insert a compressor prior to the vocoder if the carrier signal's level isn't constant enough, or an EQ if there's some kind of really nasty frequency bump going on. We don't recommend inserting any kind of modulation, echo, or reverbs prior to the vocoder, because they'll likely get mucked up - place those *after* the vocoder plug-in for best results. (A chorus plug-in after the vocoder is great for choral pad sounds.)

THE MODULATOR TRACK AND SIDECHAIN INPUT

The modulator track imparts its general frequency and amplitude content upon the carrier track. Ideally, it would be nice to have the option of using any audio signal in Mixcraft as a modulator. Mixcraft's plug-in sidechain feature allows the routing of almost any signal to plug-ins with a sidechain input.

If you've already experimented with the Vocoder Track feature, you'll see that the modulator and carrier tracks are placed above one another in a Submix track. This is done for clarity, but the placement of the modulator and carrier tracks in the track list doesn't matter. (It may be helpful to break up their placement if you're using a lead vocal track as a modulator, for example.)



To select the sidechain modulator signal, click the Sidechain pop-up menu at the top left of the Acoustic Vocoder plug-in, and select the desired audio or MIDI instrument track.

REAL-TIME VOCODER OPERATION

If you'd like to use the vocoder live with a microphone controlling a live synth sound (as with a *Vocoder Track*), plug a mic into your audio interface, and make sure its audio track has the correct audio interface physical input selected as its input source. Also, make sure the track's speaker icon is toggled on to enable real-time record monitoring.

If you're using a virtual instrument as a carrier, select its track (or make sure the track's *Arm* button is engaged). Now try holding down some keys on a MIDI controller while speaking into the mic and you should be vocoding successfully.

Remember that the modulator signal (i.e. microphone) controls frequency and amplitude, so you won't hear any sound from the carrier (i.e. synth) unless you're speaking into the mic. Furthermore, the vocoder modulator signal doesn't care about pitch; this means the end result will be roughly the same whether you're speaking or singing.

Getting Used To Live Vocoder Performance

Playing a keyboard while speaking into a vocoder can be an odd coordination at first, but it becomes natural pretty quickly. You'll likely be tempted to try and sing every note at the correct pitch, but you'll soon adjust to simply speaking, which is much easier.

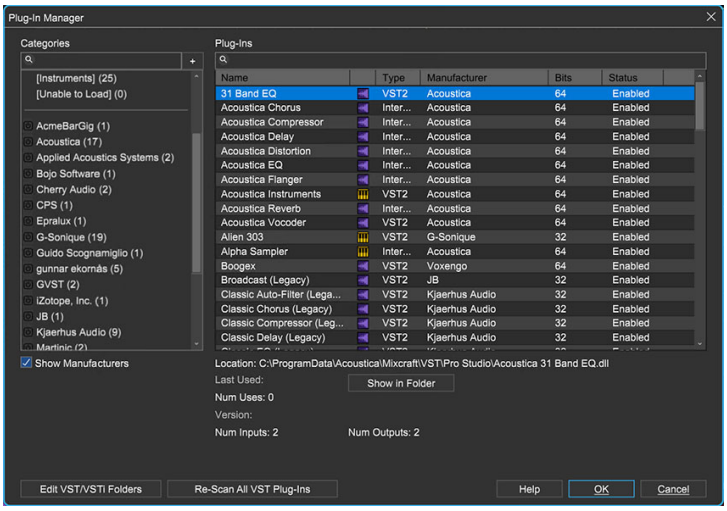
VOCODER OPERATION WITH EXISTING AUDIO TRACKS

The vocoder can also use existing audio tracks as modulator and carrier sources. You could use a lead vocal track sidechain input to vocode an existing synth pad (for “standard” robot voice and/or choir sounds), or a drum kit or loop recording to modulate white noise or any kind of noise. Entire songs can even be used as modulator sources!

Bear in mind that the modulator, carrier, and main outs are all mono only,

Once you’ve got the vocoder up and rockin’, try manipulating the *Character*, *Bandwidth*, *Decay*, and *Sibilance* controls for a whole lot of sound variation.

PLUG-IN MANAGER



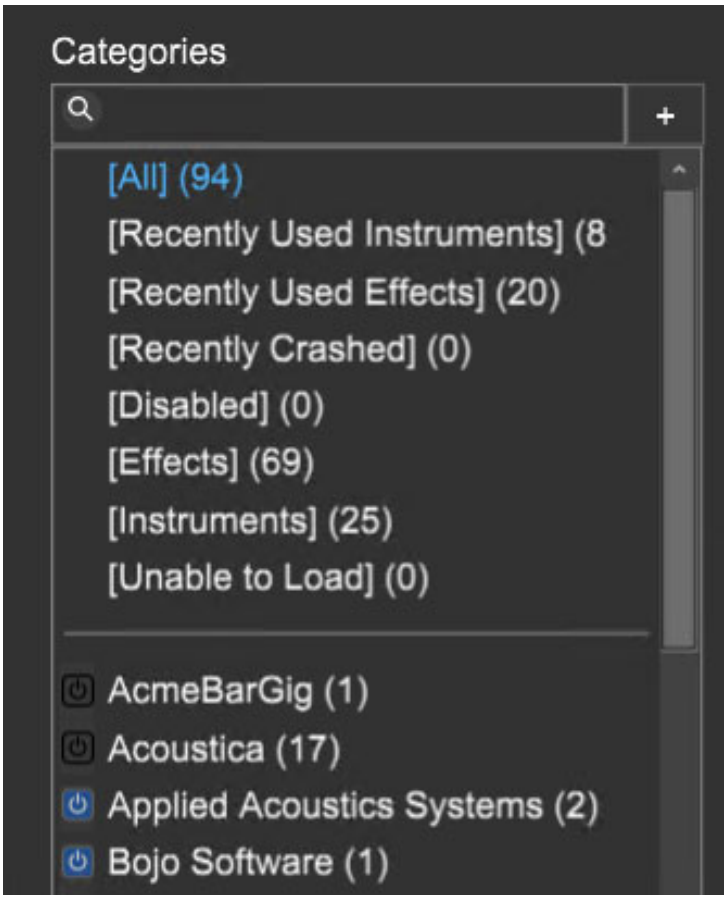
The Plug-In Manager lets you enable and disable virtual instruments and plug-ins, as well group and sort plug-ins when loading using *Collections*.These are handy if you have a large number of plug-ins; they can be used to create groups for most frequently used plug- ins, organize specific types of plug-ins, etc.

To access the *Plug-In Management* window, click on the Mixcraft *File* menu at the top left and select *Plug-In Management*. You can also access the *Plug-In Management* Window via *File>Preferences>Plug-Ins>Manage Plug-Ins*.

The *Plug-Ins* window on the right displays built-in and third-party installed virtual instruments and effects plug-ins. The *Categories* window filters which plug-ins are displayed. The green checkboxes next to each plug-in enable or disable individual plug-ins. (For instance, you might want to disable older versions, plug-ins that are causing issues, or plug-ins that you’re not currently using.)

When a plug-in is selected, a number of parameters are displayed: VST type, manufacturer, 32- or 64-bit, status, last used, number of outputs, category, and description.

CATEGORIES COLUMN



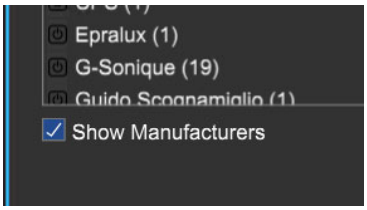
CATEGORY SEARCH

The magnifying glass and text field directly beneath the *Categories* header allow fast searching for particular categories by typing all or part of the category name.

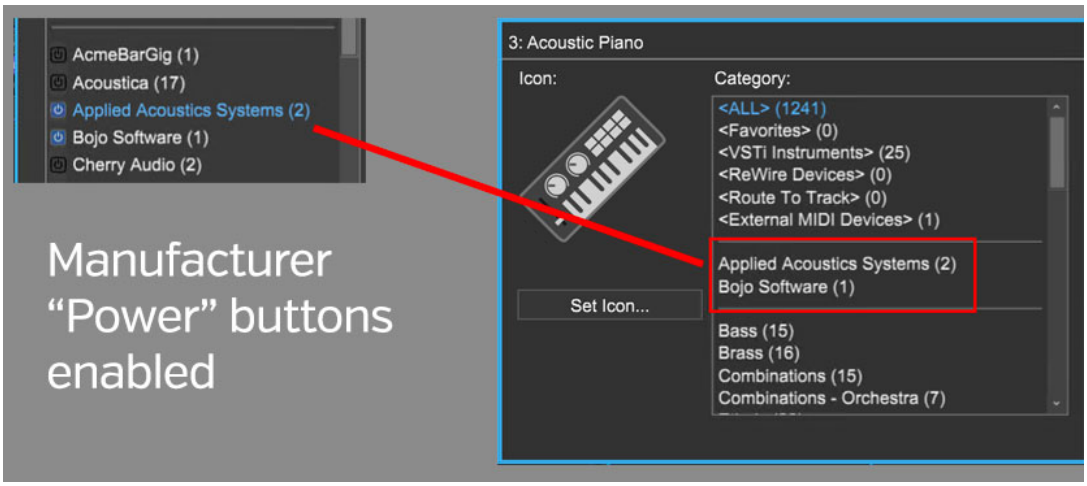
DEFAULT CATEGORIES

There are eight default categories *All*, *Recently Used Instruments*, *Recently Crashed*, *Disabled* (more on this one later), *Effects*, *Instruments*, and *Unable to Load* should be self-explanatory.

SHOW AND AND SORT BY MANUFACTURERS

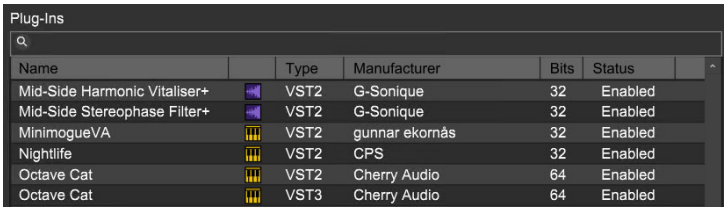


Plugin manufacturers can be hidden or shown by clicking the *Show Manufacturers* checkbox. Clicking on a manufacturer name will display only plugs from that manufacturer in the *Plug-Ins* window to the immediate right.



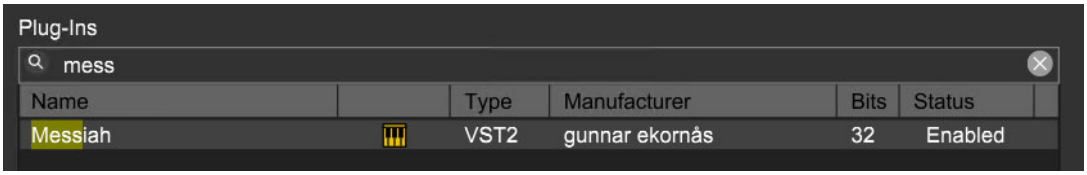
The small blue "power button" to the left of the manufacturer name enables or disables visibility of the manufacturer categories in the effects or instrument list windows as shown above.

PLUG-INS COLUMN



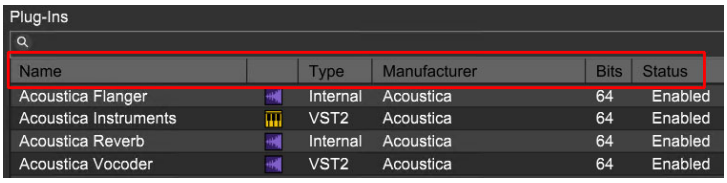
This is where plug-in effects and instruments are displayed, as filtered by the currently selected *Categories* on the left. To view all effect and instrument plug-ins, select the *[All]* category.

SEARCHING FOR PLUG-INS



The search field next to the magnifying glass icon at top can be used to find effects by typing in the name of a particular plug-in (or part of the name).

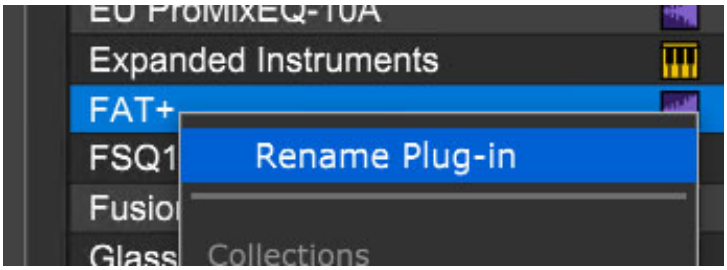
PLUG-INS COLUMN HEADERS



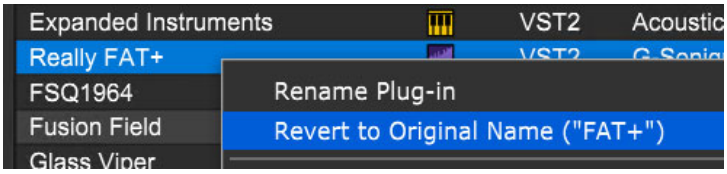
Name	plug-in name
(blank header)	instrument or effect plug-in icon
Type	which type of VST (VST2, VST3, internal Mixcraft plug-in)
Manufacturer	maker of the plug-in
Bits	32- or 64-bit
Status	plug-in enabled or disabled for use in Mixcraft

RENAME PLUG-IN

Plug-ins can be renamed. This is mainly useful if a plug-in has long name and it's getting abbreviated in a way that you don't like in the mixer or channel plug-in displays. (We won't judge you for being OCD.)

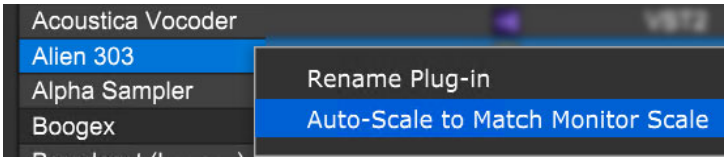


To rename a plug-in, right-click on its name in the *Plug-Ins* section, type a new name, and hit [RETURN] or click away from the name.



To *un*-rename, that is, return the plug-in to its exact original name, right-click the plug, and select *Revert to Original Name*. (See? We thought of everything...who's OCD now?!?)

AUTO-SCALE TO MATCH MONITOR SCALE

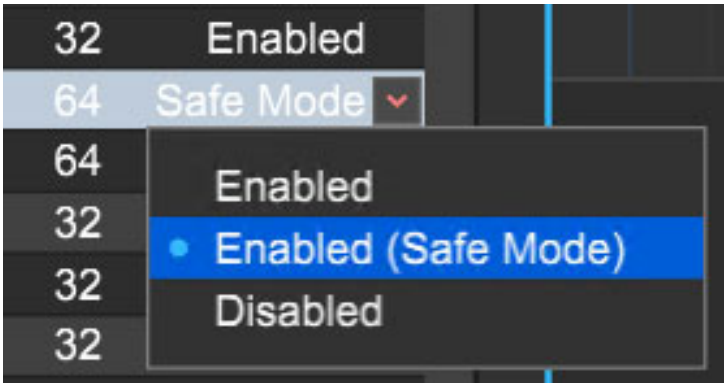


When checked, following Mixcraft restart, if a plugin is opened on a display that's not scaled to 100%, the plugin interface is automatically scale the window to match the display scale. This will make plugin windows larger on scaled displays (at the expense of a bit of sharpness).

ENABLING AND DISABLING PLUGS

Plug-ins can be globally enabled and disabled, that is, they'll be entirely "shut off" in Mixcraft. This is useful for troubleshooting if a plug-in is potentially causing issues.

To enable or disable a plug-in, left-click (not right-click) on the word *Enabled* or *Disabled* and select. The plug-in will automatically appear in the [Disabled] category at right.

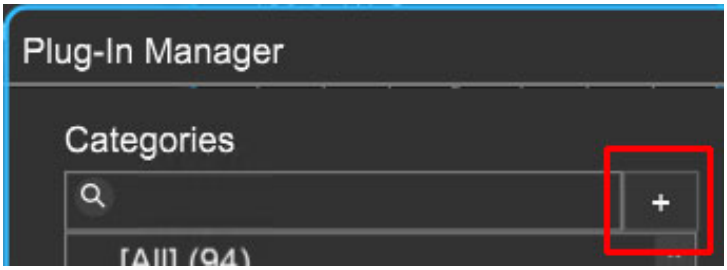


When enabling or disabling a 64-bit plug-in, you'll see a third choice: *Enabled (Safe Mode)*. This allows potentially problematic 64-bit VST2 plug-ins to run in a separate

process - this way, the plug-in won't corrupt memory in Mixcraft. If you have a plug-in that's crashing frequently, *Enabled (Safe Mode)* is a potential solution.

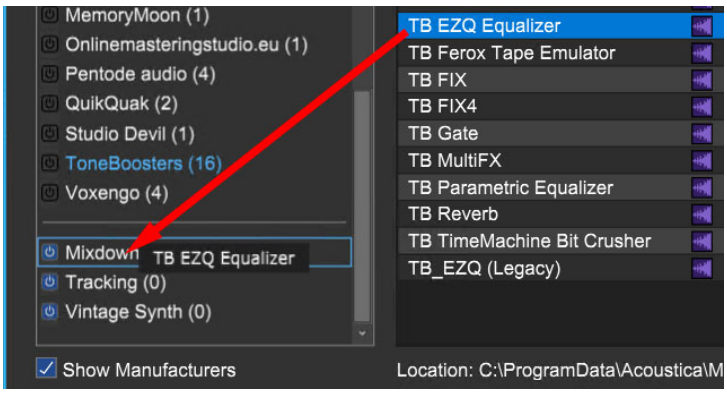
CREATING PLUG-IN COLLECTIONS

To create a plug-in collection, open the Plug-In Manager by clicking the top-left *File* menu, and select *Plug-In Manager*. Choose an effect category to be displayed in the *Plug-Ins* list.

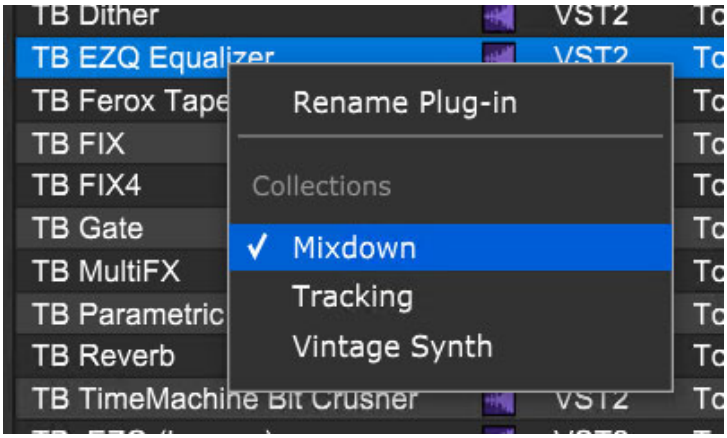


To create a new collection, click the + sign button.

You'll see *New Collection* at the bottom with a flashing cursor - type a name for the collection and hit return. We recommend names like *Tracking*, *Mixdown*, *Guitar*, *Vintage Synth*, etc.



Now select a category above (the name will turn blue) and drag the effects you'd like in your newly created collection onto the collection name below.



Alternatively, plug-ins can be added to a collection by right-clicking the effect name (TB EZQ Equalizer in the above example) and select the desired collection.

You can add as many plug-ins as you'd like into a collection. You can also mix virtual instrument and effect plug-ins, but only the appropriate type of plug-ins will display when viewing and loading plug-ins into a track. In other words, if you've clicked a track's keyboard icon to load a virtual instrument, only virtual instruments within a collection will be displayed (or vice versa). You can place the same effect or instrument into as many collections as desired.

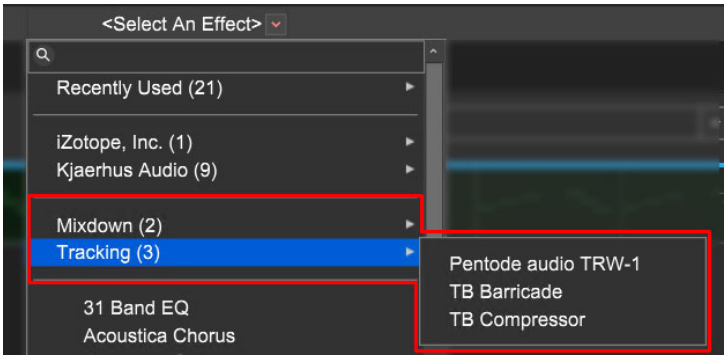
REMOVING A PLUG-IN FROM A COLLECTION

To remove a plug-in from a collection, right-click on the plug-in name in the right column, and click the name of the collection. The check mark will disappear.

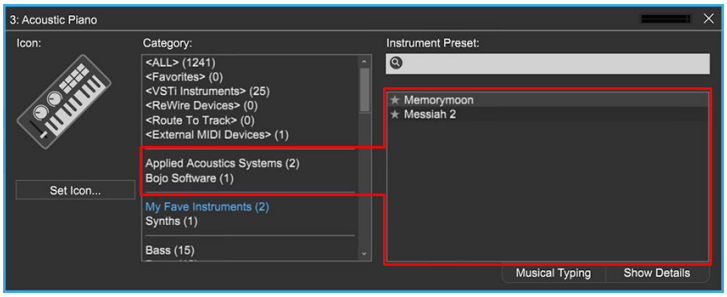
DELETING PLUG-IN COLLECTIONS

To delete a collection, simply highlight it and click the *X* button.

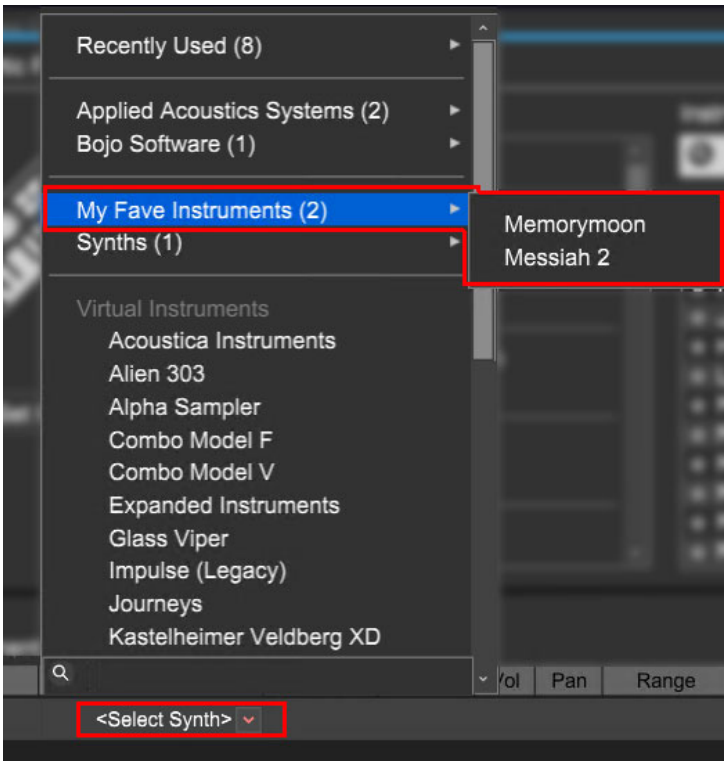
USING EFFECT AND INSTRUMENT PLUG-IN COLLECTIONS



To access an effects plug-in collection, click the track's *fx* button, then click *<Select An Effect>*. Collections will appear at the top of the plug-ins list, and hovering over the collection name will display the plug-in names; click on a plug-in's name to open it.



To access an instrument collection, click the track's piano keyboard icon. Instrument collections are visible in the second section beneath the main categories.



Instrument collections can also be accessed via *<Select Synth> pop-up* menu beneath in the instrument list (make sure the *Show Details* tab at bottom right has been selected). Collections appear at the top of the plug-ins list; hovering over the collection name will display the plug-in names. Click the plug-in name to open it.

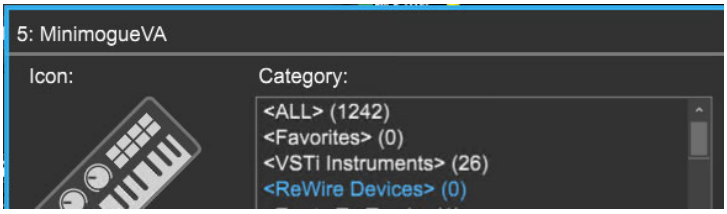
REWIRE

ReWire is an audio and MIDI protocol developed by Propellerhead Software allowing Mixcraft to access sounds, virtual instruments, and features of external music programs.

Mixcraft acts as a host, also known as a ReWire Mixer, with other applications working as “clients,” or ReWire Devices. External applications will synchronize their tempo, loop points, and start and stop times with Mixcraft. MIDI data from Mixcraft can also be routed to control virtual instruments inside other applications. Audio from these other applications is routed to Mixcraft, where it can be mixed and affected.

There are two ways to add a ReWire track with Mixcraft.

• Click the *Mix>Add ReWire Application* from the main screen menus and select the desired Rewire application. This adds a ReWire track in Mixcraft and displays the third-party program’s interface as a child window inside Mixcraft.



• Click the keyboard icon on an Instrument Track and select *<ReWire Devices>* in the category menu. Choose a ReWire application from the Instrument Preset menu. A new ReWire track will be created for the application, if one doesn’t currently exist.

Once a ReWire track has been created, all transport controls, including play, rewind, and stop, as well as tempo changes and loop points, will be sent to the Rewire application, letting you use the application in conjunction with Mixcraft. Instrument Tracks can also send live or recorded MIDI data to instrument tracks available in the ReWire application. All audio generated by the ReWire application will play through to Mixcraft on the ReWire track. As with other Mixcraft tracks, volume, pan, solo, and mute parameters apply. Effects and automation can also be applied to ReWire tracks.

USING NATIVELY SUPPORTED HARDWARE CONTROLLERS

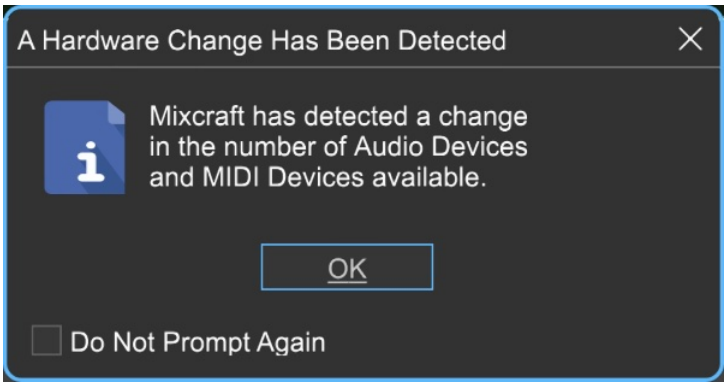
Mixcraft 10 features native support for numerous external hardware devices including the Mackie Control Universal (formerly known as “Logic Control”), Frontier Design Group Tranzport, and Novation Launchpad, as well as Acoustica’s own Mixcraft Remote mobile app for smart phones and tablets (see *Configuring the Mixcraft Remote Mobile App* at the bottom of this section).This means Mixcraft already “knows” how to interact with the knobs, sliders, and switches for these hardware controllers. Once they’re plugged in and enabled, no further assignment or MIDI mapping is needed. Hooray!

For a full list of supported devices, see Appendix 6: Natively Supported Hardware Controllers.

CONFIGURING NATIVELY SUPPORTED USB AND MIDI CONTROLLERS

No special drivers are necessary to set up a Mackie Control Universal, Tranzport, Launchpad, or the Mixcraft Remote mobile app to work in Mixcraft. Here’s how to add them.

• Plug it in. If you’re using a newer Mackie Control Universal, Tranzport, or Launchpad, plug a USB cable into the control device on one side, and an open USB port on the other. If you’re using an older Mackie Control with MIDI ports, plug these into either a dedicated MIDI port on a USB MIDI interface, or use the MIDI in/out jacks on your audio interface.



• Upon plugging in the controller device, Depending on your preference settings, you may see the dialog above acknowledging that you've plugged in a new piece of hardware. Click *OK*.

• In the upper left corner, click *File>Preferences*, then select *Control Surfaces*. In the Type column at the left, click on Add New. When you see the device in the drop-down menu, click to select it.

• If it's a USB device, select it in the *Input* and *Output* columns to the right. If the device is MIDI, select the name of the MIDI interface in the *Input* and *Output* columns. If you're using the MIDI I/O on your audio interface, select it by name in the *Input* and *Output* columns.

• Click *OK* at the bottom of the *Preferences* window and you're set!

USING MACKIE CONTROL UNIVERSAL WITH MIXCRAFT

The Mackie Control Universal (aka MCU) is a full-featured mixer-style control surface with channel strip and transport controls, a jog wheel, and numerous other controls. Because it’s designed to work with numerous DAW programs, all of its controls may not apply to Mixcraft, but we’ve implemented as many controls as possible in order to best take advantage of MCU’s control interface. Following is a list of the currently implemented controls:

MCU Control	Function
Rewind Transport Control	moves playhead back by 4x snap value
Fast-forward transport control	moves playhead forward by 4x snap value
Stop transport control	stops playback or recording
Play transport control	initiates playback
Record transport control	initiates recording
Master fader	sets master volume
Jog wheel	moves playhead forward or back by snap value
Flip button	reverses V-Pot pan and vol fader controls

Channel fader	sets track volume
V-Pot rotate (channel strip)	above channel strips, sets pan
V-Pot push (channel strip)	resets panning to center
Rec/Ready (channel strip)	arms channel recording
Solo (channel strip)	solos the track
Mute (channel strip)	mutes the track

SELECTING THE CORRECT MACKIE CONTROL PROFILE

There are a couple of different Mackie Control variants. You'll need to choose the correct profile in *File>Preferences>Control* Surfaces for it to work correctly.

If you're using an older Mackie Control and the large fluorescent display doesn't work properly, please choose *Logic Control* in the *Type* column; otherwise, select *Mackie Control* (this usually applies to units that say *Logic Control* on them).

If you're using an original Mackie Control XT or a newer silver MCU Pro XT "extender," choose the appropriate XT version in preferences. For MCU Pro setups, plug the main unit in with a USB cable, use a set of MIDI in/out jacks to connect the extender unit, and choose the appropriate USB and MIDI connections in the *Control Surfaces* preferences panel. Make sure to check the *Link* check boxes for all units if you're using one or more MCU extenders (this makes them behave as one big unit, as opposed to multiple units controlling the same eight channels). The physical order of units can be rearranged by grabbing the three lines at the left of the *Preferences* box and moving them up and down. This ensures that faders on multiple units will be in the correct order in relation to the onscreen mixer.

MACKIE CONTROL DISPLAY

LINK HERE

The Mackie Control display shows the following information for each of the current tracks:

- **Track panning percentage, left or right**
- **Track number**
- **Track name (abbreviated to four characters)**

OVERWRITE AND TOUCH FADER AUTOMATION MODES

When used in conjunction with a Mackie Control Universal, automation data can be written in real time by moving the faders. There are two write modes regulating how Mixcraft interprets fader movements and position. These can be set either in *Mix>Automation Recording Mode* in the Main Window menus, or on the MCU in the *Automation* section with the *Write* and *Touch* buttons.

OVERWRITE MODE

When a lane's automation is armed and recording, Mixcraft continuously writes the current fader or V-Pot position for the duration of the recording. As a fader or V-Pot is moved during recording, the current position is what gets written to Mixcraft. Bear in mind that if you have automation already written, Mixcraft erases previous automation and overwrites it as it moves along.

TOUCH MODE

Mackie Control Universal and other MCU-compatible devices feature touch-sensitive faders - they literally know if you're touching them. This gives Mixcraft the ability to write automation *only while a fader is being touched*. When an automation lane is armed and recording, Mixcraft only writes (or overwrites) automation if a finger is

touching the fader. Mixcraft immediately stops writing as soon as the finger is released. Next to all the faders automatically scurrying up and down on power-up, this is the MCU's most impressive party trick!

CONFIGURING THE MIXCRAFT REMOTE MOBILE APP

Mixcraft Remote is a free mobile app for iOS and Android that lets you control the transport and other functions wirelessly using an iPhone, iPad, or Android phones and tablets. Android versions are downloadable via Google Play Store; iOS versions are downloadable via the Apple App store. Here's how to use it.

• Download and install the Mixcraft Remote mobile app in your mobile device.

• In your computer's upper-left corner, click *File>Preference*s, then select *Control Surfaces*. In the *Type* column at the left, click on *Add New*. Select *Mixcraft Remote* in the dropdown menu. (Unlike other external hardware controllers, you won't need to set the *Input* and *Output* drop-down menus.)

• Click *OK* at the bottom of the *Preferences* window and you're all set!

Launch Mixcraft Remote on the mobile device; it will automatically locate and pair to your computer.

USING THE MIXCRAFT REMOTE MOBILE APP

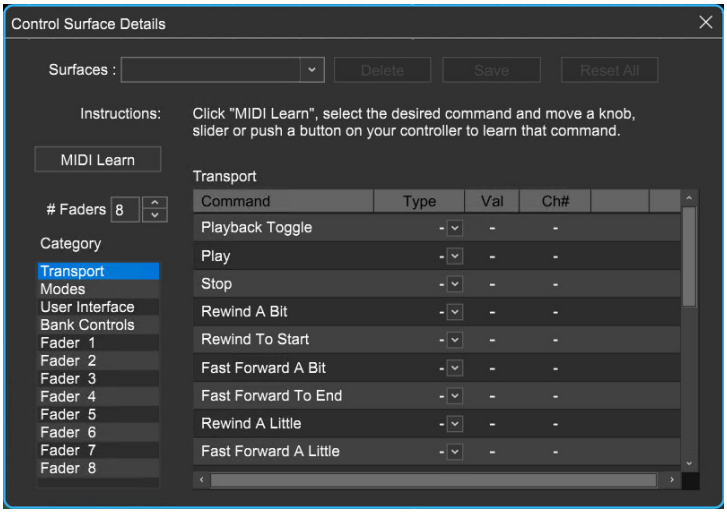
The following functions are controllable with the Mixcraft Remote app.

Mixcraft Remote Control	Function
Record transport Control	initiates recording
Return to beginning control	moves playhead to start of project
Rewind transport control	moves playhead back by 4x snap value
Play transport control	initiates playback
Fast-forward transport control	moves playhead forward by 4x snap value
Fast-forward to end transport control	moves playhead to end of project
Undo	cancels last action
Redo	restores last action
Save	saves the current project
Master volume slider	adjusts project volume
Song position	touch the *Beats/Time* display, then slide the pop-up bar to move the playhead to any position in the current project

USING GENERIC MIDI CONTROLLERS AND CONTROL SURFACES

A MIDI keyboard or other MIDI device with knobs, sliders, or buttons can be set up to control Mixcraft functions such as starting and stopping playback, record, fast forward, track arming, etc.

To configure a control surface, select *Mix>Edit MIDI Control Surface Settings...* from the Main Window menus.



MIDI LEARN

Here you'll be able to use a MIDI controller's buttons, knobs, sliders, etc. to control TONS functions and controls in Mixcraft. This is a super powerful and fun feature!

• Click the MIDI Learn button. Alternatively, you can click the MIDI button in the Main Window top toolbar.

• Click on the command to learn. Command categories can be chosen using the Category menu on the left side.

• Move the knob, button, slider or push a key on your MIDI keyboard/controller that you wish to trigger the command.

• If you wish to learn another command, select it.

Alternatively, the Mixcraft interface will highlight buttons and sliders in purple. Simply click on a button or control, then move the MIDI knob to assign it.

Once you've finished assigning controllers, click the *Stop Learning* button. (Incidentally, this disproves the theory that you're never too old to stop learning... rim shot.)

SAVING AND LOADING CONTROL SURFACE ASSIGNMENTS

Control surfaces assignments can be saved and loaded if you have multiple keyboards or want to reuse your settings for various projects. To save the current control surface assignments, click the *Save* button. To delete the current control surface assignments, click the *Delete* button.

Fields	Description
Command	This is the command being assigned or mapped
Type	Can be a CC, note-on, or note-off message

Val	The number of the CC or note-on
Ch#	MIDI channel of controller
Any (-), Dn, Up	This field determines what type of CC data to respond to. Any or (-) means it could be anything. “Dn” means that a CC button has been pushed down. “Up” means that a CC button has been released.
X	Removes the current controller assignment

These files will be stored in *%programdata%\Acoustica\Mixcraft\control-surfaces* .

To load a previous control surface, click the *Surfaces* drop-down menu and choose one.

CONTROL SURFACE COMMANDS LIST

The following commands can be assigned to MIDI control:

Main Transport Controls

Playback Toggle	Recording Metronome Toggle
Play	Count-In Metronome Toggle
Stop	Punch In/Out Toggle
Rewind a bit	Set Punch In To Current Position
Rewind to Start	Set Punch Out To Current Position
Fast forward a bit	Set Loop Start To Current Position
Fast forward to End	Set Loop End To Current Position
Record	Add Marker At Current Position
Adjust Master Volume	Play From Previous Marker

Loop Mode Toggle	Play From Next Marker
Playback Metronome Toggle	

Selected Track Controls

Select Previous Track	Monitoring For Selected Track Toggle
Select Next Track	Guitar Tuner For Selected Track Toggle
Set Selected Track Volume	EQ High For Selected Track
Set Selected Track Pan	EQ Mid For Selected Track
Mute/Unmute Selected Track	EQ Low For Selected Track
Solo/Unsolo Selected Track	Send Adjustment For Selected Track
Arm/Disarm Selected Track	

Other

Undo	Insert Virtual Instrument Track
Redo	Insert Audio Track
Save	

Mixcraft 10 introduces a scripting API, using JavaScript, which enables users to write custom scripts for enhanced control of Mixcraft using hardware MIDI controllers by creating personalized workflows and extending functionality. Mixcraft ships with a few new controller scripts using this API and new scripts will be added as they are made.

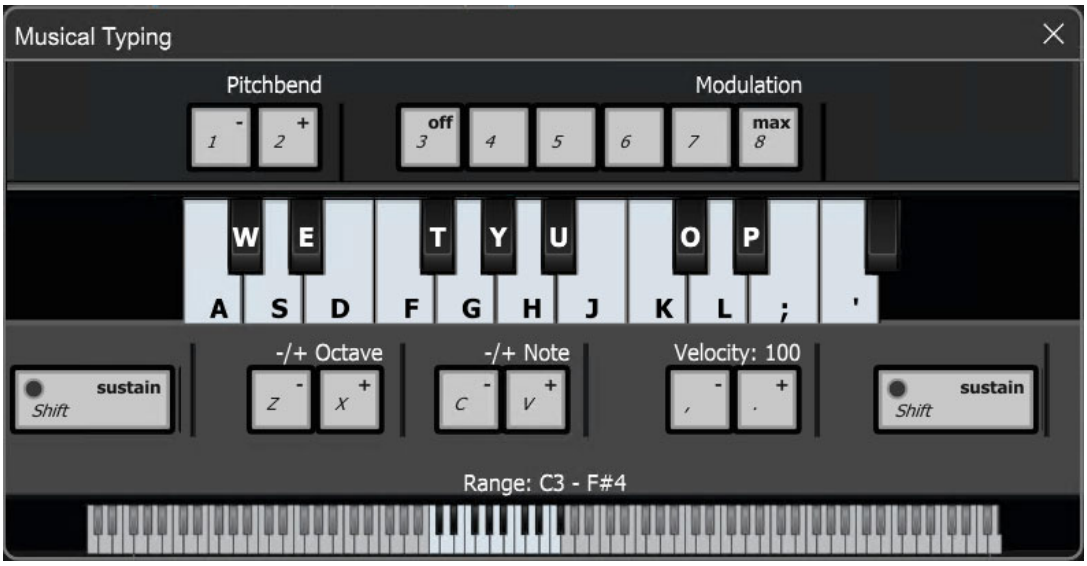
Programming experience is required, but those with experience will find the API easy to use and very straightforward.

Mixcraft 10 offers an integrated script editor with a MIDI monitor and console logging features so that you can work on your scripts directly in Mixcraft. Using an external editor is also an option, of course.

The API documentation can be found here.

MUSICAL TYPING KEYBOARD (MTK)

If you do not have a MIDI keyboard attached to your computer, the computer's standard QWERTY keyboard to play notes.



OPENING THE MTK

Select *View>Musical Typing*, click the *Musical Typing...* button in the *Instrument Preset* window, or use the keyboard shortcut [CTRL]+[ALT]+K.

PLAYING AND RECORDING NOTES

The MTK has a 17-note range (1 ½ octaves), playable via the computer's keyboard. Add a Virtual Instrument track and choose a preset. Press the keyboard buttons on the MTK to trigger notes. Press multiple keys to play chords. Press the [SHIFT] key to sustain notes. Adjust the default velocity by clicking the velocity adjust keys < or >. To bend pitch up or down, click the 1 or 2 keys while playing back notes. To adjust the modulation amount, click keys 3 to 8 to choose from off to maximum modulation.

ADJUSTING THE PLAYABLE RANGE

The MTK may be transposed in steps or octaves. To transpose by an octave, press the *Z* or *X* keys. To transpose in half-steps, press the *C* or *V* keys. Alternatively, you can click a note on the smaller keyboard on the bottom to set the start key of the playable range.

MUSICAL TYPING KEYBOARD SHORTCUTS

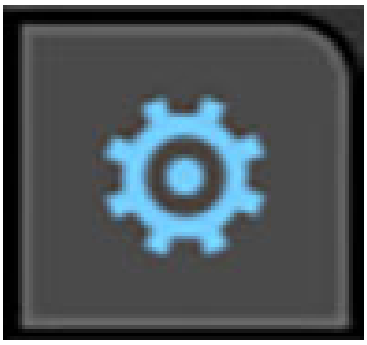
Keys	Function
A thru “	Mapped to playable notes (white keys)
Q thru {	Mapped to playable notes (black keys)
1, 2	Adjust the pitch bend
3 - 8	Adjust the modulation from “off” to “max”
[SHIFT]	Sustain the currently played notes, even if keys are released
Z, X	Transpose the playable range by +/- one octave
C, V	Transpose the playable range by +/- one note.
<, >	Adjust the default velocity for new notes.

Need More Keys, Please!

Musical Typing functionality will depend upon your computer’s keyboard. Many computer keyboards do not allow more than three keys to be pushed simultaneously.

Please keep in mind that the MTK is supplied as a way to make music and is not necessarily the best way to play a keyboard! The good news is that there are many affordable piano keyboard-tyep MIDI/USB controllers on the market... if even those are beyond your price range, there are plenty of great deals to be found on ebay, reverb.com, or Craigslist.

PREFERENCES

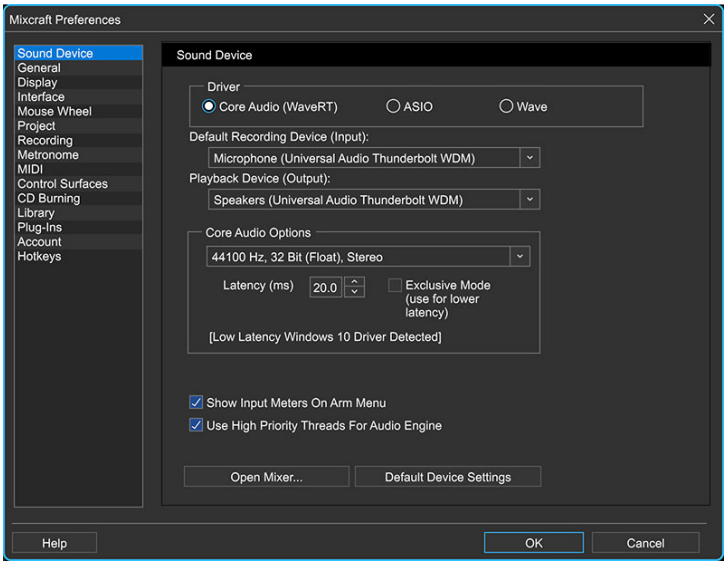


Preferences are options that are changed infrequently and allow you to customize how the Mixcraft behaves. To open the Preferences, select *File>Preferences* from the Main Window menus, or click the gear button in the top toolbar. You can also access Preferences by pressing [CTRL]+[ALT]+P.

SOUND DEVICE

Choose settings for sound devices.

SETTINGS COMMON TO ALL SOUND DEVICES



- **Driver**

Select *Core Audio*, *ASIO*, or *Wave* audio drivers. This setting affects other options on this page. The *ASIO* option will be unavailable if no ASIO drivers are found.

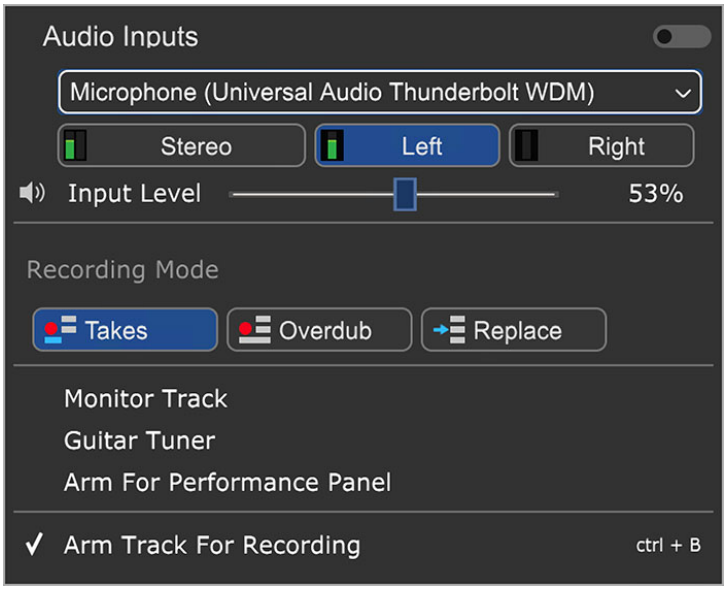
• **Default Recording Device (Input)**

Sets the hardware device that will be used for audio input (i.e., recording things).

• **Playback Device (Output)**

Sets the hardware device that will be used for audio playback.

(*The middle of the screen will display Core Audio, ASIO, or Wave specific settings, depending on which you've selected.*)



• **Show Input Meters On Arm Menu**

Toggling this shows or hides small input meters in the Arm Menu that appears on tracks (the menu that shows when you click the Arm button or the downward facing arrow beside it).

• **Use High Priority Threads For Audio Engine**

This will cause all audio mixing sound engine threads to mix at a high system priority. By default, Mixcraft uses high priority. (Sometimes I wear my "high-priority threads" when I'm headed out to the discotheque on a Saturday night, but I digress.)

• **Open Mixer...**

This opens the Windows or ASIO mixer control panel, allowing you to change some settings. This typically applies when using ASIO driver mode.

• **Default Device Settings**

This button will reset the drivers and settings to defaults. This changes settings to the

Wave driver to 44100 Hz, stereo, 16-bit (8 buffers @ 16384 bytes).

CORE AUDIO (WAVE RT)-SPECIFIC SETTINGS

Adjust these settings when WaveRT mode is selected. WaveRT stands for “Wave Real Time” and is the preferred driver. Make sure you’ve downloaded the latest drivers for your sound device. Also, contact the sound device manufacturer to see if the drivers support WaveRT.

- **Sample Rate/Bit Depth popup menu**

Choose a sample rate supported by the device. Higher sample rates provide better audio quality but require more hard disk space and CPU resources. Make sure to set this guy to 192 kHz, then swear that YOU can hear the difference to anyone who will listen! (we kid, ok?)

It's a deep subject, but generally speaking, movie film makes a good analogy: sample rate sets how many "snapshots" are taken per-second, and bit depth roughly equates to the number of available colors in an image. More specifically, sample rate governs the highest frequency that can be accurately recorded (typically half of the sample rate setting), and bit depth affects the overall quiet-to-loud dynamic range.

- **Latency**

Adjust the latency in milliseconds. Lower settings result in better performance - you’ll hear less “slapback” delay when recording with software monitoring, and Virtual Instruments will be more responsive when played live. The downside is that lower latency settings increase the potential for audio gapping or non- continuous audio (a.k.a. obnoxious crackling noises).

- **Exclusive Mode**

Exclusive Mode takes exclusive control of the sound device and allows super-low latency settings down to three milliseconds! (You’ll also be welcome at ritzy L.A. clubs and red carpet events.)

When using *Exclusive Mode*, other programs will not have access to the sound device and will need to be restarted after Mixcraft is either shut down or out of *Exclusive Mode.*

ASIO-SPECIFIC PREFERENCES

Adjust these settings if ASIO mode is selected. ASIO is an alternative driver system that allows for lower latency and improved synchronization between playback and recording when using suitable audio hardware.

• ASIO Device

Choose the default ASIO Device to record from. ASIO only allows for one device at a time.

• Latency

Adjust the latency in milliseconds. Lower settings result in better performance - you'll hear less "slapback" delay when recording with software monitoring, and Virtual Instruments will be more responsive when played live. The downside is that lower latency settings increase the potential for audio gapping or non- continuous audio (a.k.a. obnoxious crackling noises).

WAVE-SPECIFIC PREFERENCES

Adjust these settings when *Wave* mode is selected in the *Sound Device Preferences*. We only recommend using Wave mode if nothing else is available. (Wave mode, usually a bridesmaid, never a bride...)

• Sample Rate

Choose a sample rate for both recording and playback. The default CD-quality sample rate is 44.1 kHz. If your sound card (and hearing range!) supports it, Mixcraft supports sample rates up to 192 kHz. Sample rate defines how frequently "snapshots" of the current sound are captured; a good analogy would be the frame rate of a motion picture.

• Bit Depth

This is the number of bits per sample. 16-bit is the default for CD quality. Mixcraft supports bit depths up to 24-bit for ultra-high quality. Far more info exists on bit depth on the ol' Intergoogle, but the thumbnail analogy is that bit depth represents how many different amplitude levels can be represented and a good analogy would be to compare it to the number of colors available in a digital photo.

Choose 8-bit audio only if you have no other option; 8-bit can be very noisy during quiet passages (But also can be surprisingly good if the overall audio level is loud, because it's "weighted" to prioritize the fidelity of louder passages).

- **Number Of Buffers**

This is the number of audio buffers to pre-mix before starting playback. The number of buffers determines audio latency. More buffers result in higher latency. Fewer buffers result in lower latency but possible audio gapping.

- **Buffer Size**

The size of the buffer also determines audio latency. Larger buffers result in higher latency. Smaller buffers result in lower latency but can cause audio gapping. Buffer settings may require some trial-and-error to achieve the best balance of latency vs. performance.

It's All About The Drivers

Always make sure that you've downloaded the latest audio drivers for your sound device or audio system. Not only are audio hardware makers constantly ~~fixing janky~~ improving driver performance, audio issues are frequently solved with a simple driver update, so head on over to the manufacturer's website to check for updates!

GENERAL

LANGUAGE

Choose a language to view Mixcraft in. You'll need to restart Mixcraft for newly selected languages to take effect.

PLAY EXPORTED FILES AFTER THEY'RE CREATED

After mixing down to an audio file, this option launches the associated player and begins playback.

NOTIFY ME WHEN AUDIO OR MIDI DEVICES ARE ADDED OR REMOVED

Checking this enables alerts that will pop up if a MIDI/USB controller or audio device goes on the fritz (or you plug in something new). It's a useful alert in case Betty The Wonder Dog unplugs your MIDI controller, for example:

TEMPORARY FILES DIRECTORY

Choose a directory to store any temporary files used by Mixcraft, such as peak data, beat map data and other data Mixcraft temporarily stores while performing operations.

- **Browse**
  Opens Windows Explorer to set a new temporary files directory location.
- **Delete Temporary Files**
  This deletes all temporary files and folders from the *Temporary Files Directory* above. This includes all .tmp, .isk, .beatmap .isk, and .ipk files used in Mixcraft.
- **Default Directory**
  Resets the temporary files to the default location which is:
  c:\Users\<your name here, bucko>\AppData\Local\Temp\Mixcraft

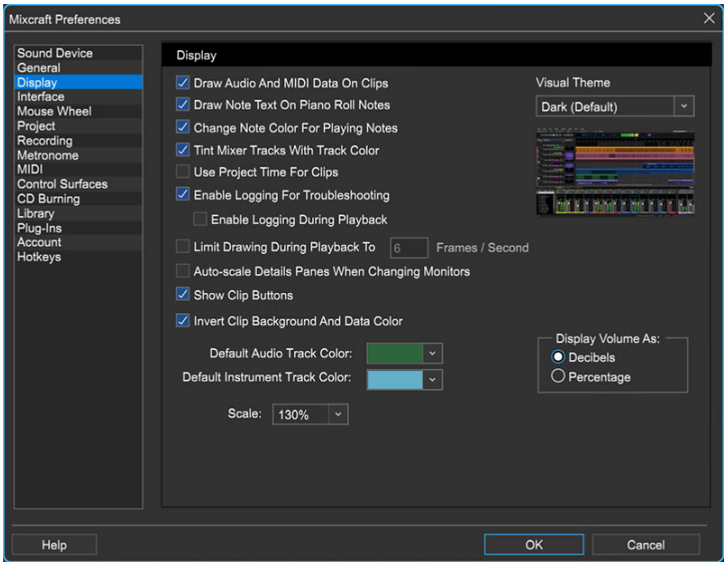
EXTERNAL WAVE EDITOR

Click the *Choose* button to set an external wave editing application to launch when *Edit In External Editor* is used.

SUPPORT - SHOW LOGS

This opens the directory containing Mixcraft log files, which our ~~surly~~ friendly tech support chaps will likely ask for should you contact them.

DISPLAY



DRAW AUDIO AND MIDI DATA ON CLIPS

Determines if an audio wave or MIDI note data is displayed on the clips. Turning this off could speed up your computer (but likely only if you have a really slow computer).

DRAW NOTE TEXT ON PIANO ROLL NOTES

Displays the text note on a note for easier recognition. For example, if the note is an A, it will display an *A* on it.

CHANGE NOTE COLOR FOR PLAYING NOTES

This option makes it easier to see what notes are currently audibly playing.

TINT MIXER TRACKS WITH TRACK COLOR

Enabling this gently tints the mixer channel strip in the same color chosen for the track (Right-click on a track>Color).

ENABLE LOGGING FOR TROUBLESHOOTING

Logging can slow down some computers. However, this option should be left on for support troubleshooting.

- **Enable Logging During Playback**
  This does exactly what it says, but can also impact performance. It’s best to leave it off and only enable if you’re trying to track down a specific issue (or if you're in the Pacific Northwest area trying to fell an enormous tree).

LIMIT DRAWING DURING PLAYBACK TO

Allows limiting the maximum frame rate Mixcraft draws the screen at in order to reduce CPU usage. By default, the screen will not draw more than 30 frames/second.

AUTO-SCALE DETAILS PANES WHEN CHANGING MONITORS

Enabling this forces Mixcraft to retain the relative scale of undocked Details panes. If, for example, you're using a large display with a smaller secondary display, this prevents windows from potentially appearing too large for the secondary display's resolution. This feature only works in Windows 10, version 1607 or newer (released August of 2016); the *Auto-Scale Details Panes When Changing Monitors* preference will be hidden (or so our programmers tell me!).

SHOW CLIP BUTTONS

Unchecking this hides the *Play*, *Mute*, and *Duplicate* buttons at the top of all clips.

INVERT CLIPE BACKGROUND AND DATA COLOR

Reverses the color arrangement of clip waveform/notes in relation to the clip background.

DEFAULT AUDIO TRACK COLOR

Choose a default track color. Default color is purple.

DEFAULT INSTRUMENT TRACK COLOR

Choose a default track color. Default color is turquoise, which is pretty to look at, but tricky to spell.

DISPLAY VOLUME AS

Choose between *Decibels* or *Percentage*. This affects track volume sliders and editing of volume envelope points on clips.

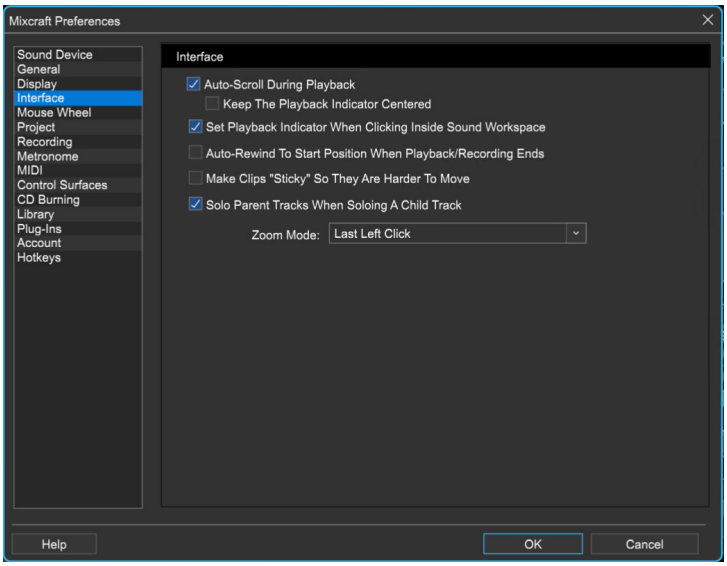
SCALE

Allows the entire Mixcraft user interface to be resized up to 200%. This is super useful if you're using one of them newfangled big ol' displays. This can also be set in the main screen top menus in *View> Scale.*

VISUAL THEME

Choose between dark or light. Default is dark theme.

INTERFACE



AUTO-SCROLL DURING PLAYBACK

This makes the Main Clip Grid scroll to automatically follow the Playhead.

- **Keep The Playback Indicator Centered**
  If *Auto-Scroll During Playback* is checked, this keeps the playback indicator to be centered during playback. This auto-scrolls the project instead of moving the playback indicator.

SET PLAYBACK INDICATOR WHEN CLICKING INSIDE SOUND WORKSPACE

This makes the Playhead jump to any position the mouse is clicked in the Main Clip Grid. Also restarts playback from this location if the project is playing back.

AUTO-REWIND TO START POSITION WHEN PLAYBACK/RECORDING ENDS

After recording or playing, the Playhead rewinds to where it was prior to record or play.

MAKE CLIPS “STICKY” SO THAT THEY ARE HARDER TO MOVE

This helps to maintain the exact offset of notes or clips when dragging up or down. For example, if you are zoomed way out and move a clip to a different track, it may change the time offset ever so slightly causing the sound to go out of sync.

SOLO PARENT TRACKS WHEN SOLOING A CHILD TRACK

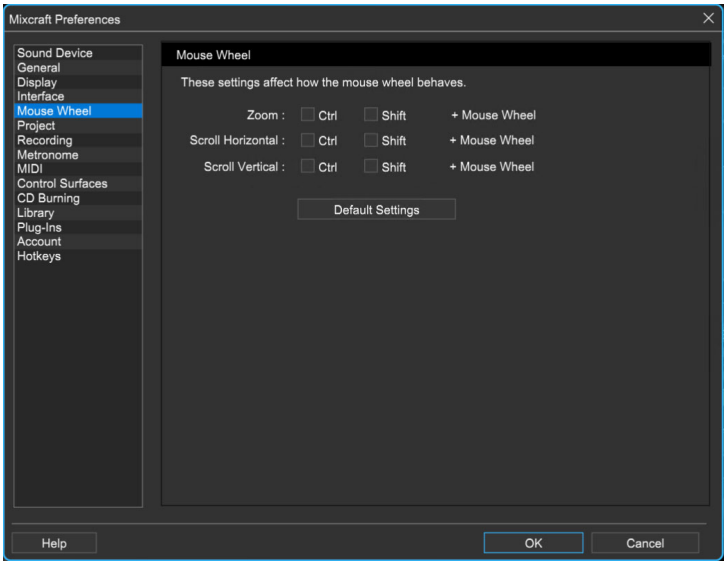
This one sounds like a parenting self-help book, but it’s not. With this option checked, soloing a track nested within a SubMix track automatically solos the parent SubMix track. If the checkbox is disabled, *only the tracks within the SubMix group will be muted* (i.e., the rest of a project’s tracks still play). Generally speaking, you’ll probably want to keep this box checked.

ZOOM MODE

This customizes zoom behavior.

- **Last Left Click & Caret**
  The center point of zoom in and out is the most recent left-click in the in the Main Clip grid.
- **Mouse Cursor**
  The center point of zoom in and out is the current mouse position.
- **Caret**
  The center point of zoom in and out is the current caret position.

MOUSE WHEEL



These settings affect how the mouse wheel controls zooming and scrolling. Choose combinations to customize mouse wheel behavior.

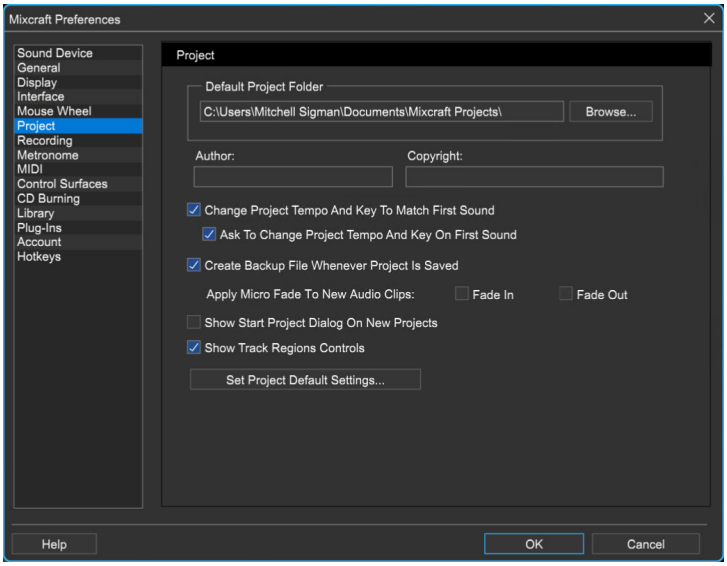
The default settings are:

Mouse wheel = Zoom
[CTRL] + Mouse wheel = Scroll Horizontal
[SHIFT] + Mouse wheel = Scroll Vertical

DEFAULT SETTINGS

Resets the Mouse Wheel settings to default settings above.

PROJECT



DEFAULT PROJECT FOLDER

Choose a directory to store Mixcraft Projects. The default project location is *c:\Users\<your name here>\Documents\Mixcraft Projects*

- **Browse**
  Opens Windows Explorer to set a new default project location.

AUTHOR

The default author will be filled into each new project's author information.

COPYRIGHT

The default copyright information will automatically be filled into each new project's copyright information.

CHANGE PROJECT TEMPO AND KEY TO MATCH FIRST SOUND

When adding loops or sounds with a known key or tempo, the software will change the master tempo and/or key so that it sounds good. For example, if a sound was normally at 68 bpm and you tried to play it at 120 bpm, it would sound terrible. Time stretching works best when the tempos are no more than 10 to 30% different. This option

conveniently sets the tempo or key of the project to match the sound's tempo or key signature.

ASK TO CHANGE PROJECT TEMPO AND KEY ON FIRST SOUND

This option causes the software to ask if you want to change the tempo or key for the *Change Project Tempo And Key To Match First Sound* option above.

SHOW TRACK REGIONS CONTROLS (MIXCRAFT PRO STUDIO ONLY)

Hides or shows the horizontal track regions boxes directly beneath the ruler at the top of the main clip grid. Please see the **Track Regions** section for more info.

CREATE BACKUP FILE WHENEVER PROJECT IS SAVED

Every time you save, Mixcraft creates a backup file located in the project folder in a sub folder called backup. mx9 backup file's contain the date and time they are saved.

APPLY MICRO FADE TO NEW AUDIO CLIPS (FADE IN/FADE OUT)

Automatically adds a 5 ms fade the beginning and/or end of audio clips. This eliminates pops and clicks at audio clip borders, but can potentially remove some of the attack phase of transient sounds (i.e., drums).

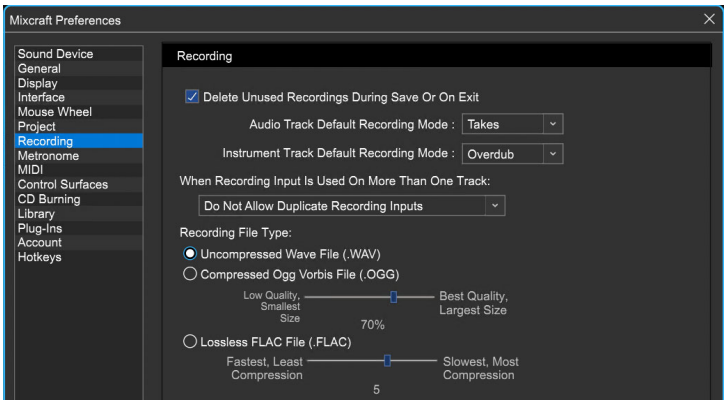
SHOW START PROJECT DIALOG ON NEW PROJECTS

Checking this displays the fabulous Mixcraft 10 Start Project window when a new project is initiated. This pref can also be enabled and disabled in the Start Project window itself. See the **Loading and Saving Projects** section for more info.

SET PROJECT DEFAULT SETTINGS...

Opens the New Project Window where default projects settings can be set, such as number each track type, tempo, key signature, etc. For more info, please see the **Loading and Saving Projects** section.

RECORDING



DELETE UNUSED RECORDINGS DURING SAVE OR ON EXIT

If this option is checked, Mixcraft deletes any recordings made that are not currently on any tracks during a project save or when the exiting the software. If recordings appear to be disappearing from the recording folder, it may be because they weren't part of the project. To prevent these recordings from being deleted, uncheck this.

- **Audio Track Default Recording Mode**
  Choose from *Takes*, *Overdub*, or *Replace* mode.
- **Instrument Track Default Recording Mode**
  Choose from *Takes*, *Overdub*, or *Replace* mode.
  For more information on *Takes*, *Overdub*, and *Replace* modes when recording MIDI clips, see the *Recording Mode* section in **Recording MIDI Tracks**; for information about recording modes with audio clips, see the *Recording Mode* section in **Recording Audio Tracks**.

WHEN RECORDING INPUT IS USED ON MORE THAN ONE TRACK

This instructs the software on how to handle two different tracks set to use the same recording input. The default is *Do Not Allow Duplicate Recording Inputs*. This routes the selected input to the newly armed track and disarms previously armed tracks.

Allow Duplicate Recording Inputs allows any number of tracks to be armed; it's possible to accidentally record numerous independent tracks of the same thing, so be careful if this option is chosen.

RECORDING FILE TYPE

- **Uncompressed WAV File (.WAV)**

WAV is the most common uncompressed Windows audio format. Because no file

compression occurs, it will have the best audio quality, but it also requires the most hard disk space.

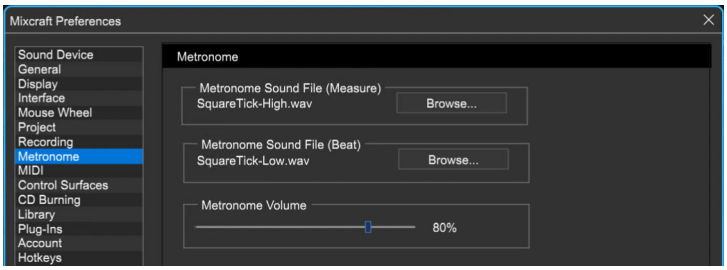
• **Compressed OGG Vorbis File (.OGG)**
OGG is very high quality compressed audio format. It's a "lossy" format, that is, it does get rid of some audio data in order to create smaller file sizes, but don't let that scare you; we've found OGG audio quality to be excellent, so we recommend using it in most situations (that's why we choose it as Mixcraft's default audio format).

OGG audio quality can be adjusted with the slider (lower quality = smaller file sizes, higher quality = larger file sizes).

• **Lossless FLAC File (.FLAC)**
FLAC is another high-quality compressed audio format. It's what's referred to as a "lossless" format because it doesn't discard any audio data. This results in larger file sizes than OGG (but smaller than uncompressed WAV).

Golden- ear types love to argue about which format sounds better, and we've got better things to do than bicker with those folks, but FLAC does sounds great in our opinion. FLAC audio quality can be adjusted with the slider (lower quality = smaller file sizes, higher quality = larger file sizes).

METRONOME



Clicking the *Browse* buttons allows customization of metronome sounds at the beginning of each measure and for individual beat clicks respectively. Default and user metronome sounds reside in the *Program Files>Mixcraft* folder.

METRONOME SOUND FILE (MEASURE)

The default measure tone is *HighTone.wav*. Click *Browse* to replace this with a custom user sound.

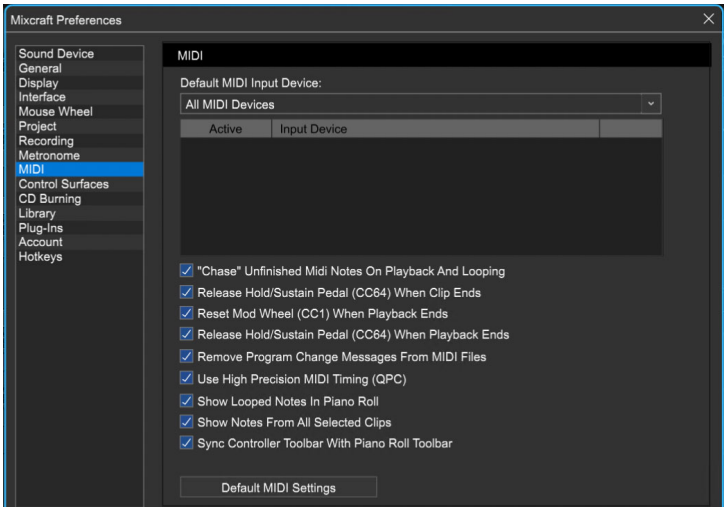
METRONOME SOUND FILE (BEAT)

The default measure tone is *LowTone.wav*. Click *Browse* to replace this with a custom user sound.

METRONOME VOLUME

Adjust the metronome volume to the desired level with the horizontal slider.

MIDI



DEFAULT MIDI INPUT DEVICE

If you have MIDI interfaces or MIDI keyboards, choose the interface that you'd like to play and record from. The default is *All MIDI Devices*.

"CHASE" UNFINISHED MIDI NOTES ON PLAYBACK AND LOOPING

MIDI is not actual sound, it's a series of commands instructing the computer play (or shut off) notes. With that in mind, what happens if you initiate playback in the middle of a note? The *Chase* option tells Mixcraft to send a "note on" message even if the playback start point is after the beginning of a note. This might not be significant if the song

contains quick, percussive sounds (like clavinet, or wood blocks), but if the song has very long sustained pads, it's likely that large musical elements will be missing if playback isn't started in the correct location. *Chase* helps alleviate this possibility.

RELEASE HOLD / SUSTAIN PEDAL (CC64) WHEN CLIP ENDS

Like the *Chase* situation above, this is another potential MIDI problem you might consider until it occurs. If a sustain pedal isn't released at the end of recording a clip (or you trim the clip's right edge so the sustain pedal off message no longer gets transmitted), it's possible to end up with notes that sustain forever and that's a mighty long time, but I'm here to tell you, there's something else: *Release Hold/Sustain Pedal (CC64) When Clip Ends.* This automatically sends a CC64 (the MIDI controller number for a sustain pedal) message of 0 to prevent possible "forever" notes.

RESET MOD WHEEL (CC1) WHEN PLAYBACK ENDS

Resets mod wheel controller to zero when playback is stopped. This prevents unwanted mod-related madness when playback is initiated - we recommend leaving this on.

RELEASE HOLD / SUSTAIN PEDAL (CC64) WHEN PLAYBACK ENDS

This performs the exact same function as *Release Hold / Sustain Pedal (CC64) When Clip Ends* described above, but does so when playback is stopped.

REMOVE PROGRAM CHANGE MESSAGES FROM MIDI FILES

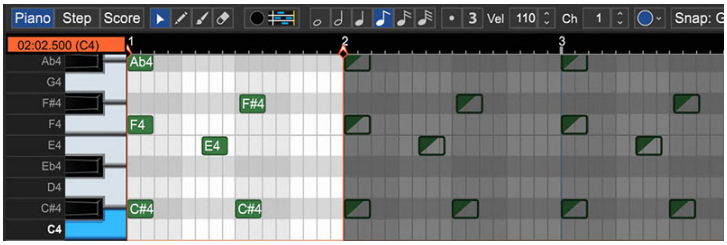
Embedded program changes in imported MIDI files (usually of the downloaded or purchased General MIDI file variety) can cause things to go haywire with undesired program changes. *Remove Program Change Messages From MIDI Files* strips the annoying program changes from MusicBob's standard MIDI file of "Total Eclipse of the Heart."

USE HIGH PRECISION MIDI TIMING (QPC)

High Precision MIDI Timing allows extremely accurate timing for MIDI recordings, by using a highly accurate clock to precisely record notes. When High Precision MIDI Timing is disabled, the timing resolution of MIDI events is approximately +/- 1 millisecond; enabling it increases timing accuracy an order of magnitude to approximately +/- 0.1 milliseconds (100 microseconds).

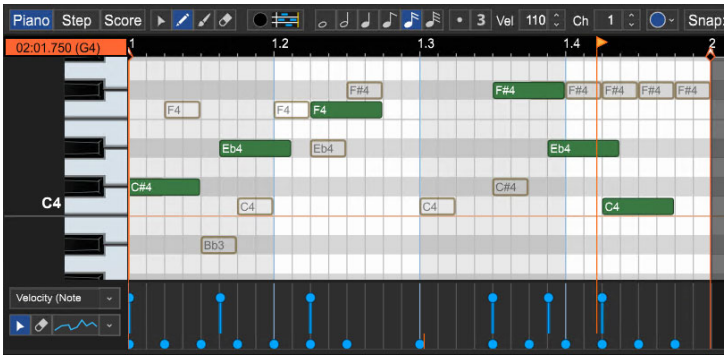
It’s possible (but unlikely) that some CPU’s will not support High Precision MIDI Timing, so if you experience any major timing glitches (besides your own jazzy- fingers), try disabling it.

SHOW LOOPED NOTES IN PIANO ROLL



Selects whether notes in looped clip copies are displayed in the Piano Roll editor. In the image above, looped copy notes are visible in the darkened section on the right.

SHOW NOTES FROM ALL SELECTED CLIPS IN PIANO ROLL



When enabled, notes from all currently selected clips will be visible in the Piano Roll editor. Notes from the clip currently being edited are solid-colored; notes from any other clips will appear as transparent. The currently edited clip will have a small wrench icon in its upper-left corner.

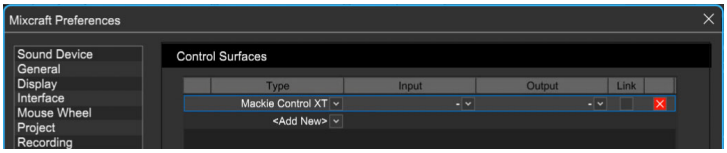
SYNC CONTROLLER TOOLBAR WITH PIANO ROLL TOOLBAR

When enabled, arrow, eraser, and pencil tool selection in the Sound Tab Piano Roll and Step Editor windows is synced. In the case of the pencil tool, it locks up with the "repeating waveforms" tool.

DEFAULT MIDI SETTINGS

Reverts all settings on this page back to default settings.

CONTROL SURFACES



Natively supported control surfaces include the Novation Launchpad, Mackie Control (aka MCU, and previously, Logic Control) and compatibles, and Acoustica's own Mixcraft Remote app for Android and iOS mobile devices.

Note: For more information on configuring control surfaces, see **Using Natively Supported Hardware Controllers**.

TYPE

For Mixcraft to recognize any of these devices, plug in the device (or in the case of Mixcraft Remote, makes sure your computer and mobile device are on the same wireless network), click *<Add New>* and select the appropriate device. If you're using an older Emagic Logic Control, be sure to choose it (instead of *Mackie Control*) in the *Type* list, otherwise all functions won't work correctly.

INPUT

Specifies the input for the Control Surface. If it's a MIDI device, choose the appropriate MIDI interface. If it's plugged into a USB port, choose the name of the Control Surface.

OUTPUT

This is specifies the MIDI or USB output for the device and is set just like the input setting. If it's a MIDI device, choose the appropriate MIDI interface. If it's plugged into a USB port, choose the name of the Control Surface.

Note: The Mixcraft Remote mobile app does not require any *Input* or *Output* settings.

LINK

Linking two or more control surfaces (e.g. Mackie control surfaces), will cause them to act as one large single control surface.

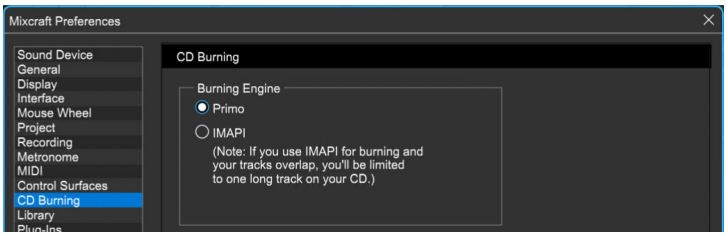
UP/DOWN ARROWS

If you’re using more than one of the same fader controller, these let you move devices up and down in the list. This effectively lets you change the fader order of cascaded units to align with their physical placement in your workspace.

X BUTTON

This deletes the currently selected Control Surface.

CD BURNING

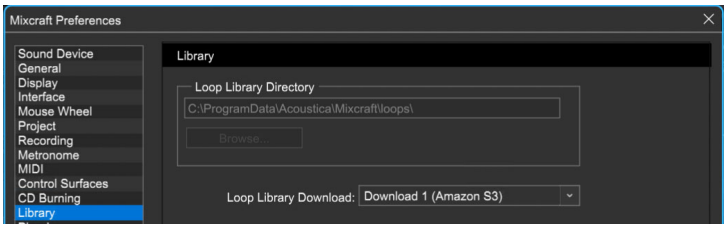


BURNING ENGINE

Choose between Primo or IMAPI. Primo is the default and recommended CD burning engine. It burns audio CD’s without gaps between tracks and supports CD-Text burning.

IMAPI is Windows default audio CD burning method. The drawback is that when burning more than one track, it inserts a two-second gap between tracks and automatically converts to WAV prior to burning.

LIBRARY



These are Mixcraft's included sound library settings.

LOOP LIBRARY DIRECTORY

The folder where the loop library is stored. When new loops are downloaded, they are saved in this directory. This folder is shared for all users on this computer.

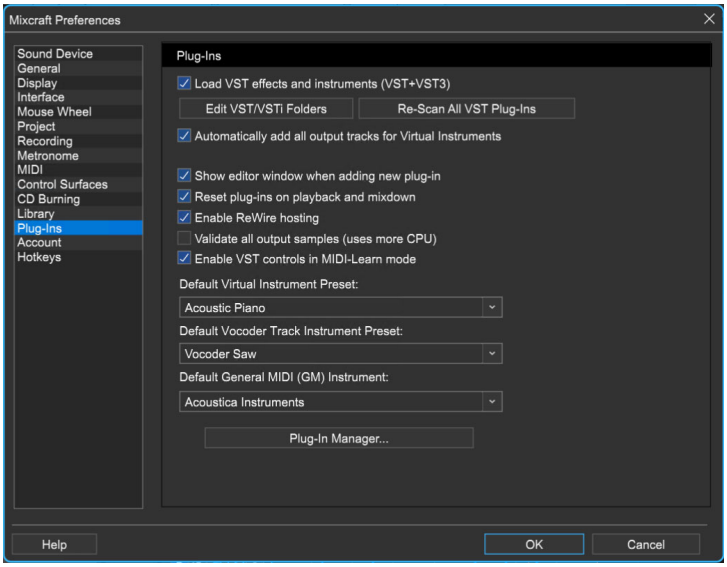
If you're using Mixcraft in Administrator mode, you can change this folder location. To run Mixcraft in Administrator mode, browse to the Acoustica Mixcraft folder, right- click *Mixcraft9.exe* and choose *Run As Administrator...*

Type in a new folder path or click *Browse...* to select a new folder.Schools or labs can set the folder to reside on a server in order to save space on individual workstations.

LOOP LIBRARY DOWNLOAD

Select a *Loop Library* download site from the drop-down. If you experience problems downloading sounds, please go to the **Troubleshooting** section.

PLUG-INS



LOAD VST EFFECTS AND INSTRUMENTS (VST+VST3)

Mixcraft loads VST effects and virtual instruments upon launch if this box is checked.

EDIT VST/VSTI FOLDERS

Click this button to add, edit, or delete folders Mixcraft scans to locate VST Plug-Ins.

RE-SCAN ALL VST PLUG-INS

Scans VST folders for new plug-ins. This is useful when installing new VST Plug-Ins. (And also helps to thwart the dreaded, “lookin’ for plugs in all the wrong places.”)

AUTOMATICALLY ADD ALL OUTPUT TRACKS FOR VIRTUAL INSTRUMENTS

This will add a child output channel track for each output channel in the VSTi. This is

only important for instrument plug-ins with multiple output channels. If this is off and the instrument has multiple output channels, a single output track is created.

SHOW EDITOR WINDOW WHEN ADDING NEW PLUG-IN

When adding instruments or effects, this automatically opens its editor window. This is on by default and you’ll most likely want to leave it on.

Note that most of the “stock” Mixcraft instruments don’t have an editor window, so this checkbox won’t apply to them.

RESET PLUG-INS ON PLAYBACK AND MIX DOWN

If playback is stopped before a delay or reverb effect has faded out, the remaining decay can get stuck in the audio buffers; this “stuck” audio can be heard the next time playback is initiated. Checking *Reset Plug-Ins On Playback And Mix Down* automatically clears Mixcraft’s audio buffers the next time play is pressed or when the *Mix Down To Audio File* command is used, eliminating these annoying audio artifacts.

ENABLE REWIRE HOSTING

Toggle this option to enable or disable ReWire hosting. You’ll need to restart Mixcraft to use newly added ReWire clients.

VALIDATE ALL OUTPUT SAMPLES (USES MORE CPU)

Provides protection against bad values being output by a plug-in, but uses more CPU. Sometimes a bad or buggy plug-in may output invalid values, causing additional

calculations to fail, and breaking all further plug-ins down the line. Unless you're experiencing problems with a specific plug-in, we recommend leaving this off.

ENABLE VST CONTROLS IN MIDI-LEARN MODE

Allows controls of VST instruments and effects plugins to learn external hardware assignments.

DEFAULT VIRTUAL INSTRUMENT PRESET

Here you can define the instrument assigned to newly created Virtual Instrument tracks. By default this is a piano sound, but it can be changed to whatever you like.

DEFAULT VOCODER TRACK INSTRUMENT PRESET

Here you can define the instrument that gets added when creating new Vocoder Tracks. This defaults to the Mixcraft Instruments *Synth Strings 1* patch, which works well for de facto vocoder robot voice effects.

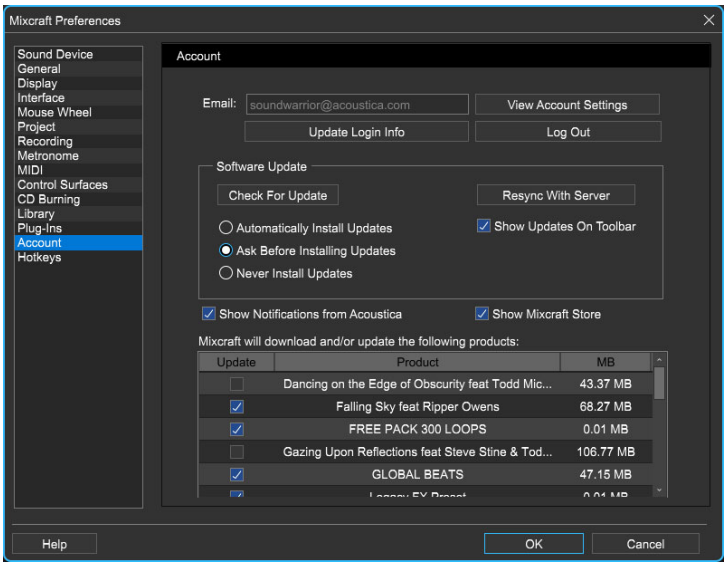
DEFAULT GENERAL MIDI (GM) INSTRUMENT

Here you can define the General MIDI sound set assigned to newly created General MIDI files. This is set to Acoustica Instruments by default.

PLUG-IN MANAGER...

A shortcut to the *Manage Plug-Ins* window (also accessible via *File>Manage Plug-Ins*). This where plug-ins can be enabled and disabled from showing in the list of effects shown in Mixcraft, and also where you can edit instrument and effects Collections (see **Plug-In Manager** for the full scoop).

ACCOUNT



Settings for your personal login information and account.

- **Email**
  Displays the email address of the current login.
- **Update Login Info**
  Clicking this opens the same email and password login screen you'll see when initially launching Mixcraft and allows changes to be made.
- **View Account Settings**- This opens your personal account page on the Acoustica Store website containing information about purchases and more.
- **Logout**
  Clicking this logs out of your Acoustica account.

SOFTWARE UPDATE

We often fix bugs and make improvements; below are options defining how Mixcraft handles updates.

- **Check For Update**
  Click this to see if an updated version of Mixcraft is available.
- **Resync With Server**
  Checks the Acoustica servers and brings Mixcraft+additional Mixcraft software packages to current ownership status as selected in the table at the bottom of the window.

- **Show Updates On Toolbar**- Checking this will display an icon in the toolbar next to the logo letting you know there's an update available.
- **Automatically Install Updates**- Updates are automatically downloaded and installed.
- **Ask Before Installing Updates**- By default, Mixcraft automatically downloads new versions of modules when available. Checking this box defeats automatic updates and will ask if you'd like to install updates when they become available.
- **Never Install Updates**- Mixcraft never automatically installs updates.

SHOW NOTIFICATIONS FROM ACOUSTICA

We occasionally will fire off in-app advertisements; disabling this checkbox will hide them. We hate repetitive, annoying ads as much as you, so we won't use this feature too often. When we do, it'll be for something super cool (like a killer sale), so we recommend leaving it on.

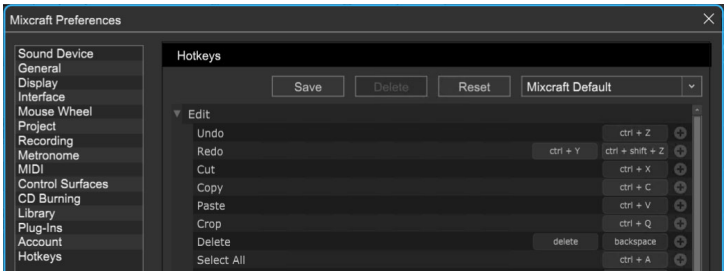
SHOW MIXCRAFT STORE

Enables or disables view of the Acoustica *Store* details tab at the bottom of the main window.

MIXCRAFT WILL DOWNLOAD AND/OR UPDATE THE FOLLOWING PRODUCTS

Use the checkboxes in this table to specify which Mixcraft-related products will update.

HOTKEYS



Mixcraft's key shortcuts can be edited and custom hotkeys can assigned here. For full information, please see the **Hotkeys** section.

MAIN WINDOW MENUS

FILE MENU

NEW PROJECT [CTRL]+N

Creates a new project and shows the *New Project Settings* dialog.

OPEN PROJECT... [CTRL]+O

Opens or loads an existing project or template.

SAVE [CTRL]+S

Saves the current project

SAVE AS...

Saves the current project or mixes down to an audio file depending on *Save As...* format selection.

COPY PROJECT FILES TO...

Copies all current project files to a folder or a new ZIP file. This is useful for backing up projects (i.e. to CD), reorganizing project files, or collaboration with others.

MIX DOWN TO

Mixes the current project to an audio or video file format.

SAVE AS MIDI FILE...

Saves the MIDI data of the current project as a Type 1 Standard MIDI file.

BURN CD... [CTRL]+B

Burns an audio CD, compatible with any standard audio CD player.

LABEL CD...

This launches the optional *Acoustica CD/DVD Label Maker* application for printing CD labels, etching a LightScribe disc, or printing on a direct-to-CD printer.

PRINT... [CTRL]+P

Prints the notation display, if currently selected.

PREFERENCES

Opens the *Preferences* dialog.

SET NEW PROJECT DEFAULTS

Opens the *New Project Settings* window.

MANAGE PLUG-INS...

Opens the *Plug-In Management* window.

RECENT PROJECTS

Displays the ten most recently loaded or saved projects for quick access. To load a recent project, click on it.

EXIT

This closes Mixcraft. Before exiting, it will prompt you to save unsaved changes.

EDIT MENU

UNDO [CTRL]+Z

This will undo any action up to the point of the last save, load, or new project.

REDO [CTRL]+Y

This will redo any “undone” action.

CUT [CTRL]+X

This cuts or removes any currently selected audio, MIDI data, or video (or parts thereof). The cut operation also stores the cut sounds in the Clipboard for pasting if desired.

COPY [CTRL]+C

This copies audio, MIDI data, or video currently selected or in the selection rectangle to the Clipboard for pasting if desired.

PASTE [CTRL]+V

Pastes or inserts audio, MIDI data, or video currently stored in the Clipboard buffer at the caret location. If necessary, new tracks are created if the Clipboard buffer stored audio, MIDI data, or video spanning multiple tracks.

CROP [CTRL]+Q

The opposite of cut. Cropping something keeps what is selected and discard everything else on the selected clips.

DELETE [DELETE]

This will remove any sounds or parts of sounds that are currently selected or in the selection rectangle. Unlike *Cut*, this will not store the deleted audio in the Clipboard.

SELECT ALL [CTRL]+A

This selects all clips in the project.

SPLIT [CTRL]+T

This splits selected clips at the current Caret location.

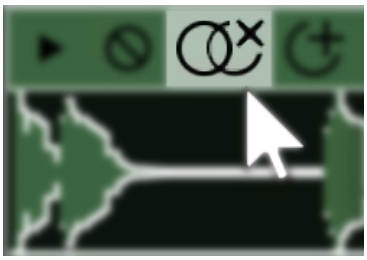
REMOVE SPACES BETWEEN CLIPS [CTRL]+J

Removing space between the clips eliminates gaps or silence between selected clips by moving the selected clips together.

MERGE TO NEW CLIPS [CTRL]+W

Merges the selected clips into a new clip. This functions on a per-track basis and does not combine clips from different tracks.

LINK



The *Link* submenu allows clips to be linked or unlinked. When clips are linked, they move together when dragging. Linked clips retain their relative offset to each other. The submenu link options are:

- Link Selected Clips
- Unlink Selected Clips

Linked clips will have a button in the title bar. Click this button to unlink clips.

INSERT SELECTED TIME

When a purple selection region is made in the Timeline or Main Clip grid, this function inserts additional time into the selected area. Any clips within the insert area are split and the right halves are advanced. Automation data is also moved to maintain the proper location.

REMOVE SELECTED TIME

When a purple selection region is made in the Timeline or Main Clip grid, this function deletes the time in the selected area. Any clips (or parts of clips) within the area are removed. Automation data in the selected area is also removed.

MIX MENU

PLAY/STOP PLAYBACK [SPACE BAR]

Starts and stops project playback at the Playback Indicator position.

PLAY FROM

Displays a menu allowing playback from project Markers.

REWIND TO START [HOME]

Moves the Playhead to the beginning of the project. If the project is currently playing, the project starts playback from the beginning.

FAST FORWARD TO END [END]

Moves the Playhead to the end of the project. If the project is playing audio, playback is stopped.

RECORD [CTRL]+R

Beings recording on any armed tracks.

SET MASTER VOLUME

Sets the master volume to an exact amount or from 20% to 200%.

MIDI RESET!

Sends a panic message to all virtual synthesizers and external synthesizers instructing them to stop playing any stuck notes. Use this if you can’t a sound to stop.

MIDI CONTROL SURFACE

Configures playback, recording, and other transport functions from a MIDI controller or device.

EDIT MASTER EFFECTS

Opens the Master Effects window. Use to apply and edit effects on the Main Mix two-track bus.

ADD REWIRE APPLICATION

Choose a ReWire application to control, if available.

ADD TEMPO/KEY CHANGE

Adds a marker at the current Playhead position and opens the Marker Edit window where a tempo, key, or time signature change may be added.

MARKERS

Opens a submenu to add, edit, or delete Markers.

TRANSPOSE KEY CHANGES

Opens a submenu with Up or Down options for the global transposition of a project, including all Markers containing key changes.

METRONOME AND COUNT-IN SETTINGS [M], [SHIFT]+M

Toggles the metronome on and off independently for playback and recording, and specifies the number of count-in measures prior to recording.

LOOP PLAYBACK MODE [L]

Loop playback of a selection or the entire project.

USE RECORDING TIMER

Sets the recording timer allowing recording to stop after a specified duration.

AUTOMATION RECORDING MODE

Selects the behavior of automation recording when using a control surface.

- **Overwrite Mode**

Continuously writes the current fader or V-Pot position for the duration of recording, overwriting existing automation data as it records.

- **Touch Mode**

When used with a control surface with touch-sensitive faders Touch Mode overwrites automation data only when the fader is being touched. When used with control surfaces with non-touch-sensitive faders, recording of automation initiates only after Mixcraft detects a fader has been moved. From this point on, automation writing behaves the same as Overwrite Mode, overwriting as it goes until Mixcraft is stopped.

TRACK MENU

ADD TRACK

Adds a new Audio Track [CTRL]+G, Virtual Instrument Track [CTRL]+E, Video Track, Send Track, SubMix Track or Output Bus Track to the end of the project.

INSERT TRACK

Inserts a new Audio Track, Virtual Instrument Track, Video Track, Send Track, SubMix Track, or Output Bus Track above the currently selected track.

DELETE TRACK [CTRL]+[SHIFT]+D

This deletes the currently selected track.

SHOW MASTER TRACK

Click to show or hide the Master Track.

PROPERTIES

These submenus contain numerous track options.

- **Mute [CTRL]+M**

Mutes or unmutes the selected track. A checkmark indicates that the track is muted.

- **Solo [CTRL]+L**

Solos or un-solos the selected track. A checkmark indicates the track is soloed.

- **Set Volume**

Sets the volume for the selected track to either an exact amount or from 20% to 200%.

- **Set Pan**

Sets the pan position of the selected track. If the clip on the track is a stereo file, pan will act as a left/right balance control.

- **Track Color**

Selects a color for the track and its clips.

- **Track Height [CTRL]+ ~ (tilde)**

Adjusts the selected track height to *Small*, *Normal*, *Large* or *Extra Large*.

• **Cycle Track Height [CTRL]+ ~ (tilde)**

Moves the track height options above.

• **Choose Image...**

Opens the Track Image dialog allowing the use of custom track list images.

LANES

The *Lanes* submenu lets you add, delete, and mute clip lanes.

• **Add [ALT]+L**

Add a new lane to the currently selected track.

• **Delete**

Delete the currently selected lane and any clips on it.

• **Delete Empty Lanes [ALT]+K**

This removes unused lanes from the currently selected track.

• **Mute All**

Mutes all clips on the selected lane.

• **Unmute All**

Unmutes all clips on the selected lane.

• **Select All**

Select all clips on the selected lane.

ARM FOR RECORDING [CTRL]+B

Arms the selected track.

MONITOR

Allows you to hear audio as it records, including any effects on the recording track.

ARM RECORDING CHANNEL AND DEVICE

Selects the recording input source for an Audio Track, Virtual Instrument Track, or MIDI Track.

RECORDING MODE

Selects *Overdub*, *Takes*, or *Replace* mode for the currently selected track.

GUITAR TUNER

Activates the Guitar Tuner on the current track [Audio Tracks only]. Unlike previous versions of Mixcraft, the track does not need to be armed to use the Guitar Tuner.

FX...

Displays the Effect List for the selected track.

SHOW/HIDE AUTOMATION LANE

Shows or hides automation lane[s] for the selected track.

MIX TO NEW AUDIO TRACK

Mixes the selected track to a new audio track with current effects applied. The original track is retained and muted after the new audio track is created. This can be useful if effects are using excessive CPU resources or RAM and compromising performance.

DUPLICATE TRACK

This copies and pastes all clips and settings of the current track and and creates a new track beneath the selected track with the same clips and settings. Useful if you'd like to make serious edits but would like to maintain an "untouched" version.

FREEZE TRACK [CTRL]+[SHIFT]+F

Freezes the selected track. This is useful if the project is using too much CPU or RAM.

SELECT ALL CLIPS ON THIS TRACK [CTRL]+[SHIFT]+A

Selects all clips on the selected track.

SOUND MENU

ADD SOUND FILE... [CTRL]+H

Use for adding audio, MIDI data, or videos to the current project. New files will be inserted at the current Caret location.

ADD INSTRUMENT CLIP

This adds a blank Virtual Instrument clip on the closest Virtual Instrument Track. You can also double-click a Virtual Instrument track to create a blank Virtual Instrument Clip.

MIDI EDITING

These submenus contain numerous MIDI editing options including Quantize, Humanize, Transpose, Velocities, Offsets, Durations, Soloize, and Double.

[See “MIDI Editing: Clips” for full details.] **LINK HERE**

PROPERTIES

These submenus specify individual clip properties. See “Using Clips and The Main Clip Grid“ for full details. **LINK HERE**

- **Mute**

Mutes or unmutes the selected clip.

- **Channels**

Selects the active/audible channel for audio clips. (Audio clips only)

- **Phase**

Selects the phase of the audio clip. (Audio clips only)

- **Normalize [CTRL]+K**

This sets the volume of all selected sounds to the normalized level. The normalized level is based on the loudest peak. Reselect to deactivate normalization.

- **Lock**

Locks or unlocks the selected clip(s) to prevent resizing, movement, or other modifications.

ENVELOPES

Submenu for *Envelopes*, a.k.a. *Clip Automation*.

• Reset Envelope [CTRL]+[ALT]+T

Restores the current envelope to its default setting for all selected sounds.

• Invert Envelope [CTRL]+[ALT]+Y

Inverts or flips the current envelope vertically for all selected sounds.

• Fade Out

Displays pop-up menu with the following options: *Fast*, *Medium*, and *Slow*. Each option adds a fade-out of the current envelope type to all selected sounds. Note that the fade is applied to the selected area. If there is a selection rectangle, the fade only occurs in the selection rectangle

• Fade In

Displays a pop-up menu with the following options: *Fast*, *Medium*, and *Slow*. Each option adds a fade-in of the current envelope type to all selected sounds. If there is a selection rectangle, the fade only occurs in the selection rectangle.

• Boost

Displays a pop-up menu to boost all selected sounds by a set percentage for the current chosen envelope type. If there is a selection rectangle, the boost is applied only to the selected area.

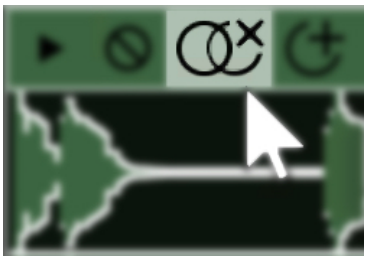
• Reduce

Displays a pop-up menu to reduce all selected sounds by a set percentage for the current chosen envelope type. If there is a selection rectangle, the reduction is applied only to the selected area.

LINK

The *Link* submenu allows clips to be linked or unlinked. When clips are linked, they move together when dragging. Linked clip retain their relative offset to each other. The submenu link options are:

• Link Selected Clips
• Unlink Selected Clips



Linked clips will have the button in the title bar. Clicking the button will unlink clips.

SPLIT [CTRL]+T

This splits selected clips at the current Caret location.

REMOVE SPACES BETWEEN CLIPS [CTRL]+J

Removing space between the clips eliminates gaps or silence between selected clips by moving the selected clips together.

MIX TO NEW CLIP [CTRL]+W

This merges the selected clips into a new clip. This functions on a per-track basis and does not combine clips from different tracks.

REVERSE

This makes audio clips play backwards, which is almost always awesome.

CONVERT AUDIO TO MIDI (MIXCRAFT 10 PRO STUDIO ONLY)

Any audio clip containing single-note melodic content can be converted to a MIDI file by right-clicking and choosing *Convert Audio To MIDI*. This is really convenient for doubling up vocal lines or instrumental solos.

This semi-miraculous feature does have some limitations - it only works correctly with single-note lines (it won’t work with chords), and it works best with clean, unprocessed sound - audio with a lot of effects such as reverb or delay won’t work too well. You may also notice that some notes are converted to the correct note but in the wrong octave. This is easy enough to fix in the Piano Editor.

ADD TO LIBRARY

Adds the audio clip to the sound library, for easy future use.

SET LOOP TO CROP

Sets the loop point on a clip to its current crop. (Audio clips only)

TRIM SILENCE [CTRL]+I

This removes any silence from left and right edges of clips. (Audio clips only)

EDIT IN EXTERNAL EDITOR...

Opens the sound or a copy of the sound in an external third-party sound editor.

VIDEO MENU

ADD A VIDEO FILE...

Adds a video file to the project.

ADD STILL IMAGES...

Add image files to the video track. JPG, BMP, and PNG formats are supported.

ADD TEXT...

Adds text to the Text Video child track.

ADD SCROLLING TEXT...

Adds scrolling text to the Text Video child track.

ALIGN CLIPS...

Aligns image and video clips for creating slide shows or aligning them to the beat.

SET NON-CLIP BACKGROUND COLOR...

Sets the color of the background if no video or image clips are present.

SHOW/HIDE VIDEO WINDOW

Shows or hides the video playback window.

SET PREVIEW WINDOW SIZE

Selects standard video sizes for the Video Window.

LINK

The *Link* submenu allows clips to be linked or unlinked. When clips are linked, they move together when dragging. Linked clips retain their relative offset to each other. The submenu link options are:

- Link Selected Clips
- Unlink Selected Clips

Linked clips will have a button in the title bar. Click this button to unlink clips.

VIEW MENU

ALL TRACKS HEIGHT

Opens a submenu for setting the selected track height to *Small*, *Normal*, or *Large*.

TIMELINE MODE

Selects Beats or Timeline viewing mode.

SNAP TO GRID

Disable *Snap* or choose a snap setting for the Timeline in the pop-up submenu.

SHOW EFFECTS ON TRACKS

Expands the right edge of the track menu to display effects inserted on the channel. This can also be done by clicking and dragging near the right edge of the track list.

SHOW/HIDE DETAILS AREA

Shows or hides the most recently selected details tab. (*Project*, *Sound*, *Mixer*, or *Library*)

MUSICAL TYPING

Opens the Musical Typing keyboard. This allows MIDI note input using a standard QWERTY computer keyboard.

PERFORMANCE PANEL

Toggles viewing and hiding of the Performance Panel.

ZOOM IN [+]

Zooms into the project for a more detailed view.

ZOOM OUT [-]

Zooms out for a wider view.

ZOOM TO PROJECT [0]

Fits the entire project to the screen.

HELP MENU

HELP FILE...

Opens the *Help File*. (the thing you're reading right now - circular logic is deep, man)

CHECK FOR UPDATE...

Checks the Internet for a newer or updated version of Mixcraft.

ENTER REGISTRATION CODE...

If unregistered, use this to enter your registration code.

BUY NOW!

Displays a window with instructions on purchasing and registering the software. (Unregistered versions only)

ABOUT MIXCRAFT...

Displays Mixcraft credits, copyrights, and thanks.

HOTKEYS

Numerous Mixcraft 10 commands can be assigned a custom keyboard shortcut consisting of either a single key or modifier key(s) + key. These are very useful for power users and can really speed up the workflow.

Many commands are pre-configured in the Mixcraft Default hotkey set, but it's just a staring point: assignments can be freely changed and saved, and additional assignments can be added.

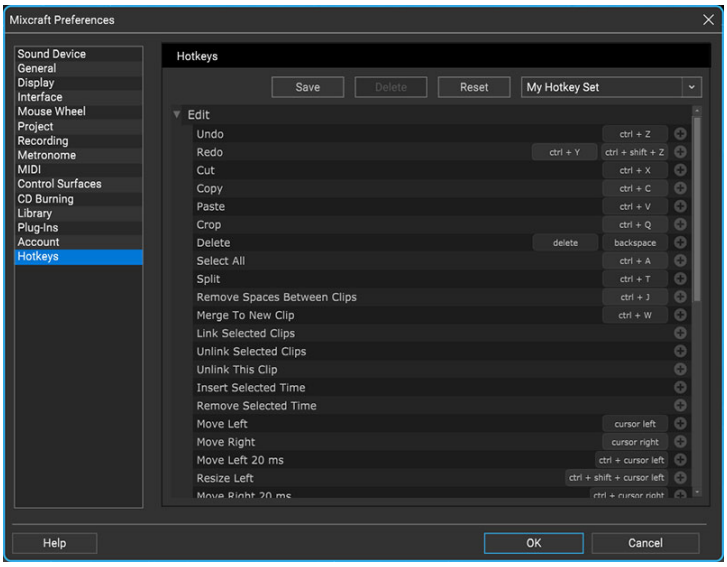
OPENING THE HOTKEYS EDITOR

To edit hotkey assignment and sets, open Mixcraft Preferences either by selecting Fi*le> Preferences...* or by clicking the preferences gear icon (next to the *MIDI* button) in the top menu bar, then select *Hotkeys*.

HOTKEY SETS

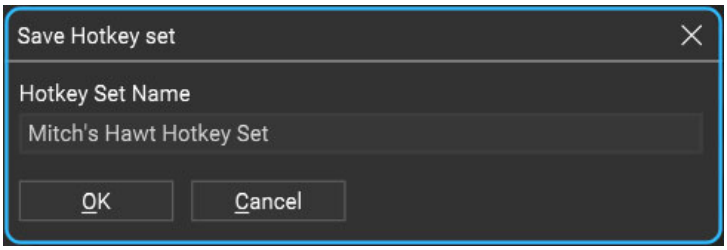
Groups of hotkey assignments can be saved as sets and named. This not only allows multiple users to easily save and use their own personalized hotkey sets, it also makes it easy to move hotkey sets to different computers - useful if you're upgrading to a new machine or working on a Mixcraft project at a friend's studio.

Note: Hotkey assignment sets can be found in the **%AppData%\Roaming\Acoustica\Mixcraft\user** directory.



Hotkey sets are selected using the popup menu at top right. This will initially contain only the *Mixcraft Defaults* hotkey set.

Save - Click to save a new hotkey set. The following window opens:



This will save a copy of the existing hotkey set along with any recent alterations.

Delete- Removes the current hotkey set. You'll be prompted with an "are you sure?" message in order to avoid any undue calamity.

Reset- Initializes all hotkey commands to factory defaults.

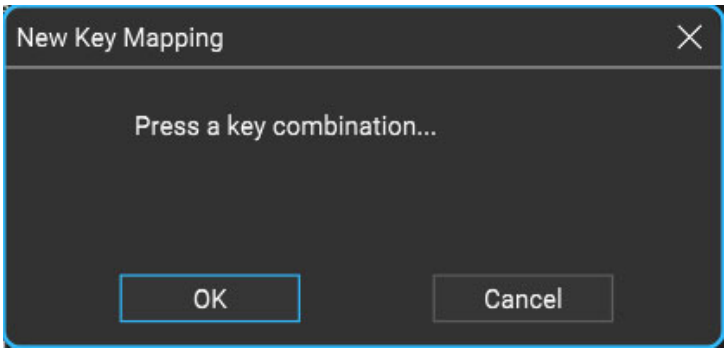
Hotkey Set Selector (defaults to "Mixcraft Default")- Clicking this opens a popup window where factory default and user hotkey sets can be selected.

ASSIGNING HOTKEY COMBINATIONS TO COMMANDS

To assign a custom hotkey, begin by finding the command you'd like to add the hotkey to. The categories coincide with the menu dropdowns at the top of the Mixcraft UI. Click on the disclosure triangles to the left of the command menu categories to view individual commands. Let's assign a custom key command to *File/Save As*:

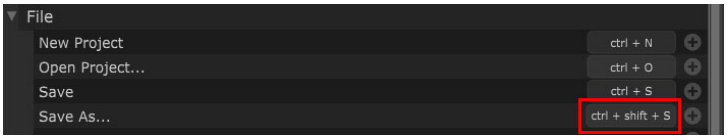
1. Click the disclosure triangle next to *File*.

2. Locate *Save As* in the list and click the *+* sign at the far right of the row.



3. When the *New Key Mapping* window opens, press the key or combination of keys you'd like to assign. In this case, we'll assign Save As to *[CTRL]+[SHIFT]+S*. Make sure to press the modifier keys first, followed by the "standard" QWERTY key. If you make a mistake, you can keep pressing keys until the desired key or key combination shows in the window.

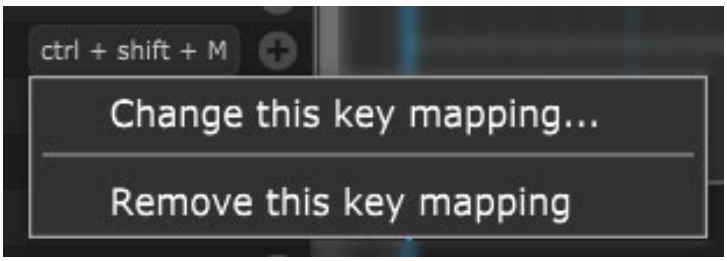
4. Click *OK*. If you decide this makin' a hotkey thing isn't the thing for you, click *Cancel* to call off the whole mess. (Kidding aside, they're real easy to add and delete, so no worries.)



5. The key combination is now visible in the row next to the *Save As*... command.

EDITING OR REMOVING HOTKEY COMMANDS

To edit or remove a hotkey command, click directly on the rectangle containing the hotkey shortcut text. This opens the following window:



- **Change this key mapping...** - Opens the New Key Mapping window where a key mappings can be assigned.
- **Remove this key mapping...** - Deletes the current mapping.

MIXCRAFT DEFAULT HOTKEYS

MIX

Function	Keyboard Shortcut
Play / Stop	[SPACE]
Play Sound Tab (not main transport)	[SHIFT]+[SPACE]
Play From Next Marker	[CTRL]+[SPACE]
Play From Previous Marker	[CTRL]+[SHIFT]+[SPACE]
Record	R or [CTRL]+R
Toggle Loop Mode	L
Toggle Playback Metronome	M
Toggle Recording Metronome	[SHIFT]+M
Move Clips	If Snap is on, the selected clips will move at the current Snap setting. [CTRL]+arrow

	keys moves the caret +/- 20 milliseconds. [CTRL]+[SHIFT]+arrow keys move the caret +/- 1 millisecond. Up/down arrow moves the caret to a different track or lane. Up/down arrow keys move the selected clips to a different track.
Moving the Caret	If Snap is on, the caret will move at the current Snap setting. [CTRL] + arrow keys moves +/- 20 milliseconds. [CTRL] + [SHIFT] + arrow keys move +/- 1 millisecond.
Move Clip Without Changing Time Offset	[SHIFT]+Drag
Resize Region While Maintaining Initial Anchor Point	[CTRL]+click near an edge of an existing region. The region's initial anchor point remains unaffected as long as [CTRL] key is held.
Expand or Contract Region Selection	[SHIFT]+click to expand or contract a selection to the edge closest to the click point.

EDITING COMMANDS

Function	Keyboard Shortcut
Undo	[CTRL]+Z
Redo	[CTRL]+Y
Cut	[CTRL]+X
Copy	[CTRL]+C
Drag a Copy	[ALT]+drag
Drag Copy and Preserve Time Offset	[SHIFT]+[ALT]+drag
Paste	[CTRL]+V
Delete	[DELETE]

Crop	[CTRL]+Q
Split	[CTRL]+T
Remove Spaces Between Clips	[CTRL]+J
Merge To New Clip	[CTRL]+W
Trim Silence	[CTRL]+I
Add Marker at current Caret position	[CTRL]+ / (*slash key*)

SNAP ADJUSTMENTS

Function	Keyboard Shortcut
Off	~
Grid	G
Measure	1
1/2 Notes	2
1/4 Notes	3
1/8 Notes	4
1/16 Notes	5
1/32 Notes	6
1/64 Notes	7

MIDI EDITING

Function	Keyboard Shortcut
Arrow Selection Tool	W

Eraser Tool	E
MIDI Reset/Panic	[CTRL]+[SHIFT]+M
Drag Copy	[ALT]+drag
Draw Selected Velocities Only	[SHIFT]+drag
Select Next Note	[TAB]
Select Previous Note	[SHIFT]+[TAB]
Select All Notes	[CTRL]+A
Unselect All Notes	[ESC]
Musical Typing Keyboard	[CTRL]+[ALT]+K
Move Note/Retain Offset	[SHIFT]+Drag

SELECTING CLIPS

Function	Keyboard Shortcut
Select All	[CTRL]+A
Select All On Track	[CTRL]+[SHIFT]+A
Select All On Lane	[CTRL]+[SHIFT]+[ALT]+A
Select Next Clip	[TAB]
Select Previous Clip	[SHIFT]+[TAB]
Deselect All	[ESC]
Delete Selected Note(s)	[DELETE]
Drag Notes Vertical Only	[SHIFT]+ drag

TRACKS

Function	Keyboard Shortcut
Delete Track	[CTRL]+[SHIFT]+D
Add Audio Track	[CTRL]+G
Add Virtual Instrument Track (MIDI)	[CTRL]+E
Arm Track Toggle	[CTRL]+B
Mute Track Toggle	[CTRL]+M
Unmute All Tracks	[CTRL]+click track Mute button
Solo Track Toggle	[CTRL]+L
Unsolo All Tracks	[CTRL]+click track Solo button
Move Track Down	[CTRL]+D
Move Track Up	[CTRL]+U
Freeze Track	[CTRL]+F
Add Lane	[ALT]+L
Delete Empty Lanes	[ALT]+K

ZOOMING AND SCROLLING

Function	Keyboard Shortcut
Zoom To Project	0
Zoom In	-
Zoom Out	+
Scroll Up/Down	Mouse Wheel
Scroll Horizontal	[SHIFT]+Mouse Wheel

Scroll Vertical	[CTRL]+Mouse Wheel
Scroll Tracks Up	[PAGE UP]
Scroll Tracks Down	[PAGE DOWN]

MISCELLANEOUS

Function	Keyboard Shortcut
View/Hide Performance Panel	P
Add Sound File...	[CTRL]+H
Normalize Sound	[CTRL]+K
Adjust Volume Slider, Pan Slider, EQ Knobs	[CTRL], [ALT] or [SHIFT] + click and drag
Reset MIDI Devices	[CTRL]+[ALT]+M
Print Virtual Instrument Clip	[CTRL]+P
Fade In Clip Fast	[ALT]+1
Fade Out Clip Fast	[ALT]+2
Fade In Clip Medium	[ALT]+3
Fade Out Clip Medium	[ALT]+4
Fade In Clip Slow	[ALT]+5
Fade Out Clip Slow	[ALT]+6
Boost Clip 1%	[ALT]+[CTRL]+Q
Reduce Clip 1%	[ALT]+[CTRL]+A

Function	Keyboard Shortcut
Boost Clip 5%	[ALT]+[CTRL]+W

Reduce Clip 5%	[ALT]+[CTRL]+S
Boost Clip 25%	[ALT]+[CTRL]+E
Reduce Clip 25%	[ALT]+[CTRL]+D
Boost Clip 50%	[ALT]+[CTRL]+R
Reduce Clip 50%	[ALT]+[CTRL]+F

CURSORS

ADJUST CONTROLLER

You’ll see this when adjusting MIDI controller data in the bottom section of the *Sound/Piano* and *Step* edit windows.

ARROW

The default cursor.

BRUSH

Used to “paint” notes into the *Sound*/*Piano* edit window.

EDIT UP/DOWN

Shows when a control is dragged up or down. You’ll see this when adjusting mixer faders.

ENVELOPE CURVE

Indicates the curve of an envelope is being altered for a logarithmic or exponential response.

ENVELOPE POINT EDIT/ADD POINT

This cursor shows that an envelope point can be added or moved.

ENVELOPE POINT REMOVE POINT

This cursor shows that an envelope point can be deleted.

ERASER

This cursor shows that notes or controller data can be erased.

FLEXAUDIO™

Holding down the [CTRL] key and dragging allows visual time-stretching of any audio clip.

HAND GRAB

Indicates moving stuff around, such as rearranging the order of tracks.

I-BEAM

This cursor shows that a selection can be made on a sound.

LIFT LINE

Seen when raising or lowering sections of automation using the automation line tool.

LINE ADJUSTER TOOL

This guy pops up in audio and MIDI regions as well as in the MIDI controller data window of the Piano Roll and Step Edit windows. It performs a couple of operations, generally related to moving multiple edit points simultaneously.

NO DRAG

Appears when trying to drag something somewhere it can’t be placed, such as dragging and audio clip to MIDI track.

PENCIL

This cursor shows that new notes or controller data can be drawn.

PLAY SOUND

This cursor shows that a sound from the sound library can be played.

RESIZE INTERFACE

This cursor is shown when resizing the details area or resizing a track.

RESIZE OR LOOP SOUND

This cursor shows that a loop of sound can be resized from the left or right.

RESIZE TRACK HEADER

This shows when horizontally resizing the track header width.

SCISSORS

Clips can be split by holding down the [CTRL]+[ALT] keys and clicking on the desired split location - the cursor turns into the scissors icon while hovering over the clip and red line appears to show where the split will occur (the split occurs at the closest *Snap* setting increment). If you'd like to split a clip at the exact cursor location, set the *Snap* setting to *Off*.

STOP SOUND

This cursor shows that a currently playing sound from the library can be stopped.

TRACK VOLUME

This cursor is used when changing the master volume or a track’s volume slider.

FLAT TOOL

This cursor is used to lower a note or piano roll bar by one-half step/semitone in Notation View.

SHARP TOOL

This cursor is used to raise a note or piano roll bar by one-half step/semitone in Notation View. Store the Sharp tool out of reach of small children and animals.

SLIDE

Uses for horizontal resizing such as shortening or lengthening notes in the *Piano* editor. Also a cool 90s jam by the Goo Goo Dolls.

WEB HAND

Seen when hovering over a web link, such as the author information area in the Library tab. Also, a chronic wrist condition resulting from extended web development.

TROUBLESHOOTING

Here are some answers to common problems and issues. If you can’t find a solution in this section, you’ll find numerous support options online at:

www.acoustica.com/product_support/

- Playing
- Recording
- Files Not Loading
- Effects & Plug-ins
- CD Burning
- Video
- Loop Library
- Control Surfaces

PLAYING AUDIO

SOUND DOES NOT PLAY

You’ve added sounds, but you can’t play anything... Here are a few things to check.

- Are the speakers on and plugged in? (Sorry, management made us ask.)

- Can you play a Wave file through Windows or another sound application? If you can’t, there may be a problem with the sound card’s configuration or drivers. Refer to your sound card documentation to track down the problem.

- Load the volume control that came with your sound card and make sure that the Wave device is turned up and not muted.

- Another program may be using the sound card at the same time. (May happen with older versions of Windows.)

• Update or install your sound card’s drivers. Check the manufacturer’s website for the latest drivers and documentation.

SOUND IS BREAKING UP, POPPING, OR CLICKING

When playing back a project, if the audio sounds like it is starting and stopping quickly, it could be because the computer is over tasked due to other programs running at the same time. Your computer may not be powerful enough to mix the audio in your project. Here are some things to try:

Always shut down as many unnecessary programs as possible. It may even be advantageous to temporarily shut down virus software. (We don’t recommend doing this unless you’ve done a full scan and are not connected to the Internet.)

Increase the audio device latency setting. (Go to the Preferences>Sound Device in the Main Window menus.)

Freeze a track if there are many effects or compressed audio formats on the track. (Frozen tracks use far less CPU resources.)

Turn off some display features. Go to the *Preferences>Display* and try limiting the frame rate or not drawing audio and MIDI data. Turning off logging may also help.

Make sure that you have the latest drivers for your sound card. Visit your sound card manufacturer’s website to check for updates.

Note the CPU meter in the lower right corner of Mixcraft; this indicates how much CPU Mixcraft is using compared to the entire computer’s entire CPU usage.

Driver Type	Action
WaveRT	Go to the WaveRT preferences. Increase the latency time.
ASIO	Go to the ASIO preferences. Try a different ASIO driver, download the latest ASIO driver or increase the latency setting.
Wave	Go to the Wave preferences. Increase buffer size and/or the number of buffers

SOUND IS DELAYED OR LAGGING (LATENCY)

The opposite of sound breaking up or gapping is an audible delay of sound playback and/or latency from the time an edit is made to the time you hear it. For example, a change is made to an envelope point during audio playback. If it takes several seconds to hear the effect of the change, you're experiencing latency. The solution depends on the type of audio drivers being used.

Driver Type	Action
WaveRT	Choose a lower latency time.
ASIO	Go to the ASIO preferences and click the *Open Mixer...* button. Use the ASIO driver control to configure the latency. There will usually be a latency setting, displayed in milliseconds. If possible, choose 10 milliseconds. 40- 80 milliseconds is also tolerable.
Wave	Go to the Wave preferences. Reduce the number of buffers and/or size. Try different settings to find a balance between performance and smooth non-gapping audio.

Did we mention to make sure you have the latest drivers for your sound card? Of course we did. Visit your sound card manufacturer's website to check for updates.

NOTES WON'T STOP PLAYING!

Sounds like most of the lead guitarists we know, am I right people?!? If you're playing back Virtual Instrument Clips and notes continue to play after stopping, this is referred to to as "stuck" notes.

The solution is to click *Mix>MIDI Reset!* from the Main Window menus. This should stop all Virtual Instrument stuck notes.

If this does not stop the notes, try saving your project and restarting Mixcraft. If the stuck notes are coming from an external hardware synthesizer, try resetting or restarting the external synthesizer.

If none of this works, beat your computer into oblivion with a twenty-pound sledgehammer 'til the racket ceases. (works for lead guitarists too)

ASIO IS NOT AVAILABLE

Make sure you've installed the latest drivers for your sound card. Go to the sound device's manufacturer website to download and install them.

SOUND PLAYS BACK TO SLOW OR FAST

If loaded sounds play back too fast or too slow, it's most likely because the sound is being tempo adjusted by Mixcraft. You can check this by clicking on the sound,

clicking the *Sound* tab, and clicking *Time Stretch* to hear the sound at its native tempo. (Audio can sound odd if it's being time stretched too drastically.)

RECORDING

RECORDING IS NOT WORKING!

You can play audio, but you can't record anything! There can be many reasons why this is not working. Here are a few:

- Make sure audio hardware/microphone/guitar is properly plugged in!
- Make sure the correct input/source is armed.
- Make sure the recording level of the armed track is turned up.
- Try recording using a different driver. Try ASIO, WaveRT, and Wave, in that order.

Make sure you have the latest drivers for your sound card. Visit your sound card manufacturer's website to check for updates. (We're as tired of typing it as you are of reading it.)

RECORDINGS DRIFTING AND/OR START AT THE WRONG TIME

If you notice that recordings are not lining up properly at the start, you'll need to adjust the offset or start time of the recorded sound. Make sure Snap is off and move the sound so that it lines up properly. Zoom in for the best accuracy. Switching to an ASIO driver or purchasing a better sound device may help.

If recordings are slowly drifting over time, the problem is due to an inaccurate clock on your sound card or sound device. Each device is made with more or less accurate clocks and not all devices have the same time as an atomic clock, for example.

If you have a Soundblaster LIVE, try recording in 48 kHz mode, by switching your Sound Device preferences to the 48 kHz sample rate.

• Drift Work Around

Assuming the start of the sound is lined up properly, go to the end of the sound and visually time stretch it with FlexAudio using the [CTRL] key so that it lines up properly. Make sure to change the pitch shift mode to *Do Not Fix Pitch*.

Once you've lined up the end of the recording, you should be able to go to the *Sound* tab to view the time stretch percentage that was needed to get it in sync. (Example percentages will be around 99.995% or 100.004%). Following this, you can simply apply this drift percentage to all recordings. (Don't forget to change the pitch shift mode to *Do Not Fix Pitch!*)

RECORDINGS ARE NOT IN SYNC

There are a couple of possibilities:

• Starting positions of recordings are wrong.

If the start offset of the recording is wrong, try the following:

• Adjust the clips positions manually.
• Update your sound card's drivers if possible. Check the sound card manufacturer's website.
• Use a more professional sound card designed for recording music, if possible.Try switching to ASIO mode. or WaveRT mode for better synchronization.
• Recordings slowly losing synchronization over time.

Always make sure that you have the latest drivers for your sound device. Visit your sound device manufacturer's website to see if there is an update. (That makes a baker's dozen, right?)

I CAN’T HEAR MYSELF DURING RECORDING!

Some sound cards or USB devices have no provision for monitoring live recording. If you can’t hear yourself or whatever you’re recording, you can use Mixcraft to play the incoming audio by monitoring the track (by pressing the speaker icon when a track is armed for recording). Always use headphones when monitoring to prevent audio bleed from other tracks.

NEW TRACKS ARE RECORDING SOUND FROM OTHER TRACKS (BLEEDING OVER)

If newly recorded tracks are picking up parts of other tracks, your microphone or input device is probably picking up the sound from your speakers.

Try using headphones- don’t forget to turn off your speakers. If the “full immersion” of headphones is adversely affecting your pitch when singing, try pulling one side off your ear. (added plus: you’ll look cool like Kenny Loggins and Michael McDonald during 70s vocal tracking sessions)

If that doesn’t work, your sound device may have noisy circuitry. Go to the Windows mixer recording settings and make sure that only the devices you are interested in recording are heard. Mute any sources that are not being recorded (such as the CD player or auxiliary). To open the sound card’s mixer click the Windows *Start* button, and click *Run...* Type in *sndvol* or *sndvol32* and press the [ENTER] key.

Also, make sure you’ve selected the correct recording source. If possible, it’s best to choose a specific source, instead of something general like *Stereo Mix*, *What You Hear*, or *Digital Wave*. For example, if the recording source is a microphone, choose *Microphone*. If recording from your computer’s Line In input, choose that.

To choose a recording source, click on the small down arrow to the right of the *Arm* button on the recording track. First, choose the sound device you want to use (you may only have one choice), and you’ll see a submenu with a stereo source option.

Again, if you already have a specific source selected, your microphone could be picking up the sound from your speakers. Try turning off your speakers and using headphones to monitor the audio.

MY RECORDINGS ARE ONLY ON THE LEFT OR RIGHT CHANNEL!

This occurs when a mono input is plugged in to the left or right input of an audio device, but you've selected stereo recording. To remedy this, be sure to arm a track for the specific input you'd like to record from, either by input number, or by the channel (left or right). If you wish to preserve stereo recordings, right-click on the clip, select *Properties>Channels*, and select either the *Left* or *Right* channel. This will play only one channel of a stereo recording.

MY RECORDINGS ARE TOO LOUD AND ARE DISTORTING

Distortion can ruin a good recording, and the worst part is, once distorted audio is recorded, there's no way to remove distortion. If the input signal is illuminating the meters all the way and the peak indicators are lit, your incoming signal is too loud. And if it's too loud, you're too old… ok, maybe that doesn't apply here.

If you're using Wave or WaveRT drivers and the track is armed, there should be a red input level slider available on your track. You can use this to attenuate the input level until the input source is no longer driving the meters into the red.

If you're using an ASIO device or other external audio device, you won't see an input level slider on armed tracks (this inherent to ASIO audio devices, not Mixcraft). You'll need to lower the output level of the hardware preamp or audio device to reduce the level being sent to Mixcraft.

Finally, it's possible that you may be British rock legends, Motörhead, wherein everything is louder than everything else. (And yes, I had to Google how to put the dots over the O.)

FILES NOT LOADING

SOUND WON'T LOAD

There are many different types of sound file formats. Mixcraft currently supports Wave (.WAV and .AIF), MP3, OGG, and WMA formats.

In addition, Mixcraft works with the Windows Audio Compression Manager (ACM) to load compressed non-PCM Wave files.

If the audio file is a WMA file, make sure that WMA format support is installed and that the file does not have Digital Rights Management (DRM) on it. The preceding paragraphs might've set a record for acronyms... sorry about that.

WMA FILE SUPPORT

In order to load and save to WMA files, you must have support for Microsoft Windows Media Format 7.1. If you are trying to load a WMA file or export to a WMA file and the option is grayed out, you probably do not have this installed. To download and install it, please visit http://www.acoustica.com/plug-ins/wma-install.htm. (It isn't necessary to restart your computer.)

If you've already installed WMA support, you may be trying to open a WMA with Digital Rights Management (DRM). If the WMA file was created with Windows Media Player, try recreating it with DRM disabled. To turn off DRM, run Windows Media Player, choose *Options* from the *Tool* menu, click on *Copy Music* and ensure that *Copy Protect Music* is unchecked.

CAN'T LOAD OR SEE VIDEO FILE

To load a video, select *Video>Add Video File...* from the Main Window menu. Navigate to the folder containing the video. If the video is not in .AVI or .WMV format, you'll need to switch the *File Type* drop- down from *Default Video Files* to *All Files*. Your video file should now be visible. Select it to load it.

Proper video codecs may need to be installed in order to load a given video. See *Video Is Not Loading* for more information.

If you're still not seeing video, check to make sure your eyes are open, as closed eyelids commonly cause video to be unviewable.

VIDEO IS NOT LOADING

If the video fails to load, it's likely because you're missing the correct DirectX video codec. Do one of the following:

Install the software included with your video camera (or download the most current version from the manufacturer's website). It may also have come with a DirectX video

decoder that would allow other programs such as Windows Movie Maker or Windows Media Player to play the files. (Assuming the file was created with a video camera that you own.) Restart your computer after installing new video codecs.

Download and install a video file converter application to convert the video to AVI or WMV. This is better than loading the original video format, as it will be faster.

Install a DirectX/DirectShow video codec for the video format you're attempting to load. Beware of many faulty/buggy/error prone decoders out there on the Internet! And make sure to download and install the latest version of Windows Media Player.

EFFECTS AND PLUG-INS

HOW DO I ADD A PLUG-IN (VST OR VSTI)?

Mixcraft allows you to add your own VST or VSTi plug-ins. Plug-ins are usually .DLL files. Download and install the plug-in file (.DLL) into your VST folder and restart Mixcraft. The new VST plug-in should now be in the effect drop-down list or Virtual Instrument list. Some plug-ins include their own installers. In that case, run the installer and point the software to the appropriate folder.

If you don't know where your VST folder is, you can create a new one and add it in the Plug-Ins section. To add your own VST folder, go to Preferences>Plug-Ins in the Main Window menus and click *Edit VST/VSTi Folders*. Click the Add button to add your own folder, or click *Auto-Scan For VST/VSTi Directories* to locate one automatically.

Make sure to put the new VST plug-in (.DLL) into one of the folders in your VST folder list and restart Mixcraft. The effect should appear in the effect drop-down or Virtual Instrument lists, depending on the type of plug-in.

HOW CAN I PREVENT CERTAIN PLUG-INS FROM LOADING?

Mixcraft has two files which may be edited to exclude plug-ins from loading. These files are located in the *%programdata%\Acoustica\Mixcraft\ folder*.

VSTIgnore.ini - VST plug-in ignore list

Open or double-click the file, add the name of the effect, and set it to *equal = 1*. For example, if you had an effect you didn't want to load called "Digital Media StudioDenoiser", you would enter:

Digital Media StudioDenoiser=1

Save the ignore file, restart Mixcraft, and the effect will not be loaded. For VST plug- ins, you will need to use the name of the dll such as *SuperDuperReverb.dll=1*

HOW CAN I HEAR EFFECTS DURING RECORDING?

Some sound cards or USB devices have provisions for monitoring recording inputs independently of Mixcraft. But if you'd like to hear the effects during recording, you'll need to disable the sound device's monitoring and use Mixcraft's monitoring system. For example, if you are making a weird recording of your voice and would like to hear the echo or delay while recording, you'll need to turn on monitoring. You'll need to enable Mixcraft's monitoring and disable any sound card's built in monitoring.

CAN I USE 32-BIT PLUG-INS WITH THE 64-BIT VERSION OF MIXCRAFT?

Mixcraft 10 natively runs in 64-bit mode, but 32-bit plugins are still supported and will be loaded in a VST shell. This is not related to bit depth of your sound device. (This is for the type of Windows it runs on.)

CD BURNING

CD Burning Engine	Details
Primo	The default and preferred burning engine. Burns on-the-fly, CD-Text, and supports gapless tracks.
IMAPI	The drawback to IMAPI is that it adds two-second gaps between tracks.

I'M GETTING CD BURNING FAILURES

Here are some suggestions if CD's fail to burn properly:

• Try a burn in Test Mode first.
• Try a different blank CD (Make sure it's not full or scratched).
• Try a blank CD from a different manufacturer.
• Shut down other programs and temporarily shut down your virus checker during a burn. (Shutting down virus checker software should be done at your own risk. Make sure you're not connected to the Internet and have recently done a full virus scan.)
• Try burning at a slower speed, especially if your CD recorder does not support "Burn Proof" mode.
• Try checking the option *Convert To WAV First*.
• If you have more than one CD or DVD recorder, try burning with the other.
• If you're using Windows XP or Vista, try switching to IMAPI.
• Try switching to a different burning engine.
• Try burning a short sound just to verify that the CD recorder can burn and is not defective.
• Try burning with another program such as Windows Media Player to verify that your CD recorder is not defective or having a system conflict.

GET RID OF THE TWO-SECOND GAP BETWEEN TRACKS

By default, audio CD's burned in Primo mode will not have a two-second gap between tracks. If burning in IMAPI mode, there will be a two-second gap between tracks. There are two options:

• Click the *Burn As One Track* checkbox in the *Burn CD* window. The disadvantage is that you'll have to fast forward or rewind the CD to get to a specific part.
• Mix the project down to WAV files and then use a third-party burning program that supports the CD- or DVD-burner. In the Mix Down dialog, make sure the *Create A New File For Each CD Marker* option is selected. We recommend using WAV files at CD quality for the mix down. Import the WAV files into the third-party CD burning software, arrange them in the correct order and burn the CD.

BURNED CD WON'T PLAY IN MY CD PLAYER

Here are a few things to try:

• Make sure that you actually burned the CD! Look at the back of the CD under a light and look for differences between the burned area and blank section.
• Make sure that there aren’t any scratches or smudges on the CD data surface.
• Try a different burning engine. Primo is the latest and newest engine. Change the engine in the CD Burning preferences.
• Try burning using a blank CD from a different manufacturer. See if there is a recommended type of CD for your CD player
• Try burning at a slower speed. Older CD players are not as tolerant and if you burn at a slower speed, it will burn with higher precision. Also, some blank CDs are not rated for higher speeds. Check the information on the blank CD packaging for burn speed rating.
• If there is a paper sticker label on the CD, it could be interfering with the weight balance or it may not be spinning at the correct speed. Try a CD without a label.
• Check to see if the CD plays in other CD players or computers. (CD drives in computers typically are less finicky about playing burned CD’s properly than dedicated consumer audio CD players.)

VIDEO

VIDEO PLAYBACK PROBLEMS

If after loading a video, Mixcraft does one of the following:

• Crashes with an error window
• Freezes and stops responding
• Mixcraft’s CPU usage goes way up to above 60% or so.
• Video frames appear distorted

If one of the above is happening, it could be the DirectX video decoder. The best solution is to convert the video file to AVI or WMV format. AVI and WMV are compatible with Mixcraft. AVI files use less CPU power, as well. Search the Internet for “video converter software” that will convert to AVI and/or WMV.

DIRECTX ERRORS OR ERRORS LOADING VIDEO

Mixcraft uses Window's DirectX layer to decode video, so video playback will be governed by the codecs installed on your computer. Codecs are little pieces of software that programs can use to decode special video file formats. Many codecs are poorly written and may not work properly for video editing. If you're having these types of issues, try the following:

• Download the latest Microsoft Windows Media Player.
• Install the software included with your video camera or download and install the latest version from the manufacturer's website. It may also have include a DirectX video decoder allowing other programs such as Windows Movie Maker or Windows Media Player to play the files. (If the file was created with a video camera that you own.) Make sure to restart the computer after installing.
• Download a video file converter that will convert movies to AVI or WMV format. This is better than loading the original video format, as it will be faster.

VIDEO FILE IS TOO BIG

If you want to send a video via email or upload it, you may find the file size to be far too large. Uploading or sending huge files is impractical and slow. Here are some suggestions:

• To send via email, upload the video to a video hosting site such as Youtube or Vimeo and send people a link to the video instead of sending the actual video file.
• Adjust the video settings to a lower quality prior to rendering/mixdown. Lower quality videos result in smaller file sizes. See the "Video Tracks and Editing" section for more information. **LINK HERE**

LOOP LIBRARY

CAN'T DOWNLOAD SOUNDS

If you can't download sounds from the library, check the following:

• Make sure you're connected to the good ol' Internet. Try launching an Internet browser and going to a news article or website you haven't previously viewed. (This verifies that

you aren’t viewing previously cached content.)
• Verify that security software or an Internet firewall isn’t blocking Mixcraft’s access to the Internet. It may be necessary to reconfigure firewall or security software to allow Internet access for Mixcraft. (Check your security or firewall’s documentation for assistance.)
• Change Mixcraft’s Internet download server in Preferences>Library>Loop Library Download in the Main Window menus.

CAN I ADD MY OWN SOUNDS?

Yes, indeed. See “Adding Sounds To The Mixcraft Library.” **LINK HERE** Supported sound formats include AIF, WAV, OGG, MP3 and WMA.

CONTROL SURFACES

MIXCRAFT DOESN’T RECOGNIZE MY CONTROLLER.

If the devices is a natively recognized control surfaces, make sure you’ve added it in *Preferences>Control Surfaces* in the Main Window menus. Natively recognized control surfaces include Mackie Control (or others supporting the Mackie Control format), Novation Launchpad, Frontier Design Group TranzPort, and the Acoustica Mixcraft Remote mobile app.

If you’re using a generic MIDI control surface, go to the *Control Surface Details* dialog box in *Mix>MIDI Control Surface* in the Main Window menus and make sure the device is selected, or set the *Surfaces* drop-down menu to Any for Mixcraft to receive control surface messages from all connected controller devices. If your device is not listed in the *Device* drop-down, check that it’s plugged in and that the necessary drivers have been installed. You may need to close and re-open the *Control Surface Details* dialog to display new devices.

MIXCRAFT RECOGNIZES SOME KNOBS OR BUTTONS ON MY CONTROLLER, BUT WON'T RESPOND TO OTHER KNOBS OR BUTTONS.

Mixcraft's controls can be set to respond to MIDI Continuous Controller (CC) message, or specific notes on your keyboard. Some controllers only send MIDI Machine Control (MMC) or other types of system-exclusive data that Mixcraft does not respond to - just because it has a bunch of sliders and a MIDI out jack, that doesn't necessarily mean it transmits MIDI CC messages. (We're lookin' at you, vintage 90s Roland JD-800.) With that said, most newer MIDI or USB devices with a bunch of knobs/sliders/buttons usually do transmit MIDI CC data. (Check your controller's manual.)

GLOSSARY

ASIO

ASIO provides an interface between the audio application and sound card. It’s an acronym for Audio Stream Input/Output. It was developed by Steinberg Media Technologies and helps manufacturers and developers to create hardware and driver software extending the personal computer’s audio connectivity to meet the needs of musicians and audio engineers.

ASIO offers a relatively simple way of accessing multiple audio inputs and outputs. The Audio Stream I/O API addresses the areas of efficient audio processing, high data throughput, synchronization, low latency and extensibility on the audio hardware side. The interface is not bound to any fixed number of input and output channels, and provides a constant streaming model.

ASPI

ASPI stands for Advanced SCSI Programming interface and standardizes communication between a SCSI host adapter and CD drives, hard drives and other devices. (Most people can think of it as a special driver to communicate with your CD writer.)

Audio Clips

Audio clips represent audio files that can be stretched, edited, looped and played in Mixcraft. Audio clips will usually be in OGG, WAV, MP3, WMA or AIFF format.

AVI

AVI (Audio Video Interleave) is a Microsoft video file format standard for storing audio and video on PCs. AVI files can contain compressed or uncompressed video and audio.

BPM

Beats per minute. The usual measurement of tempo in music. In Mixcraft, BPM means quarter notes / minute.

Burn Proof

Burn Proof is a proprietary technology for buffer under-run protection developed by Plextor. Other buffer under-run avoidance technologies are called Safe Burn, Power Burn and Just Speed. Most new drives have a buffer under-run protection technology.

Buffer Underrun

This is when the computer cannot deliver data fast enough to a CD writer.

CD-Quality

CD-Quality is the standard quality used on audio CDs. Its audio specs are 44,100 Hz sample rate, 16-bit, stereo.

Clipboard

The clipboard is a buffer of sounds that can be stored and pasted later.

Clipboard operations involving sound is limited to Mixcraft and it will not share audio data with other programs unless you add the audio file directly.

DAO

DAO stands for Disc-At-Once. During the CD burning process, the entire CD is written continuously without the write laser being turned off. This results in seamless, uninterrupted audio with ‘seek-able’ tracks.

Decibel

The decibel (dB) is a logarithmic unit of relative measurement used to compare the ratio of the intensities of two signals. When an amplitude doubles, the increase corresponds to 6 dB.

Decoder

An algorithm or process for taking compressed or encrypted data and turning it into uncompressed or unencrypted data.

DRM

DRM stands for Digital Rights Management. DRM provides a security layer on software, audio or any type of media to help ensure proper licensing and use of the content. DRM on audio files is constantly evolving and the “jury is still out” as to whether it is effective.

Effects Chain

A group of multiple effects processing audio, arranged in series (i.e., one after the other). Audio is sent down the effect chain list from top to bottom and the final result is heard on your speakers.

Encoder

An algorithm or process for taking uncompressed data and turning it into compressed or encrypted data.

General MIDI

General MIDI or GM is a standardized mapping of patch numbers to specific instruments. For example, patch 0 is always ‘Acoustica Piano’. Each GM standard synthesizer will have patch 0 mapped to “Acoustica Piano”. More details can be found on Wikipedia.

IMAPI

IMAPI is the built in burning system found in Windows. IMAPI stands for Image Mastering Application Programming Interface.

ISRC

ISRC stands for International Standard Recording Code. If your intention is to burn an audio CD for commercial use, you will need to enter in your ISRC codes for each track.

Key Signature

The key identifies the tonic triad, the chord, major or minor, which represents the final point of rest for a piece, or the focal point of a section.

Latency

Latency is a delay between the time something occurs and the time that you sense the occurrence. In audio software, this might be the difference from the time audio is mixed and processed to the time you hear it.

Megabyte

A megabyte is approximately one million bytes (1024 X 1024 bytes). A typical hard drive stores around 40 GB (gigabytes). A gigabyte is equivalent to a billion bytes or 1024

X 1024 X 1024 bytes.

Metronome

A metronome is a device or system that produces a regulated pulse, usually used to keep a beat steady in musical compositions.

MIDI

MIDI is an acronym for Musical Instrument Digital Interface. It is the way that physical and virtual

synthesizers communicate with each other. For example, when you press middle C on your musical keyboard, it sends a message says “Play Middle C”. It is a small and compact series of codes.

MP3

MPEG-1 Audio Layer 3, more commonly referred to as MP3, is a popular digital audio encoding, lossy compression format, and algorithm, designed to greatly reduce the amount of data required to represent audio, yet still sound like a faithful reproduction of the original uncompressed audio to most listeners.

Multitrack

Multitrack recording (“multitracking” or just “tracking” for short) is a method of sound recording that allows separate recording of multiple sound sources to create a cohesive whole.

Normalize

The process of raising the volume so that the biggest volume in the sound is increased to the maximum possible and the rest of the sound is raised in volume by the same percentage.

OGG

Ogg is a patent-free, fully open, and standardized multimedia bit stream container format designed for efficient streaming and manipulation (concatenation and muxing) by the Xiph.Org Foundation.

Overdub

Overdubbing (the process of making an overdub, or overdubs) is a technique used by recording studios to add a supplementary recorded sound to a previously recorded performance.

Pan

The balance or ratio between the left and right speakers (channels).

Peaks

A visual display of a sound’s amplitude over time. (Mixcraft displays one peak per millisecond.)

PCM

Pulse-code modulation (PCM) is a digital representation of an analog signal where the magnitude of the signal is sampled regularly at uniform intervals, then quantized to a series of symbols in a digital (usually binary) code. PCM has been used in digital telephone systems and is also the standard form for digital audio in computers and the compact disc red book format.

Primo

Primo is a CD burning engine created by Primo Software. It is the default burning engine.

Sample Bit Depth

In digital audio, bit depth describes the amount of data contained in each sample, using the unit bits (not to be confused with bytes). Common examples of bit depth include CD audio, which is recorded at 16 bits, and DVD- Audio which can support up to 24-bit audio.

Sample Channels

Sample channels describes the number of channels contained in each audio sample. For example, CD audio has two channels in each sample.

Sample Rate

The sampling rate, sample rate, or sampling frequency defines the number of samples per second (or per other unit) taken from a continuous signal to make a discrete signal.

For time-domain signals, it can be measured in hertz (Hz).

Semitone

A semitone, or half-step is a musical interval. It is the smallest interval commonly used in Western music, and is considered the most dissonant.

Standard MIDI File

This is a standard file format that stores multiple tracks of MIDI data. Most MIDI software will read standard MIDI files (.MID)

Tag

A tag is extra ancillary information stored inside of an audio file, which includes things like artist, album, genre and copyright.

TAO

Track-At-Once or TAO is a recording mode where the recording laser stops after each track is finished and two run- out blocks are written. One link block and four run-in blocks are written when the next track is recorded. TAO discs can have both data and audio at the same time.

Tempo

In musical terminology, tempo (Italian for “time”, from Latin Tempus) is the speed or pace of a given piece.

Time Signature

The time signature (also known as “meter signature”) is a notational convention used in Western musical notation to specify how many beats are in each bar and what note value constitutes one beat.

Time Stretch

Time stretching is the process of changing the speed or duration of an audio signal without affecting its pitch.

Virtual Instrument Clips

A Virtual Instrument Clip contains MIDI data which is a series of notes and other events. To produce actual audio, it sends the note data to the synthesizer configured on a Virtual Instrument Track.

Virtual Instrument Track

A Virtual Instrument Track is a track that has a Virtual Instrument or external synthesizer which it sends MIDI information to.

Volume

The amplitude of sound. Within the Mixcraft 10 environment, the minimum is 0% and the maximum is 200%

VST Effects

Virtual Studio Technology and its acronym VST refer to an interface standard for connecting audio synthesizer and effect plug ins to audio editors and hard-disk recording systems. VST and similar technologies allow the replacement of traditional

recording studio hardware with software counterparts.

WAV

WAV (or WAVE), short for Waveform Audio Format, is a Microsoft and IBM audio file format standard for storing audio on PCs.

Waveform

Waveform means the shape and form of a signal, such as a wave moving across the surface of water, or the vibration of a plucked string.

WaveRT

This is the low latency, high performance audio driver system in Windows Vista. It stands for Wave Real Time.

WDM

WDM stands for Windows Driver Model.

WMA

WMA stands for Windows Media Audio. WMA files contain perceptually encoded sound data. The frequencies that humans cannot perceive are removed, although some audio purists say they can tell the difference between a high bit-rate WMA and a Wave file. A WMA file can beas much as 20 times smaller than an equivalent WAV file.

WMV

WMV (Windows Media Video) is a Microsoft video file format for storing and streaming audio and video on PCs. WMV files contain compressed video and audio.

APPENDIX 1: USING MELODYNE FOR BASIC VOCAL TUNING

MELODYNE, MEET MIXCRAFT - AN INTRODUCTION

Not only is Celemony's awesome Melodyne tuning software included with Mixcraft 10 Pro Studio (see the sidebar), but we've taken it one step further: instead of operating as a standard VST plug-in, Melodyne functionality is integrated into the clip sound edit window. This makes using it really easy.

When using the standard Melodyne plug-in version, it's first necessary to transfer audio into Melodyne in real-time (essentially playing back the audio material so Melodyne can "record" it for editing), but Mixcraft 10's built-in Melodyne architecture eliminates this step for a much smoother workflow.

Note that the standard VST plug-in version of Melodyne Essential is included with Mixcraft 10. This is primarily for folks who already have songs using the original plug- in version, but under just about any other circumstance, using Mixcraft's built-in Melodyne functionality is the best choice.

WHAT DOES MELODYNE DO? IS IT HARD TO USE?

Melodyne may look a little intimidating when you first open it, but rest assured, basic (and great-sounding) vocal tuning is easily accomplished. Before we get to the exciting "do this, then do that…" section, it's important to understand the underlying concept of Melodyne.

Most vocal tuning plug-ins correct pitch in real-time, modifying the audio as it plays back; in fact, this is how most VST effects plug-ins work. Melodyne operates differently; audio material is loaded into Melodyne and analyzed prior to playback.

Mixcraft takes care of this task transparently and automatically when audio is selected for editing. Once analyzed, Melodyne places the notes on a grid similar to Mixcraft's piano roll edit window. From here, you can freely move note "blobs" up or down to change their pitch, left or right to move them in time, or even stretch or compress individual notes. This offers amazing freedom not only for pitch and timing correction, but also for creatively modifying and retooling performances.

An Offer You Can't Refuse

If you're using the standard version of Mixcraft, it's worth it to upgrade to Mixcraft 10 Pro Studio for the addition Melodyne alone. Upgrading from standard Mixcraft to Pro Studio is actually less expensive than buying Melodyne Essential, plus you get a ton of killer instruments and effects. Operators are standing by! (get more info on upgrading at ***www. acoustica.com****)*

HOW TO TUNE A VOCAL TRACK, LICKETY-SPLIT

For this example**,** we'll assume you've already recorded a vocal take. In the basic project shown below is a drum loop, a bass line, and a lead vocal:

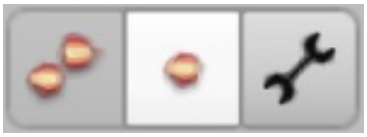
If the vocal track contains multiple clips, it's helpful to merge the clips together into one. You can do this by selecting all clips on the track then right-clicking and selecting *Merge*.

Now double-click the vocal clip to open it in the *Sound* editor, and click the *Melodyne* button.

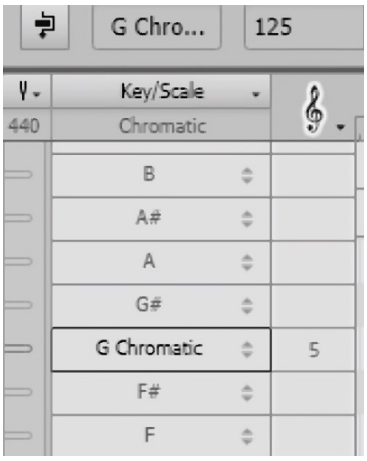
If you're opening Melodyne for the first time, you'll most likely see something like the window below. Because Celemony (makers of Melodyne) is a separate entity from Acoustica, you'll need to register Melodyne to activate it, but we the good folks at Celemony make this process pretty painless and quick.

We'll assume you've got Melodyne up and running at this point.

Begin by making sure that Melodyne is set to *Clip* mode; that's the icon that looks like a little orange blob.



If you know what key the song is in, now is a good time to set the key signature in Melodyne. Remember that there is no correlation between Mixcraft's project key setting (the one you set in the transport section) and Melodyne's key signature setting, so you'll want to set the key in both places.



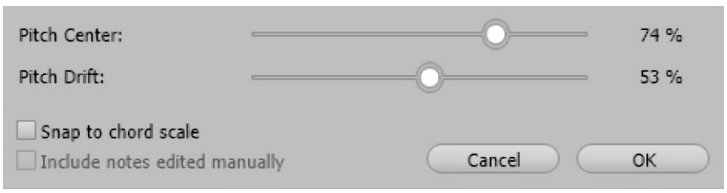
To select the key signature, click on the list beneath *Scale*. More than likely you'll be looking at something like the image below where the text is tiny and hard to read.

This is easily remedied by clicking the arrow tool, then scrolling down and selecting the magnifying glass tool from the toolbar. Click-dragging in Melodyne's edit grid will let you adjust size vertically and horizontally.

Now that we can easily read the key signatures, click the appropriate key to select it. (See the *Key Party!* sidebar on the next page) If you're not sure what key the melody is in (or the key is frequently changing), you can leave the key signature setting as is.

Now we're ready for Melodyne to do its magic. Click the *Correct Pitch Macro* button in Melodyne's top toolbar. It looks like this:

This opens up the Correct Pitch Macro window:



If you've set a key signature, check the *Snap to <key here>* checkbox to ensure that Melodyne snaps notes to that key and scale. If this box is left unchecked, Melodyne will snap notes to chromatic half steps. If the vocalist is relatively on pitch, this usually works fine; if they're a little squirrely, you may need to move notes around on the grid, but that's fun and easy (we'll get to that).

The *Pitch Center* slider moves notes up or down toward the next closest quantization step - either the next closest note in the *Snap to* key setting or the next closest half-step if the *Snap* to box is left unchecked. The higher the *Pitch Center* percentage setting, the closer the note "blobs" will move toward the target scale pitch - think of *Pitch Center* as general tuning strength control.

The *Pitch Drift* slider affects fluctuations that happen during a single note's duration. A good example of this would be when a long, held note begins to go flat over time. The higher the *Pitch Drift* percentage setting, the more Melodyne will "reel in" these fluctuations and hold notes to correct pitch.

You'll be able to see the note blobs and pitch line move as you slide the *Pitch Center* and *Pitch Drift* sliders. Once you've got them set, click the *OK* button and you're done. You can listen to the results by hitting the play button in Mixcraft, or you can start and stop playback of the soloed vocal within Melodyne by clicking in Melodyne's ruler area.

Key Party!

When setting key signatures, remember that oftentimes a major or minor melody line will contain one or two notes "outside" of the standard major (aka Ionian) or minor (aka Aeolian) scale. Unless you're getting down with some angular Balinese or Hungarian jams, more times than not, the correct melodic scale will be the aforementioned standard Ionian major or Aeolian minor but beginning on a different note than the key of the song. This is the basic concept behind scale modes. In case you spent Music Theory 101 rockin' Sammy Hagar on your Walkman, you can bypass all that smarty-pants theory stuff and determine the correct scale notes by playing all of the pitches of the song's

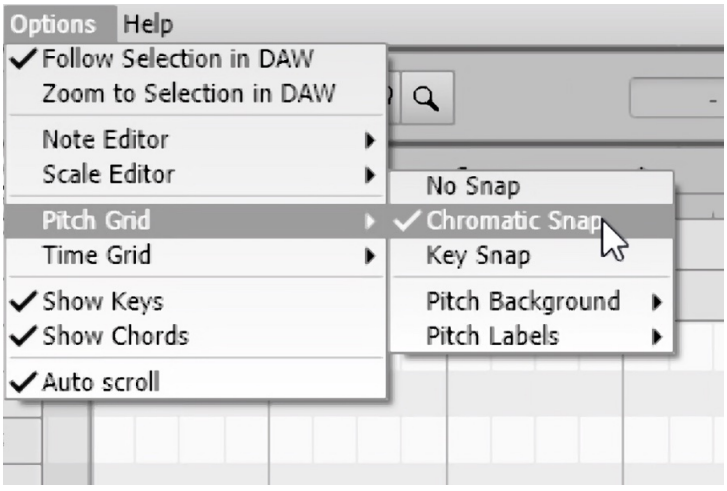
melody on a keyboard, and seeing which standard major or minor key scale pattern the melody notes "fit" into. Use this key to set Melodyne's correction.

CHANGING PITCHES OF INDIVIDUAL NOTES

You don't have to tune all the notes in a clip simultaneously. You can highlight an individual note or multiple notes for tuning either by dragging a box around note blobs, shift-clicking to select sequential notes, or control-clicking to select non-sequential notes (or any combination thereof).

Occasionally Melodyne's pitch detection algorithm will incorrectly detect note pitches, causing it to correct to the wrong pitch. You can fix this by selecting the *Arrow Tool* and grabbing the offending note blob to move it up or down the grid.

Before you start moving note blobs, you'll want to check the *Pitch Grid* setting. Click *Options>Pitch Grid.* You'll have three choices:



• **No Snap**

This allows notes to freely slide to any pitch. This can be useful for fixing up oddball notes that aren't sitting right, but it's easy to get in trouble with *No Snap*.

• **Chromatic Snap**

Notes move up or down in half-step increments but maintain their "fine" position. In other words, if the note has already been tuned, it will stay correctly tuned relative to the scale when moved to a different note. (*Chromatic Snap* was also a kickin' a capella R&B group that I saw open for New Kids in '86)

• **Scale Snap**

Notes move up or down in accordance with the selected scale and key signature settings.

It should be easy to see how creating "customized" melodies is as simple as moving MIDI notes around in Mixcraft's *Piano Roll* edit window. You can even duplicate the clip in the Mixcraft workspace, then move the notes in the secondary clip to create harmonies. Things will start sounding funny if notes are moved too far away from the original pitches, but hey, it worked for Art Of Noise and they had positively archaic technology compared to the awesome sauce that is Mixcraft and Melodyne!

• **Remove Melodyne**

Clicking this removes all edits made with Melodyne, shuts off Melodyne for the clip and switches the *Sound* tab editor back to the default wave editor.

SOME CLOSING ADVICE ABOUT PITCH CORRECTION

Unless the performance is really amiss (we like to use the term "bad"), try to avoid automatically cranking the *Pitch Center* and *Pitch Drift* sliders up to 100% in order to maintain some human performance aspect. The best pitch correction happens when you can't tell it was used.

APPENDIX 2: BACKING UP MIXCRAFT PROJECTS AND DATA

Since things are known to occasionally go horribly awry in the land of computer hard drive storage, it's prudent to back up Mixcraft projects and their associated data. Here we'll detail how to archive projects.

FILES SAVED IN MY "DOCUMENTS: MIXCRAFT PROJECTS"

By default, Mixcraft projects save to the *My Documents\Mixcraft Projects* directory, however, you can choose different folders anytime a project is saved. See the Saving A Project (page 166) for more details.

FILES SAVED IN "APPDATA\ROAMING\ACOUSTICA\MIXCRAFT"

Mixcraft stores a variety of data in *C:\users\[your user name]\AppData\Roaming\Acoustica\Mixcraft*, and we recommend backing up this entire folder regularly. Here's a breakdown of the data Mixcraft stores here:

AppData\Roaming\Acoustica\Mixcraft\collections: plug-in collections

AppData\Roaming\Acoustica\Mixcraft\favorites: instrument preset and VSTi preset favorites

AppData\Roaming\Acoustica\Mixcraft\FX: user-created VST presets

AppData\Roaming\Acoustica\MixcraftIcons: user-created instrument preset icons

AppData\Roaming\Acoustica\Mixcraft\InstPresets: user-created instrument presets

If you're copying a Mixcraft setup to a new computer and you copy collections, favorites, or other presets that use non-Acoustica plug-ins, you'll have to install those plug-ins on the new computer. Mixcraft identifies plug-ins via VST unique IDs rather than install folders, so they don't have to be installed in the same folders as your current computer.

That said, you'll need to go to *Preferences/Plug-ins* to tell Mixcraft which folders to search in order to properly locate VST and VSTi plug-ins.

FILES SAVED IN "C:\PROGRAMDATA\ACOUSTICA\MIXCRAFT"

Mixcraft stores downloaded library loops here, and though you can always download them again, there's a variety of other data here that you'll want to back up:

ProgramData\Acoustica\Mixcraft\auto-mapping: user-created MIDI mapping presets

ProgramData\Acoustica\Mixcraft\MetaPresets7: Acoustica preset and user-created effect chains stored here

ProgramData\Acoustica\Mixcraft\UserLibrarySounds: user-imported library loops and audio files. Note that if you didn't check the Copy Sounds To Library Folder box when the audio files were originally imported, the audio files will be in their original folders and not in UserLibrarySounds. If you're copying a Mixcraft setup to a new machine, you'll need to manually copy those files to the same folder locations on the new computer (or reimport them).

APPENDIX 3:
NIFTY USES FOR OUTPUT BUS TRACKS

CREATE OUTPUT BUS TRACKS FOR SIMPLIFIED MIXING

In the image below, we've created five Output BusTracks created for combining all drums, bass, guitars, keyboards, and vocals. All of the drum tracks are routed to the *Drums* Output Bus Track, all vocal tracks are routed to the *Vocals* Output Bus Track and so on. This effectively places our entire mix under just five faders, making it super easy to control the mix.

In this example, the Output Bus tracks are all routed to the standard stereo master outs; we're not routing any of the audio to separate audio interface physical outs. Also remember that each Output Bus Track can have its own EQ, effects, and automation.

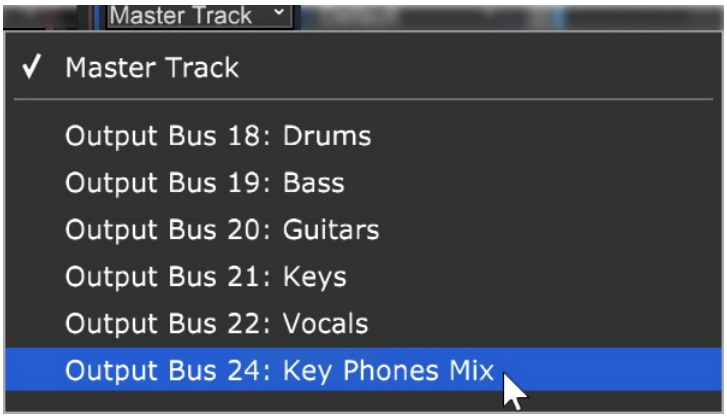
CREATE HEADPHONE CUE OR MONITOR MIXES

When recording or performing live, musicians appreciate having their own custom monitor mix. The keyboard player may want to hear the drums, keyboards, and some vocals, but maybe they don't want to hear the guitarist. Meanwhile, the drummer only wants to hear bass and vocals. And the vocalist will, of course, only want to hear themself, at eardrum-searing volume.

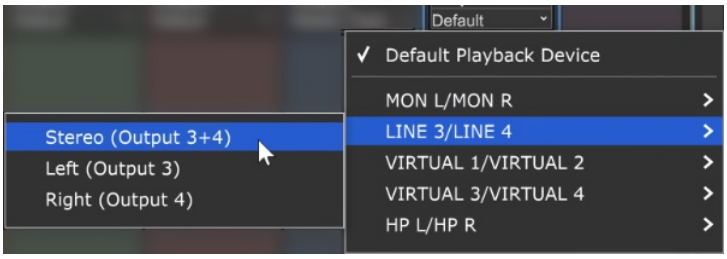
If your audio hardware is equipped with multiple outputs, custom headphone mixes can be set up for each ~~whiny baby~~ band member (you may need to route the audio output to some kind of headphone amp device). Here's how to do it:

• Create a Send Track for each individual performer's mix. In the image above, the second track from the right is a Send Track named *Key Headphones*. You'll see a corresponding send knob in each of the mixer channels.

• Next, create an Output Bus Track for each performer's mix. In the image above, that's the blue Key Phones Mix track.



• Click the Output button on the Key Headphones Send Track, and select the Key Phones Mix Output Bus track. This routes the Send Track to the Output bus track.



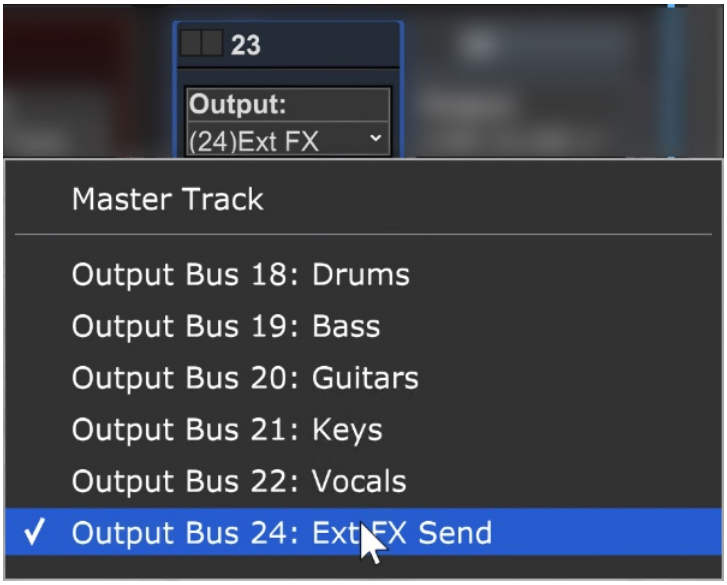
• Click the *Output* button on the Key Phones Mix Output Bus Track and choose the audio hardware physical output you'd like to route to.

You're all set - the level of the *Send* knobs on each track can be used to create a custom monitor mix for the keyboard player. Repeat the steps to create as many mixes as needed.

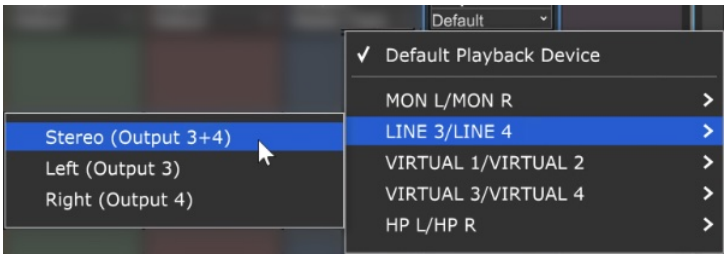
USE HARDWARE EFFECTS IN A MIX

Using a multi-out audio interface and a little crafty routing, Mixcraft lets you use hardware effect units in mixes. In the example below, a Send Track has been created to make use of a vintage tape delay. The Send Track has been routed to an Output Track, set to an output on the audio interface (make sure and use a physical output other than the main stereo outs). This allows an external hardware effect to behave the same as a Send Track with an onboard plug-in effect. Here's how to set it up:

• Create a Send Track (Send 1- Space Echo in the above shot) and an Output Bus Track (Ext FX Send).



• Set the Send Track Output flip menu to the Output Bus track you just created.



• Set the Output Bus Track Output flip menu to a physical output of your audio hardware (or a pair of outs if using a stereo effect unit).

• Plug the selected audio interface physical output into the input of the effect unit.

• Plug the output(s) of the effect unit into one of the inputs of the audio interface.

• Turn up the red Send knob of the mixer channel you'd like to hear the effect on. In our case, it's the Vocal channel. Set the effect unit's input level appropriately.

• Create a new Audio Track, and set its record input to the same one you plugged the output of the effect unit into. Click the track's Arm button (you might want to initially turn the volume down in case there are any lurking feedback goblins).

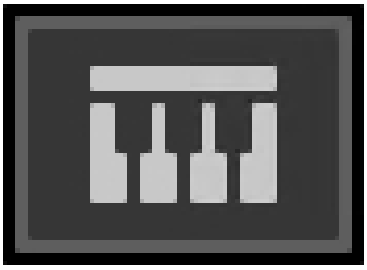
If software monitoring is activated on the audio track (by clicking the speaker icon with the track armed), the effect output will be heard alongside all other mix elements. It's a good idea to record the effected signal (preferably set to 100% wet). Once you've done this, the effected signal can be mixed as desired and you won't need to worry about having it set up when playing back the project in the future.

One thing to keep in mind is when routing external effects in this manner is that audio latency settings can affect the timing of the returned effect signal when using software monitoring at higher latency settings. If you're using a time-domain effect such as a delay or reverb, it's unlikely you'll hear any noticeable lagging (just make sure the effect unit is set to 100% wet). You're more likely to hear "comb filter" or flange-y artifacts with "real-time" insert effects such as EQ's or compressors. The easy workaround is to record the effected audio into Mixcraft, then scoot the resulting audio clip back a tiny amount in order to make up for the return-trip delay (turn Snap off and zoom in as close as possible).

TRANSMITTING MIDI CLOCK/SYNC TO EXTERNAL DEVICES

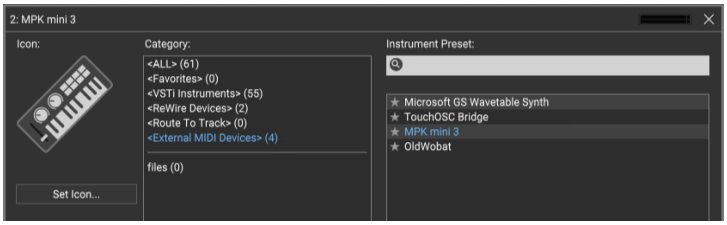
If you're using Mixcraft in conjunction with a self-contained music workstation/ sequencer/beat-box type device (like an Akai MPC workstation, a Korg Monotribe, or maybe a crusty Yamaha RX-something-or-other drum machine you found in your uncle's closet), Mixcraft can be set to send MIDI clock data over a standard MIDI cable. This lets everybody play together in lock-step. If you find yourself trying to hit the play button on two devices at once (which never works!), you may need to send MIDI clock to the external sequencer/drum machine. Here's how to configure Mixcraft to send MIDI clock data:

1. Open a new MIDI instrument track by clicking the *+Track* button at the top of the track list, or click on an existing unused MIDI instrument track.

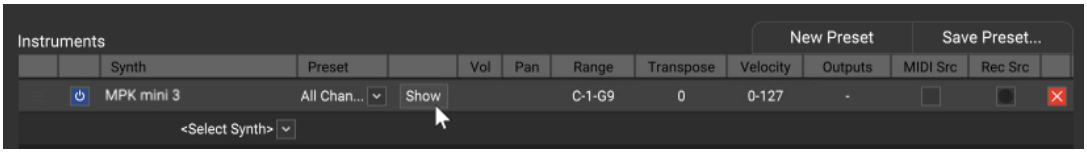


2. Click the track's keyboard icon to open the instrument window.

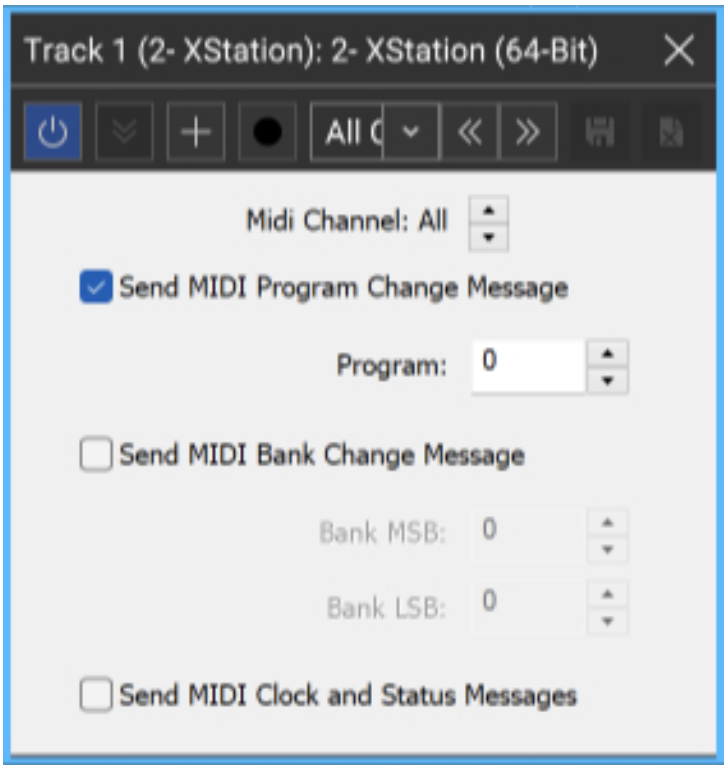
3. In the *Category* list, click *<External MIDI Devices>*, then choose the name of your MIDI interface in the *Instrument Preset* window.



4. In the *Instruments* window click the *Show* button.



5. Check the *Send MIDI Clock and Status Messages* checkboxes.



The pop window at the top of the window lets you specify which MIDI channels will receive MIDI clock data (1-16, or all sixteen channels simultaneously). When you're done, click the *X*'s in the upper-right window corners to close the MIDI clock and MIDI instrument windows.

To send MIDI clock on multiple (but not all) MIDI channels or to different ports on a multi-port MIDI interface, you can create multiple clock transmission "instruments" set to different single MIDI channels or ports.

APPENDIX 5: FREESOUND.ORG CREATIVE COMMONS LICENSE TERMS

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APPENDIX 6: NATIVELY SUPPORTED HARDWARE CONTROLLERS

The table below lists all natively supported hardware controllers as of 2023, but we're adding support for newer hardware all the time. If you don't see your unit listed (or you're in the market for one), make sure you're using the latest version of Mixcraft, then have a look at the supported control surfaces menu by going to the Main Window menus and choosing *File>Preferences>Control Surfaces*. Click the down arrow under the the *Type* column to see the list of currently supported hardware controllers.

	model
Acoustica	Mixcraft Remote
Akai	APC Mini
Arturia	Beatstep
Behringer	CMD LC-1
Behringer	CMD Touch
Frontier Design Group	TranzPort
Keith McMillen Instruments	QuNeo
Livid Instruments	OhmRGB
Mackie	Logic Control/Logic Control XT
Mackie	Mackie Control/Mackie Control XT
	Mackie Control Universal Pro
Mackie	Mackie Control Universal Pro XT
MIDI Fighter	3D

Novation	Launchkey 49 mk2
Novation	Launchkey Mini
Novation	Launchkey mk2
Novation	Launchpad
Novation	Launchpad mk2
Novation	Launchpad Pro
Novation	Orbit

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Copula time/pitch stretching technology by QuikQuak

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aufTAKT, tONaRT, and z.reverb by **zplane.development**

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Many thanks to the LAME team for their work on the LAME encoder. See their website at **https://lame.sourceforge.io/**

MPEG patent technology licensed by Thomson at **https://www.iis.fraunhofer.de/en/ff/amm/consumer-electronics/mp3.html**

Copula time/pitch stretching technology by QuikQuak aufTAKT, tONaRT, and z.reverb by **zplane.development**

MP3 Encoder written by Patrick Dehne and Thomas Orgis

ReWire™ technology by Propellerhead

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