

TRANSFUSER²

User Guide



Introduction



Transfuser is a powerful virtual instrument for slicing, dicing, shuffling, triggering, rephrasing, and resequencing audio loops and phrases. It can help you create exciting new beats, loops, and phrases that you can use in new songs or even as part of a live performance.

System Requirements and Product Support

For complete system requirements, compatibility information, and product registration, visit the AIR website: airmusictech.com.

For technical support, please contact us through the **Support** page of our website: airmusictech.com/support.

Installation

Windows

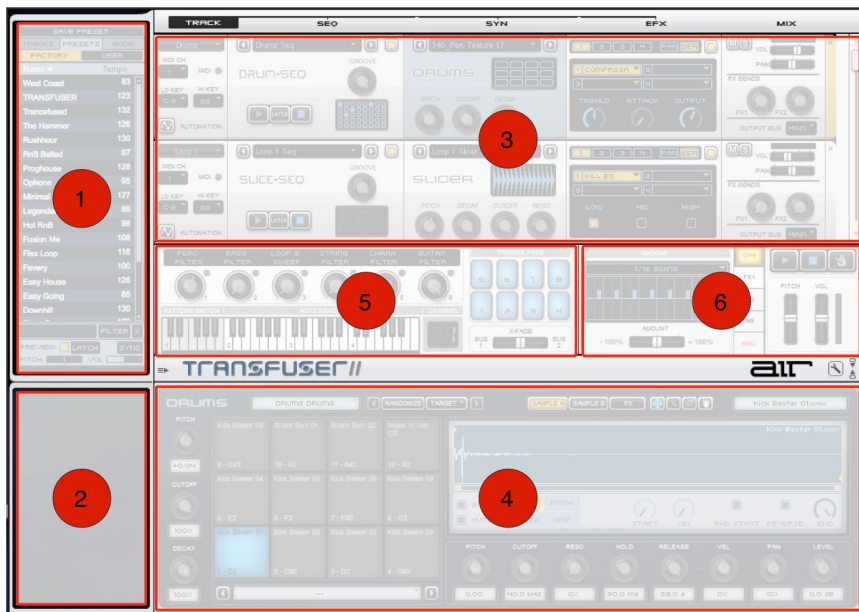
1. Double-click the **.exe** installer file you downloaded.
2. Follow the on-screen instructions.

Note: Loom uses PACE copy protection, so it will install the PACE InterLok driver on your system if you do not already have it. As most audio software uses PACE copy protection, though, this is probably already installed on your system.

Mac OS® X

1. Double-click the **.pkg** installer file you downloaded.
2. Follow the on-screen instructions.

Understanding Transfuser: An Overview

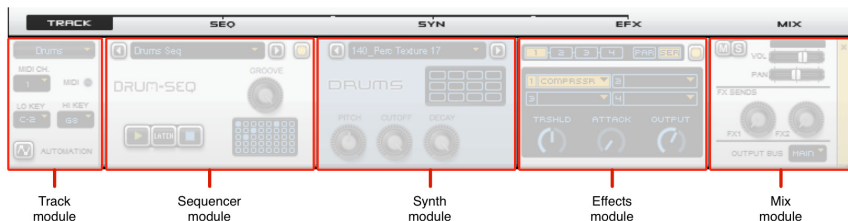


To quickly grasp the possibilities of this beat-mangling monster, this chapter introduces you to Transfuser's layout and basic concepts.

Transfuser's main page may seem overwhelming at first sight, but not to worry—it is clearly laid out and the entire instrument only has one page. The single-page design means that once you understand the function of the different areas, you understand the entire instrument.

1. **Browser Pane** – The Browser pane lets you access Factory and user-created Tracks, and Factory audio files as well as any other audio files on your computer. Using the Browser pane, you can quickly and easily find the Transfuser Tracks or audio files you want, preview them, and drag them into the Tracks pane.
2. **Info Pane** – The Info pane provides context-sensitive help for the different sections and controls in Transfuser. It also provides information on audio files selected in the Browser, such as Bit Depth, number of channels, Sample Rate, Duration, and BPM (if available).
3. **Tracks Pane** – The Tracks pane is where Transfuser Tracks are created, edited, managed, and mixed. Tracks consist of modules that let you automate, sequence, play back, process, and mix imported audio and audio input signals.

When you first open Transfuser, the Transfuser Tracks pane is empty ("Drag Track Or Audio Files Here" is displayed in the area). Drag Transfuser Track files or audio files from the Transfuser Browser or from your computer's Desktop, Explorer (Windows), or Finder (Mac OS X) to add or create Transfuser Tracks.



4. **Editor Pane** – The Editor pane provides access to all of the controls for the selected module or effect, and also the Transfuser Preferences. For example, if a Drum Sequencer module is selected, its sequencer pattern editor and controls are displayed in the Editor pane. If a Phrase Synth module is selected, its Waveform display and controls are displayed in the Editor pane.

5. **Controller Section** – The Controller section provides performance controls for Transfuser. You can easily map a MIDI controller (such as an M-Audio Axiom 49) to any number of Transfuser controls. The Controller section provides six host-automatable knobs, eight Trigger Pads, a four-octave keyboard for selecting patterns, triggering and transposing sounds, and a fader for crossfading between Transfuser Output Buses 1 and 2. The Controller section also displays the MIDI Input channel for any selected Transfuser Track.
6. **Master Section** – The Master section provides access to the Master Groove, Effects Sends 1 and 2, Main Effects Inserts, and Recorder. It also provides controls for the Master Transport and Click, as well as Pitch and Volume of the main output.

Quick Start: How-To Guides

This chapter helps you explore Transfuser's basic concepts and controls with several hands-on examples. You will touch some of the most important functions, understand the basic concepts, and make the first guided steps toward getting your groove on with Transfuser.

But, first things first:

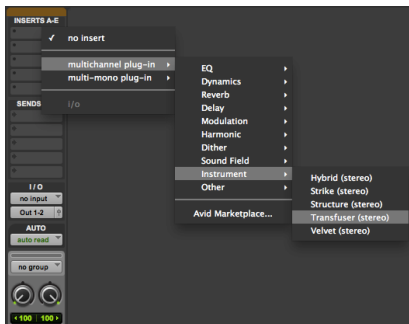
- Make sure that Transfuser is correctly installed and authorized.
- Launch your music software and launch an instance of Transfuser.

Insert Transfuser on an Instrument Track in Avid® Pro Tools®

Here is how to insert Transfuser on a Pro Tools Instrument track.

*** Note:** If you are using another music making application, the process may vary. Please check with your software's documentation to learn how to use virtual instruments.

1. Create a new stereo Instrument track (recommended) in your Pro Tools session:
 - Choose **Track > New**.
 - Select **1** new **Stereo Instrument Track** in Ticks.
 - Click **Create**.
2. Click the Pro Tools Track Insert selector and select **Transfuser**.



When you first insert Transfuser on a Pro Tools Instrument track, the Tracks pane in the Transfuser Plug-in window is empty. Import Factory or custom Transfuser Tracks, or import audio to create new Transfuser Tracks, by dragging from the Transfuser Browser pane (or even from Pro Tools or the Desktop). Until you have Tracks in Transfuser, there is nothing for Transfuser to play.

Test-Drive Transfuser

Before reading any further, insert Transfuser on a stereo Instrument track and play around with it for awhile, just to see what you can do!

1. Drag an audio file or region into the Tracks pane ("Drag Track Or Audio Files Here").
2. Choose how you want to import and convert the audio (such as **Drum Kit** and **Drum Sequence**).
3. Click **Play** on the Transfuser Master Transport.
4. Click any module in the Track (**Track**, **Seq**, **Syn**, **EFX**, or **Mix**) and explore what comes up in the Editor section.
5. Don't forget to play around with the Effects (**EFX**) module!



Basic Operation

First, let's look at what you can do with Transfuser Tracks.

To play back Transfuser Tracks, do any of the following:

- Click the **Play** button in the Slicer Sequencer Track module. If the Latch button is lit (enabled), the Sequencer keeps playing until you click **Stop**. If Latch is disabled, playback stops as soon as you release the mouse. Use the Sequencer Module Transport controls to start and stop playback independently of other Transfuser Tracks.
- Click the **Play** button on the Transfuser Master Transport. This starts and latches playback (indicated with the green "temporary latch" button) for all Transfuser Tracks. Click the **Stop** button to stop playback for all Transfuser Tracks.
- Either click a key on the GUI keyboard or play a note on your external MIDI keyboard. Any Transfuser Track set to the corresponding MIDI Input Channel plays back. If Latch is disabled, it plays back for as long as you hold down the key and stops as soon as you release the key. If Latch is enabled, playback continues even after you release the key.

Note: Note that stopping your music software's Transport also stops the Transfuser Main Transport. Starting your music software's Transport does not necessarily start playback Transfuser. You need to send MIDI notes to Transfuser from your music software to make Transfuser play.

Next, let's see what you can do with audio loops.

To "Transfuse" Your First Loop:

1. Click the **Audio** tab at the top of the Transfuser Browser, then click the **Factory** tab.
2. Open any folder by double-clicking it (such as one of the "Loops" folders).
3. Click the **Preview** button at the bottom of the browser to enable Preview (it is lit when enabled). Now you can listen to a loop by just clicking its name in the list. Preview lasts as long as you hold down the mouse (or, if Latch is enabled, for the duration of the audio file).
4. Locate an audio file and drag it into the empty Tracks pane (or even over an existing Track if you've already created one).
5. In the resulting dialog, select what you want to do with the loop. For now, click **OK** for **Sliced Audio** and **Sliced Sequence**. The loop is automatically sliced up and sequenced to create a new Track.
6. Start playback in Transfuser to hear the sliced up loop.



Preview enable button

Now, let's explore drum tracks.

Loading and Editing a Drum Groove:

1. Click the **Tracks** tab at the top of the Transfuser Browser, then click the **Factory** tab.
2. Locate a Factory Drum Track (such as **4 On The Floor**) and drag it into the Tracks pane.
3. Click the Sequencer module on the Track and take a look at its various parameters in the Editor pane.
4. Start playback and adjust the various controls in the Editor to explore the possibilities.
5. Click the Synth module on the Track and take a look at its editor in the Editor pane.
6. With Transfuser still playing back, adjust the various controls and explore the possibilities.

You can also click individual Drum Pads in the Drums Editor to play back individual samples. Better yet, play the corresponding notes on your MIDI controller to play the Drums Synth directly.

Digging Deeper

Now that you have scratched the surface, let's dig a little deeper into what you can do with Transfuser.

Using Multiple Transfuser Tracks

By combining multiple Transfuser Tracks and tweaking a few controls, you can build your own unique custom loops.

1. Start a new instance of Transfuser.
2. Drag in a Factory Track or an audio file from the Browser section.
3. Drag in another Track or some audio.
4. Set both Transfuser Tracks to the same MIDI input channel (so you can play them together from the keyboard).
5. Also, switch off Latch in the transports of each Track Sequencer module. (When Latch is enabled, the sequencer keeps playing even after you release the key.)

Now that you can play both Tracks at the same time, edit them to create a new groove.

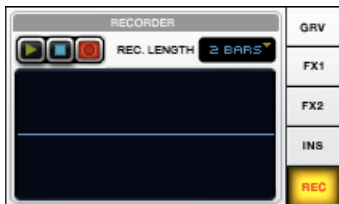
Tip: Not only can you create multiple Tracks in a single instance of Transfuser (each of which can be soloed, muted, or otherwise mixed within that instance of Transfuser), you can have multiple instances of Transfuser in your music software.

Recording in Transfuser

When you have created that loop that you absolutely love, or even if you've just created something you want to use in another Transfuser Track, you can record the results right in Transfuser.

To record in Transfuser:

1. Click the **REC** button (next to the Master Transport) to show the Recorder pane.



2. Play your loop by playing back the Sequencers (with Latch enabled on each Track) or by holding down a MIDI key. Observe the resulting waveform in the Recorder pane.
3. Set the Record Length to **1**, **2**, or **4 Bars**.



4. Use the Recorder Transport to Stop, Play, or Record.
5. At any time, drag the waveform in the Recorder window to an existing Transfuser Track Synth module (replacing it) or into the blank area of the Tracks section to create a new Track with the audio you just recorded. You can also drag the file onto your computer's Desktop, Explorer (Windows), or Finder (Mac OS X).
6. The Recorder can keep recording, or you can click **Stop**. After you stop recording, the recorded audio remains available. We recommend letting Transfuser continue to record and simply dragging the waveform you want to export (within one bar's time, before the draggable file changes).

Tip: You can also drag the waveform to your music application's audio track or to the Region List for further editing, arranging, and mixing.

Editing and Storing Patterns

Transfuser lets you edit and store up to 12 patterns per Sequencer module. Each pattern is key-mapped (MIDI note numbers 36–47) so you can trigger it from the on-screen keyboard, or from an external MIDI keyboard controller. Initially, each key triggers the same pattern. To edit any pattern:

1. Select the key for the pattern you want to edit, selecting Pattern 6 (MIDI note number 41 shown).



(Pattern 6 selected)

2. In the Pattern Editor, edit the pattern to your heart's desire (let M.A.R.I.O. show you some love!).
3. The freshly edited pattern can be called up any time you play that key (MIDI note number).

Building Drum Patterns

You can build your own patterns from scratch, using a Factory pattern, or start from an existing pattern and edit as you please. To build your own Drum Pattern:

1. In the Drum Sequencer Editor, select a Pattern (1–12).



2. Click the **Clear** button in the Pattern section to clear the currently stored pattern.



3. Select the **Multi** tool in the editor and click in the pattern editor to draw in a new note for any step in the sequencer. While clicking and holding, move the Multi up or down to increase or decrease the Velocity for the note.

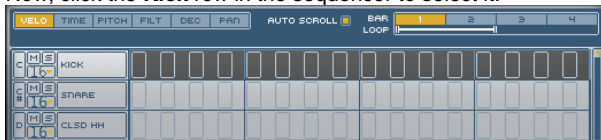


4. Go ahead and draw in the rest of the pattern as you like. Refer to the Info Pane to get more detailed information about what the tools can do.

An Alternate Approach to Creating Drum Patterns

Instead of creating a pattern from scratch, you can also use some of the common rhythmic patterns available in the Transfuser Drum Sequencer templates:

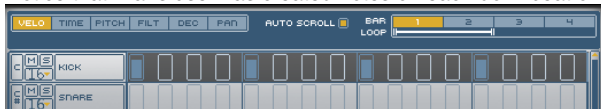
1. Again, select the Pattern you want (1–12) and click the **Clear** button.
2. Now, click the **Kick** row in the sequencer to select it.



3. Click the **Edit** button and choose **Create > Rhythmic Template 1,2,3,4**.



Notice that Transfuser has created notes on each downbeat of the Kick row:



4. Select other rows (like the **Snare**) and select other Templates (like **Offbeat**).

Chop It Up with Beatcutter

The Beatcutter effect provides a quick and easy way to chop up and shuffle your beats.

1. Set up a Transfuser Track with a loop playing back.
2. In the Effects module, from the first Effect insert, click and choose **Load > Beatcutter**.



3. Controls for Beatcutter appear in the Editor pane.

Force Buttons



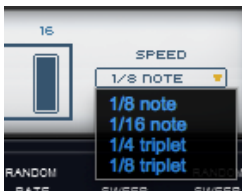
4. Click any of the Force buttons to immediately apply the corresponding effect for as long as you hold down the mouse:
- **Repeat:** Repeats playback of the currently sounding slice.
 - **Reorder:** Randomly reorders the playback of slices.
 - **Gate:** Truncates the length of the slice for a really choppy sound.
 - **Scratch:** Applies a "varispeed" effect that dynamically affects the pitch and duration slices like "scratching" on a turntable.
 - **Freeze:** Freezes playback of the audio at that moment in time by repeating a short buffer of samples.



5. Click on any note in the Beatcutter 16-step pattern sequencer and drag up or down to adjust its effect probability. The Probability value determines the likelihood of whether or not Beatcutter manipulates a certain note in the pattern.



6. You can also change the Speed of the probability pattern. Select one of the following from the **Speed** drop-down menu:
- **1/8th note**
 - **1/16th note**
 - **1/8 note triplet**
 - **1/16 note triplet**



Tip: Feed Signal Generator into Beatcutter (try using a square wave or pink noise) to find out what it really does to the signal! Be sure to watch the levels on the Signal Generator though—you don't want to blow out your speakers (or your ears)! Also, don't restrict yourself to cutting up beats—try a vocal phrase and see what Beatcutter can do!

Chop Up External Audio from Another Track

You can process audio from an audio track or live input on your audio interface with any of the Transfuser Effects. These steps use Pro Tools as an example, but you can do this with different host software that allows you to route audio from one track to another.

1. Set up an audio bus for the signal you want to feed into Transfuser. For example, assign the audio Output path of a pre-recorded audio track to **Bus 1-2**.
2. Insert Transfuser on a new stereo Instrument track.

Important for VST/AU users: If you are using the VST or AU version of Transfuser, insert the **TransfuserFX** effect plug-in onto an *audio* track instead of an Instrument (or MIDI) track. The TransfuserFX plug-in can process incoming audio or MIDI.

3. Set that Track's audio Input path to receive the same bus that your source track's Output is assigned (such as **Bus 1-2**).
4. In Transfuser, drag the **Default Audio Input** Track preset from the Browser to the Tracks pane.



(Audio Input Synthesizer Module)

5. Start playback in the host software.
6. Play a key on your MIDI keyboard or click a key on Transfuser's on-screen keyboard to pass audio through Transfuser. You can also use the **Thru** control.
7. In the Effects module, load Beatcutter on any insert and have fun!



Working with M.A.R.I.O.

M.A.R.I.O. (Musical Advanced Random Intelligent Operations) are musical randomization algorithms (one for each module) that lets you create variations of your sequencer patterns simply by clicking a single button.

1. Start by opening a new instance of Transfuser.
2. Click the **Tracks** tab at the top of the Transfuser Browser. Next, click the **Factory** tab.
3. Locate a Factory Drum Track (such as **4 On The Floor**) and drag it into the empty Tracks section. This loads a Drum Sequencer and Drums Synth module.
4. Select the Drum Sequencer module.
5. Select the first pattern by clicking the corresponding key on the on-screen keyboard, or by playing **C1** on your MIDI keyboard controller.



2. Click Here (or play note C-1)

1. Select All

- From the **Select** menu, choose **Select All**. This way M.A.R.I.O. can be applied to the whole pattern.

Tip: In the Drum Sequencer, M.A.R.I.O. is only applied to selected Note Events. This is great for M.A.R.I.O.-izing just one bar of the pattern, or even only one instrument in the kit, like just the hi-hat.

- Start playback in the Sequencer so you can hear the changes you'll make with M.A.R.I.O. as you apply them.
- In the Drum Sequencer Editor pane, locate the M.A.R.I.O. **Apply** button.



Apply button

- With the pattern playing back, click the M.A.R.I.O. **Apply** button. Notice the changes to the pattern playing back.
- Click it several more times. Each time, M.A.R.I.O. creates a musically interesting variation of the original pattern.

11. Click the arrow buttons to the left and right of the M.A.R.I.O. Apply button to go back or forward through the history of applied M.A.R.I.O. variations. This way, you can select the most musically appropriate version for your purposes.



12. Drag the **Depth** dial right or left to increase or decrease the amount of M.A.R.I.O. variation to be applied.



13. You can also expand the reach of M.A.R.I.O. to many other musical parameters. Select any parameters you want to affect from the **Target** drop-down menu.



The Multi Tool



All Transfuser Sequencers now have a useful Multi tool that allows you to perform a variety of tasks without having to change tools (for example, switching from Pencil to Eraser). Like the other tools, the Multi tool can be used to make changes to the display area of any Sequencer.

The operation of the Multi tool varies from one Sequencer to another, but generally it is possible to do the following:

- Move one or more events by clicking and dragging the note(s).
- Copy one or more notes by Alt-dragging (Windows) or Option-dragging (Mac OS X) the note(s).
- Change the length of one or more notes by grabbing the right-edge of the note(s).
- Create new notes by Control-clicking (Windows) or Command-click (Mac OS X).
- Create new continuous events by Shift+Alt (Windows) or Shift+Option (Mac OS X) dragging.
- Delete a note or event by double-clicking it.
- Reset an event to its default value by Alt (Windows) or Option (Mac OS X) clicking.

Remember to refer to the Info Pane to get more detailed information about what the tools can do.

Synthesizer Randomization



Several of the Transfuser synthesizer modules contain an intelligent randomization system. This system lets you create new sounds quickly by simply clicking the **Randomize** button.

By default, all parameters contained within the synthesizer will be randomized. However, if you would like to maintain certain synthesizer sections and only change others, click the **Target** to open the drop-down (shown at the right). From this menu, you can un-check sections that would like to prevent being randomized.

The **Left** and **Right Arrow** buttons let you undo and redo randomization settings and let you quickly audition multiple randomized variations of a synthesizer.



Configuring Transfuser for Performance

Transfuser can easily be played live from an external MIDI controller or as a thoroughly arranged multitrack virtual instrument. Whether you choose to play Transfuser loose, off the cuff, and on the fly, or if you're a control freak and want to sequence everything in your music software, Transfuser lets you quickly and easily assign MIDI notes and MIDI continuous controllers (MIDI CC) to virtually any pattern trigger or control available.

Assigning MIDI Control

Transfuser makes it easy to assign MIDI control to any of its performance controls. This lets you sequence Transfuser from your music software's MIDI tracks, or play in real-time through with a MIDI controller.

Using sensibly-mapped MIDI controllers, you set up Transfuser as a profoundly compelling and expressive instrument for performance and arranging.

To assign a MIDI controller to any Transfuser control:

1. Right-click the control you want to assign (such as the **Cutoff** frequency control in a Drums module).
2. Select **Learn CC**.
3. On your MIDI controller, move the knob, fader, button, or other controller (such as mod wheel, foot switch, or volume pedal).



To unassign (forget) a MIDI controller assignment for any Transfuser controls:

1. Right-click the control you want to unassign (such as the **Force Repeat** control in Beatcutter).
2. Select **Unlearn CC**.



Omni Mode for Assigned MIDI CC:

MIDI CC assignments in Transfuser work in Omni mode. That is, they are received by Transfuser Tracks on all MIDI input channels. This lets you use a single controller for common controls on different Transfuser Tracks, even if the Tracks are assigned to different MIDI input channels. You can still use different MIDI input channels to trigger and play various Sequencer and Synth modules independently using MIDI notes.

Default MIDI Assignments:

To facilitate the ease of playing Transfuser, several standard MIDI continuous controllers (CC) are set as the following default assignments:

- **CC 1 (Mod Wheel):** X-Fade (Bus 1 and 2)
- **CC 7 (Volume):** Master Level
- **CC 23:** Stop All
- **CC 24:** Play All

Note: Aftertouch is treated as a generic MIDI CC and it can be learned by any control just like any other MIDI CC number. However, pitch bend is not re-assignable and always controls Master Pitch.

Controller Section



The Controller section provides performance controls for Transfuser. You can easily map a MIDI controller (such as an M-Audio Axiom series keyboard) to any number of Transfuser controls. The Controller section provides six Smart knobs, eight Trigger Pads, a four-octave keyboard for selecting patterns and triggering sounds, and a fader for crossfading between Transfuser Output Buses 1 and 2. The Controller section also displays the input MIDI channel for any selected Track.

Smart Knobs



Transfuser provides six host-automatable knobs, each of which can be assigned to control multiple other controls in Transfuser. For example, you can assign a single Smart knob to control the Cutoff Filter in multiple Synth modules on separate Transfuser Tracks.

Smart knobs apply to the assigned controls regardless of whether or not those controls are on Tracks set to receive different MIDI channels. This is especially useful if you are using different MIDI channels to control different Tracks, but you want certain controls on those Tracks to have a master control.

For information on assigning and using Smart knobs, please see ***Configuring the Smart Knobs*** section of this User Guide.

Tip: Assign MIDI CCs (continuous controllers) on your external MIDI controller (such as the knobs on any of the M-Audio Axiom series keyboard controllers) to any of the six Transfuser Smart knobs.

Pattern Switch Keys



The Pattern Switch keys map to the corresponding Pattern keys in the Sequencer Editors. Clicking a Pattern Switch key (C1–B1) in the Controller section selects the corresponding Sequencer Pattern.

The Pattern Switch keys only affect those Tracks assigned to the same MIDI Input Channel as displayed in the Channel indicator.

When playing the Transfuser Pattern Switch Keys from an external MIDI keyboard or from your music software's sequencer, be sure to select the corresponding MIDI channel for the "Transfuser *n*" port from your music software's MIDI track selector (where *n* is the numbered instance of a specific Transfuser insert). To play a Synth module directly, select the corresponding MIDI channel for the "Transfuser *n* Synth" port.

Note Range Keys:



The Note Range keys can be used to play the Sequencer modules on Tracks. How the different Sequencer modules respond to the Note Range keys depends on the option selected in the Note Range selector in each Sequencer Editor.

The Note Range keys only affect those Tracks assigned to the same MIDI Input Channel as displayed in the Channel indicator.

Tip: Set different Tracks' **Lo Key** and **Hi Key** settings to different octave ranges for each Track. This way you can control multiple Tracks independently based on what octave range you play in on the Note Range keys (as well as when using an external MIDI keyboard).

Channel Indicator:

The Channel indicator displays the MIDI Input Channel for the current (or last) selected Track. The on-screen Keyboard and Trigger Pads only affect those Tracks assigned to the MIDI Input Channel displayed in the Channel indicator. To change the MIDI channel, select a Track assigned to the MIDI Input Channel you want.



Trigger Pads:

Transfuser provides eight Trigger Pads, each of which can be assigned to trigger Sequencer Patterns in specific Sequencer modules, and also to send MIDI notes (assignable between 48 and 71) to Sequencer and Synth modules. A single Trigger Pad can be assigned to multiple target modules (right-click a Trigger Pad to assign it).

You can also set the default MIDI input channel and octave range for the Trigger Pads in the Transfuser Preferences (see ***Transfuser Preferences*** section of this guide).



X-Fade:

The X-Fade slider lets you crossfade between all Tracks set to Output Bus 1 and all Tracks set to Output Bus 2, much like a DJ mixer.

For information on crossfading between Output Bus 1 and 2, see ***Crossfading Between Bus 1 and 2*** of this User Guide.



Configuring the Smart Knobs



The automatable knobs provide easy access to significant performance controls while playing Transfuser. Transfuser provides six Smart knobs that can be assigned to virtually any control, and a single Smart knob can be assigned to more than one control. Smart knobs can be controlled by plug-in automation from your music software.

To assign a Smart knob:

1. Right-click a control (from any module) that you want to assign.
2. From the drop-down menu, select **Assign To Smartknob > 1** to have Smart knob 1 mapped to the current control.
3. If you have other controls you also want to control with Smart knob 1, assign them in the same way. For example, if you have multiple Tracks, you can have the Pitch controls of all the Synth modules assigned to Smart knob 1.
4. Go ahead and assign other controls to the other Smart knobs as you like.
5. For the final touch, assign the Smart knobs to knobs on your external MIDI keyboard controller so that you can control multiple on-screen knobs with one knob on your MIDI controller.

Tip: You can name Smart knobs by double-clicking the text directly above the knob.

To show an assigned control in the Editor section:

1. Right-click the Smart knob.
2. From the drop-down menu, select the assigned control and choose **Target** from its submenu. If the targeted control is in a Sequencer, Synth, or Effects module, the Editor for that module is shown in the Editor section.

To forget (unassign) an assigned control from a Smart knob:

1. Right-click the Smart knob.
2. From the drop-down menu, select the assigned control and choose **Unassign** from its submenu.

To forget (unassign) a Smart knob assignment from an assigned control:

1. Right-click the control you want to unassign.
2. From the drop-down menu, select **Unassign Smart Knob 1** (or whichever of the six available Smart knob is assigned).

Configuring the Note Range Control



When using Sequencer modules, there are different modes that determine how the sequencer responds when playing keys in the Note Range area of the on-screen keyboard (as well as any external MIDI controller).

There are up to three different modes in each sequencer. Switch between different modes using the Note Range selector beneath the sequencer name in the Editor pane.

Drum Sequencer

- **Trigger Pattern:** Note range keys trigger the patterns (1–12) stored for the Drum Sequencer.
- **Transpose Pattern:** Keys in the Note Range trigger the selected pattern and transpose it according to the note played (or clicked). The original pitch transposition of the loop is mapped to **C3**. Notes below C3 transpose the loop down and notes above transpose it up.
- **Play Pads:** Note range keys play the individual pads of the Drums Synth.



Phrase Sequencer

- **Trigger Phrase:** The Note Range keys trigger or re-trigger the Phrase Pattern.
- **Transpose Phrase:** Keys in the Note Range and retrigger the Phrase Pattern and transpose it chromatically. **C3** is the original pitch.
- **Play Notes:** Keys in the Note Range get passed through so they play the module directly without triggering the Pattern. This way you can play whole new melodies.



Slice Sequencer

- **Trigger Loop:** Keys in the Note Range trigger the sliced loop at its original pitch. All keys in the Note Range have exactly the same function.
- **Transpose Loop:** Keys in the Note Range trigger the loop and transpose it according to the note played (or clicked). The original pitch transposition of the loop is mapped to **C3**. Notes below C3 transpose the loop down and notes above transpose it up.
- **Play Slices:** Keys in the Note Range play the individual slices of the loop. Slices are mapped to keys in order from left to right. The first slice in the loop is triggered by **C2**, the second by **C#2**, the third by **D2**, and so on. C5 is the top of the on-screen keyboard range, so any slices beyond C5 (the 37th slice) will be out of range. However, you can play any number of slices—well, any number beyond 36 and up to 79 (MIDI note number 127)—by using an external MIDI keyboard controller or MIDI notes from your music software's MIDI or Instrument tracks.



Tip: Try using **C1** through **B1** to trigger stored Slicer Sequencer Patterns (1–12) and set the Note Range to Play Slices (C2–C5+) to interject individual slices.

Configuring the Trigger Pads

Transfuser has eight Trigger Pads that can be used to trigger playback of Sequencer Patterns in specific Sequencer modules, and also to send MIDI notes to Sequencer and Synth modules.

A single Trigger Pad can also be assigned to multiple target modules. This way a single Trigger Pad can be used to trigger different patterns in different modules simultaneously, or even just to play sampled Drum Pads in Drums Synth modules on different Tracks.

If you are using an external MIDI controller with Transfuser, the Trigger Pads map to MIDI notes: 1 = C, 2 = C#, 3 = D, 4 = D#, 5 = E, 6 = F, 7 = F#, and 8 = G. If your controller has trigger pads (like the M-Audio Axiom series keyboard), be sure to assign them to the corresponding notes. Set the default MIDI input channel and octave range for the Trigger Pads in the Transfuser Preferences (see the **Transfuser Preferences** section of this guide to learn more).

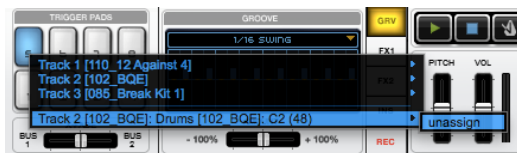
To assign a Trigger Pad:

1. Right-click the Trigger Pad you want to assign.
2. From the drop-down menu, choose the Track and the Module you want (such as **Track 3 > Drums**) and select the Pattern or MIDI note you want to trigger—such as **C2 (48)** to trigger a Kick Drum sound.
3. You can assign the same Trigger Pad to trigger another pattern or MIDI note in other Track modules. This is especially useful if you want to trigger different patterns in different Track Sequencer modules simultaneously.



To unassign a Trigger Pad:

1. Right-click the Trigger Pad you want to unassign.
2. Choose the Track, Module, and Pattern or Note and select Unassign.
3. Repeat the preceding steps for other Tracks assigned to the same Trigger Pad.
4. Repeat the preceding steps for other Trigger Pads.



Bussing and Mixing in Transfuser



Transfuser lets you mix each Track output independently using each Track Mix module. You can also assign each Track Output to one of up to eight stereo buses, as well as an additional Cue Bus for auditioning. Transfuser also provides a crossfade control to crossfade between Tracks assigned to Bus 1 and Tracks assigned to Bus 2.

Important: When working with multiple aux channels, open Transfuser's **Preferences** and set **Optional Aux Outs** to **On**, ensuring those aux channels will still be mixed into the main bus.

Each Track provides Mute, Solo, Volume, Pan, two Effect Sends, and an Output Bus selector in the Mix module. Any of these Mix controls can be assigned to a MIDI CC or Smart knob (or Track Automation).

When playing back multiple Transfuser Tracks, mute and solo Tracks on downbeats or at the beginnings of phrases, slowly pan a Track over a bar, and otherwise have a blast mixing right within Transfuser.

Tip: To audition Tracks before bringing them into the mix, set up an "Auxiliary" track for cueing Transfuser Tracks set to the Cue Bus. You may need to refer to your music software's documentation to learn how to set up auxiliary tracks.

To assign a Track to an Output Bus:

1. Click the Track Output Bus selector.
 2. Select any of the following:
 - **Off:** Effectively mutes the Track Output. The Track is assigned to no audio Output Bus. However, the signal can still pass through the Effects Sends.
 - **Main:** Assigns the Main output of Transfuser.
 - **1–8:** These outputs can be used if you wish to process or route certain Transfuser tracks separately from the Main output.
 - **Cue:** Is a dedicated bus for auditioning a Transfuser Track before assigning it to another Output Bus and bringing it into the mix. Set up a dedicated Auxiliary Input track in your music software session for monitoring the Cue Bus from Transfuser. The output of this bus can then be routed to headphone mix.
- Note:** Cue mixes are handled differently by different music making applications. Please refer to your software's User Guide to learn how to set up a cue mix.





Crossfading Between Bus 1 and 2:

Assign two (or more!) different Tracks to Output Buses 1 and 2 respectively. Transfuser lets you crossfade between these two Output Buses much like a DJ mixer. This way, you can set up one groove on Output Bus 1 and a different groove in Output Bus 2, and then fade one in while the other fades out (and then cue up the next groove to fade in), or just fly in Output Bus 2 to punctuate Output Bus 1, or... well, you get the idea. To do this, drag the **X-Fade** control left for more of Output Bus 1 and right for more of Output Bus 2.

Tip: Assign the **X-Fade** control to a MIDI CC to control it from a knob or fader on your MIDI controller. It is assigned to MIDI CC 1 (mod wheel) by default.

Showing and Hiding Panes in Transfuser



Since the Transfuser plug-in can take up a lot of screen space with multiple Tracks, you may want to hide the Browser or Editor panes after you have set up and configured your Tracks for performance. This can be done by clicking the show/hide icons.

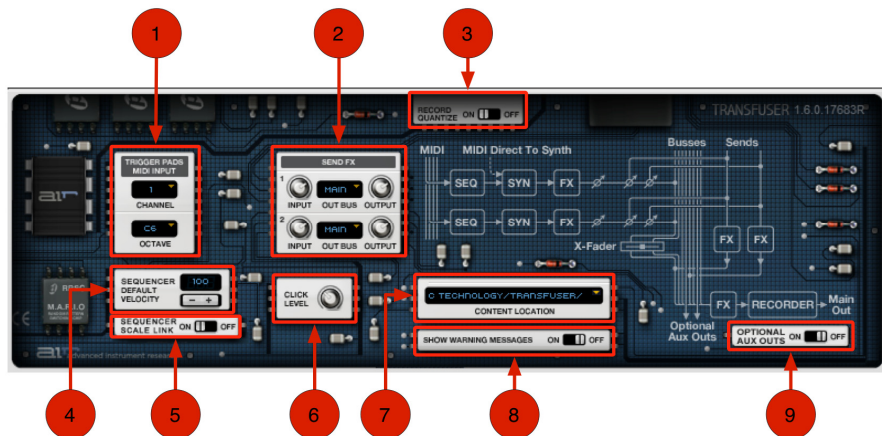
1. **Show/Hide Browser** – Click to show or hide the Browser pane.
2. **Show/Hide Controller/Master Panes** – Click to show or hide the Controller and Master Section Panes.
3. **Show/Hide Editor Pane** – Click to show or hide the Editor pane.

Adjusting the Transfuser Window Height



Since Transfuser lets you create multiple Tracks, you may want to adjust the height of the plug-in window to see more or fewer Tracks. Simply click the middle of the Transfuser window and drag up or down to increase or decrease the height.

Transfuser Preferences



1. Trigger Pads MIDI Input

- **Channel:** Lets you set the MIDI input channel for the Transfuser Trigger Pads.
- **Octave:** Lets you set the octave range for MIDI note control of the Transfuser Trigger Pads.

2. Send FX

- **Input:** Adjusts the default Input Gain for FX1 or FX2 respectively.
- **Out Bus:** Selects the Output Bus Channel for FX1 or FX2 respectively.
- **Output:** Adjusts the default Output Gain for FX1 or FX2 respectively.

3. **Record Quantize** – The Record Quantize preference lets you turn Record Quantize on or off for the real-time pattern recording function in the Drum Sequencer module.
4. **Sequencer Default Velocity** – The Sequencer Default Velocity preference lets you set the default velocity for automatically created Events in the Sequencer modules.
5. **Sequencer Scale Link** – When switched on, all Tracks (and Track Previews) are forced to follow the musical scale manually set in any Track's sequencer. When switched off, Tracks (and Track Previews) will play in their originally defined scale.
6. **Click Level** – The Click Level preference lets you set the volume level for the click in the Transfuser Metronome.
7. **Content Location** – Double-click the Content Location preference to set the directory location for Transfuser Content (Track and audio files). This is only necessary if you have installed the Transfuser Content to another location than the default.
8. **Show Warning Messages** – When performing destructive edits, this setting determines whether or not Transfuser warns you before committing to the edit.
9. **Optional Aux Outs** – By default, this is switched off, but when switched on, all of Transfuser's auxiliary outputs are re-routed to the stereo master output. This may be helpful when troubleshooting complex output routing scenarios, where many aux outputs are being sent to the host application.

Transfuser Tracks and Modules

Browser

The Transfuser Browser provides easy access to factory-created Tracks and audio, as well as to any of your own custom Tracks and audio loops and samples. The Browser also provides controls for auditioning and filtering stored Tracks and audio.

Navigating the Browser

The Transfuser Browser lets you view both Factory and user-created Tracks. You can also view Factory audio loops and samples, and three different user definable directories let you configure Transfuser to quickly and easily access your favorite audio loop and sample libraries.

To view Factory Tracks:

1. Click the **Tracks** tab at the top of the Browser.
2. Click the **Factory** tab.
3. Select any Track in the list for preview and import.

To view User-created Tracks:

1. Click the **Tracks** tab at the top of the Browser.
2. Click the **User** tab.
3. Select any Track in the list for preview and import.

To view Factory audio:

1. Click the **Audio** tab at the top of the Browser.
2. Click the **Factory** tab.
3. In the Browser list, double-click the folder whose content you want to view.
4. In the Browser list, select the Factory Audio you want to preview and import.



To navigate to other directories on your computer:

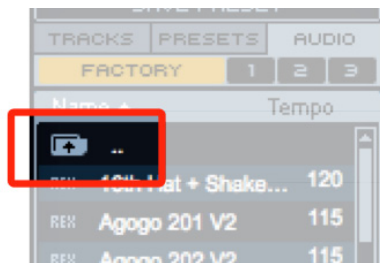
1. Click the **Audio** tab in the Browser.
2. Click tabs **1**, **2**, or **3**.
3. Double-click the folder whose contents you want to view.
4. Select the audio file you want to preview and import.

Tip: The User Audio tabs **1**, **2**, and **3** are "sticky." That way you can navigate to three different locations on your computer and easily revisit those locations by clicking the **1**, **2**, and **3** buttons.



To navigate back up through directories on your computer:

Double-click the **Move Up One Directory Level** icon at the top of the Browser list.

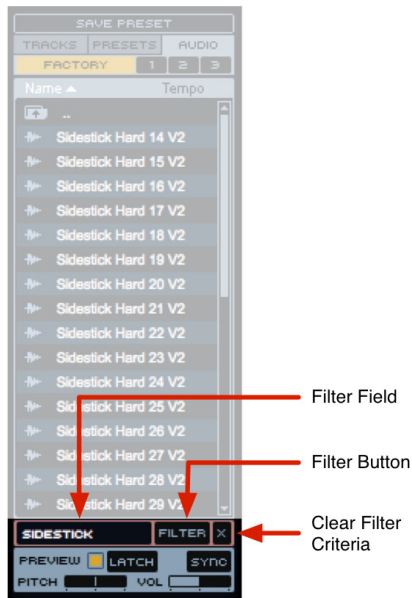


Filtering items in the Browser

Transfuser lets you filter items in the Browser list by alphanumeric characters. This way you can quickly find the Track or sample you want.

To filter the Browser list:

1. Type the alphanumeric characters in the **Filter** field to show all items in the list containing those characters.
2. Click the **Filter** button.
3. Click **X** to clear the filter criteria.



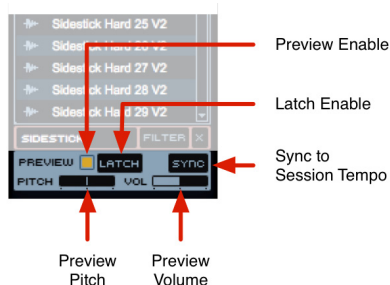
Previewing Tracks and Audio in the Browser

Transfuser lets you preview Tracks and audio from its Browser. All previewed audio is played through the Main output of Transfuser.

To audition a Track or audio from the Transfuser Browser:

1. Enable **Preview** in the Browser.
2. Enable or adjust the other Browser Preview controls:

- **Latch Enable:** Latches preview of the selected file.
- **Sync Enable:** Synchronizes preview to your music software's session tempo.
- **Pitch:** Adjusts the pitch transposition of the previewed Track or audio file.
- **Volume:** Adjusts the preview volume.



3. Click the Track or audio file you want to audition in the Browser list. The item plays back for as long as you hold down the mouse. If Latch is enabled, then the entire Track or file plays back and loops with a single click.

Once you have found a Track or audio file you would like to use, simply drag that file into the Transfuser Tracks panel.

Transfuser Tracks

Transfuser lets you create multiple Tracks of paired Sequencer and Synth modules. You can play and mix multiple Tracks in a single instance of Transfuser simultaneously. In this way, you can perform simple grooves to complex arrangements, triggered by MIDI sequences in your music software or even in real-time using Transfuser's on-screen interface or an external MIDI controller.

Tip: If you'd like to use more than 99(!) independently controlled Transfuser Tracks, you can launch additional instances of Transfuser in your music software.

Transfuser Tracks are made up of a series of modules in a serial control and signal path:

MIDI Input—Automator > Sequencer > Synth (Syn) > Effects (EFX) > Mix

The Track module provides controls for managing Tracks, assigning the MIDI control input channel, assigning the Low and High MIDI note range (this way you can assign different octaves to control different Tracks), and up to 12 lanes of Track automation.

Creating Tracks in Transfuser

In Transfuser, you can create Tracks. These Tracks consist of modules for Track automation, sequencing and triggering, generating sound, effects processing, and mixing. Each Track you create can be played back and mixed individually. You can cue Tracks for playback and crossfade between Tracks much like a DJ mixer.

To load a factory Track into Transfuser:

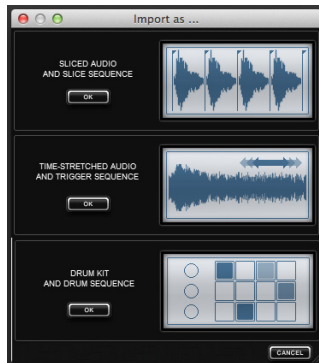
- Drag a Factory Track from the Transfuser Browser to the Tracks pane.



To create new Tracks in Transfuser:

1. Drag audio files (REX, ACID, AIFF, or WAV) or audio regions to the Tracks pane from the Transfuser Browser.
2. In the resulting **Import As** dialog, select the type of Track you want. There are four basic types of Tracks in Transfuser:

- **Sliced Audio and Slice Sequence:** Converts the dropped audio to a slice sequencer that plays back the sliced audio.
- **Time-Stretched Audio and Trigger Sequence:** Converts the dropped audio to a drum pattern (sequence) and plays back a sampled drum kit. Transfuser extracts the drum samples from the dropped audio as well as possible.
- **Drum Kit and Drum Sequence:** Converts the dropped audio to a drum pattern (sequence) and plays back a sampled drum kit. Transfuser extracts the drum samples from the dropped audio as well as possible.
- **Bass Synth and Phrase Sequence:** Is not available for imported audio, but a bass track can be added by dragging a factory bass track (or you can create your own).



3. To create another Track, repeat the previous steps.

Tip: You can also have a Thru Sequencer and Audio Input Synth. However, this configuration is not available in the Import As dialog.

Sampler Files Folder

When you import non-Factory audio into Transfuser, a **Sample Files** folder is created in the Transfuser content location (User Data/Recorded Audio, or as set in Transfuser's **Preferences**). This keeps all imported audio conveniently with the session.

Expanding and Collapsing Tracks in Transfuser

Since you can have multiple Tracks in Transfuser, you may want to minimize the height of some Tracks to save screen space. Likewise, you may want to maximize the height of other Tracks to access Track controls on-screen.

To minimize (collapse) or maximize (expand) a Track in Transfuser:

- Click the triangular icon at the top left of the Track.



Tip: Shift-click the **Track Expand/Collapse** button to expand or collapse all Transfuser Tracks.

Cutting or Copying and Pasting Tracks

If you want to use a Track that you constructed as the basis of another Track, you can cut or copy it, and paste it to another Track.

To Copy and Paste one Track to another:

1. From the **Track** menu of the Track you want to copy, select **Copy** (or **Cut** if you want to remove the source Track).
2. From the Track menu of the Track you want to replace, select **Paste**.



Tip: You can drag one Track over another to replace it, just like Cut and Paste, by dragging the Track module. You can Alt-drag (Windows) or Option-drag (Mac OS X) one Track to another to copy and replace as well.

Saving Tracks

Once you have set your own custom Transfuser Tracks, you probably will want to save some of them for later use. You can save each of your Tracks individually.

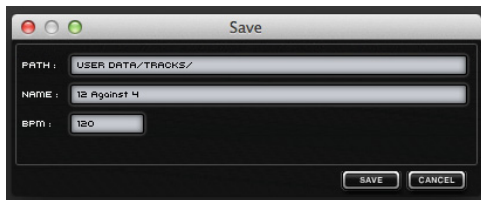
To save a Transfuser Track:

1. From the **Track** menu, choose **Save**. To save the Track with any imported sample content, choose **Save With Samples**.

Tip: You can also drag the Track module from the Tracks pane to the Browser to save the Track with any imported sample content.



2. In the **Save** dialog, specify **Path**, **Name**, and **BPM**. You can save your Tracks with samples to any directory location, but you probably want to keep them in the default location so that they are available in the Transfuser **Browser > Tracks > User** directory.



You can set default Transfuser Content Location in the Transfuser Preferences (see the **Transfuser Preferences** section of this User Guide for more information).

Moving Tracks

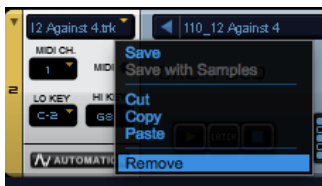
To move a Track, click any part of the track not containing any controls and drag that track to the location you want between (or before or after) other Tracks.

Important: If you drag one Track on top of another, you will replace that Track.

Removing Tracks

To remove a Track in Transfuser, do one of the following:

- Choose **Remove** from the Track module menu.



- Click the **Remove** button for the Track you want to delete, and then click **Yes** to confirm that you want to delete the Track (or click **No** to cancel).



Assigning MIDI Input Channels

Any Transfuser Track can be independently assigned to receive MIDI on any MIDI channel (1–16). This lets you assign multiple MIDI tracks from your music software to independently play multiple corresponding Transfuser Tracks.

Tip: MIDI CC assignments work in Omni mode. Transfuser Tracks on all MIDI input channels. This lets you use a single controller for common controls on different Transfuser Tracks, even if the Tracks are assigned to different MIDI input channels.

To assign the MIDI channel input for MIDI control of a Track:

- From the Transfuser Track MIDI Channel Input selector, select the MIDI channel for MIDI control of the Track.



Assigning the Track Low Key and High Key Range

Transfuser lets you assign different MIDI note low and high key ranges for each Track. This lets you play Synth modules and trigger sequencer patterns for different Tracks from different note ranges of your external MIDI keyboard controller or from MIDI and Instrument tracks in your session. MIDI note numbers below or above the assigned note key range have no effect on the Track.

To assign the Low and High Key Notes for a Track:

- Select the MIDI note and octave from the **Lo Key** and **Hi Key** drop-down menus.



Low Key
Note

High Key
Note

Transfuser Track Automation

Each Transfuser Track provides up to 12 lanes of automation that can be assigned to any control in any module in the Track. For detailed information on Transfuser Track Automation, see the **Transfuser Track Automation** section of this User Guide.

Creating, Saving and Loading Modules

(Sequencer and Synth Modules Only)

Transfuser lets you individually change the Sequencer and Synth modules. This way you can keep an existing Track, with any existing Track Automation and Effects, but change the type of Sequencer, Synth, or both. For example, you might even want to play a Drums Synth using a Phrase Sequencer.

Creating a New Sequencer Module



To create a new Sequencer module in an existing Transfuser Track:

- From the **Sequencer** menu, select one of the following:
 - **New Chord-Seq:** Creates a new Chord Sequencer module.
 - **New Drum-Seq:** Creates a new Drum Sequencer module.
 - **New Phrase-Seq:** Creates a new Phrase Sequencer module.
 - **New Poly-Seq:** Creates a new Poly Sequencer module.
 - **New Slice-Seq:** Creates a new Slice Sequencer module.
 - **New Thru-Seq:** Creates a new Thru module (which effectively means no sequencer).

Creating a New Synth Module



To create a new Synth module in an existing Transfuser Track:

- From the **Synth** menu, select one of the following:
 - **New Analoge:** Creates a new Analoge Synth module.
 - **New Audio Input:** Creates a new Audio Input module.

Note: The Audio Input module is a special type of "synthesizer" that can pass audio (live or pre-recorded) from your making software to the effects section contained within Transfuser. This allows you, for example, to use Transfuser as a powerful, automatable, effects processing instrument for your existing tracks.

- **New Bass:** Creates a new Bass Synth module.
- **New Drums:** Creates a new Drums Synth module.
- **New Electric:** Creates a new Electric Synth module.
- **New Phrase:** Creates a new Phrase Synth module.
- **New Slicer:** Creates a new Slicer Synth module.

Saving Modules

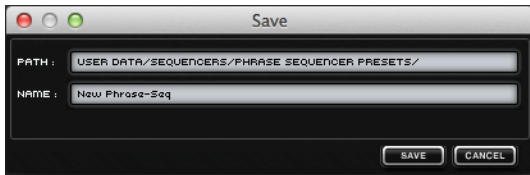
If you have a particularly good Sequencer or Synth module configuration, you can save it for use in other Transfuser Tracks or even other instances of Transfuser.

To save a Sequencer or Synth module:

1. From the Sequencer or Synth module menu, choose **Save**.



2. In the **Save Preset** dialog, enter the name you want for the module preset.



3. Click **Save** to save the module preset (or click **Cancel**).

Tip: You can also drag the module to the Browser.

For information on saving Tracks, see the **Saving Tracks** section of this guide.

Loading Saved Modules

Custom-saved Sequencer and Synth modules can be loaded into any current Transfuser Track. You can only load the same type and kind of custom module as the one you want to replace. For example, you can only load saved Phrase Synth modules into a Phrase Synth module, and you cannot load a stored Slice Sequence into a Drum Sequence module, let alone a stored slice Sequence into a Phrase Synth module.

To load a Sequencer or Synth module:

- From the **Sequencer** or **Synth** module menu, choose **Load from User Data** and select the Sequencer or Synth module you want.

Copying and Pasting Track Modules

If you have a particularly good sequence that you want to use to play another Sequencer module, or you have a particularly good Synth module configuration that you want to use with another sequencer, you can copy and paste from a module in one Track to the same type of module in another Track.

To copy and paste a module from one Track to another:

1. From the source **Sequencer** or **Synth** module menu, choose **Copy**.
2. From the destination **Sequencer** or **Synth** module menu, choose **Paste**.

Tip: You can also drag one module over another to replace it, just like copy and paste. In fact, this is the only way to copy and paste Effects modules from one Track to another.

Enabling/Disabling Modules



Each Sequencer and Effects module provides an Enable/Disable button. Click this button to either enable or disable the individual module. Disabling a module effectively bypasses its function in the Transfuser Track.

This can be useful if you want to bypass a Track Effects module, or if you want to bypass the Track Sequencer (maybe to trigger individual events in the Synth module using MIDI control).

Tip: Effects Sends 1 and 2, and the Main Effects Inserts also have Enable/Disable button.

Sequencer Modules

Sequencer modules play back the audio loaded into Synth modules using Sequencer Patterns. Transfuser provides four different types of Sequencer modules:

- **Chord Sequencer:** Provides a polyphonic sequencer that intelligently creates polyphonic "chordal" accompaniment that gets played by a polyphonic Transfuser Synthesizer.
- **Drum Sequencer:** Provides a 12-note step sequencer for playing the Drums Synth module.
- **Phrase Sequencer:** Provides a monophonic MIDI sequencer for playing the Phrase Synth module.
- **Poly Sequencer:** Provides a polyphonic sequencer that can be programmed to send MIDI data to a Transfuser Synthesizer module.
- **Slice Sequencer:** Provides a slice sequencer for playing the Slicer Synth module.
- **Thru Module:** Provides no sequencing controls whatsoever and any MIDI input plays the Track Synth module directly.

For detailed information on the Sequencer Editors, please refer to the ***Transfuser Sequencer Editors*** section in this User Guide

Chord Sequencer

Chord-Seq is a polyphonic sequencer that intelligently creates polyphonic "chordal" accompaniment that get played by a polyphonic Transfuser Synthesizer.

Chord-Seq Module:

1. Transport Controls

- **Play:** Plays the track sequence.
- **Latch:** Engages and disengages Latch mode. In this mode, the track continues to play even when no MIDI notes are received. The sequencer will continue playing until the Stop button is pressed (or your host's transport is stopped).

Note: Pressing the Sequencer's Play button engages a temporary latching (indicated by a green Latch light). This is so that you don't have to hold the Play button to keep hearing a sequence.

- **Stop:** Stops playback of the sequence.



2. Scale Type – Adjust the Scale Type (Major or Minor) parameter within the Editor pane.

Note: You can force all Tracks and Track Previews to follow your sequencer's scale by switching on **Sequencer Scale Link** in Transfuser's **Preferences**.

Chord-Seq Editor:

When you select the Chord-Seq module on a Track, its Editor is available in the Editor pane. The Chord-Seq Editor provides more in-depth features than those listed here in the Track Module. Please see the ***Transfuser Sequencer Editors*** section of this guide for more information.

Drum Sequencer

The Drum Sequencer module lets you configure a 12-note step sequencer to play a Drums Synth module on the same Track.

Drum-Seq Module:

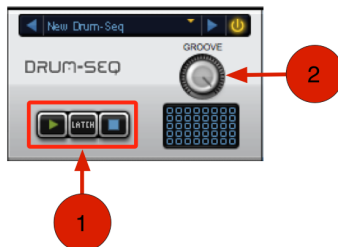
1. Transport Controls

- **Play:** Plays the track sequence.
- **Latch:** Engages and disengages Latch mode. In this mode, the track continues to play even when no MIDI notes are received. The sequencer will continue playing until the Stop button is pressed (or your host's transport is stopped).

Note: Pressing the Sequencer's Play button engages a temporary latching (indicated by a green Latch light). This is so that you don't have to hold the Play button to keep hearing a sequence.

- **Stop:** Stops playback of the sequence.

2. Groove – Lets you apply 0–100% of Groove microtiming as set in the Sequencer.



Drum-Seq Editor:

When you select the Drum Sequencer module on a Track, its Editor is available in the Editor pane. The Drum Sequencer Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Sequencer Editors** section of this guide for more information.

Phrase Sequencer

The Phrase Sequencer lets you configure a monophonic MIDI sequencer to play a Phrase Synth module on the same Track.

Phrase-Seq Module:

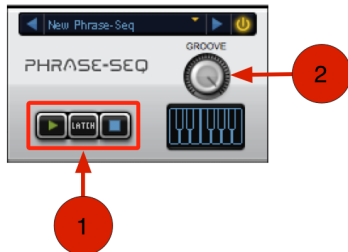
1. Transport Controls

- **Play:** Plays the track sequence.
- **Latch:** Engages and disengages Latch mode. In this mode, the track continues to play even when no MIDI notes are received. The sequencer will continue playing until the Stop button is pressed (or your host's transport is stopped).

Note: Pressing the Sequencer's Play button engages a temporary latching (indicated by a green Latch light). This is so that you don't have to hold the Play button to keep hearing a sequence.

- **Stop:** Stops playback of the sequence.

2. Groove – Lets you apply 0–100% of Groove microtiming as set in the Sequencer.



Phrase-Seq Editor:

When you select the Phrase-Seq module on a Track, its Editor is available in the Editor pane. The Phrase-Seq Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Sequencer Editors** section of this guide for more information.

Poly Sequencer

Poly-Seq is a polyphonic sequencer that works like a small sequencer that can be programmed to send MIDI data to a Transfuser Synthesizer module.

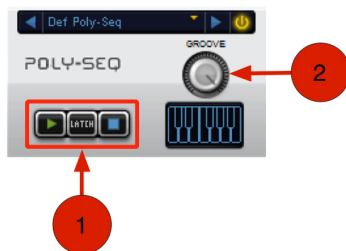
Poly-Seq Module:

1. Transport Controls

- **Play:** Plays the track sequence.
- **Latch:** Engages and disengages Latch mode. In this mode, the track continues to play even when no MIDI notes are received. The sequencer will continue playing until the Stop button is pressed (or your host's transport is stopped).

Note: Pressing the Sequencer's Play button engages a temporary latching (indicated by a green Latch light). This is so that you don't have to hold the Play button to keep hearing a sequence.

- **Stop:** Stops playback of the sequence.



2. Groove – Lets you apply 0–100% of Groove microtiming as set in the Sequencer.

Poly-Seq Editor:

When you select the Poly-Seq module on a Track, its Editor is available in the Editor pane. The Poly-Seq Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Sequencer Editors** section of this guide for more information.

Slice Sequencer

The Slice Sequencer lets you configure a slice sequencer to play a Slicer Synth module on the same Track.

Slice-Seq Module:

1. Transport Controls

- **Play:** Plays the track sequence.
- **Latch:** Engages and disengages Latch mode. In this mode, the track continues to play even when no MIDI notes are received. The sequencer will continue playing until the Stop button is pressed (or your host's transport is stopped).

Note: Pressing the Sequencer's Play button engages a temporary latching (indicated by a green Latch light). This is so that you don't have to hold the Play button to keep hearing a sequence.

- **Stop:** Stops playback of the sequence.

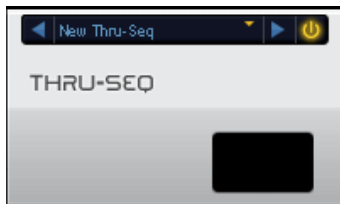
2. Groove – Lets you apply 0–100% of Groove microtiming as set in the Sequencer.



Slice-Seq Editor:

When you select the Slice-Seq module on a Track, its Editor is available in the Editor pane. The Slice-Seq Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Sequencer Editors** section of this guide for more information.

Thru Module



Besides the Sequencer menu and the module **Enable/Disable** button, the Thru module provides no controls and no Editor. Thru simply bypasses the Sequencer module and any MIDI input plays the Track Synth module directly.

Tip: Use the Thru Sequencer module to play Synth modules directly, such as the Bass Synth, from your music software's MIDI tracks or with a MIDI controller.

Synth Modules

Synth modules generate sound using imported audio files. Audio files and regions can be dragged into Transfuser from the Transfuser Browser or from your computer's Desktop, Explorer (Windows), or Finder (Mac OS X). Synth modules are played back by corresponding Sequencer modules.

For information on creating, saving, and loading custom Synth modules, see the ***Creating, Saving, and Loading Modules*** in this User Guide.

Transfuser provides seven different types of Synth modules:

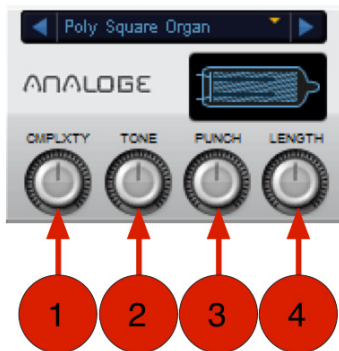
- **Analoge:** Provides polyphonic analog modeling technology to Transfuser.
- **Bass:** Provides a monophonic bass-line synthesizer.
- **Drums:** Provides a sophisticated 12-pad drum sampler.
- **Electric:** Provides the sound of electric pianos to Transfuser.
- **Phrase:** Converts imported audio to beatmatched, time compressed/expanded audio. Using the Phrase Sequencer or MIDI input, you can play back the Phrase Synth module at different transpositions, times, and durations.
- **Slicer:** Converts imported audio into individual "slices" based on a sophisticated, automatic transient-detection algorithm. That is to say, it automatically chops up your audio into individual events that can be played back at any tempo, in any order, and with all kinds of processing, by the Slice Sequencer module or MIDI input.
- **Audio Input:** Passes audio from disk or the audio Input of the track on which Transfuser is inserted. This lets you directly process your music software's audio tracks in Transfuser without having to import it.

Analogue Synth

The Analogue synthesizer brings analog modeling technology to Transfuser. This powerful polyphonic synthesizer has everything you need to get classic "old-school" analog sounds as well as cutting-edge modern sounds.

Analogue Module:

1. **Complexity** – Controls several parameters that influence the overall complexity or density of the sound created.
2. **Tone** – Controls parameters that influence the overall tone or brightness of the sound created.
3. **Punch** – Controls parameters that influence the attack characteristic of the sound created. Low Values will lead to a harder attack, while high value will soften the sound.
4. **Length** – Controls several parameters that influence the overall length of the sound created.



Analogue Synth Editor:

When you select the Analogue Synth module on a Track, its Editor is available in the Editor pane. The Analogue Editor provides more in-depth features than those listed here in the Track Module. Please see the ***Transfuser Synth Editors*** section of this guide for more information.

Bass Synth

The Bass Synth module provides a bass synthesizer with a single adjustable oscillator, filter, and amplitude controls. You can play the Bass Synth module with a Phrase Sequencer or Thru Sequencer (using MIDI sequences from MIDI tracks or playing directly with a keyboard).

Bass Synth Track Module:

1. **Cutoff** – Lets you adjust the Cutoff frequency for the Filter of the Bass Synth.
2. **Reso** – Lets you adjust the Resonance (or "Q") of the Filter of the Bass.
3. **Env Mod** – Lets you control the amount of Envelope Modulation applied to the Bass.
4. **Drive** – Lets you control the amount of Drive applied to the Bass.



Bass Synth Editor:

When you select the Bass Synth module on a Track, its Editor is available in the Editor pane. The Bass Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Synth Editors** section of this guide for more information.

Drums Synth

The Drums Synth module is a sample-based drum machine that can be played back by the Drum Sequencer module. It provides twelve sample pads to which you can drag samples or choose from a number of factory samples.

Drums Synth Track Module:

1. **Pitch** – Lets you raise or lower the pitch of the Drums in semitones and cents.
2. **Cutoff** – Lets you adjust the Cutoff Frequency applied to the Drums.
3. **Decay** – Lets you adjust the amount of Decay applied to the Drums. Lower settings result in shorter decays and higher settings result in longer decays for the Drums.



Drums Synth Editor:

When you select the Drums Synth module on a Track, its Editor is available in the Editor pane. The Drums Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Synth Editors** section of this guide for more information.

Electric Synth

The Electric synthesizer brings the sound of electric pianos to Transfuser. This polyphonic synthesizer can be set to achieve all kinds of tones ranging from mellow and laid back to "forward" and aggressive.

Electric Module:

1. **Pickup Type** – Seamlessly fades between the electro-magnetic and electro-static pickups. The different models create different spectra, especially when the **Distance** parameter is set to small values.
2. **Pickup Distance** – Sets the physical distance between the pickup and the reed / fork that produces the initial sound. Smaller distances will create a richer, brighter and more distorted spectrum.
3. **Attack** – Adjusts the attack of the notes. Values below middle (12:00) position will add a click to the start, similar to some compressors. Values higher than mid position will soften the attack of the notes.
4. **Shape Decay** – Determines how quickly a note fades into silence when it is being held.



Electric Synth Editor:

When you select the Electric Synth module on a Track, its Editor is available in the Editor pane. The Electric Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Synth Editors** section of this guide for more information.

Phrase Synth

The Phrase Synth module takes any imported audio and automatically beat matches it to the current tempo using very sophisticated Time Compression and Expansion algorithms. You can then apply further processing and filtering to the audio within the module and trigger playback using the Phrase Sequencer module.

Phrase Synth Track Module:

1. **Pitch** – Lets you raise or lower the pitch of the audio in the Phrase Synth in semitones.
2. **Fine** – Lets you adjust the fine tuning of the pitch of the audio in the Phrase Synth in cents.



Phrase Synth Editor:

When you select the Phrase Synth module on a Track, its Editor is available in the Editor pane. The Phrase Editor provides more in-depth features than those listed here in the Track Module. Please see the ***Transfuser Synth Editors*** section of this guide for more information.

Slicer Synth

The Slicer Synth module takes any imported audio and slices it up at the transients. Transients are the peaks in the audio waveform. With drum loops, transients are the individual hits on each drum. With a bass or guitar loop, transients occur at the attack of each note or chord played. Once the audio is sliced up, the individual slices can be played back by the Slice Sequencer.

Slicer Synth Track Module:

1. **Pitch** – Lets you raise or lower the pitch of the audio slices in the Slicer Synth in semitones.
2. **Decay** – Lets you adjust the amount of Decay applied to the audio slices. Lower settings result in shorter decays and higher settings result in longer decays for each of the audio slices.
3. **Cutoff** – Lets you adjust the Cutoff frequency of the Filter applied to the audio slices.
4. **Reso** – Lets you adjust the Resonance of the Filter.



Slicer Synth Editor:

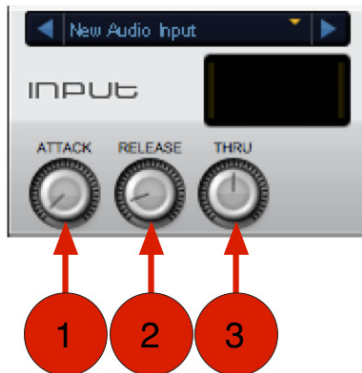
When you select the Slicer Synth module on a Track, its Editor is available in the Editor pane. The Slicer Editor provides more in-depth features than those listed here in the Track Module. Please see the **Transfuser Synth Editors** section of this guide for more information.

Audio Input

The Audio Input Synth module passes audio from the DAW track on which Transfuser is inserted. When Transfuser is inserted on an audio track, it can process any audio played back on that track as well.

Audio Input Synth Track Module:

1. **Attack** – Lets you adjust the Attack time of the envelope for audio input.
2. **Release** – Lets you adjust the Release time of the envelope for audio input.
3. **Thru** – Lets you directly adjust the through level for the audio input.



Audio Input Synth Editor:

When you select the Audio Input Synth module on a Track, its Editor is available in the Editor pane. The Audio Input Editor provides more in-depth features than those listed here in the Track Module. Please see the ***Transfuser Synth Editors*** section of this guide for more information.

Effects Module



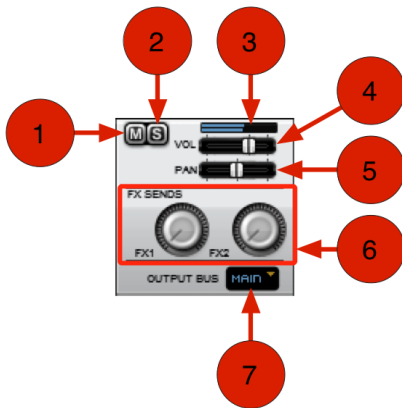
The Effects module provides up to four different effect inserts, parallel or in series, on each Track.

For detailed information on the Effects Editors, see the ***Transfuser Effects Editors*** section.

Mix Module

The Mix module provides Mute, Solo, Volume, and Panning controls for the Track. It also provides two effects sends for additional processing and lets you assign the Track Output Bus. You can select any of the Transfuser Output Buses as the input for audio and Auxiliary tracks in your music-making software for further mixing and processing.

1. **Mute** – Click the Mute button to mute and unmute the Track. When muted, the Mute button is lit.
2. **Solo** – Click the Solo button to solo and un-solo the Track. When soloed, the Solo button is lit. All unsoloed Tracks are automatically muted.
3. **Meters** – The Track Meters show the output level for the Track.
4. **Volume** – The Volume slider lets you increase or decrease the output volume of the Track. Move the slider right to boost the output and left to attenuate the output.
5. **Pan** – The Pan slider lets you adjust the panning of the Track in the stereo field. Move the slider right to pan right and left to pan left.
6. **FX Sends 1 and 2** – The Effect Sends 1 and 2 controls let you send signal from the Track to Send Effects 1 and 2 (in the Master section). Drag the control right (or up) to increase the amount of signal sent to the Effect Send and left (or down) to decrease the amount of signal sent to the Effect Send. Also see *Effects Sends 1 and 2* section of this guide.



7. **Output Bus** – The Output Bus selector lets you select any of the available stereo Transfuser Output Buses.

Important: When working with multiple aux channels, open Transfuser's **Preferences** and set **Optional Aux Outs** to **On**, ensuring those aux channels will still be mixed into the main bus.

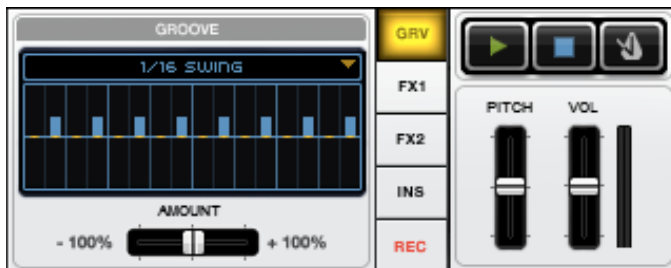
- **Off:** Effectively mutes the Track Output. The Tracks is assigned to no audio Output Bus. However, the signal can still pass through the Effects Sends.
- **Main:** Assigns the Main output of Transfuser.
- **Output Buses 1–8:** Can be selected for discrete mixing in your music software.

Tip: Output Buses 1 and 2 can be used in conjunction with the X-Fade control in the Controller section to cross-fade between different Tracks set to Output Buses 1 and 2 respectively.

- **Cue Output Bus:** Can be used to audition Tracks before switching them to one of the main Output Buses. Set up an Auxiliary Input track in your music software to monitor the Cue Output Bus from Transfuser and route it to the Headphone outputs on your software or audio interface.



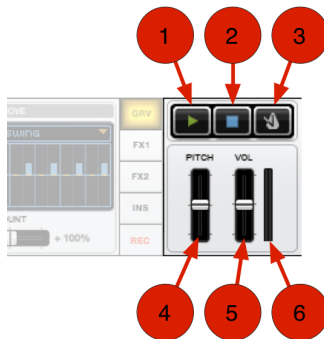
Master Section



The Master section provides access to the Master Groove, Effects Sends 1 and 2, Main Effects Inserts, and Recorder. It also provides controls for the Master Transport and Click, and Pitch and Volume.

Master Transport

1. **Play** – Click the Play button in the Master Transport to start play back in Transfuser whether or not your music software's transport is engaged.
2. **Stop** – Click the Stop button in the Master Transport to stop play back in Transfuser whether or not the your music software's Transport is engaged.
3. **Metronome** – When you want to play or record with the Drum Sequencer on the fly, without any other Transfuser Tracks or the DAW transport running, you can use the Metronome in the Master section to keep the beat. The Transfuser Metronome always synchronizes to your music software's tempo.



To activate the Metronome, click the Metronome button. Click it again to turn off the Metronome.

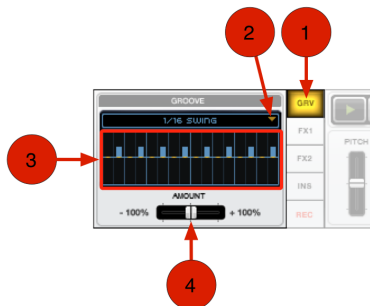
Note: Audio from the Metronome is not recorded in Transfuser. However, it can be recorded to your music software's audio tracks. The level of the click for the Metronome can be set in the Transfuser Preferences. See the **Transfuser Preferences** of this guide to learn more.

4. **Pitch** – The Main Pitch slider lets you transpose the pitch of the main Transfuser audio output. Raise the slider to transpose the pitch up and lower the slider to transpose the pitch down.
5. **Volume** – The Main Volume slider lets you raise or lower the volume for the main Transfuser audio output. Raise the slider to boost the volume and lower the slider to attenuate the volume.
6. **Meters** – The Main Meters show the levels for the main Transfuser audio output.

Master Groove

All of the Transfuser Sequencer modules let you apply varying degrees of "groove" as configured in the Transfuser Master Groove. In Transfuser Sequencers, each step is normally locked to a strict grid. Applying Groove lets you modify the microtiming of each step. Each sequencer can be set locally to use the Master Groove or another local Groove preset.

The Master Groove editor provides 16-step timing adjustment. The Groove matches a single bar in the sequencer module.



1. **GRV button** – This button accesses the Master Groove editor.
2. **Groove Presets** – Lets you select preset Grooves. You can select one of the following:
 - **1/16 Swing**: Applies a sixteenth-note swing pattern.
 - **1/8 Swing**: Applies an eighth-note swing pattern.
 - **1/4 Swing**: Applies a quarter-note swing pattern.
 - **Laid Back**: Applies a laid back groove pattern that is a little bit behind the beat.
 - **Ahead**: Applies a pushing Groove pattern that is a little bit ahead of the beat.
3. **Groove Display** – Adjusts the timing of a step in the Groove. Draw up to adjust the timing after the grid (beat). Draw down to adjust the timing before the grid (beat).
4. **Groove Amount** – Adjusts the amount of groove microtiming available to Tracks and certain effects (such as **Beatcutter** or **Gater**).

Applying Groove in a Sequence

Use the Sequencer Module Groove control to apply the Groove to the sequence pattern. Each sequencer module provides its own Groove control. However, note that though the Thru module provides no controls the Master Groove does pass through it and affects any groove-savvy effects on the Track (such as Beatcutter or Gater).

You can adjust the amount of groove applied to the sequence from the Track module or in the Sequencer Editor.



Effects Sends 1 and 2

Transfuser provides two separate Effects Sends for Tracks. Each Send Effects module provides four effects inserts, which can be routed serially or in parallel. Choose from the same effects that are available in the Effects module (see **Transfuser Effects Editors**).

To access the controls for Send Effects 1 or 2:

- Click either **FX1** or **FX2** to the left of the Master Transport.

To send audio from a Track to Send Effects 1 or 2:

- Adjust the FX1 or FX2 knob in any Track.



Tip: Use the Track Effects Sends for more CPU intensive processing that you want to apply to more than one Track, such as **Reverb** or **Delay**.

Main Effects Inserts



Transfuser also provides effect inserts on the Main Output. Four effects inserts are available, which can be routed serially or in parallel, just like in the Effects module and Send Effects modules. Choose from the same effects that are available in the Effects module (see the *Transfuser Effects Editors* of this guide).

To access the controls for Main Effects Inserts:

- Click **INS** to the left of the Master Transport.

Tip: Use the Main Effects Inserts to process the main audio Output from Transfuser. You might want to use it for dynamics type effects, such as **Compressor** or **Maximizer**.

Recorder



Transfuser provides its own recorder that lets you capture 1, 2, or 4 bar recordings of Transfuser playback from the main Transfuser audio output.

To record in Transfuser:

1. Click **REC** (left of the Master Transport) to show the Recorder pane.
2. Set the **Record Length** to 1, 2, or 4 Bars.
3. Play back Transfuser. Observe the resulting waveform in the Recorder pane.
4. Use the Recorder Transport to stop, play, or record.
5. At any time, drag the waveform in the Recorder window to an existing Transfuser Track Synth module (replacing it) or into the blank area of the Tracks section to create a new Track. You can also drag the file onto your computer's Desktop, Explorer (Windows), or Finder (Mac OS X).
6. The Recorder can keep recording, or you can click **Stop**. After you stop recording, the recorded audio remains available. We recommend letting Transfuser continue to record and simply dragging the waveform you want to export (within one bar's time, before the draggable file changes).

Transfuser Track Automation

Transfuser Track Automation provides a whole other layer of precision control over Transfuser Tracks. Each Track has up to 12 lanes of automation that can be assigned to any control in any module in the Track. Each automation lane provides 32-step sequencing for automation. Steps can be measured in 1/4-note to 1/32-note subdivisions of the beat (including triplets). Each sequence can play straight through, first to last and then repeat, or forward then backward. Also, each can be discretely step-automated or interpolated on a curve (curve automation is good for continuous controls).

To assign a control Track Automation:

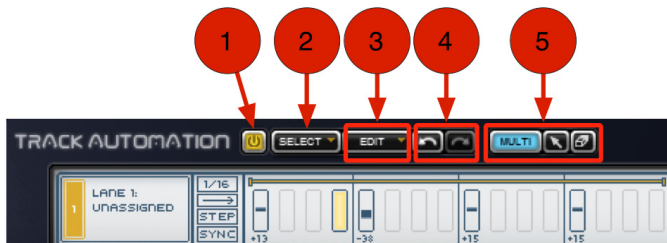
1. Right-click the control you want to assign.
2. From the drop-down menu, choose **Assign Automation Lane** and select the number for the Track Automation Lane you want assigned (1–12).

To unassign a control Track Automation:

1. Right-click the control you want to unassign.
2. From the drop-down menu, select **Unassign Automation Lane**.



Track Automation Controls



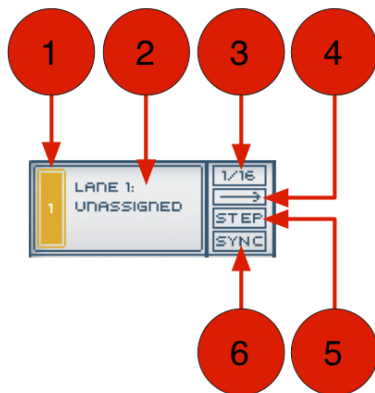
1. **Enable/Disable** – Click this button to enable or disable Track Automation.
2. **Select Menu**
 - **Select All:** Selects all Track automation.
 - **Invert Selection:** Inverts the selection so that what was selected is unselected and what wasn't selected is now selected.
 - **Deselect:** Clears the current selection.
3. **Edit Menu**
 - **Revert Automation to Initial State:** Lets you revert the Track automation to its initial state (which will be the state of Track automation the last time you saved your session).
 - **Event/Selection Edit:** The Event/Selection Edit commands only apply to existing automation. If you haven't drawn in any automation in a selection, these commands won't do anything.
 - **Set All Steps to Default:** Sets all steps in the selection to their default setting of 0.
 - **Randomize Step Values:** Randomizes the values for all steps in the selection.

- **Increase Dynamic Range:** Increases the value (in the positive or negative direction) of all steps in the selection proportionally.
 - **Decrease Dynamic Range:** Decreases the value (in the positive or negative direction) of all steps in the selection proportionally.
 - **Create Crescendo:** Sets all steps in the selection to a ramp shape, progressively increasing from the initial event value of -100 to a final event value of +100.
 - **Create Decrescendo:** Sets all steps in the selection to a ramp shape, progressively decreasing from the initial event value of +100 to a final event value of -100.
4. **Undo/Redo** – These buttons can be used to undo or redo the changes that have been made to the Track Automation area.
5. **Edit Tools**
- **Pencil Tool:** Use the Pencil tool to draw and edit Transfuser Track Automation events. The Pencil tool is a "smart tool" that lets you:
 - Draw automation events and adjust their values when the cursor shows the pencil.
 - Set or add a selection when the cursor shows the arrow.
 - Move or copy events when the cursor shows the hand.
 - Set the Loop Range for each Automation Lane when the cursor shows the horizontal arrows.
 - **Selector Tool:** Use the Selector tool to make selections in the Track Automation Editor. Selected events can be edited using the Event/Selection Edit commands.
 - **Eraser Tool:** Use the Eraser tool to delete individual events or all events in a selection.

Track Automation Lane Controls

Each Track Automation Lanes provides controls for determining how the Track automation plays back.

1. **Enable/Disable** – Enables or disables the Track Automation Lane. When enabled, the button is illuminated.
2. **Lane Assignment** – Displays the name of the control to which the Track Automation Lane is assigned. You can Right-click the Lane Assignment and select Unassign to unassign the Track Automation Lane. You can also Right-click the Lane Assignment and select Target to view the module containing the assigned control in the Editor pane.
3. **Rate** – Sets the rate (as a subdivision of the beat) at which Track Automation events will play.
4. **Direction** – Sets the playback direction for the Track Automation Lane. Click to toggle between Forward (→) and Forward/Backward (<→).
5. **Step/Curve** – Toggles between Step and Curve. When set to Step, the Track Automation Lane sends discrete control values for each event. When set to Curve, the Track Automation Lane sends continuous control data, interpolating between the values for each event.
6. **Sync** – Toggles track automation synchronize on and off. When this feature is switched on, the track automation lane is synchronized with the start of the sequencer's pattern (so each repetition of the pattern will have identical automation).



Automation Events

Automation Events change the setting of targeted controls by the specified percentage (plus or minus) at that step in time. Automation Events can be created and editing using the Track Automation Edit Tools. Additionally, you can edit Automation Events within a selection using commands in the Edit menu.

To create an Automation Event:

1. Select the Pencil tool.
2. Click a Step in an Automation Lane where you want to create an event. Drag up or down to set the value of the event.

To change the value for an Automation Event:

- With the Pencil tool, drag up or down to increase or decrease the value of the event.

Note: Alt-click (Windows) or Option-click (Mac OS X) an event to set its value to 0. Hold down the Shift key and drag up or down to adjust the values for all events in the Automation Lane.

To delete an Automation Event, do one of the following:

- With the Pencil tool, single-click the event you want to delete.
- With the Eraser tool, click the event you want to delete. You can also click a selection to delete all events within the selection.

Editing Selected Automation Events

Selected events can be moved or copied, and the values for selected events can be changed simultaneously. Commands from the Edit menu apply to selected events.

To select Automation Events:

1. Select the Selector tool.
2. Drag across one or more Automation Events on one or more Automation Lanes.

Note: Shift-click to extend or contract the selection.

To clear the selection:

- With the Selector tool, double-click in the selection.

To move selected events:

1. With the Selector tool, make the selection you want.
2. Select the Pencil tool.
3. Move the cursor over near the top of the selection. The cursor changes to a hand.
4. Drag the selection from the current location to the location to where you want to move the selected events.

Configuring Automation Lanes

Once you have assigned an Automation Lane to a control in Transfuser, you will want to configure automation for that control.

To configure automation for a control:

1. Click the Track module. The Track Automation editor appears in the Editor pane.



2. Assign Lane 1 to the Slicer Cutoff filter by right-clicking the **Cutoff** control and select **Assign To Automation Lane > 1**.
3. In the Track Automation Editor, change the automation from steps to a curve. Click **Step** to change it to Curve. This provides a continuous change between the specified automation settings.
4. Decide if you want the rate of change (each step) to remain at the default setting of 1/16th notes, or if you want another rate. To change the rate, click **1/16** and select the new rate from the drop-down menu.



5. Also, decide if you want the automation to start from the beginning, play to the end, and then repeat—or if you want it to repeat playing forward then backward. Click the arrow to toggle between the two.
6. Now you are ready to draw in the automation. Click the Pencil tool to draw the automation.
7. Click in the first step where you want to draw automation. Drag up or down to increase or decrease the value. The range is from -100% to +100% of the current setting of the assigned control.

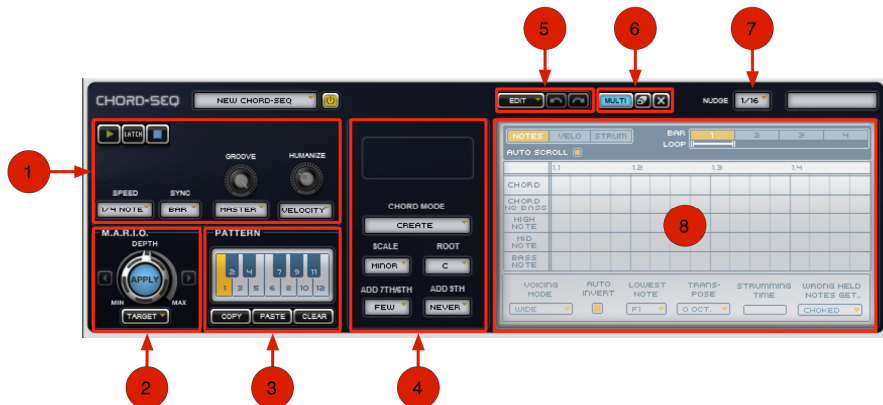


The control value offset due to Track Automation is displayed in the assigned control's yellow corona. This shows the actual deviation from the controls original value and its current absolute state.

8. Draw in any other automation.
9. Adjust the duration of the automation loop by clicking and dragging the beginning or ending of Loop Range indicator left or right. Different Automation Lanes can have different durations.
10. Be sure to enable the Track Automation Lane by clicking its number. The number is highlighted when automation is enabled. Otherwise, any automation on that lane has no effect.
11. Play back the Transfuser Track to hear what you have done so far.
12. Go ahead assign other Automation Lanes to other controls and explore what you can do. Also explore some of the "automatic" automation tools in the **Edit** drop-down menu (such as **Randomize Step Values**, **Create Crescendo**, and **Create Decrescendo**). Note that these only apply to any currently drawn automation events.

Transfuser Sequencer Editors

Chord Sequencer



Chord-Seq Pane:

1. Sequencer Controls

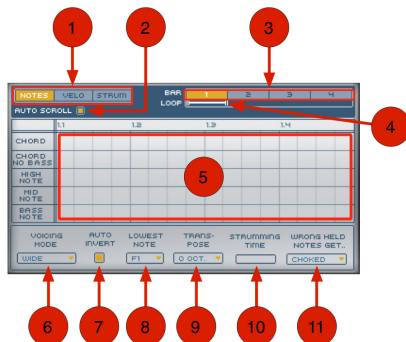
- Transport Controls:** These controls are used to start and stop the Sequencer. When Latch mode is engaged, the Sequencer continues to play until the Stop button is pressed.
- Speed:** Adjusts the playback speed of the Sequencer as a ratio of the host's master tempo.

- **Sync:** Selects the Sequencer's playback position when triggered in relation to the host's timeline or other Transfuser Tracks. Use **Bar** for performing and playing around in Transfuser. Use **Beat** or **1/16** for arranging songs in your host's timeline. Select **Off** to turn off automatic synchronization.
 - **Groove:** The drop-down menu selects the Groove Micro timing of the Sequencer. You can use the Transfuser Master Groove or another local Groove option. The knob above the menu sets the amount of groove, from **0** to **100%**.
 - **Humanize:** This feature adds random variations to velocity and micro-timing to make for more dynamic-sounding sequences. Use the knob to set the amount of Humanization (higher values give more variation). The drop-down menu determines whether Humanize will apply to the velocity, timing, or both velocity and timing.
2. **M.A.R.I.O.** – M.A.R.I.O. (Musical Advanced Random Intelligent Operations) is a musical randomization algorithm that lets you create variations of your Sequencer patterns by clicking a single button. M.A.R.I.O. is described in detail in the ***Working with M.A.R.I.O.*** section of this guide.
 3. **Pattern Controls** – The Pattern section lets you create and recall up to 12 different Sequencer patterns. Click the numbered keys to select a pattern (the selected pattern is highlighted in yellow). You can copy, paste, or clear patterns using the buttons below the pattern selector buttons.
 4. **Chord Seq Controls**
 - **Chord Mode:** Sets the behavior of the Sequencer. Choose **Detect** to have Chord Seq detect a chord you play on your MIDI keyboard. Use **Create** to press just single keys on your keyboard and let Chord Seq create a chord matching the selected scale. Use **Detect/Correct** to play the chord yourself on the keyboard and let the Sequencer detect and correct it to the closest chord matching the selected scale.

- **Scale:** Sets the scale type used to create the chord that is played. This menu is only available when Chord Mode is set to **Create** or **Detect/Correct**.
- **Root:** Sets the scale root used to create the chord that is played. This menu is only available when Chord Mode is set to **Create** or **Detect/Correct**.
- **Add 7th/6th:** When Chord Mode is set to **Create**, this drop-down menu determines the frequency with which 7th or 6th chords are created.
- **Add 9th:** When Chord Mode is set to **Create**, this drop-down menu determines the frequency with which 9th chords are created.

Note: You can force all Tracks and Track Previews to follow your sequencer's scale by switching on **Sequencer Scale Link** in Transfuser's **Preferences**.

5. **Edit Controls** – This drop-down menu provides commands that can be applied to the whole pattern or currently displayed bar. The arrow keys can be used to undo and redo edits that have been made.
6. **Tools** – These tools let you create, edit, delete, and select patterns and options contained in the display area. The new **Multi** tool lets you make many kinds of edits without having to change tools. To find out more about this tool, please see the section titled ***The Multi Tool*** in this guide.
7. **Nudge** – This drop-down menu determines the minimum subdivision of the beat for notes in the display below. The selected option provides the rhythmic "grid" for creating and moving notes. Select one of the available divisions or choose **Off** if you would like to edit without a grid.
8. **Display** – You can create and edit Sequencer patterns here. This area is described in detail in the next section of this guide.

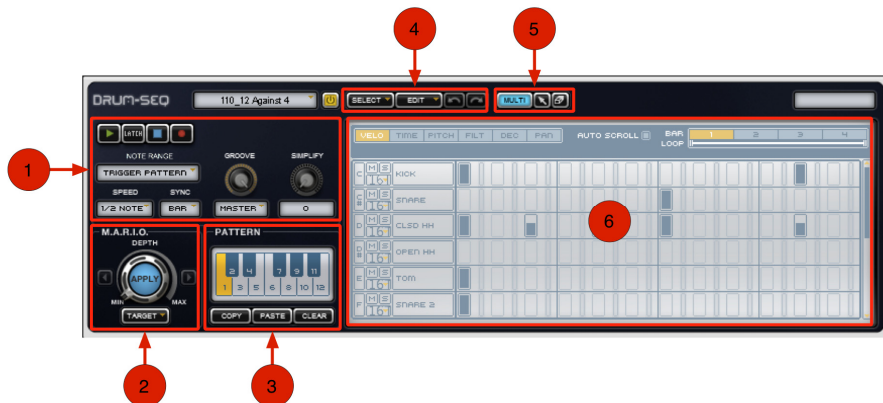


Chord-Seq Display:

1. **Edit Control** – These buttons select what parameter of a strum event you would like to edit. You can choose **Notes**, **Velo** (velocities), or **Strum**.
2. **Auto Scroll** – If you have zoomed in, the editor may only display part of the pattern. If this is the case, the pattern editor view automatically scrolls to the current playback position when the Auto Scroll option is enabled.
3. **Pattern Indicator** – This bar displays the four bars of the Sequencer.
4. **Loop Range Selector** – This selector shows the start point, stop point, and loop length of the sequence. You can drag the left or right loop handle to change pattern's loop length, or drag the center of the bar to change the start/stop points. When a loop is playing, a moving icon shows the current playback position.
5. **Pattern Editor** – Here you can enter, edit, or delete the strum events that will be played by the sequence. The Edit Control buttons select what parameter of the event you would like to edit.

6. **Voicing Mode** – Defines the voicing algorithm that selects the notes that form the chord. Depending on the mode, this could be up to 8 notes through several octaves, just a few close together, only octaves, or just 2 or 3 for more simple sequences.
7. **Auto Invert** – When switched on, the Sequencer is allowed to play inverted chords, which is useful to avoid "parallel shifts." If left off, all chords are played with no inversions.
8. **Lowest Note** – Defines the lowest note the Sequencer is allowed to use when voicing a chord. If an inversion / octave of a chord would normally use notes below this selection, a different inversion or octave will be used.
9. **Transpose** – Transposes the entire Sequencer in octaves.
10. **Strumming Time** – Defines the time it takes to play a strummed event from the first to the last note. The middle of this range results in guitar-like strumming. Smaller values result in a more electronic "tech-y" sound, whereas larger values result in more arpeggiated events.
11. **Wrong Held Notes Get...** – Determines what happens if wrong notes are played. If the current chord changes but some notes of the old chord are still sustained, the old notes can be **Kept** (this leads to smoother, legato-like playback, with possible disharmonics), **Choked** (no disharmonics will appear, but the sequence may sound interrupted), or **Retuned** (smoother playback and no disharmonics, but the results may sound unnatural).

Drum Sequencer Editor

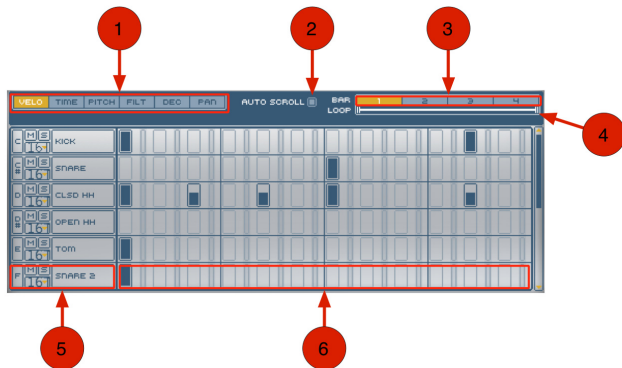


Drum-Seq Editor:

1. Drum-Seq Controls

- **Transport:** These controls are used to start and stop the Sequencer. When Latch mode is engaged, the Sequencer continues to play until the Stop button is pressed. Use the Record button if you would prefer to play a sequence using your MIDI keyboard instead of entering it in with a mouse.
- **Note Range:** The Note Range setting determines how the Sequencer plays back the corresponding Synth module on the Track.
- **Speed:** Adjusts the playback speed of the Sequencer as a ratio of the host's master tempo.

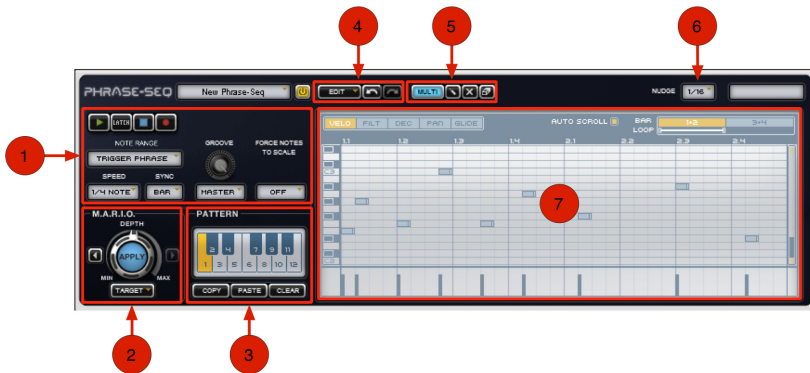
- **Sync:** Selects the Sequencer's playback position when triggered in relation to the host's timeline or other Transfuser Tracks. Use **Bar** for performing and playing around in Transfuser. Use **Beat** or **1/16** for arranging songs in your host's timeline. Select **Off** to turn off automatic synchronization.
 - **Groove:** The drop-down menu selects the Groove Micro timing of the Sequencer. You can use the Transfuser Master Groove or another local Groove option. The knob above the menu sets the amount of groove, from 0 to 100%.
 - **Simplify:** Gradually simplifies any Drum Pattern by thinning out the number of notes playing. Thinned-out (muted) notes are grayed out in the Sequencer.
2. **M.A.R.I.O. Controls** – M.A.R.I.O. (Musical Advanced Random Intelligent Operations) is a musical randomization algorithm that lets you create variations of your Sequencer patterns by clicking a single button. M.A.R.I.O. is described in detail in the ***Working with M.A.R.I.O.*** section of this guide.
 3. **Pattern Controls** – The Pattern section lets you create and recall up to 12 different Sequencer Patterns. Click the numbered keys to select a pattern (the selected pattern is highlighted in yellow). You can copy, paste, or clear patterns using the buttons below the pattern selector buttons.
 4. **Edit Controls** – This drop-down menu provides commands that can be applied to the whole pattern or currently displayed bar. The arrow keys can be used to undo and redo edits that have been made.
 5. **Tools** – These tools let you create, edit, delete and select patterns and options contained in the display area. The new Multi tool lets you make many kinds of edits without having to change tools. To find out more, please see ***The Multi Tool*** section of this guide.
 6. **Display** – You can create and edit Sequencer patterns here. This area is described in detail in the next section of this guide.



Drum-Seq Display:

1. **Editor Pages** – These buttons select what note data is displayed at the bottom of the display. You can choose **Velo** (velocity), **Time**, **Pitch**, **Flt** (filter), **Dec** (decay), and **Pan**.
2. **Auto Scroll** – If you have zoomed in, the editor may only display part of the pattern. If this is the case, the pattern editor view automatically scrolls to the current playback position when the Auto Scroll option is enabled.
3. **Pattern Indicator** – This bar displays the four bars of the Sequencer.
4. **Loop Range Selector** – This selector shows the start point, stop point, and loop length of the sequence. You can drag the left or right loop handle to change pattern's loop length, or drag the center of the bar to change the start/stop points. When a loop is playing, a moving icon shows the current playback position.
5. **Channel Controls** – Here you can control the parameters of a specific lane. For example, you solo or mute a lane or set the resolution of each step. The name and note value is also listed here.
6. **Pattern Editor** – Here you can enter, edit, or delete the notes that will be played by the sequence. This is done by simply clicking and dragging any of the on-screen boxes.

Phrase Sequencer Editor

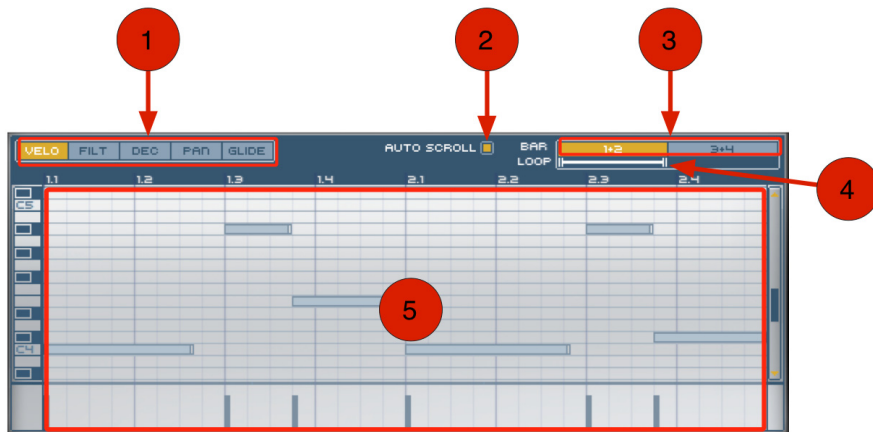


Phrase-Seq Editor:

1. Phrase-Seq Controls

- **Transport:** These controls are used to start and stop the Sequencer. When Latch mode is engaged, the Sequencer continues to play until the Stop button is pressed. Use the Record button if you would prefer to play a sequence using your MIDI keyboard instead of entering it in with a mouse.
- **Note Range:** The Note Range setting determines how the Sequencer plays back the corresponding Synth module on the Track.
- **Speed:** Adjusts the playback speed of the Sequencer as a ratio of the host's master tempo.
- **Sync:** Selects the Sequencer's playback position when triggered in relation to the host's timeline or other Transfuser Tracks. Use **Bar** for performing and playing around in Transfuser. Use **Beat** or **1/16** for arranging songs in your host's timeline. Select **Off** to turn off automatic synchronization.

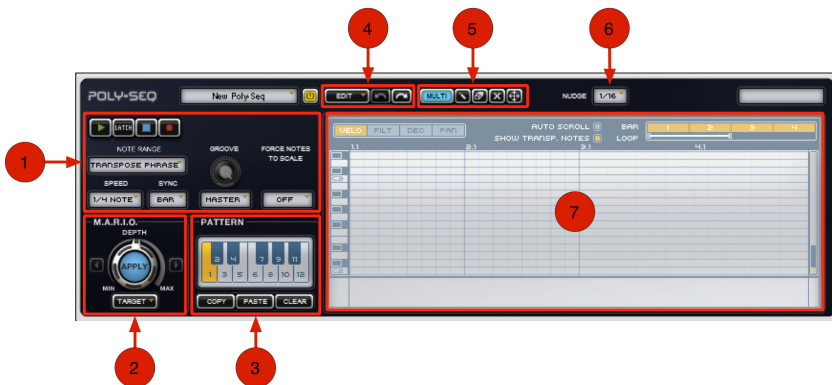
- **Groove:** The drop-down menu selects the Groove Micro timing of the Sequencer. You can use the Transfuser Master Groove or another local Groove option. The knob above the menu sets the amount of groove, from 0 to 100%.
 - **Force Notes to Scale:** Selecting any of the scales in this drop-down menu restricts the MIDI notes allowed in the Phrase Pattern. This assures that any notes in the Sequence Pattern will be limited to a single diatonic scale.
2. **M.A.R.I.O. Controls** – M.A.R.I.O. (Musical Advanced Random Intelligent Operations) is a musical randomization algorithm that lets you create variations of your Sequencer patterns by clicking a single button. M.A.R.I.O. is described in detail in the ***Working with M.A.R.I.O.*** section of this guide.
 3. **Pattern Controls** – The Pattern section lets you create and recall up to 12 different Sequencer Patterns. Click the numbered keys to select a pattern (the selected pattern is highlighted in yellow). You can copy, paste, or clear patterns using the buttons below the pattern selector buttons.
 4. **Edit Controls** – This drop-down menu provides commands that can be applied to the whole pattern or currently displayed bar. The arrow keys can be used to undo and redo edits that have been made.
 5. **Tools** – These tools let you create, edit, delete and select patterns and options contained in the display area. The new Multi tool lets you make many kinds of edits without having to change tools. To find out more about this tool, please see the section titled ***The Multi Tool*** in this guide.
 6. **Nudge** – This drop-down menu determines the minimum subdivision of the beat for notes in the display below. The selected option provides the rhythmic "grid" for creating and moving notes. Select one of the available divisions or choose **Off** if you would like to edit without a grid.
 7. **Display** – You can create and edit Sequencer patterns here. This area is described in detail in the next section of this guide.



Phrase-Seq Display:

1. **Editor Pages** – These buttons select what note data is displayed at the bottom of the display. You can choose **Velo** (velocity), **Filt** (filter), **Dec** (decay), **Pan**, **Glide**.
2. **Auto Scroll** – If you have zoomed in, the editor may only display part of the pattern. If this is the case, the pattern editor view automatically scrolls to the current playback position when the Auto Scroll option is enabled.
3. **Pattern Indicator** – This bar displays the four bars of the Sequencer.
4. **Loop Range Selector** – This selector shows the start point, stop point, and loop length of the sequence. You can drag the left or right loop handle to change pattern's loop length, or drag the center of the bar to change the start/stop points. When a loop is playing, a moving icon shows the current position of the playback.
5. **Pattern Editor** – Here you can enter, edit, or delete the notes that will be played by the sequence. This is done by simply clicking and dragging any of the on-screen boxes.

Poly-Seq Sequencer

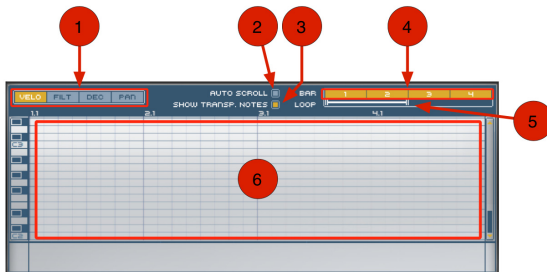


Poly-Seq Editor:

1. Poly-Seq Controls

- **Transport:** These controls are used to start and stop the Sequencer. When Latch mode is engaged, the Sequencer continues to play until the Stop button is pressed. Use the Record button if you would prefer to play a sequence using your MIDI keyboard instead of entering it in with a mouse.
- **Note Range:** The Note Range setting determines how the Sequencer plays back the corresponding Synth module on the Track.
- **Speed:** Adjusts the playback speed of the Sequencer as a ratio of the host's master tempo.
- **Sync:** Selects the Sequencer's playback position when triggered in relation to the host's timeline or other Transfuser Tracks. Use **Bar** for performing and playing around in Transfuser. Use **Beat** or **1/16** for arranging songs in your host's timeline. Select **Off** to turn off automatic synchronization.

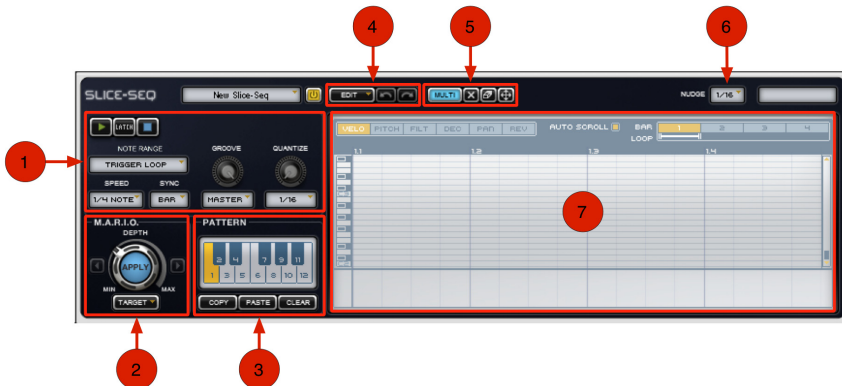
- **Groove:** The drop-down menu selects the Groove Micro timing of the Sequencer. You can use the Transfuser Master Groove or another local Groove option. The knob above the menu sets the amount of groove, from 0 to 100%.
 - **Force Notes to Scale:** Selecting any of the scales in this drop-down menu restricts the MIDI notes allowed in the Phrase Pattern. This assures that any notes in the Sequence Pattern will be limited to a single diatonic scale.
2. **M.A.R.I.O. Controls** – M.A.R.I.O. (Musical Advanced Random Intelligent Operations) is a musical randomization algorithm that lets you create variations of your Sequencer patterns by clicking a single button. M.A.R.I.O. is described in detail in the ***Working with M.A.R.I.O.*** section of this guide.
 3. **Pattern Controls** – The Pattern section lets you create and recall up to 12 different Sequencer Patterns. Click the numbered keys to select a pattern (the selected pattern is highlighted in yellow). You can copy, paste, or clear patterns using the buttons below the pattern selector buttons.
 4. **Edit Controls** – This drop-down menu provides commands that can be applied to the whole pattern or currently displayed bar. The arrow keys can be used to undo and redo edits that have been made.
 5. **Tools** – These tools let you create, edit, delete and select patterns and options contained in the display area. The new Multi tool lets you make many kinds of edits without having to change tools. To learn more, please see ***The Multi Tool*** section of this guide.
 6. **Nudge** – This drop-down menu determines the minimum subdivision of the beat for notes in the display below. The selected option provides the rhythmic "grid" for creating and moving notes. Select one of the available divisions or choose **Off** if you would like to edit without a grid.
 7. **Display** – You can create and edit Sequencer patterns here. This area is described in detail in the next section of this guide.



Poly-Seq Display:

1. **Editor Pages** – These buttons select what note data is displayed at the bottom of the display. You can choose **Velo** (velocity), **Flt** (filter), **Dec** (decay), and **Pan**.
2. **Auto Scroll** – If you have zoomed in, the editor may only display part of the pattern. If this is the case, the pattern editor view automatically scrolls to the current playback position when the Auto Scroll option is enabled.
3. **Show Transposed Notes** – When switched on, the editor shows the notes at their current transposition with non-editable transparent events.
4. **Pattern Indicator** – This bar displays the four bars of the Sequencer.
5. **Loop Range Selector** – This selector shows the start point, stop point, and loop length of the sequence. You can drag the left or right loop handle to change pattern's loop length, or drag the center of the bar to change the start/stop points. When a loop is playing, a moving icon shows the current playback position.
6. **Pattern Editor** – Here you can enter, edit, or delete the notes that will be played by the sequence.

Slice Sequencer Editor

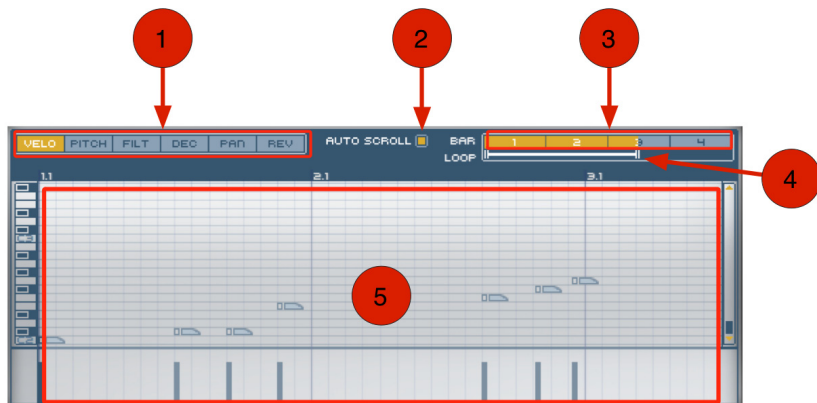


Slice-Seq Editor:

1. Slice-Seq Controls

- **Transport:** These controls are used to start and stop the Sequencer. When Latch mode is engaged, the Sequencer continues to play until the Stop button is pressed.
- **Note Range:** The Note Range setting determines how the Sequencer plays back the corresponding Synth module on the Track.
- **Speed:** Adjusts the playback speed of the Sequencer as a ratio of the host's master tempo.
- **Sync:** Selects the Sequencer's playback position when triggered in relation to the host's timeline or other Transfuser Tracks. Use **Bar** for performing and playing around in Transfuser. Use **Beat** or **1/16** for arranging songs in your host's timeline. Select **Off** to turn off automatic synchronization.

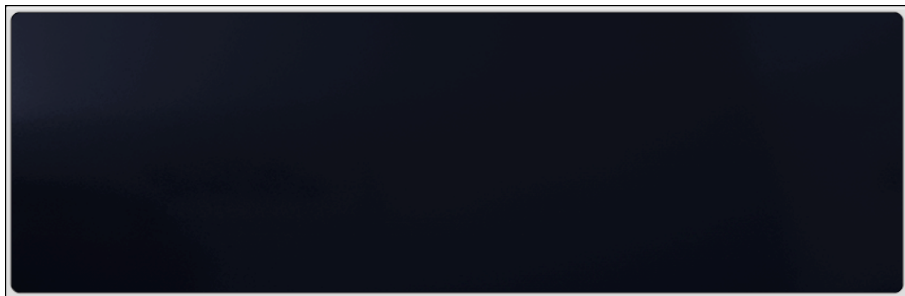
- **Groove:** The drop-down menu selects the Groove Micro timing of the Sequencer. You can use the Transfuser Master Groove or another local Groove option. The knob above the menu sets the amount of groove, from 0 to 100%.
 - **Quantize:** The drop-down menu selects how the slice events will be quantized while the knob determines the "strength" of the quantization.
2. **M.A.R.I.O. Controls** – M.A.R.I.O. (Musical Advanced Random Intelligent Operations) is a musical randomization algorithm that lets you create variations of your Sequencer patterns by clicking a single button. M.A.R.I.O. is described in detail in the ***Working with M.A.R.I.O.*** section of this guide.
 3. **Pattern Controls** – The Pattern section lets you create and recall up to 12 different Sequencer Patterns. Click the numbered keys to select a pattern (the selected pattern is highlighted in yellow). You can copy, paste, or clear patterns using the buttons below the pattern selector buttons.
 4. **Edit Controls** – This drop-down menu provides commands that can be applied to the whole pattern or currently displayed bar. The arrow keys can be used to undo and redo edits that have been made.
 5. **Tools** – These tools let you create, edit, delete and select patterns and options contained in the display area. The new Multi tool lets you make many kinds of edits without having to change tools. To find out more about this tool, please see ***The Multi Tool*** section in this guide.
 6. **Nudge** – This drop-down menu determines the minimum subdivision of the beat for notes in the display below. The selected option provides the rhythmic "grid" for creating and moving notes. Select one of the available divisions or choose **Off** if you would like to edit without a grid.
 7. **Display** – You can create and edit Sequencer patterns here. This area is described in detail in the next section of this guide.



Slice-Seq Display:

1. **Editor Pages** – These buttons select what note data is displayed below. You can choose **Velo** (velocity), **Pitch**, **Filt** (filter), **Dec** (decay), **Pan**, and **Rev** (reverse).
2. **Auto Scroll** – If you have zoomed in, the editor may only display part of the pattern. If this is the case, the pattern editor view automatically scrolls to the current playback position when the Auto Scroll option is enabled.
3. **Pattern Indicator** – This bar displays the four bars of the Sequencer.
4. **Loop Range Selector** – This selector shows the start point, stop point, and loop length of the sequence. You can drag the left or right loop handle to change pattern's loop length, or drag the center of the bar to change the start/stop points. When a loop is playing, a moving icon shows the current position of the playback.
5. **Pattern Editor** – Here you can enter, edit, or delete the slices that will be played.

Thru Sequencer Editor



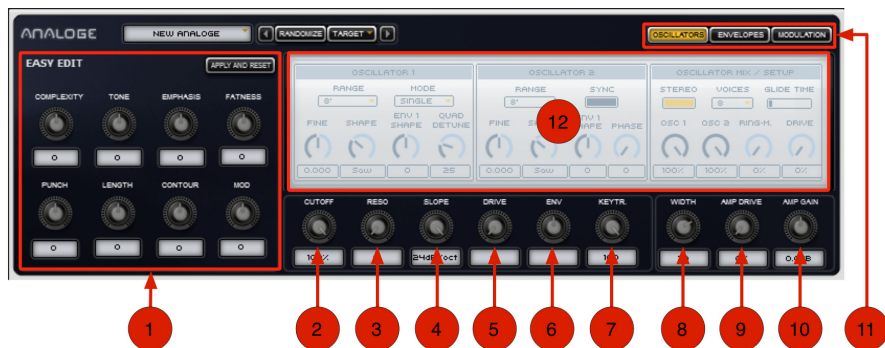
The Thru Sequencer passes MIDI information on to your chosen Transfuser synthesizer. Since it simply passes information along, its Editor has no controls.

Transfuser Synth Editors

Transfuser provides seven different types of Synth modules:

1. **Analog:** Brings polyphonic analog-modeling technology to Transfuser. This powerful polyphonic synthesizer has everything you need to get classic "old-school" analog sounds as well as cutting-edge modern sounds.
2. **Audio Input:** Passes audio from disk or the audio input of the track on which Transfuser is inserted. This lets you process audio tracks directly in Transfuser without having to import it.
3. **Bass:** Provides a monophonic bass-line synthesizer. Using the Phrase Sequencer, you can play the Bass Synth with 1-4 bar bass-line sequences, or using the Thru Sequencer you can play bass directly from your music software.
4. **Drums:** Converts imported audio to individual drum samples mapped to a sophisticated 12-pad drum sampler. Using the Drum Sequencer or MIDI input, the Drums Synth module can play back simple to very intricate drum patterns.
5. **Electric Synth:** The Electric synthesizer brings the sound of electric pianos to Transfuser. This polyphonic synthesizer can be set to achieve all kinds of tones ranging from mellow and laid back to "forward" and aggressive.
6. **Phrase:** Converts imported audio to beat-matched audio using very sophisticated time compression and expansion (TCE) algorithms. Using the Phrase Sequencer or MIDI input, you can play back the Phrase Synth module at different transpositions, times, and durations.
7. **Slicer:** Converts imported audio into individual "slices" based on a sophisticated, automatic transient-detection algorithm. It automatically chops up your audio into individual events that can be played back in any order, and with all kinds of processing, by the Slice Sequencer module or MIDI input.

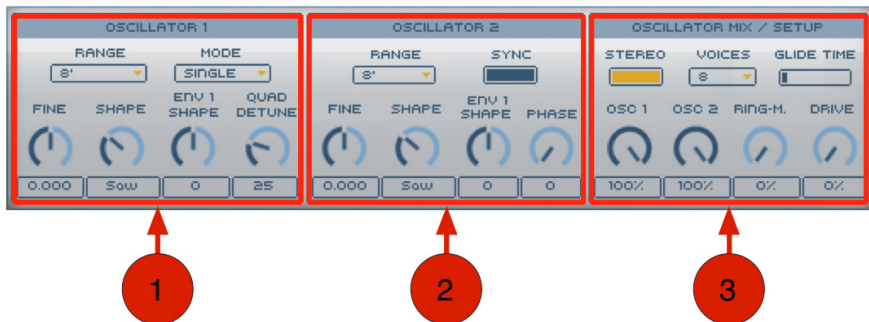
Analoge Synthesizer



Analogue (Main Page):

1. **Easy Edit Controls** – The Easy Edit section automatically connects itself to appropriate controls of the synthesizer. This means that turning one Easy knob will cause several of the controls to change simultaneously. For example, if you turn the Length knob, a variety of settings will change in order to modify the length of your sound.
 - o **Edit Knobs:** Each of these eight knobs modifies a specific dimension of your sound by changing a variety of parameters
 - o **Apply and Reset:** All Easy Edit settings made will be written into the relevant Analogue parameters and the Easy edit knobs will be set to their defaults. You can then continue using the Easy Edit controls for even more modification if desired.
2. **Cutoff** – Sets the low-pass filter's resonance
3. **Resonance** – Sets the low-pass filter resonance.

4. **Slope** – Seamlessly increases the filter steepness ("slope") from 0db/oct. to 24db/oct.
5. **Drive** – Sets the amount of distortion applied in the filter section.
6. **Envelope** – Sets the amount that Envelope 2 modulating the cutoff frequency.
7. **Keytrack** – Sets the amount that cutoff frequency is affected by the pitch of the notes played. For higher values, the filter will be more open when playing higher keys.
8. **Width** – Adjusts the stereo width of the Transfuser output. A range of 50-80% results in the most natural sound.
Note: If the sound created is mono, the width parameter has no effect. To change a mono sound into stereo, switch on **Stereo** in the oscillator section.
9. **Amp Drive** – Adds distortion at the output amplifier stage of Analoge.
10. **Amp Gain** – Controls the output level of the Analoge module.
11. **Display Selector** – Selects which set of controls will be shown in the **Display** area.
12. **Display** – This section can display Oscillator, Envelope, or Modulation controls. The Display Selector buttons located above the display determine what is shown.



Analoge – Oscillators page:

1. Oscillator 1 Section:

- **Range:** Sets the octave range of Oscillator 1. When set to **Wide**, the oscillator's pitch is adjustable through its entire range using the **Fine** Knob.
- **Mode:** Lets you select what kind of oscillator you'd like to use. Select **Single** for a normal oscillator with one waveform. Select **Quad** for four independent oscillators creating four detuned waveforms.
- **Fine:** Sets the fine tuning of Oscillator 1.
- **Shape:** Seamlessly fades between Triangle, Saw, Rectangle and Pulse waveforms.
- **Env 1 Shape:** Sets the amount that Envelope 1 affects the Shape parameter.
- **Quad Detune:** Sets the amount of detuning for the oscillators in Quad mode.

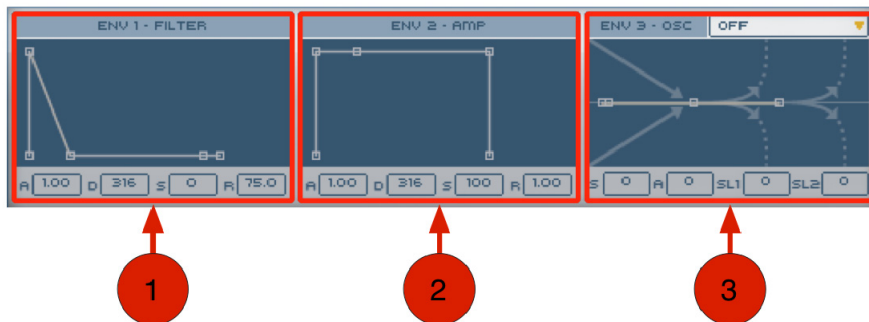
Note: Quad Detune only has an effect when Oscillator 1 Mode is set to **Quad**.

2. Oscillator 2 Section:

- **Range:** Sets the octave range of Oscillator 1. When set to **Wide**, the oscillator's pitch is adjustable through its entire range using the **Fine** Knob.
- **Sync:** When set to **On**, the second oscillator's phase is reset each time oscillator 1 has finished playing a wave cycle.
- **Fine:** Sets the fine tuning of Oscillator 1.
- **Shape:** Seamlessly fades between Noise, Saw, Rectangle and Pulse waveforms.
- **Env 1 Shape:** Sets the amount that Envelope 1 affects the Shape parameter.
- **Phase:** Sets the start phase of Oscillator 2. This parameter affects the attack phase of the sound.

3. Oscillator Mix / Setup Section:

- **Stereo:** When switched **On**, each voice is doubled to form a wide stereo sound. The width can be adjusted using the **Width** knob.
- **Voices:** Sets maximum number of simultaneous voices playable. High values will sound better for some sequences but will also increase the CPU load.
- **Glide Time:** If the Voices parameter is set to **Mono**, this parameter defines the time it takes for a new key to reach its new pitch.
- **Osc 1:** Sets the level of Oscillator 1.
- **Osc 2:** Sets the level of Oscillator 2.
- **Ring-M:** Sets the amount of ring-modulation between Oscillators 1 and 2.
- **Drive:** Sets the amount of distortion applied in the Oscillator Mix section.



Analogue – Envelopes page:

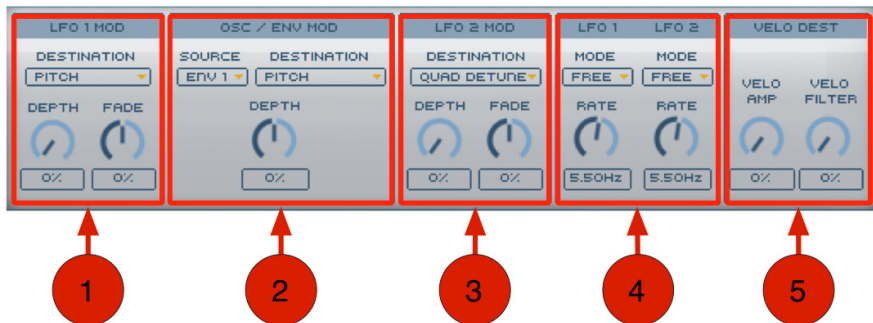
1. Env 1 – Filter Section:

- **A:** Sets the Attack time of Envelope 1.
- **D:** Sets the Decay time of Envelope 1.
- **S:** Sets the Sustain time of Envelope 1.
- **R:** Sets the Release time of Envelope 1.

2. Env 2 – Amp Section:

- **A:** Sets the Attack time of Envelope 2.
- **D:** Sets the Decay time of Envelope 2.
- **S:** Sets the Sustain time of Envelope 2.
- **R:** Sets the Release time of Envelope 2.

3. **Env 3 – Amp Section:** This is a unique type of Envelope that can be used to achieve sounds that are not possible with standard ADSR envelopes. The controls are as follows:
- **Target:** This drop-down menu selects the target parameter for Envelope 3.
 - **S, A, SL1, SL2 settings:** The envelope signal begins at the **S** (Start) position. It then travels to middle position (no effect) with the speed set by the **A** (Attack) value. While the note is held, the level is increased or decreased at a constant speed determined by the **SL1** (Slope1) value. After you release a note, the envelope begins to move to the value set by the **SL2** (Slope2) parameter.



Analogue – Modulation page:

1. LFO 1 Mod Section:

- **Destination:** Selects what parameter will be modulated.
- **Depth:** Sets the amount that LFO 1 modulates the destination parameter.
- **Fade:** Sets the Fade In or Fade Out time of LFO 1. In the center (12:00) position, the modulation depth will not change over time. Turn to the left for a faster modulation fade-out. Turn to the right for slower modulation fade-in.

Tip: A typical use for the **Fade** knob would be to keep the attack of a note unaffected by an LFO modulation.

2. Osc / Env Mod Section:

- **Source:** Selects the modulation source signal.
- **Destination:** Sets the target parameter of the modulation.
- **Depth:** Sets the amount of modulation applied to the target parameter.

3. LFO 2 Mod Section:

- **Destination:** Selects what parameter will be modulated.
- **Depth:** Sets the amount that LFO 2 modulates the destination parameter.
- **Fade:** Sets the Fade In or Fade Out time of LFO 1. In the center (12:00) position, the modulation depth will not change over time. Turn to the left for a faster modulation fade-out. Turn to the right for slower modulation fade-in.

Tip: A typical use for the **Fade** knob would be to keep the attack of a note unaffected by an LFO modulation.

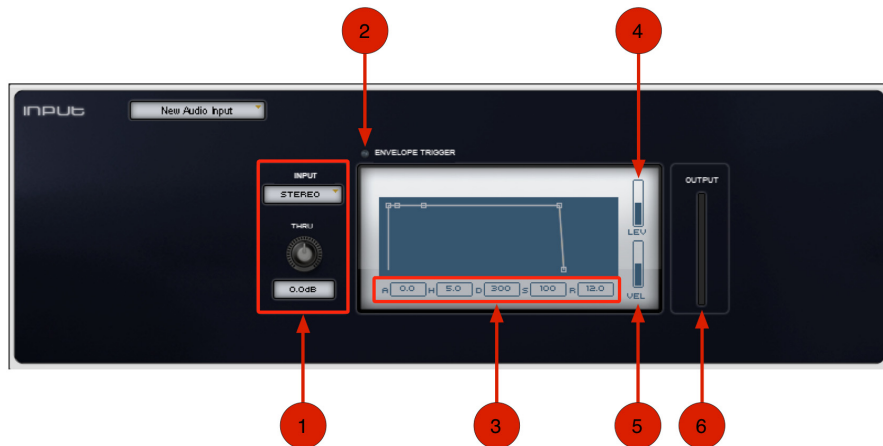
4. LFO 1-2 Section: This section has identical controls for LFO1 and LFO2.

- **Mode:** Determines the synchronization of each LFO. When set to **Free**, the rate and phase of the LFO will be unsynchronized to the host tempo and song position. When set to **Sync**, the LFO will be synchronized to both host tempo and song position. When set to **Drift**, the LFO will randomly vary its rate.
- **Rate:** Sets the speed of each LFO. When mode is set to **Sync**, the rate is displayed in beats or bars. Otherwise, the rate is displayed in Hertz (Hz).

5. Velo Dest:

- **Velo Amp:** Sets the amount that the velocity of a note affects its volume.
- **Velo Filter:** Sets how much the velocity of a note affects the cutoff frequency of the filter.

Audio Input Editor



1. **Input** – The Input setting lets you select any of the following options for audio input:
 - **Stereo:** Passes the stereo signal from the audio track.
 - **Left:** Passes only signal from the left channel of a stereo track.
 - **Right:** Passes only signal from the right channel of a stereo track.
 - **Noise:** Generates white noise. This is useful for testing the Input Synth, and any sequence that might be triggering it, in the absence of an audio input.
 - **Thru:** The Thru control lets you adjust the audio throughput regardless of the Envelope Trigger. Increase or decrease the amount of audio Thru by clicking and dragging the control right or left (or up or down). The range for the Thru control is from $-\infty$ to +12.0 dB.

2. **Envelope Trigger Indicator** – Illuminates when a MIDI note is received.
3. **Envelope Controls** – When you send a MIDI note to the Input Synth module, it opens the gate to pass audio from the selected Input. The Envelope Trigger provides an amplitude envelope for passing audio when triggered by MIDI.
 - **Attack:** Lets you set the duration of the Attack portion of the Envelope.
 - **Hold:** Lets you set the duration of the Hold portion of the Envelope.
 - **Decay:** Lets you set the duration of the Decay portion of the Envelope.
 - **Sustain:** Lets you set the level of the Sustain portion of the Envelope between 0 and 100%.
 - **Release:** Lets you set the duration of the Release portion of the Envelope.
4. **Level** – The Level control lets you adjust the master volume for playback from the Input Synth module. Drag up to increase or drag down to decrease the output level for Input Synth.
5. **Velocity** – The Velocity control lets you adjust how much incoming MIDI velocities affect the Envelope Trigger of the Input Synth module.
6. **Output Meter** – The Output meter displays the audio output level as it passes through the Input Synth module.

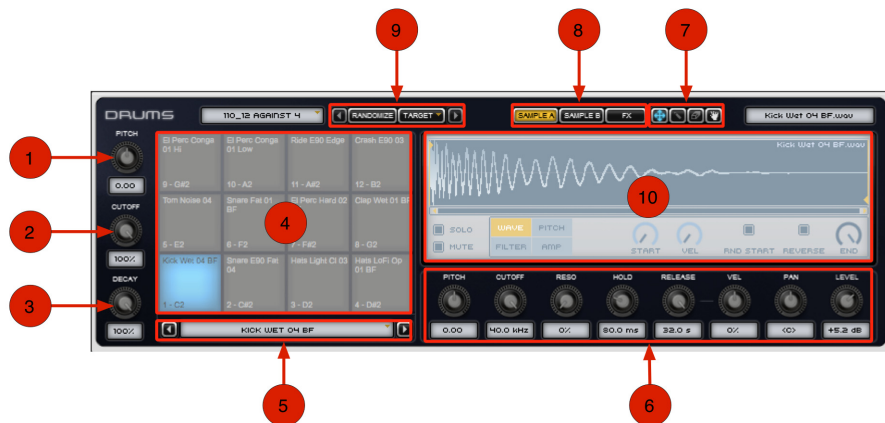
Bass Synth Editor



1. **Oscillator Section:** Bass provides an adjustable single Oscillator for monophonic MIDI playback.
 - **Wave:** Lets you change the waveform shape from Octave-Saws to a Saw (center position) to a Square wave.
 - **Sub-Octave:** Lets you adjust the level of a square wave that is one octave below the Oscillator frequency.
 - **Glide:** Lets you increase or decrease the Glide time between notes (from 10 ms to 2.00 seconds) when played legato, or when played with a Phrase Sequencer using the Glide settings for each Note Event.

2. **Filter Section:** Bass provides an 18 dB/octave resonant low-pass filter after the Oscillator with adjustable Cutoff frequency and Resonance.
 - **Cutoff:** Lets you adjust the Cutoff frequency for the Filter.
 - **Reso:** Lets you adjust the Resonance (or "Q") of the Filter.
3. **Envelope Section:** Provides an envelope to shape the attack and decay of a note.
 - **Invert:** When enabled, this option inverts the envelope. Enable this option for softer, "squishier" attacks. The Decay control will function more like an Attack control in an ADSR-type envelope—the attack will ramp up to the sustain level of the signal.
 - **Env Mod:** Determines the amount of envelope modulation of the Filter Cutoff. At 0%, the envelope has no effect on the signal.
 - **Decay:** Determines the length of the decay after the initial attack (note on). At 0%, the signal drops to silence right after the attack. At 100%, the signal decays over a period of time after the attack.
4. **Accent Section:** The Accent controls affect the Filter according to the velocity played. When playing with higher velocities, the Accent effect is more pronounced. The Accent effect is most noticeable with higher Resonance settings.
 - **Decay:** Adjusts the Envelope Decay when an accented note is triggered. When set to 100%, the accent is quite pronounced. At -100%, the Accent is much more muted.
 - **Level:** Determines how much the Accent affects the amplitude at note on.
5. **Distortion Section:** Use Distortion to color the audio signal with distortion.
 - **Bright:** When enabled, the Bright option provides a bright, clean distortion.
 - **Drive:** Lets you increase the amount of drive (input volume) of the signal.
 - **Level:** Controls the output Level of the Distortion.
6. **Randomize Controls** – These controls let you quickly randomize your Bass Synth settings in a musical fashion. Please see the **Synthesizer Randomization** section of this guide to learn more about this feature.

Drums Synth Editor



1. **Pitch** – The Pitch control lets you raise or lower the pitch of the Drums in semitones and cents. The Pitch control is also available in the Drums Synth Track module.
2. **Cutoff** – The Cutoff control lets you adjust the Cutoff frequency of the Filter applied to the Drums. The Cutoff control is also available in the Drums Synth Track module.
3. **Decay** – The Decay control lets you adjust the amount of Decay applied to the Drums. Lower settings result in shorter decays and higher settings result in longer decays for each of the Drum Samples. The Decay control is also available in the Drums Synth Track module.

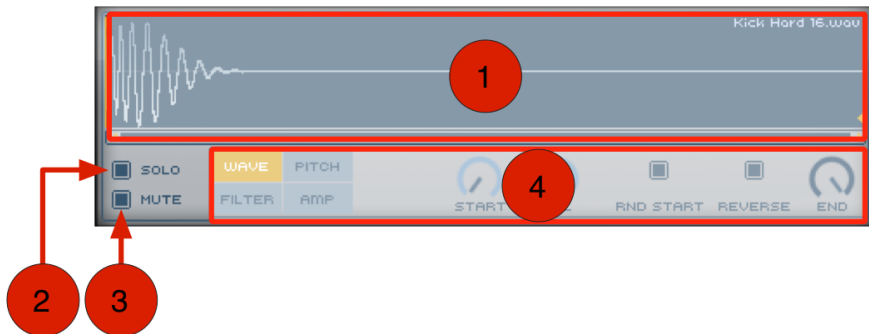
4. **Drum Pads** – Each of the 12 Drum Pads lets you load factory or custom samples for playback by the Drum Sequencer.

Click a Pad to select it. Clicking a Pad also triggers the Drum Sample (if one is loaded). The Pad lights when selected. The Pads also light when played by the Drum Sequencer Pattern or MIDI.

5. **Drum Pad Menu** – This menu lets you load any of the existing samples onto a drum pad. You can also clear the sample content on a pad.
6. **Sample Controls** – The Sample controls apply equally to both Samples A and B for the selected Drum Pad. Each Sample for each Pad provides its own set of controls for the following:
- **Pitch:** Adjust to transpose the pitch of the selected Drum Pad samples up or down.
 - **Cutoff:** Adjust to increase or decrease the Cutoff Frequency for the selected Drum Pad samples.
 - **Resonance:** Adjust to increase or decrease the amount of Resonance for the Cutoff Frequency for the selected Drum Pad samples.
 - **Hold:** Adjust to increase or decrease the duration of Hold for the selected Drum Pad samples.
 - **Release:** Adjust to increase or decrease the duration of the Release for the selected Drum Pad samples.
 - **Velocity:** Adjust to increase or decrease how much MIDI velocity affects release time of the selected Drum Pad Samples.
 - **Pan:** Adjust to pan the audio output of the selected Drum Pad Samples left or right in the stereo field.
 - **Level:** Adjust to increase (boost) or decrease (attenuate) the amount of gain for the selected Drum Pad Samples.

7. Edit Tools

- **Zoom and Scroll:** Lets you adjust the horizontal zoom of the Waveform display. Click in the Waveform display and drag down to zoom in or drag up to zoom out, dragging left and right to scroll.
 - **Pencil:** Lets you draw control breakpoints in the Pitch, Filter, and Amp Page views. The Pencil tool is not available in the Wave Page view.
 - **Eraser:** Lets you delete control breakpoints in the Pitch, Filter, and Amp Page views. The Eraser tool is not available in the Wave Page view.
 - **Grabber:** Lets you drag and drop the waveform to another Transfuser module, the host Edit window, or your desktop.
8. **Sample Parameter Pages** – These buttons determine what is shown on the Drum Sequencer Display. The Drum Synthesizer can trigger up to two "layers" of samples on each Drum Pad. Click **Sample A** or **Sample B** to view Layer 1 and Layer 2, respectively. The Drum Synthesizer also has an effects section that can be viewed by clicking the **FX** button.
9. **Randomize Controls** – These controls let you quickly randomize your Drum Synth settings in a musical fashion. Please see the **Synthesizer Randomization** section of this guide to learn more about this feature.
10. **Display** – This area shows parameters relating Sample A (Layer 1), Sample B (Layer 2), or the Drum Synth effects area. Use the Sample Parameter Pages to select what is shown.

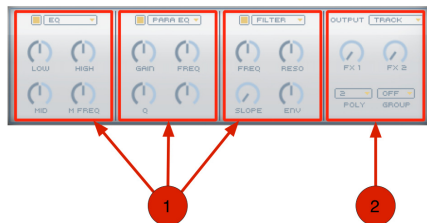


Drum Synth Display – Sample A/B Page

1. **Display** – Shows the waveform of the sound that is loaded on your selected pad.
2. **Solo** – Use this button to solo the current sample (layer).
3. **Mute** – Use this button to mute the current sample (layer).
4. **Page Selector** – The Drum Synth display has four different pages that can be displayed (Wave, Pitch, Filter, and Amp). Use the buttons at the left to display what is shown. The knobs and buttons at the right of this area will change depending on what is selected. The on-screen tool-tips will explain the function of each knob or button.

Drum Synth Display – FX Page

1. **FX Modules** – Each drum pad can be routed through up to three "insert" effects. These three slots are where you assign those effects that you would like to use. Select the effect using the drop-down menu at the top. The labeling of the four knobs below the drop-down menu will change depending on what effect you choose. You can use the illuminated on/off switch to enable or disable any of the effects.



2. FX Master Section

- **Output:** Lets you set the audio output to the track (through the track insert effects) or directly to any Output Bus. Setting different Drum Pads to different Output Buses lets you mix and process individual Drum Pads on separate host tracks.
- **FX 1/2:** Lets you send signal from the Drum Pad audio output to Effect Send 2.
- **Poly:** Lets you set the polyphony for the selected Drum Pad from 1 to 8 voices. If a Drum Pad is likely to be frequently re-triggered before the end of the sample has been reached, use a higher setting to keep consecutive Drum Samples from being cut off. Higher settings are definitely better for sounds like ride cymbal samples that should overlap rather than cutting each other off.
- **Group:** Lets you assign the selected Drum Pad to one of four possible Groups (A-D). Select **Off** to leave the Drum Pad unassigned to a Group. Pads in the same Group cut off the sound of other pads in the same group. For example, assign open and closed hi-hat samples to the same group so that they cut each other off.



1. Pickup Controls

- **On/Off:** Turns on the Pickup section of the synthesizer. This is the main sound-generating section, where the physical modeling happens.
- **Type:** Seamlessly fades between the electro-magnetic and electro-static pickups. The different models create different spectra, especially when the **Distance** parameter is set to small values.
- **Distance:** Sets the physical distance between the pickup and the reed / fork that produces the initial sound. Smaller distances will create a richer, brighter, and more distorted spectrum.
- **Height:** Adjusts the physical height of the pickup in relation to the position of the reed / fork producing the sound. Different heights will create different spectra, with a different character of distortion.

- **Key-Tone:** Sets the amount that tone is affected when playing keys of higher and lower pitch. At higher values, the distortion/brightness of the spectrum is reduced when playing high notes.
- **Vel-Tone:** Sets the amount that tone is affected by velocity. For high values, high velocities will result in a brighter tone with more distortion.
- **Vel-Level:** Sets the amount that volume is affected by velocity. For high values, high velocities will result in a greater volume of the notes.

2. Shape Controls

- **Attack:** Adjusts the attack of the notes. Values below the middle (12:00) position will add a click to the start, similar to some compressors. Values greater than middle position will soften the attack of the notes.
- **Vel-At:** Determines how much the Attack parameter is affected by note velocity. For high values, notes with low velocities will sound soft, while for high velocities the sound will have a hard attack at start.
- **Peak Length:** Sets the length of the hard extra click created using smaller values of the **Attack** parameter. If **Attack** is greater than the middle position, this parameter has no effect.
- **Release:** Determines how quickly a note fades into silence once it is released.
- **Decay:** Determines how quickly a note fades into silence when it is being held.
- **Key-Decay:** Sets the amount that decay is affected by the pitch of the notes played. When this parameter is set to high values, higher keys will have a shorter decay while lower keys have a longer decay.

3. Bell Controls

- **On/Off:** Switches the Bell section of the synthesizer on and off. This section adds a second tone to the Pickup section and is often used to add a bell-like attack to the sound. It can also be used to add unnatural harmonics.
- **Tune:** Sets a semitone offset of the bell tone relative to the note being played.

- **Key-Tune:** Determines the amount that the bell tuning is affected when playing keys of higher or lower pitch. Setting this knob to **100%** will produce a sound that is completely in tune. For other values, the bell will be disharmonic, metallic, and/or bell-like.
- **Key-Level:** Sets the amount that the bell volume is affected when playing keys of higher and lower pitch. The default setting is the middle (12:00) position. For values greater than the middle position, the bell for higher notes will become quieter. For values lower than middle position, the bell for lower notes will become quieter.
- **Decay:** Defines how quickly the bell fades into silence. Use small values for typical electric piano tines.
- **Dry/Pickup:** Seamlessly adjusts the amount of bell added before or after the pickup. Adding it after the pickup gives more natural sounds and is the correct emulation of an electric piano. Other settings can result in unnatural but very interesting sounds.
- **Mix:** Overall volume of the bell part.

4. Noise Controls

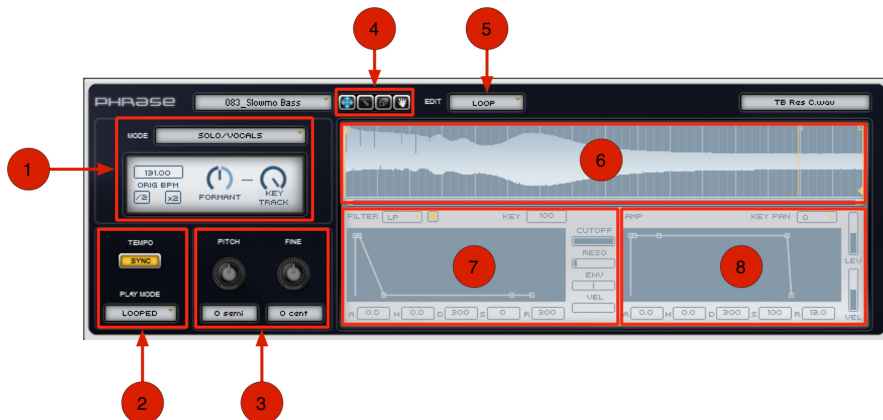
- **On/Off:** Activates the Noise section of the synthesizer. The Noise section can be used to add various sonic "colors" to the start of a sound.
- **Color:** Sets the character of noise. Higher values will result in a brighter noise.
- **Key-Color:** Determines how the noise color is affected when playing high and low keys. When set to high values, the noise is brighter at higher notes.
- **Random:** Determines the amount of volume randomization of the noise. For high values, there is higher variation in noise after subsequent key strikes.
- **Attack:** Adjusts how hard or soft the noise is at the start of a note.
- **Decay:** Defines how quickly the noise fades into silence.
- **Mix:** Volume of the Noise section.

5. Trem Controls

- **On/Off:** Switches the tremolo effect on and off.
- **Pan:** When this parameter is switched **On**, the tremolo effect also controls the panning of the sound. If switched **Off**, panning remains unaffected.
- **Sync:** When this parameter is switched **On**, the tremolo speed is synchronized to the host application's tempo, providing a predictable and rhythmical effect. When the parameter is switched **Off**, the tremolo effect runs freely and is not synchronized to the host application.
- **Depth:** Sets the intensity of the tremolo effect.
- **Rate:** Sets the speed of the tremolo effect.

6. **Randomize Controls** – These controls let you quickly randomize your Electric Synth settings in a musical fashion. Please see the ***Synthesizer Randomization*** section of this guide to learn more about this feature.

Phrase Synth Editor



1. **Mode Controls** – The Mode setting determines how Transfuser analyzes and processes audio for beat-matching (time compression and expansion). Select from the following options:
 - **Solo/Vocal:** Select this option for monophonic vocal or solo instrumental material, such as a flute.
 - **Mix/Chords:** Select this option for polyphonic harmonic material, such as a guitar chords, piano comping, or even full mixes.
 - **Drum/Perc:** Select this option for non-pitched rhythmic material, such as drum loops.

- **Vocodize:** Select this option for vocoding-type time compression and expansion where the pitch of the audio is forced to match the MIDI notes you play. Vocodize works best on solo material, otherwise the pitch mapping can be obscured.
- **Lo-Fi:** Select this option for low-fidelity re-sampling for "grainy"-sounding time compression and expansion. Lo-Fi uses granular synthesis for TCE.
- **Sampler:** Select this option to simply play back the audio without time compression and expansion processing.

7. **Tempo Controls** – The Tempo section lets you synchronize the audio with your music software's tempo and set whether or not the audio plays once through or loops.

- **Sync:** When Sync is enabled, the Phrase Synth module synchronizes (beat-matches) to the session tempo. When disabled, a continuously variable Speed control becomes available in place of the Original BPM settings.
- **Speed:** When Sync is disabled, the Speed control becomes available in place of the Original BPM settings. Increase or decrease the Speed control to change the rate at which the Phrase Synth plays through the loaded audio file.
- **Play Mode:** The Play Mode setting determines whether or not the Phrase Synth loops the loaded audio on playback.
 - **One Shot:** Plays once through the audio loaded into the Phrase Synth without looping.
 - **Looped:** Plays through the audio loaded into the Phrase Synth and loops playback according to the loop markers set in the Waveform view.

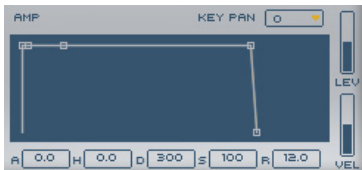
8. **Pitch Controls** – Let you edit the pitch of your selected sample:
- **Pitch:** Lets you raise or lower the pitch of the Phrase sample in semitones. The Pitch control is also available in the Phrase Synth Track module.
 - **Fine:** Lets you raise or lower the pitch of the Phrase sample in cents. The Fine control is also available in the Phrase Synth Track module.
9. **Edit Tools**
- **Zoom and Scroll:** Lets you adjust the horizontal zoom of the Waveform display. Click in the Waveform display and drag down to zoom in or drag up to zoom out, dragging left and right to scroll.
 - **Pencil:** Lets you draw control breakpoints in the Level and Pan Page views. The Pencil tool is not available in the Loop Page view.
 - **Eraser:** Lets you delete control breakpoints in the Level and Pan Page views. The Eraser tool is not available in the Loop Page view.
 - **Grabber:** Lets you drag and drop the waveform to another Transfuser module, the host Edit window, or your desktop.
10. **Edit Mode Selector** – This drop-down menu lets you select what parameter you will be editing in the waveform editor below. You can edit **Loop**, **Level**, or **Pan** settings for your phrase.
11. **Waveform Display** – This area displays your waveform overlayed with Loop, Level, or Pan settings (as selected in the Edit Mode Selector).

12. **Filter** – The Filter controls are available regardless of which Edit view is selected.



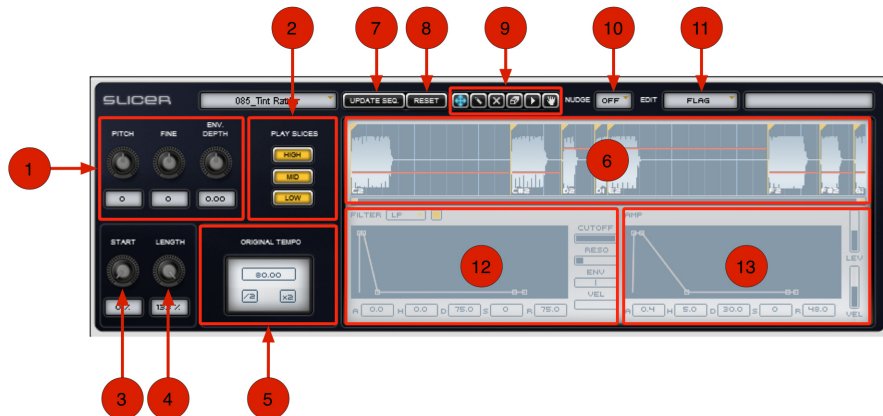
- **Filter:** Lets you select the type of filter you'd like to use. Choose from **LP** (Low-Pass), **BP** (Band-Pass), **HP** (High-Pass), and **EQ** (Equalizer).
- **Enable:** This button (located to the left of the Filter menu) lets you enable or bypass the Filter. It is illuminated when the filter is active.
- **Envelope:** The Slicer Synth Editor provides a five-point envelope for the Filter: **A** (Attack), **H** (Hold), **D** (Decay), **S** (Sustain), and **R** (Release).
- **Key:** The Key setting lets you adjust how much the filter cutoff tracks the keyboard (MIDI notes) from **0%** (no tracking) to **100%** (one octave per octave). Keyboard tracking is most useful for synth sounds, like synth lead or bass.
- **Cutoff:** Drag left to decrease and right to increase the Cutoff Frequency.
- **Envelope Depth:** Drag left to decrease and right to increase how much the Filter Envelope affects the Filter Cutoff.
- **Velocity:** The Velocity control lets you set how much MIDI velocity affects the Filter Envelope.

13. **Amp** – The Slicer Synth Editor provides a five-point Amplitude envelope.



- **Envelope:** The Slicer Synth Editor provides a five-point envelope for the Filter: **A** (Attack), **H** (Hold), **D** (Decay), **S** (Sustain), and **R** (Release).
- **Key Pan:** The Key Pan setting determines how much the output is automatically panned as you play across the keyboard. As well as varying depths, random and alternating left-right settings are available.
- **Level:** The Level control lets you adjust the master volume for playback from the Slicer Synth module. Drag up to increase and drag down to decrease the playback level for Slicer Synth.
- **Velocity:** The Velocity control lets you adjust how much incoming MIDI velocities affect the output level of the Slicer Synth module.

Slicer Synth Editor



The Slicer Synth module is a sample-based synthesizer that can be played back by the Slice Sequencer module. When you select the Slicer Synth module on a Track, its Editor is available in the Editor pane. When you import audio into a Slicer Synth, it automatically sets slice markers at transient peaks in the audio. Each slice can be played back individually or in any order. You can even reverse and process individual slices. The Slicer Synth Editor provides a Waveform view editor for setting the location of the slices. You can also change the Pitch, Cutoff, and Filter and Amplitude Envelopes for the loaded audio.

1. Pitch Controls

- **Pitch:** Lets you raise or lower the pitch of slices in semitones. The Pitch control is also available in the Slicer Synth Track module.
- **Fine:** The Fine control lets you raise or lower the pitch of slices in cents.
- **Envelope Depth:** Adjust the Envelope Depth control to change how much the Filter and Amplitude Envelopes affect the individual slices.

2. **Play Slices** – The Play Slices options pass certain slices by frequency band (**High**, **Mid**, **Low**) when enabled and filter out certain slices by frequency band when disabled. The Play Slices options are enabled when lit.
 - **High:** When disabled, filters out high-range slices (like high-hat sounds).
 - **Mid:** When disabled, filters out mid-range frequency slices (like snare drum or guitar chord sounds).
 - **Low:** When disabled, filters out low-range slices (like kick drum or bass sounds).
3. **Start** – Adjust the Start control to set where playback starts in each individual slice. This setting is measured as a percentage of the total duration of the slice. Higher settings will start playback after the initial attack portion of the slice.
4. **Length** – Adjust the Length control to increase or decrease the total length of each individual slice. Lower settings cut off the release portion of the slice for a detached or even staccato-like effect. Higher settings allow slices to overlap slightly for an elided, legato-like effect. This can also help fill in gaps when playback is slower than the original tempo.
5. **Original Tempo** – The Original Tempo setting represents the analyzed original tempo of the imported audio file. You can also enter a different BPM value than the analyzed value for the audio file, if necessary (for example, if the audio doesn't have a clearly defined pulse).

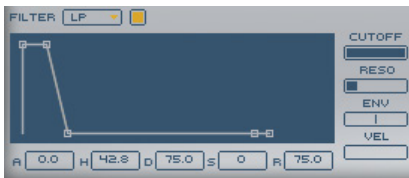
Sometimes, the analyzed Original Tempo setting can be off by a factor of two. To correct this, click one of the following:

- **/2:** If the currently analyzed Original Tempo is twice the actual tempo, click this option.
- **x2:** If the currently analyzed Original Tempo is half of the actual tempo, click this option.

6. **Waveform Display** – The Slicer Synth Editor lets you edit the slice points for the loaded audio against a Waveform display. The Slicer Synth Editor lets you edit the Level and Frequency Range Flag (**High**, **Mid**, or **Low**) for each slice against the Waveform display. Additionally, you can adjust the Filter and Amplitude Envelopes for the loaded audio.
7. **Update Seq** – The Update Sequence button is only available after there have been changes to the number or location of slice markers. If you have made any changes to the number or location of slice markers, click this button so that the Slice Sequencer module can accurately play the Slice Synth module.
8. **Reset** – Click the Reset button to reset any and all changes to the Slicer Synth to the original slice analysis (in terms of slice marker locations, slice levels, and High, Mid, and Low frequency band identification).
9. **Edit Tools**
 - **Zoom:** Adjusts the horizontal zoom of the Waveform display. Click in the Waveform display and drag down to zoom in or drag up to zoom out.

The Zoom tool for the Slicer Synth Editor also lets you relocate slice markers, adjust the Level for individual slices, and Flag individual slices as being in the High, Mid, or Low range for slice playback (see **Play Slices** section).
 - **Pencil:** Creates new slice markers in any Edit view (Slice, Level, or Flag).
 - **Eraser:** Deletes slice markers in any Edit view (Slice, Level, or Flag).
 - **Play:** Lets you play a single slice.
 - **Grabber:** Lets you drag samples from Slicer to any other Synth module.
10. **Nudge** – The Nudge setting determines the rhythmic grid for slice markers. When creating or moving slice markers, they will snap to the selected grid (if any).

11. **Edit Menu** – The Edit menu lets you select which parameters are available for editing against the Waveform display.
- **Slice:** Shows the individual slice markers against the Waveform display. For more information, see the ***Slicer Synth: Working with Slices*** section.
 - **Level:** Shows the individual slices, each with an independent level control.
 - **Flag:** Shows the individual slices, each with a High-, Mid-, or Low-Range Flag. These Flags indicate the detected (or user-defined) frequency range of the slice. Disable any of the Play Slices options to filter out any slices flagged in that frequency range.
12. **Filter** – The Filter controls are available regardless of which Edit view is selected.



- **Filter:** Lets you select the type of filter you'd like to use. Choose from **LP** (Low-Pass), **BP** (Band-Pass), **HP** (High-Pass), and **EQ** (Equalizer).
- **Enable:** This button (located to the left of the Filter menu) lets you enable or bypass the Filter. It is illuminated when the filter is active.
- **Envelope:** The Slicer Synth Editor provides a five-point envelope for the Filter: **A** (Attack), **H** (Hold), **D** (Decay), **S** (Sustain), and **R** (Release).
- **Cutoff:** Drag left to decrease and right to increase the Cutoff Frequency.
- **Envelope Depth:** Drag left to decrease and right to increase how much the Filter Envelope affects the Filter Cutoff.
- **Velocity:** The Velocity control lets you set how much MIDI velocity affects the Filter Envelope.

13. **Amp** – The Slicer Synth Editor provides a five-point Amplitude envelope.



- **Envelope:** The Slicer Synth Editor provides a five-point envelope for the Filter: **A** (Attack), **H** (Hold), **D** (Decay), **S** (Sustain), and **R** (Release).
- **Level:** The Level control lets you adjust the master volume for playback from the Slicer Synth module. Drag up to increase and drag down to decrease the playback level for Slicer Synth.
- **Velocity:** The Velocity control lets you adjust how much incoming MIDI velocities affect the output level of the Slicer Synth module.

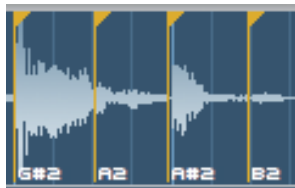
To increase (or decrease) the Level for a Slice:

1. Select **Level** view from the Edit Menu.
2. With the Zoom tool selected, click a slice level control and drag up (or down).

To change a Flag:

1. Select **Flag** view from the Edit Menu.
2. With the Zoom tool selected, click the Range Flag for a slice and drag up or down to change its setting to **High**, **Middle**, or **Low**.

Slicer Synth: Working with Slices



Slice markers indicate the start time for playback of individual slices of audio. Each slice is assigned a unique MIDI note for individual slice playback (from the Slice Sequencer or from MIDI). You can add, delete, mute, and play individual slices in any Edit view.

To move a Slice marker:

1. Select **Slice** view.
2. With the Zoom tool selected, click the Flag at the top of the slice marker and drag it left (earlier) or right (later).

You can zoom in on the Waveform for more accurate marker placement.

When moving a slice marker, it will snap to the selected grid if Nudge is set to anything other than **Off**.

To add a Slice, do one of the following:

- With the Pencil tool selected, click on the Waveform display where you want to add a new slice marker.
- With the Zoom tool selected, double-click on the Waveform display where you want to add a new slice marker.

Note: When adding a slice marker, it will snap to the selected grid if Nudge is set to anything other than **Off**.

To mute a slice:

- With the Mute tool selected, click the slice you want to mute. The slice grays out.

To delete a slice marker, do one of the following:

- With the Eraser tool selected, click the slice for the marker you want to delete.
- With the Zoom tool selected, double-click the slice marker you want to delete.

Note: The preceding slice now includes the audio of the deleted slice marker. You cannot delete the first slice.

To play (audition) an individual slice:

- With the Play tool selected, click the slice for the marker you want to audition.

Tip: You can audition individual slices to find one you might want to use for a Drum Pad in a Drums Synth module.

To drag an audio slice from the Slicer Synth to a Drum Pad in a Drums Synth:

1. With the Grabber tool selected, click the slice you want and drag it to a Drums Synth module in the Tracks pane.
2. When the Drums Synth Editor appears in the Editor pane, drop the slice on the Drum Pad you want.

Transfuser Effect Editors

Transfuser has 21 different Effect modules that can be used to modify your sounds. This chapter describes the controls for each Effect.

Inserting Effects

The Track Effects modules, Send Effects 1 and 2, and Main Effects Inserts all provide the same number of Effects Inserts and controls—each provides four Effects Inserts.

To insert an effect:

- From the Effects Insert drop-down menu, choose Load and select the effect you want.



To remove an effect:

- From the Effects Insert drop-down menu, choose Remove.

To move an effect:

- Drag the Effect from one Effects Insert to another.

To copy and paste an Effects module from one Track to another:

- Drag the Effects module from one Track to another.

To cut or copy an effect from one Insert and paste it to another Insert:

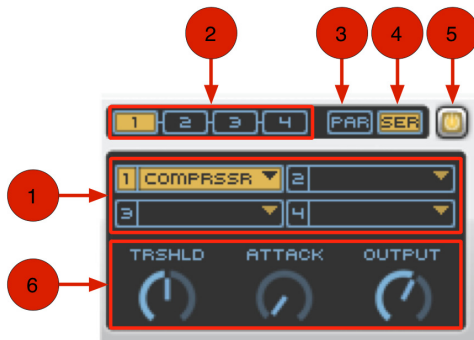
- You can cut or copy an Effect (with all its current settings) from one Insert and paste it to another Insert in the same module or even in a different module:
 1. From the source **Effects Insert** drop-down menu, choose **Cut** or **Copy**.
 2. From the destination **Effects Insert** drop-down menu, choose **Paste**.

Tip: Alt-click (Windows) or Option-click (Mac) and drag to copy and paste an effect from one insert to another.

Effect Module Controls

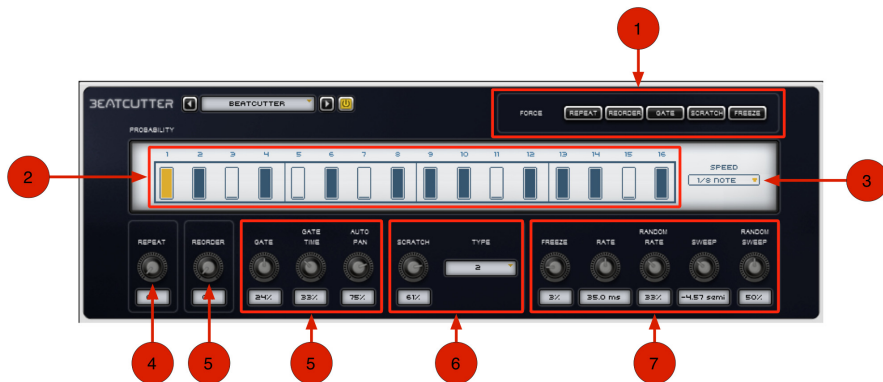
1. **Effects Insert (1–4)** – Lets you select which Insert effect you would like to use. The selected Effects Editor appears in the Editor pane.

2. **Effects Insert Editor Selectors:** Lets you select any one of the four Effects Inserts in the module. The Effect Editor (if any) for the selected Insert appears in the Editor pane. Also, the Effect performance controls (if any) for the selected Insert appear in the Effects module below the Effects Inserts.



3. **Parallel:** When selected, the audio signal is routed through Effects Inserts 1 and 2 in series, parallel to 3 and 4 in series.
4. **Serial:** When selected, the audio signal is routed through all the Effects Inserts serially in order (1–4).
5. **Module Enable:** Lets you enable or disable the module.
6. **Performance Controls:** Provides access to a few critical effects controls for performance. This provides easy access to musically useful controls during performance right in the Effects module, without having to access the Effect Editor, and they can be assigned to MIDI CCs. The available controls vary depending on the selected Effect. For example, the Compressor effect provides Threshold, Attack, and Output controls.

Beatcutter



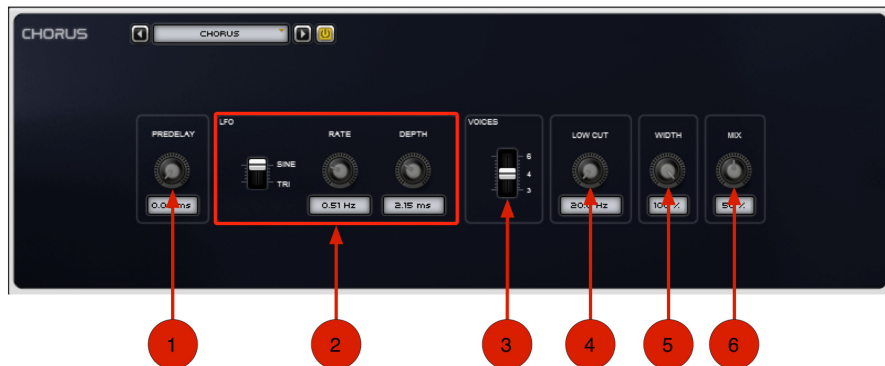
Use the Beatcutter effect as a quick and easy way to chop up and shuffle your beats. Of course you don't have to limit yourself to just cutting up beats; try feeding it vocals or instrumental melodies, riffs, or chords.

1. **Force Buttons** – Click the Beatcutter Force buttons to apply 100% any of the following effects:
 - **Repeat:** Repeats playback of the currently sounding slice.
 - **Reorder:** Randomly reorders the playback of slices.
 - **Gate:** Truncates the length of the slice for a really choppy sound.
 - **Scratch:** Applies a varispeed effect that dynamically affects the pitch and duration slices like "scratching" on a turntable.
 - **Freeze:** Freezes playback of the audio at that moment in time by repeating a short buffer of samples.

2. **Probability Display** – The Probability step sequencer lets you adjust the likelihood that any Beatcutter effects will be applied at a given step. For example, with Step 1 set to **100%**, Beatcutter effects will be applied 100% of the time. If it is set to **0%**, Beatcutter effects will never be applied at that step. To adjust a Probability Step value, click the vertical bar in the step you want to adjust and drag up or down.
3. **Speed** – Depending on the Speed setting, there are 16 or 12 probability steps. Select one of the following options:
 - **1/8 Note**: Plays 16 steps over 8 beats.
 - **1/16 Note**: Plays 16 steps over 4 beats.
 - **1/4 Triplet**: Plays 12 steps over 4 beats.
 - **1/8 Triplet**: Plays 12 steps over 2 beats.
4. **Repeat** – The Repeat control lets you adjust the probability (**0–100%**) of any step repeating playback of the previously played slice.
5. **Reorder** – The Repeat control lets you adjust the probability (**0–100%**) of any step actually playing back a different slice than the current one in sequence.
6. **Gate** – The Gate control lets you adjust the probability (**0–100%**) of any step gating playback of the current slice. How the slice is gated is determined by the following additional controls:
 - **Gate Time**: Lets you adjust the duration of the slice as a percentage of its original length.
 - **Auto Pan**: Lets you adjust the rate at which Beatcutter pans across consecutive slices. High settings result in instant hard-left and -right alternating panning. Low settings result in gradual panning across several slices.

7. **Scratch** – The Scratch control lets you adjust the probability (**0–100%**) of any step (set to **100%**) "scratching" playback of the current slice. Scratch is a varispeed effect that dynamically affects the pitch and duration slices like "scratching" on a turntable. How the slice is scratched is determined by the Type setting. Select any of the following options:
- **1:** Applies varispeed down and up (like touching a record to pause playback and then letting go) every step.
 - **2:** Applies varispeed down (like slowing down a record) every step.
 - **3:** Applies varispeed up (like starting up a record) every step.
 - **4:** Applies varispeed down (like slowing down a record) every other step.
 - **5:** Applies varispeed up (like starting up a record) every other step.
 - **6:** Applies varispeed down (like slowing down a record) over four steps.
 - **Random:** Randomly applies varispeed options 1–6.
 - **Octave Up:** Plays each slice double-speed.
 - **Octave Down:** Plays each slice half-speed.
8. **Freeze** – The Freeze control lets you adjust the probability (**0–100%**) of any step (set to **100%**) "freezing" playback of the currently sounding slice. How the slice is "frozen" is determined by the following additional controls:
- **Rate:** Determines the length of the sample buffer from the frozen slice. Use higher settings for shorter buffers and lower settings for longer buffers.
 - **Random Rate:** Applies a variable amount of randomness to the length of the sample buffer.
 - **Sweep:** Applies a filter sweep from 0 to –12.00 semitones or from 0 to +12.00 semitones (basically +/- 1 octave).
 - **Random Sweep:** Applies a variable amount of randomness to the range of the sweep.

Chorus

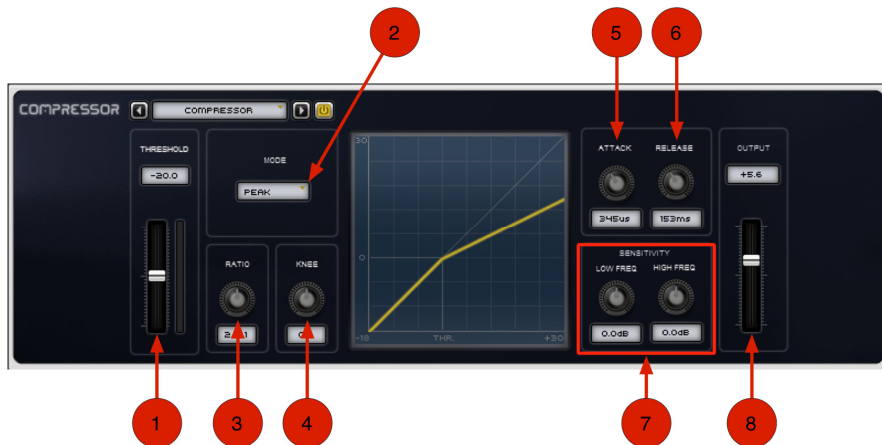


Use the Chorus effect to apply a short modulated delay to create depth and space.

1. **Pre-Delay** – Set the Pre-Delay in milliseconds (**0.00–24.00 ms**).
2. **LFO** – The Low Frequency Oscillator lets you select the waveform, rate, and depth of modulation.
 - **Sine/Tri**: Select either a Sine wave or a Triangle wave for the LFO.
 - **Rate**: Set the rate for the oscillation of the LFO in Hertz (**0.01–10.0 Hz**).
 - **Depth**: Set the depth of LFO modulation of the audio signal in milliseconds (**0.00–24.00 ms**).
3. **Voices** – Select the number of voices (3, 4, or 6). For a thicker sound, use more voices.

4. **Low Cut** – The Low Cut control lets you adjust the frequency of the Low-Cut Filter (**20.0 Hz–1.00 kHz**). The Low-Cut Filter is applied to the wet signal only. This is useful for reducing "seasick" pitch modulation of bass sounds.
5. **Width** – The Width control lets you adjust the stereo width of the LFO (**0–100%**). Higher settings provide a wider chorusing effect and lower settings a narrower chorusing effect.
6. **Mix** – The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (un-effected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix of both.

Compressor



Use the Compressor effect to squash (compress) the audio signal.

1. **Threshold** – Compression reduces the dynamic range of signals that exceed a chosen threshold. The Threshold control sets the level (**-40.0** to **0.0 dB**) that the signal must exceed to trigger compression.
2. **Mode** – The Mode setting lets you select any of the following compression modes:
 - **Peak:** In Peak mode, the gain control responds more accurately to brief signal peaks than in the RMS mode. This ensures peaks are more accurately controlled, however broadband audio may be unacceptably squashed whenever a loud, short transient sound occurs. Use Peak compression when treating individual drum and percussion sounds.

- **RMS:** In RMS mode (Root Mean Square), compression works by detecting the average level of a signal. In RMS mode the compression will sound natural, but loud, short transients may pass through at a higher level than you want. If you're trying to raise the apparent volume of the audio signal, use RMS compression. However, if you're trying to stop peaks from distorting the signal, use Peak mode.
 - **Opto:** In Opto mode, Transfuser emulates an optical compressor. Optical compressors use a light sensitive resistor (LDR) and a small lamp (LED or electroluminescent panel) to create changes in signal gain. This can add smoother compression to the signal, because the response times of the light and the resistor soften the attack and release times.
3. **Ratio** – The Ratio control sets the compression ratio, or the amount of compression applied as the input signal exceeds the threshold. For example, a **2:1** compression ratio means that a 2 dB increase of level above the threshold produces a 1 dB increase in output. This control ranges from **1.0:1** (no compression) to **100:1** (hard limiting). The graphic display updates to show changes to the Ratio control.
4. **Knee** – The Knee control sets the shape of the slope of the compressor for it to reach full compression once the threshold has been exceeded. At **0%**, "hard-knee" compression is applied. Values above **0%** soften the knee. The graphic display updates to show changes to the Knee control.

As you increase this control (in the positive or negative direction), it goes from applying "hard-knee" compression to "soft-knee" compression:

- With hard-knee compression, compression begins when the input signal exceeds the threshold.
- With soft-knee compression, gentle compression begins and increases gradually as the input signal approaches the threshold, and reaches full compression after exceeding the threshold. This creates smoother compression.
- Values below **0%** (negative values) go beyond "hard-knee" compression to non-linear compression responses emulating some vintage analog compressors.

5. **Attack** – The Attack control sets how quickly (**10.5 μ s** to **100 ms**) the compressor responds to the "front" of an audio signal once it crosses the selected threshold. Long settings let peaks through unaffected.
6. **Release** – The Release control sets the amount of time (**10.0 ms** to **10.0 seconds**) that it takes for the compressor gain to reduce when the input signal level drops below the selected threshold.
7. **Sensitivity** – The Sensitivity controls tailor the compressor's sensitivity to high and low frequencies in the input signal.
 - **Low Freq:** Adjusts the input sensitivity for low frequencies.
 - **High Freq:** Adjusts the input sensitivity for high frequencies.
8. **Output** – The Output control lets you boost overall output gain to compensate for heavily compressed signals. This control ranges from **-20.0** to **+20.0**, with the default value at **0 dB**.

Delay



This is a single delay line that can synchronize to your music software's tempo.

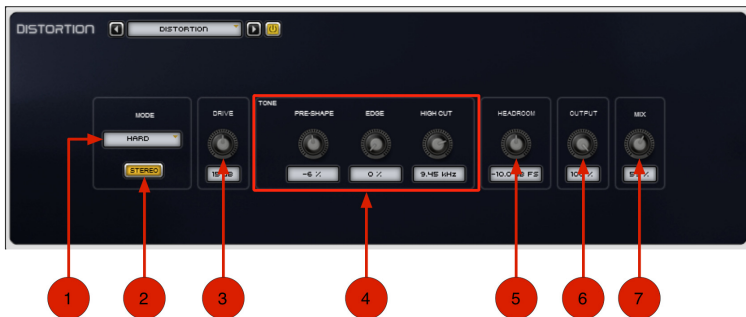
1. **Mode** – Select one of the following options for the Delay Mode:

- **Mono:** Sums the incoming stereo signal to mono, then offers separate left and right delay output taps from that signal.
- **Stereo:** Processes the left and right channels of the incoming stereo signal independently and outputs the processed signal on the corresponding left and right channels.
- **Cross:** Processes the left and right channels of the incoming stereo signal independently, but outputs the processed signal on the opposite channel. For example, the dry signal coming in on the left channel is delayed and then output on the right channel.

2. **Sync** – When Sync is enabled, the delay time synchronizes to the tempo of your music application. When Sync is disabled, you can set the delay time in milliseconds independently of your software's tempo. The Sync button is lit when it is enabled.
3. **Time** – When Sync is enabled, the Delay control lets you select a rhythmic subdivision or multiple of the beat (based on your audio software's tempo) for the delay time. When Sync is disabled, the Time control lets you set the delay time in milliseconds and seconds (**1 ms to 4.00 seconds**).
4. **L/R Ratio** – The Left/Right Ratio control lets you set the ratio of left to right delay times. Move the control all the way to the left (**50:100**), and the left channel delay time is half the right channel delay time. Move the control all the way to the right (**100:50**), and the right channel delay time is half the left channel delay time.
5. **Feedback** – The Feedback control lets you adjust the amount of delay feedback (**0–100%**). At **0%**, the delayed signal repeats only once. As you increase the feedback, the number of times the delay repeats increases. At **100%**, the delay doesn't repeat indefinitely, but it does last a very long time!

Note that each Delay mode produces a different feedback pattern, especially when the L/R Ratio control is not centered.
6. **Low Cut** – The Low Cut control lets you adjust the frequency for the Low-Cut Filter. For less bass, raise the frequency.
7. **High Cut** – The High Cut control lets you adjust the frequency for the High-Cut Filter. For less treble, lower the frequency.
8. **Width** – The Width control lets you adjust the width of the delay effect in the stereo field.
9. **Mix** – The Mix control lets you balance the amount of dry signal with the amount of wet (delayed) signal. At 50%, there are equal amounts of dry and wet signal. At 0%, the output is all dry and at 100% it is all wet.

Distortion

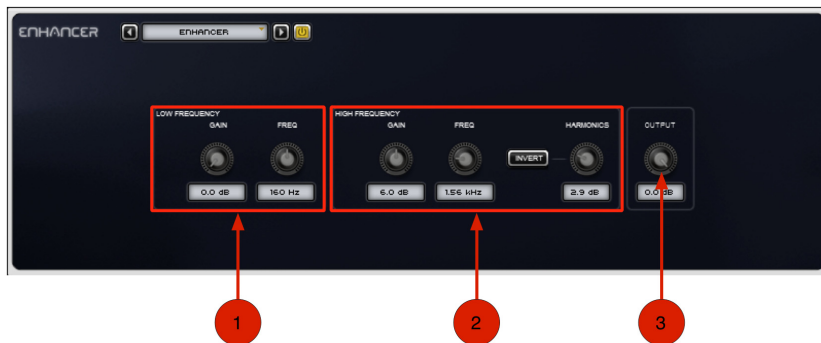


Use the Distortion effect to color the audio signal with various types of distortion.

- Mode Controls** – Select one of the following options for the Distortion Mode:
 - Hard:** Provides a sharp, immediate distortion of the signal.
 - Soft:** Provides a softer, more rounded distortion of the signal.
 - Warp:** Wraps the waveform back on itself for a complex distortion tone that changes quickly from soft to harsh.
- Stereo** – When Stereo is enabled, the left and right channels of the incoming stereo signal are processed separately. When it is disabled, the incoming stereo signal is summed and processed as mono. The Stereo button is lit when it is enabled.
- Drive** – The Drive control lets you increase the drive (input volume) of the signal from **0 dB** (no distortion) to **60 dB** (way too much distortion!). Sometimes an increase or decrease of just one or two decibels can make a big difference on the amount and quality of distortion.

4. **Tone Controls** – The Tone controls let you shape the timbral quality of the distortion.
- **Pre-Shape:** The Pre-Shape control lets you increase or decrease a broad gain boost (or attenuation) of treble frequencies in the processed signal. PreShape is essentially a pre-distortion tone control that makes the distortion bite at different frequencies.
Set to **0%**, the Pre-Shape control doesn't affect the tone at all. Higher settings provide a boost in the high end of the distorted signal (more treble distortion), while lower settings suppress the high end, with some mid-range boost, for a darker, less distorted tone.
 - **Edge:** The Edge control lets you change clipping from being symmetrical to being asymmetrical, which makes it sound richer and nastier at high settings. The difference is most noticeable at lower Drive settings.
 - **High Cut:** The High Cut control lets you adjust the frequency for the High-Cut Filter. To cut the high end of the processed signal, lower the frequency.
5. **Headroom** – The Headroom control lets you adjust the headroom for the dynamic range of the distorted signal between **-20.0 dBFS** and **0.0 dBFS**. Rather than using the Drive to adjust the signal level relative to a fixed clipping level, use the Headroom control to adjust the clipping level without changing the signal level.
6. **Output** – The Output control lets you lower the Output level of the distorted signal from **0** to **100%**. At **0%**, no distorted signal passes through the output. At **100%**, the distorted signal passes through the output at full volume.
7. **Mix** – The Mix control lets you balance the amount of dry signal with the amount of wet (distorted) signal. At **50%**, there are equal amounts of dry and wet signal. At **0%**, the output is all dry and at **100%** it is all wet.
The Mix control can be used in conjunction with the Output control to find just the right balance of the distorted signal with the input (dry) signal. For example, with Mix set to **50%**, equal amounts of the dry and wet signal pass to the output. You can then lower the Output control to decrease the amount of distorted signal being passed to the output until you get exactly the right mix between the two signals, and just the right overall level.

Enhancer

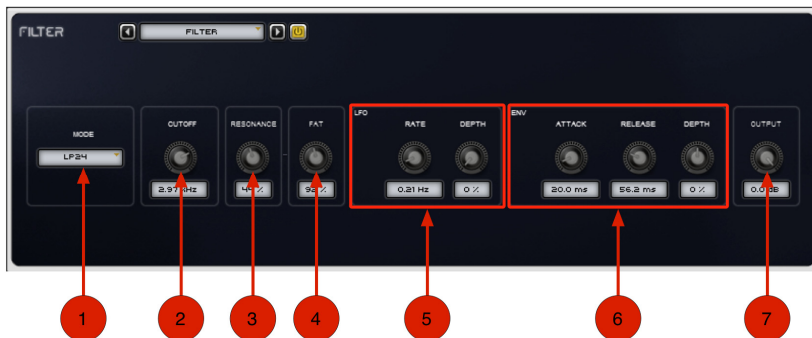


This effect enhances the low- and high-broadband frequencies of the incoming audio signal.

1. **Low Frequency Controls** – The Low Frequency controls let you boost the amount of low frequencies in the signal, and to set the median frequency for enhancement.
 - **Gain:** Adjust the Gain control to boost the low end (**0.0–12.0 dB**).
 - **Frequency:** Adjust the Frequency control to set the median frequency for the bass boost (**40.0–640 Hz**).
2. **High Frequency Controls** – The High Frequency controls let you boost the amount of high frequencies in the signal, and to set the median frequency for enhancement. You can also generate extra harmonic content in the signal.
 - **Gain:** Adjust the Gain control to boost the high end (**0.0–12.0 dB**).
 - **Frequency:** Adjust the Frequency control to set the median frequency for the treble boost (**1.00–10.0 kHz**).

- **Invert:** The Invert button inverts the phase of the generated harmonics. The Invert button is lit when enabled.
 - **Harmonics:** Adjust the Harmonics control to generate additional high frequency harmonics in the signal (**0.0–12.0 dB**).
3. **Output** – The Output control lets you lower the Output level from **0.0 dB** to **–INF dB**.

Filter



Use the Filter effect to apply a modulating, resonant filter to the audio signal. Have fun with filter sweeps or give your sounds that extra-resonant aura.

- Mode** – Select one of the following options for the type of filter:
 - LP24:** Provides a low-pass filter with a 24 dB cutoff.
 - LP18:** Provides a low-pass filter with a 18 dB cutoff.
 - LP12:** Provides a low-pass filter with a 12 dB cutoff.
 - BP:** Provides a band-pass filter.
 - HP:** Provides a high-pass filter.
- Cutoff** – Adjust the Cutoff frequency of the filter, from **20.0 Hz** to **20.0 kHz**.
- Resonance** – The Resonance control lets you adjust the amount filter Resonance (**0–100%**). At **100%**, the filter feeds back on itself.

4. **Fat** – The Fat control lets you adjust the amount of overdrive in the resonant peak. At lower settings, the signal gets quieter at high Resonance settings for clean distortion. At higher settings, the signal is over-driven at high resonance settings.
5. **LFO Controls** – The Filter effect provides a sinusoidal Low Frequency Oscillator (LFO) for modulating the filter cutoff frequency.
 - **LFO Rate:** Adjust the Rate control to increase or decrease the frequency (**0.01–100.0 Hz**) of the LFO. Lower settings are slower and higher settings are faster.
 - **LFO Depth:** Adjust the Depth control to increase or decrease the amount of modulation (**0–100%**) of the Cutoff frequency by the LFO. Lower settings create a slight vibrato (with the rate set high) and higher settings create a wide sweep of the Cutoff frequency range.
6. **Envelope Controls** – The Filter effect provides an Envelope follower for controlling the Cutoff frequency.
 - **Attack:** Adjust the Attack control to set the time (**10.0 ms to 10 seconds**) it takes to respond to increases in the audio signal level.
 - **Release:** Adjust the Release control to set the time (**10.0 ms to 10 seconds**) it takes to recover after the signal level falls.
 - **Envelope Depth:** Adjust the Depth control to determine how much the Envelope follower affects the Cutoff frequency.
 - At **0%**, the Envelope follower has no effect on the Cutoff frequency.
 - At **+100%**, the Attack ramps up to the Cutoff frequency setting; and the Release starts from the Cutoff frequency setting and ramps down.
 - At **–100%**, the Attack starts from the Cutoff frequency setting and ramps down; and the Release ramps up to the Cutoff frequency setting.
7. **Output** – The Output control lets you lower the Output level from **0.0 dB** to **–INF dB**.

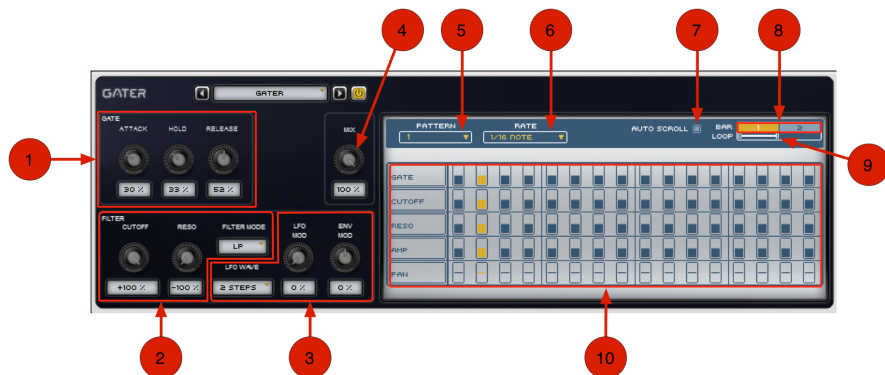


Use the Flanger effect to apply a short modulating delay to the audio signal.

1. **Modulation Controls** – The Modulation section provides controls for the Low-Frequency Oscillator (LFO) used to modulate the Delay time.
 - **Trigger:** Click the Trigger button to reset the LFO phase. This lets you manually start the filter sweep from that specific point in time (or under MIDI control, at a specific point in your arrangement). Clicking the Trigger button also forces the Mix control up if it is too low while the button is held; this ensures that the filter sweep is audible.
 - **Sync:** When Sync is enabled, the Flanger Rate control synchronizes to the session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the session tempo. The Sync button is lit when it is enabled.

- **Rate:** When Sync is enabled, the Rate control lets you select a rhythmic subdivision or multiple of the beat for the Flanger Modulation Rate. When Sync is disabled, the Rate control lets you the modulation rate independently of the session tempo (**0.01–10.0 Hz**).
 - **Depth:** The Depth control lets you adjust the amount of modulation applied to the Delay time.
 - **Wave:** The Wave control lets you interpolate between a triangle wave and a sine wave for the modulating LFO.
 - **Offset:** The Offset control lets you adjust the phase offset (**–180° to +180°**) for the LFO waveform applied to the left and right channels.
2. **Delay Controls** – These controls let you adjust the delay time, frequency of the low-cut filter, and amount of feedback for the Flanger.
- **Delay:** The Delay control lets you adjust the Delay time (**0.00–12.00 ms**) for the Flanger.
 - **Low Cut:** The Low Cut control lets you adjust the Low Cut frequency (**20.0 Hz–1.00 kHz**) for the Flanger.
 - **Feedback:** The Feedback control lets you adjust the amount of delay feedback for the Flanger. At **0%**, the delay repeats only once. At **+/-100%**, the Flanger feeds back on itself.
3. **Mix** – The Mix control lets you balance the amount of dry signal with the amount of wet (flanged) signal. At **50%**, there are equal amounts of dry and wet signal. At **0%**, the output is all dry, and at **100%**, it is all wet.

Gater



Use the Gater effect to chop up the audio signal into staccato rhythmic patterns with variable filtering, amplitude, and panning.

1. **Gate** – The Gate controls let you adjust the Attack, Hold, and Release amounts for the Gater Step Sequencer pattern. At the maximum settings, the gating provides a smooth morphing effect.
 - **Attack:** The Attack control lets you adjust the duration of the attack as a percentage of the step duration.
 - **Hold:** The Hold control lets you adjust the duration of the hold (or sustain) as a percentage of the step duration.
 - **Release:** The Release control lets you adjust the duration of the release as a percentage of the step duration.

2. **Filter** – The Filter controls provide controls for the selected filter type.
 - **Cutoff:** The Cutoff control lets you adjust the Filter Cutoff frequency
 - **Reso:** The Reso control lets you adjust the Resonance at the Cutoff frequency.
 - **Filter Mode:** The Filter Mode selector lets you select the type of Filter. Options include **Off** (no filtering), **LP** (low-pass), **BP** (band-pass), **HP** (high-pass), and **Phaser**.
3. **LFO Wave** – The LFO Wave selector lets you select the duration, or frequency of the Low-Frequency Oscillator (LFO). The duration of one cycle of the LFO is measured in Steps.
 - **Random:** Randomly changes the level of the LFO every step, for a "sample and hold" waveform.
 - **2, 3, 4 ... 256 Steps:** Sets the duration of one cycle of the LFO to the selected number of steps. Changes to the Step Rate consequently affect the durations of cycles of the LFO.
 - **LFO Mod:** The LFO Mod control lets you adjust the amount of LFO modulation of the Cutoff frequency.
 - **Env Mod:** The Env Mod control lets you adjust how much an Envelope Follower affects the Cutoff frequency. Note that the Cutoff is fixed for the duration of each step, so it will not respond to a peak in the envelope until the start of the next step.
4. **Mix** – The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (un-effected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix.
5. **Pattern (1–32)** – From the Pattern selector, select any of the thirty-two available (**1–32**) Patterns for playback and editing.

6. **Rate** – From the Rate selector, select any of the following rhythmic note values as the Step Rate for all Patterns.
7. **Auto Scroll** – The Gater Pattern Editor can only display one bar (of two). When the Auto Scroll option is enabled, the Gater Pattern Editor view scrolls bar by bar during playback for the selected Loop duration. When it is disabled, the Gater Pattern Editor view shows only the currently selected Bar View.
8. **Bar View Selector** – The Gater Pattern Editor only has room to display one bar at a time. You can select the Bar you want to view by clicking on it. The currently viewed bar is lit in the Bar View selector.
9. **Loop Range** – The Loop Range selector lets you set the loop length for the Gater Pattern. You can measure the loop length end point location against the Bar View selector. Click the end point of the Loop Range selector and drag left or right to adjust the Loop Range end point.
10. **Pattern Step Events** – The Gater Pattern Editor provides five lanes for five different Gater parameters. Each parameter can set on a per-step basis. You can edit a step parameter by clicking and dragging the steps up or down. There are five lanes:
 - **Gate:** The Gate parameter determines how much audio sounds through on any given step. At lower settings, Steps pass shorter durations of the incoming audio signal; at higher settings, Steps pass longer durations.
 - **Cutoff:** The Cutoff parameter lets you adjust the Cutoff frequency for a Step.
 - **Reso:** The Reso parameter lets you adjust the amount of filter resonance for a Step.
 - **Amp:** The Amp parameter lets you adjust the amount of amplification for a Step. Higher settings increase the level of the gated signal and lower settings decrease it.
 - **Pan:** The Pan parameter lets you adjust the panning for a Step in the stereo field.

Kill EQ

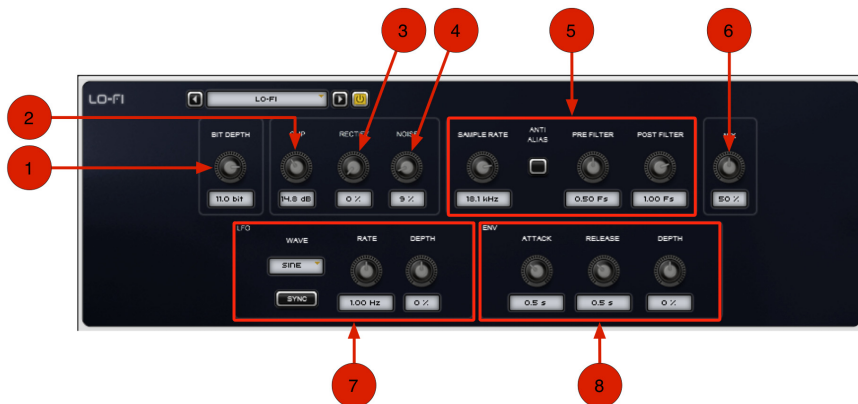


Use the Kill EQ effect to zap out the Low, Mid, or High broadband frequency range from an audio signal. This is a popular effect with DJs and is commonly used in dance music production (especially in House music).

1. **Kill Buttons** – Apply a broadband band stop for Low, Mid, or High frequencies.
 - **Low:** Click the Low button to kill the low-range frequencies. Click it again to pass the low-range frequencies. The button is lit when Kill is enabled.
 - **Mid:** Click the Mid button to kill the mid-range frequencies. Click it again to pass the mid-range frequencies. The button is lit when Kill is enabled.
 - **High:** Click the High button to kill the high-range frequencies. Click it again to pass the high-range frequencies. The button is lit when Kill is enabled.

2. **Gain** – The Gain controls let you boost or attenuate the gain for the Low-, Mid-, and High-range frequencies that are passed (not "killed").
 - **Low:** Adjust the Low control to boost or attenuate the gain for the low-range frequencies when Kill is not enabled.
 - **Mid:** Adjust the Mid control to boost or attenuate the gain for the mid-range frequencies when Kill is not enabled.
 - **High:** Adjust the High control to boost or attenuate the gain for the high-range frequencies when Kill is not enabled.

3. **Frequency Sweep** – The Frequency Sweep controls let you "sweep" a band-pass filter between the specified Low-Mid range frequency and the specified Mid-High range frequency.
 - **Low-Mid:** The Low-Mid control lets you adjust the crossover frequency between the low and mid bands.
 - **Sweep:** The Sweep control lets you sweep the Low-Mid and Mid-High crossover frequencies together. This is useful when using the Kill EQ as a sweepable band-pass filter by "killing" the low and high frequency bands and sweep the mid band.
 - **Mid-High:** The Mid-High control lets you adjust the crossover frequency between the mid and high bands.



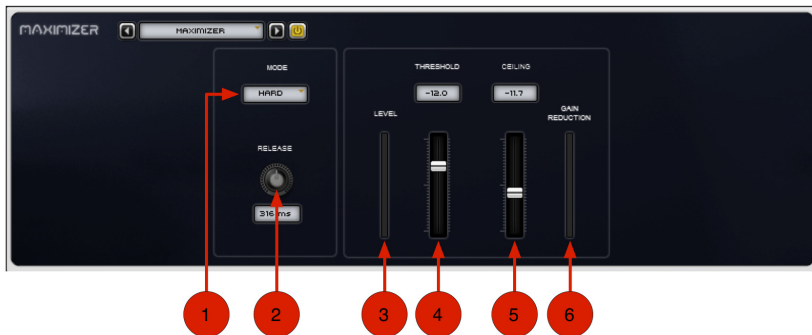
Use the Lo-Fi effect to bit-crush, down-sample, clip, rectify, and otherwise mangle the input signal.

1. **Bit Depth** – The Bit Depth control lets you truncate the bit depth of the incoming signal from **16 bits** all the way down to **1 bit**.
2. **Clip** – The Clip control lets you increase the gain (**0.0–40.0 dB**) of the audio signal so that it clips.
3. **Rectify** – The Rectify control lets you adjust the amount of Rectification of the signal (making negative peaks positive) from **0–100%**.
4. **Noise** – The Noise control lets you adjust the amount of noise in the clipped signal from **0–100%**.

5. **Sample Rate Controls** – These controls let you apply sample rate reduction to the audio signal with optional anti-alias filtering.
- **Sample Rate:** Adjust the Sample Rate control to resample the audio signal at another sample rate (**500 Hz to 50.0 kHz**).
 - **Anti-Alias:** Enable anti-aliasing filters before and after down-sampling to reduce aliasing in the resampled audio signal. For a much grittier sound, disable the Anti-Alias filter. The Anti-Alias button is lit when the filter is enabled.
 - **Pre Filter:** Adjust the Pre Filter control to adjust the antialiasing filter cutoff applied to the audio signal before resampling. The filter is applied as a multiplier of the sample frequency (F_s) between **0.12 F_s** and **2.00 F_s** .
 - **Post Filter:** Adjust the Post Filter control to adjust the range of anti-aliasing filter cutoff applied to the audio signal after resampling. The filter is applied as a multiplier of the sample frequency (F_s) between **0.12 F_s** and **2.00 F_s** .
6. **Mix** – The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (un-effected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix.
7. **LFO** – The LFO controls let you apply a Low-Frequency Oscillator to modulate the Sample Rate.
- **Wave:** Select from the following waveforms for the LFO.
 - **Sync:** Enable Sync to synchronize the LFO Rate to the session tempo. When Sync is disabled, you can set the Rate time in milliseconds independently of the session tempo. The Sync button is lit when it is enabled.
 - **Rate:** When Sync is enabled, the Rate control lets you select a rhythmic subdivision or multiple of the beat for the LFO Rate. When **Sync** is disabled, the Rate control lets you the modulation rate in independently of your music software's tempo (**0.01–10.0 Hz**).
 - **Depth:** The Depth control lets you adjust the amount of modulation applied to the Sample Rate.

8. **Env** – The Lo Fi effect provides an Envelope follower for controlling the Sample Rate. This is useful for accentuating and enhancing signal peaks (such as in drum loops) with artificially rectified high-frequencies.
- **Attack:** Adjust the Attack control to set the time (**10.0 ms to 10 seconds**) it takes to respond to increases in the audio signal level.
 - **Release:** Adjust the Release control to set the time (**10.0 ms to 10 seconds**) it takes to recover after the signal level falls.
 - **Envelope Depth:** Adjust the Depth control to determine how much the Envelope follower affects the Sample Rate.
 - At **0%**, the Envelope follower has no affect on the Sample Rate.
 - At **+100%**, the Attack ramps up to the Sample Rate setting; and the Release starts from the Sample Rate setting and ramps down.
 - At **-100%**, the Attack starts from the Sample Rate setting and ramps down; and the Release ramps up to the Sample Rate setting.

Maximizer



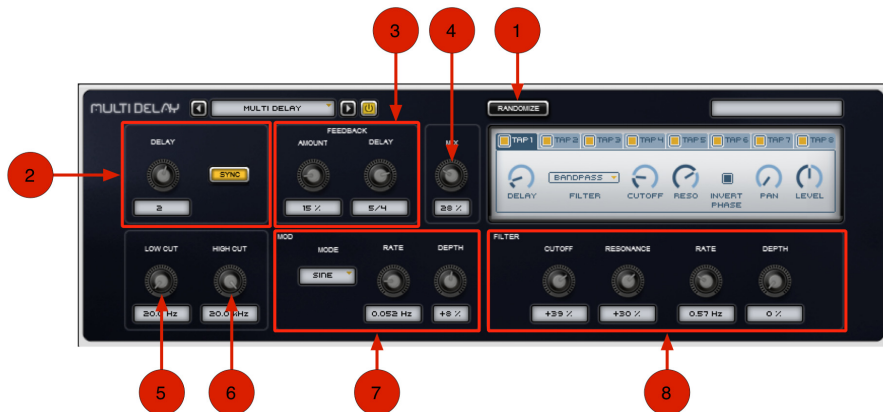
Use the Maximizer effect to apply peak-limiting and sound-maximizing to the audio signal.

1. **Mode** – The Mode setting lets you select any of the following compression modes for the Maximizer:
 - **Hard:** Provides hard peak-limiting.
 - **Soft:** Provides softer peak-limiting.
2. **Release** – The Release control sets how long it takes for the Maximizer to ease off of its attenuation after the input signal drops below the threshold level. Since the Maximizer has an attack time of zero milliseconds, the Release control has a noticeable effect on the character of the limiting.

In general, if you are using heavy limiting, use proportionally longer release times in order to avoid pumping that may occur when the Maximizer is forced to jump back and forth between limited and unlimited signal levels.

3. **Level** – The Level meter displays the input level of the audio signal.
4. **Threshold** – The Threshold control sets the threshold level for limiting (**–40.0 dB to 0.0 dB**). Signals that exceed this level will be limited. Signals below it will be unaffected. Limited signal peaks are attenuated to match the threshold level, so the value that you set here will determine the amount of reduction applied.
5. **Ceiling** – The Ceiling control determines the maximum output level. After limiting is performed, use the Ceiling control to adjust the final output gain. This sets the absolute ceiling level for limited peaks.
6. **Gain Reduction** – The Gain Reduction meter displays the amount of gain reduction being applied.

Multi Delay



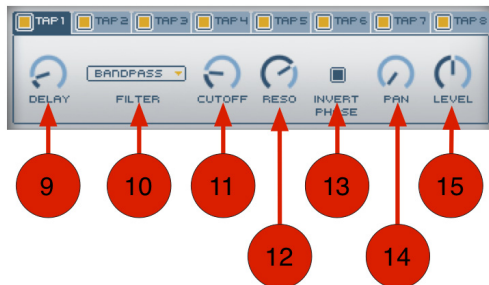
Use the Multi Delay effect to apply up to eight delay lines to the audio signal.

1. **Randomize** – Click the Randomize button to randomize all of the control settings in the Multi Delay effect.
2. **Delay** – These controls set the overall delay time for the effect.
 - **Delay:** This knob sets the delay time for the effect. When Sync is enabled, the Delay control lets you select a rhythmic subdivision or multiple of the beat (based on the your music making software's session tempo) for the delay time. When Sync is disabled, the Time control lets you the delay time in milliseconds and seconds (**50.0 ms to 4.00 seconds**).
 - **Sync:** When Sync is enabled, the Delay time synchronizes to the session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the session tempo. The Sync button is lit when it is enabled.

3. **Feedback** – The Feedback controls let you adjust the amount of feedback and an additional delay line that can be linked or unlinked to the main delay time.
 - **Amount:** The Amount control lets you adjust the amount of delay feedback (**0–100%**). At **0%**, the delayed signal repeats only once. As you increase the feedback, the number of times the delay repeats increases. At **100%**, the delay doesn't repeat indefinitely, but it does last a very long time!
 - **Delay:** The Delay control can be linked to the main Delay control, or it can be adjusted independently. It provides the same time settings as the main Delay control and likewise can be synchronized to the session tempo.
4. **Mix** – The Mix control lets you balance the amount of dry signal with the amount of wet (delayed) signal. At **50%**, there are equal amounts of dry and wet signal. At **0%**, the output is all dry, and at **100%**, it is all wet.
5. **Low Cut** – The Low Cut control lets you adjust the frequency for the Low-Cut Filter.
6. **High Cut** – The High Cut control lets you adjust the frequency for the High-Cut Filter.
7. **Mod** – The Mod controls let you modulate the main delay time.
 - **Mode:** The Mode setting lets you select the modulating waveform.
 - **Rate:** Adjust the Rate control to determine the frequency (**0.000–50.000 Hz**) of the modulating waveform.
 - **Depth:** Adjust the Depth control to set the amount of cutoff modulation of the main delay time.
8. **Filter** – The Filter controls let you adjust the Cutoff frequency, Resonance, Rate of modulation of the Cutoff frequency, and how much the Filter affects the audio signal.
 - **Cutoff:** The Cutoff control lets you adjust the Cutoff frequency of the filter.
 - **Resonance:** The Resonance control lets you adjust the amount filter Resonance.
 - **Rate:** Adjust the Rate control to increase or decrease the frequency (**0.01–10.0 Hz**) of LFO modulation of the Cutoff frequency. Lower settings are slower and higher settings are faster.
 - **Depth:** Adjust the Depth control to determine how much the Filter affects the delayed audio signal.

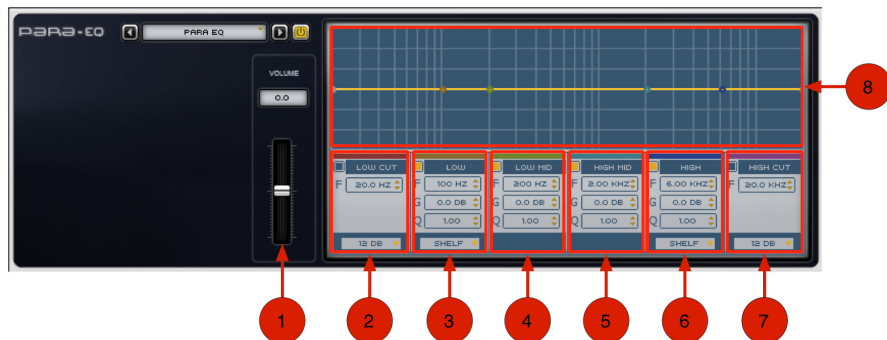
Delay Taps:

The Multi Delay provides eight Taps (delay lines). Each Tap provides the same set of controls. Controls for each Tap can be edited independently of the other Taps. You can select an individual Tap for editing by clicking its name at the top of the Multi Delay Tap pane. You can enable or disable (bypass) any of the eight available Taps by using the on/off switches at the top of screen.



9. **Delay** – Adjust the Delay control to set the length of delay for the tap, relative to the main Delay setting.
10. **Filter** – Select from the following types of filters for the Tap.
 - **Off**: Turns off the filter. When the Filter is set to **Off**, the Cutoff and Reso controls have no effect.
 - **Lowpass**: Provides a low-pass filter.
 - **Bandpass**: Provides a band-pass filter.
 - **Highpass**: Provides a high-pass filter.
11. **Cutoff** – Adjust the Cutoff control to set the Cutoff frequency (**40.0 Hz** to **16.0 kHz**) for the selected filter type.
12. **Reso** – Adjust the Reso control to change the amount of Resonance for the selected filter type.
13. **Invert Phase** – Enable Invert Phase to invert the phase of the selected filter. When enabled, the Invert Phase button is lit.
14. **Pan** – Adjust the Pan control to pan the audio signal from the Tap left or right in the stereo field.
15. **Level** – Adjust the Level control to change the output level (**-INF** to **+12 dB**) of the Tap.

Para EQ



The Para EQ effect is a 6-band parametric EQ that you can use to help sculpt the sound by boosting or attenuating specific frequencies.

1. **Volume** – Adjust the Volume control to balance the level of the signal after adjusting the Gain settings of the various EQ bands.
2. **Low Cut:**
 - **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
 - **Frequency:** Adjust the frequency (**20 Hz–8.00 kHz**) for the Low Cut.
 - **Decibel:** Menu Select the depth of the Low Cut in decibels (**6, 12, 18, or 24 dB.**)

3. Low EQ:

- **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
- **Frequency:** Adjust the frequency (**20 Hz–1.00 kHz**) for the Low Band.
- **Gain:** Adjust the gain (**–/+18 dB**) for the Low Band.
- **Q:** Adjust the Q (**0.40–10.00**) for the Low Band.
- **EQ Type Menu:** Select either **Bell** or **Shelf** for the EQ type.

4. Low Mid:

- **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
- **Frequency:** Adjust the frequency (**40 Hz–8.00 kHz**) for the Low-Mid Band.
- **Gain:** Adjust the gain (**–/+18 dB**) for the Low-Mid Band.
- **Q:** Adjust the Q (**0.40–10.00**) for the Low-Mid Band.

5. High Mid:

- **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
- **Frequency:** Adjust the frequency (**120 Hz–16.00 kHz**) for the High-Mid Band.
- **Gain:** Adjust the gain (**–/+18 dB**) for the High-Mid Band.
- **Q:** Adjust the Q (**0.40–10.00**) for the High-Mid Band.

6. High:

- **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
- **Frequency:** Adjust the frequency (**1.20 kHz–20.00 kHz**) for the High Band.
- **Gain:** Adjust the gain (**–/+18 dB**) for the High Band.
- **Q:** Adjust the Q (**0.40–10.00**) for the High Band.
- **EQ Type Menu:** Select either **Bell** or **Shelf** for the EQ type.

7. High Cut:

- **Band Enable/Disable:** Select (or deselect) the Band enable button to enable the EQ Band.
- **Frequency:** Adjust the frequency (**120 Hz–20.0 kHz**) for the High Cut.
- **Decibel Menu:** Select the depth of the High Cut in decibels (**6, 12, 18, or 24 dB.**)

8. **Graphic Editor** – Adjusting the Frequency, Gain, or Q controls of any of the EQ bands is represented in the Graphic Editor. You can also edit the Frequency and Gain of any of the EQ Bands by dragging in the Graphic Editor.

Phaser

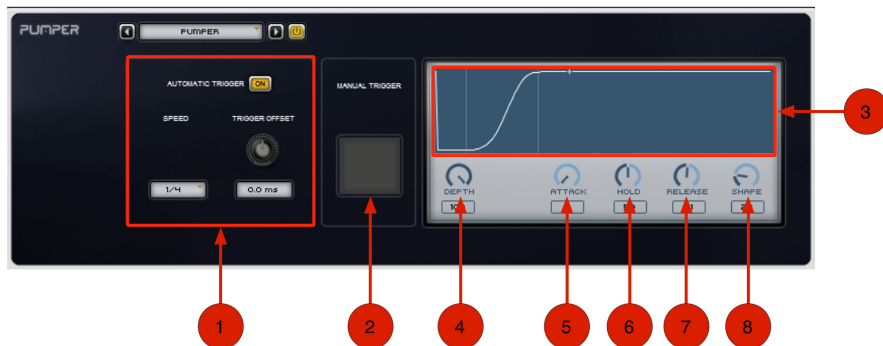


Use the Phaser effect to apply a phaser to the audio signal for that wonderful "wooshy," "squishy" sound.

1. **Poles** – Select the number of phaser pole (stages): **2, 4, 6, or 8**. The number of poles changes the character of the sound. The greater the number of poles, the thicker and squishier the sound.
2. **Sync** – When Sync is enabled, the Phaser Rate control synchronizes to the session tempo. When Sync is disabled, you can set the Rate in milliseconds independently of the session tempo. The Sync button is lit when it is enabled.
3. **Rate** – When Sync is enabled, the Rate control lets you select a rhythmic subdivision or multiple of the beat for the Phaser Modulation Rate. When Sync is disabled, the Rate control lets you the rate of the Phaser in independently of the session tempo (**0.01–10.0 Hz**).

4. **Depth** – The Depth control lets you adjust the depth of modulation, which in turn affects the amount of phasing applied to the audio signal.
5. **Wave** – The Wave control lets you interpolate between a triangle wave and a sine wave for modulating the Phaser.
6. **Center** – The Center control lets you change the frequency center (**100 Hz** to **10.0 kHz**) for the phaser poles.
7. **Offset** – The Offset control lets you adjust the phase offset (**-180°** to **+180°**) for the Phaser applied to the left and right channels.
8. **Feedback** – The Feedback control feeds the output signal of Phaser back into the input, creating a resonant or singing tone in the phaser when set to its maximum.
9. **Low Cut** – The Low Cut control lets you adjust the frequency of the Low-Cut Filter (**20.0 Hz–1.00 kHz**), which can be useful for taming low-frequency "thumping" at high feedback settings.
10. **Mix** – The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (unaffected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix of both.

Pumper



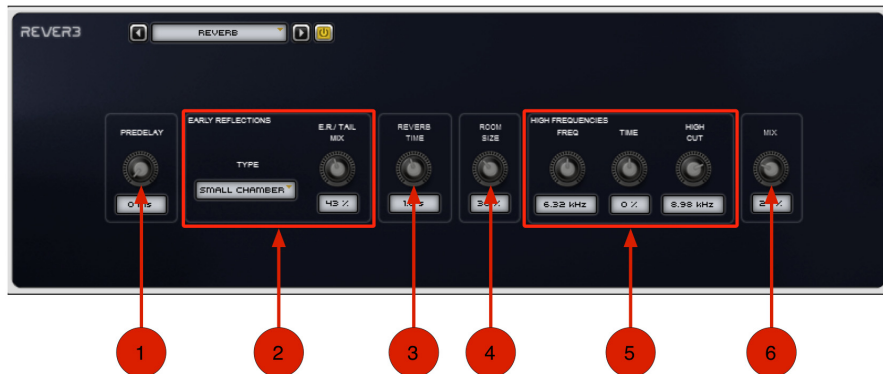
Use the Pumper effect to overly compress the audio signal to simulate a compressor being triggered rhythmically by a sidechain.

1. **Automatic Trigger** – These controls allow the Pumper effect to run automatically based on your audio software's master clock.
 - **On:** Turn the Automatic Trigger **On** to trigger the Pumper at the selected Speed. When it is turned **Off**, the Pumper will only be triggered when you click the Manual Trigger button.
 - **Speed:** The Speed setting synchronizes to your audio software's session tempo. All options are in rhythmic note values.
 - **Trigger Offset:** Adjust the Trigger Offset control to offset the Automatic Trigger by up to ± 100.0 ms.

2. **Manual Trigger** – Click the Manual Trigger button to immediately trigger the Pumper regardless of whether the Automatic Trigger is On or Off.
3. **Envelope Display** – Displays the duration of the Attack, Hold, and Release times of the Pumper. It also displays the dynamic Depth of the Pumper and the Shape (slope) of the Release.

Additionally, the current playback location is indicated by a moving dot along the line of the Envelope display; it starts at the beginning of the Envelope with each trigger of the Pumper, and travels through the envelope at the rate of the selected Speed based on the session tempo.
4. **Depth** – Adjust the Depth control to set the depth of the Pumper. Higher values provide a greater amount of pumping and lower values less.
5. **Attack** – Adjust the Attack control to increase or decrease the attack time of the Pumper.
6. **Hold** – Adjust the Hold control to increase or decrease the hold time of the Pumper.
7. **Release** – Adjust the Release control to increase or decrease the release time of the Pumper.
8. **Shape** – Adjust the Shape control to change the slope of the Pumper on release.

Reverb



Use the Reverb effect to apply Reverb to the audio signal, creating a sense of room or space. Typically, you'll want to use Reverb on one of the Effect Send inserts or Main Effects inserts. This way you can process audio from multiple Transfuser Tracks, giving them all a sense of being in the same space.

1. **Pre-Delay** – The Pre-Delay control determines the amount of time that elapses between the original audio event and the onset of reverberation. Under natural conditions, the amount of pre-delay depends on the size and construction of the acoustic space, as well as the relative position of the sound source and the listener. Pre-Delay attempts to duplicate this phenomenon and is used to create a sense of distance and volume within an acoustic space. Long Pre-Delay settings place the reverberant field behind rather than on top of the original audio signal.

2. **Early Reflections** – Different physical environments have different early reflection signatures that our ears and brain use to localize sound. These reflections affect our perception of the size of a space as well as where an audio source sits within it. Changing early reflection characteristics changes the perceived location of the reflecting surfaces surrounding the audio source.

Early reflections are simulated in Reverb by using multiple delay taps at different levels that occur in different positions in the stereo spectrum (through panning). Long reverberation generally occurs after early reflections dissipate.

- **Type:** Selects the type of room that the Transfuser Reverb will simulate.
 - **ER/Tail Mix:** Adjusts the ER/Tail Mix control to change the output level of the early reflections. Setting the Level control to **0%** produces a reverb effect that is only the reverb tail.
3. **Reverb Time** – Adjusts the Reverb Time to change the rate at which the reverberation decays after the original direct signal stops. At its maximum value, infinite reverberation is produced.
4. **Room Size** – Adjust the Room Size control to change the apparent size of the space.
5. **High Frequency** – The High Frequency controls let you shape the tonal spectrum of the reverb by adjusting the decay times of higher frequencies.
- **Freq:** Adjust the Frequency control to set the frequency boundary between the mid and high range frequency bands.
 - **Time:** Adjust the Time control to decrease or increase the decay time for mid to high-range frequency bands. Higher settings provide longer decay times and lower settings provide shorter decay time. With lower settings, high frequencies decay more quickly than low frequencies, simulating the effect of air absorption in a hall.
 - **High Cut:** The High Cut control lets you adjust the frequency for the High Cut filter (**1.00–20.0 kHz**). Adjusting the High Cut control to change the decay characteristics of the high frequency components of the Reverb. To cut the high-end of the processed signal, lower the frequency.
6. **Mix** – The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (unaffected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix of both.

Spring Reverb

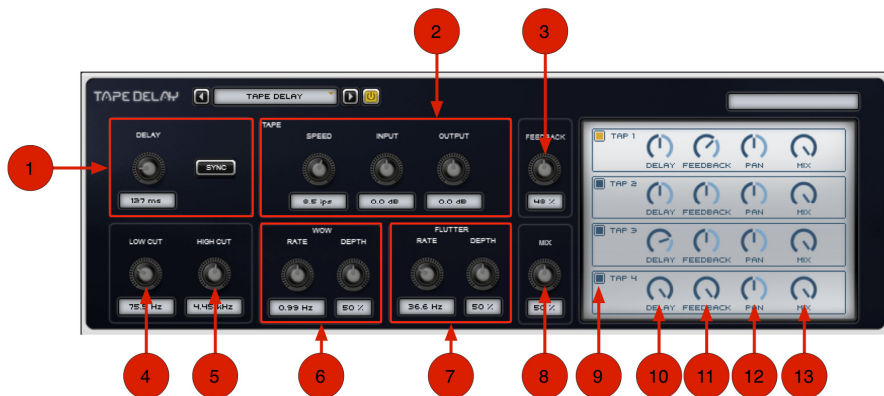


The Transfuser Spring Reverb brilliantly models its analog namesake. The analog spring reverb is an electromechanical device much like the plate reverb. The signal to be reverberated is fed to a transducer at the end of a long, suspended metal coil spring. The transducer causes the spring to vibrate with the result that the signal reflects from one end of the spring to the other. At the other end of the spring is another transducer that converts the motion of the spring back into an electrical signal, thus creating a delayed and reverberated version of the input signal.

1. **Pre-Delay** – The Pre-Delay control determines the amount of time (**0–250 ms**) that elapses between the original audio event and the onset of reverberation.
2. **Reverb Time** – Adjust the Reverb Time to change the reverberation decay time (**1.0–10.0 seconds**) after the original direct signal stops. Shorter times result in a tighter, more ringing and metallic reverb, such as when walking down a narrow hall with hard floors and walls. Longer times result in a larger reverberant space, such as an empty, large, concrete cistern.

3. **Low Cut** – The Low Cut control lets you adjust the frequency of the Low-Cut Filter (**20.0 Hz–1.00 kHz**). Use the Low-Cut Filter to reduce some of the potential "boomy-ness" you can get with longer Reverb Times.
4. **Diffusion** – Adjust the Diffusion control to change the rate at which the sound density of the reverb tail increases over time. Higher Diffusion settings create a smoother reverberated sound. Lower settings result in "flutterier" echo.
5. **Width** – Adjust the Width control to change the spread of the reverberated signal in the stereo field. A setting of **0%** produces a mono reverb, but leaves the panning of the original source signal unaffected. A setting of **100%** produces a open, panned stereo image.
6. **Mix** – The Mix control lets you adjust the Mix between the "wet" (affected) and "dry" (unaffected) signal. **0%** is all dry, and **100%** is all wet, while **50%** is an equal mix of both.

Tape Delay



Use the Tape Delay effect to add classic variable speed analog tape delay to the audio signal. In addition to standard analog tape delay controls, the Transfuser Tape Delay provides four separate delay lines (Taps).

1. Delay Controls:

- Delay Knob:** These controls let you specify the duration of the tape delay. When Sync is disabled, the Delay control lets you set the tape length in milliseconds and seconds (**50.0 ms to 4.00 seconds**); When Sync is enabled, the Delay control lets you select a rhythmic subdivision or multiple of the beat (based on the tempo of your software).
- Sync:** When Sync is enabled, the Delay time synchronizes to the session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the session tempo. The Sync button is lit when it is enabled.

2. **Tape** – The Tape controls let you set the Tape Speed, as well as Input and Output levels.
 - **Speed:** The Speed control adjusts the tape speed in IPS (inches per second). Tape speed affects the frequency response of the modeled tape machine as well as the delay time. Set Speed to lower settings for a lower resolution, dirtier sound with fewer high frequencies. Speed can also be useful as a performance control, letting you add really wild pitch sweeps to the delay repeats.
 - **Input:** The Input control lets you adjust the Input level to the virtual tape machine between **–INF** and **+12.0 dB**. Higher Input levels can result in an emulated tape saturation distortion.
 - **Output:** The Output control lets you adjust the Output level from the virtual tape machine between **–INF** and **+12.0 dB**.
3. **Feedback** – The Feedback control lets you adjust the amount of feedback (**0–100%**) of the delayed signal back into the tape delay line. At **0%**, the delayed signal repeats only once. As you increase the feedback, the number of times the delay repeats increases. The repeating, delayed signal gradually fades and degrades over time.
4. **Low Cut** – The Low Cut control lets you adjust the frequency for the Low-Cut filter. For less bass, raise the frequency.
5. **High Cut** – The High Cut control lets you adjust the frequency for the High-Cut filter. For less treble, lower the frequency.
6. **Wow** – The Wow controls let you adjust the Rate and Depth of the virtual tape machine's Wow modulation (a slow fluctuation in tape speed). Higher settings results in wider fluctuations in speed (and pitch).
 - **Rate:** Adjust the Rate control to change the Rate (**0.10–20.0 Hz**) of Wow-like tape speed fluctuation.
 - **Depth:** Adjust the Depth control to change the amount (**0–100%**) of Wow-like tape speed fluctuation.

7. **Flutter** – The Flutter controls let you adjust the Rate and Depth of the virtual tape machine's Flutter modulation (a fast fluctuation in tape speed). Higher settings results in wider fluctuations in speed (and pitch).
- **Rate:** Adjust the Rate control to change the Rate (**10 Hz–1.00 kHz**) of Flutter-like tape speed fluctuation.
 - **Depth:** Adjust the Depth control to change the amount (**0–100%**) of Flutter-like tape speed fluctuation.
8. **Mix** – The Mix control lets you balance the amount of dry signal with the amount of wet (delayed) signal. At **50%**, there are equal amounts of dry and wet signal. At **0%**, the output is all dry, and at **100%**, it is all wet.
- Note:** The Tape Delay provides four separate Taps (delay lines). Each Tap provides the same set of controls (described below). The controls for each Tap can be edited independently of the other Taps. You can enable or disable (bypass) any of the four available Taps.
9. **Tap On/Off** – These buttons enable and disable each of the four Taps. The button is lit when a Tap is active.
10. **Delay** – Adjust the Delay control to set the amount of delay for the Tap.
11. **Feedback** – Adjust the Feedback control to set the amount of Feedback for the Tap.
12. **Pan** – Adjust the Pan control to pan the audio signal from the Tap left or right in the stereo field.
13. **Mix** – Adjust the Mix control to lower (or raise) the output level of the Tap (delay line).

Tube Drive



Use the Tube Drive effect to add overdriven, tube-saturated distortion to the audio signal.

1. **Drive** – Sets the input volume of the signal through the Tube Drive effect.
2. **Headroom** – Adjust the headroom of the incoming signal (from **-30.0 dB** to **0.0 dB**).
3. **Saturation** – Adjusts the amount of tube saturation.
4. **Output** – Lets you boost or attenuate the overall output gain of the tube driven signal. This control ranges from **-20.0** to **+20.0**, with the default value at **0 dB**.



Use the Vinyl effect to make your Transfuser sound like your old vinyl records played on your dusty, old turntable (you know, the one that really needs a new needle). The Transfuser Vinyl effect is guaranteed to add an extra aura of faux-nostalgia to your Transfuser Tracks.

1. Distortion Controls:

- **Drive:** Lets you increase the amount of drive (input volume) of the signal. Increase the Drive to make it sound like you really need to get a new needle for your turntable!
- **Wide:** This mode creates a broader spread of the Drive distortion in the stereo field. When enabled, the Wide button is lit.
- **Frequency:** Adjusts the cutoff frequency (50 Hz–5.00 kHz) used to filter the distortion.
- **Resonance:** Adjusts the amount of resonance of the cutoff frequency used to filter the distortion.
- **Saturation:** Adjust the amount of saturation in the distortion.

2. Noise Controls:

- **Level:** Changes the amount of "scratchy record" noise in the audio signal. When set to **0%**, it sounds like you're playing a brand-new record. When set to **100%** (and with a higher Density setting), it sounds like you took your vinyl and scrubbed it with 20-grit sandpaper!
- **Density:** Changes the relative density of noise components in the audio signal. For some occasional pops and clicks, use a lower Density setting and a higher Level setting (adjusting the Noise Gate settings can help with this too). For that fuzzy needle sound, use a higher Density setting and a lower Level setting.
- **Tone:** Changes the bandwidth (**3.5–14 kHz**) of the added noise components.

3. Noise Gate – The Noise Gate controls let you adjust the Hold and Release times for the Noise Gate. Use the Noise Gate if you want the vinyl noise to stop when the input signal is silent.

- **Hold:** Sets the noise gate's hold time (**10.0 ms–10.0 seconds**).
- **Release:** Sets the noise gate's release time (**10.0 ms–10.0 seconds**).

Support

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