Transfuser™
Plug-in

Version 1.0

contents

chapter 1

Introduction

Welcome to the Transfuser™ RTAS (Real Time AudioSuite) plug-in for Digidesign®-qualified Pro Tools® systems. Transfuser is a powerful and easy to use modular loop-manipulating, beat-munging, groove generator for any Pro Tools session.

Transfuser delivers superior performance and reliability thanks to its direct integration with the Pro Tools production environment. With its integrated file browser, Transfuser lets you quickly find, audition, and import any audio loop. To further inspire your creativity, Transfuser comes with a comprehensive library of loops and samples. You can quickly and easily create your own beats and grooves by dragging and dropping loops directly into Transfuser from the Pro Tools Timeline, Region List, DigiBase Browsers, or even from Windows Explorer or the Mac Finder.

📖 *For detailed information on using plug-ins in Pro Tools, see the Pro Tools Reference Guide.*

Transfuser Features

The Transfuser RTAS plug-in for Pro Tools features:

- Intelligent loop slicing, time stretching, sequencing, combining, arranging, freezing, and BPM-synchronized effects to build complex and varied grooves quickly

- Unique tools for working with loops and other rhythmic material

- Powerful real-time controls for rapidly constructing and performing rich, musical parts

- Customizable interface with collapsible Track views, and Browser and Editor panes

- Incredibly creative musical randomization functions for quickly creating groove variations on the fly

- Per-Track selectable sequencer, sound generator, and multi-effects modules

- Automatic, intelligent, and musical analysis and slicing of audio material with the Slicer module

- Musical pitching, stretching, beat-matching, and vocoding of phrases and loops with the Phrase module

- Powerful drum sequencing possibilities with the Drums and Drum Sequencer modules

- Multi-pattern Slice, Drum, and Trigger Sequencer modules that offer many different styles of internal sequencing, from triggering a sample to playing and performing complex drum grooves

- 12 lanes of automation per Track lets you automate up to 12 freely assignable controls

- Internal bar-synchronized resampling

- Multi-effects processor with up to four effects per Track

- Support for many popular audio formats, including WAV, ACID, AIFF, REX 1 & 2, and Apple Loops

- Comes with more than 2 GB of content, including 2,000 loops, hits, and construction kits from Big Fish Audio

System Requirements

To use Transfuser, you need the following:

- An iLok USB Smart Key

- An iLok.com account for managing iLok licenses

- One of the following:
  - A Digidesign-qualified Pro Tools|HD®, Pro Tools LE, or Pro Tools M-Powered system
  - A Digidesign-qualified Pro Tools system and a third-party software application that supports the Digidesign RTAS plug-in standard

- DVD drive for Installation disc (boxed version of plug-in only)

- Internet access for software activation and registration purposes

For complete system requirements, visit the Digidesign website (www.digidesign.com).

Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved.

For a list of Digidesign-qualified computers, operating systems, hard drives, and third-party devices, visit the Digidesign website at:

www.digidesign.com/compatibility

Registering Your Plug-in

If you purchased a download version of a plug-in from the DigiStore (www.digidesign.com), you were automatically registered.

If you purchased a boxed version of a plug-in, you will be automatically registered when you authorize your plug-in (see "Authorizing Transfuser" on page 6).

Registered users receive periodic software update and upgrade notices.

For information on technical support, visit the Digidesign website (www.digidesign.com).

Working with Plug-ins

See the *Pro Tools Reference Guide* for general information on working with plug-ins in Pro Tools, including:

- Inserting plug-ins on tracks
- Clip indicators
- Plug-in window
- Adjusting plug-in controls
- Automating Plug-ins
- Monitoring and recording audio from instrument plug-ins
- Using the Librarian

Conventions Used in This Guide

All Digidesign guides use the following conventions to indicate menu choices and key commands:

Convention	Action
File > Save	Choose Save from the File menu
Control+N	Hold down the Control key and press the N key
Control-click	Hold down the Control key and click the mouse button
Right-click	Click with the right mouse button

The names of Commands, Options, and Settings that appear on-screen are in a different font.

The following symbols are used to highlight important information:

☼ *User Tips are helpful hints for getting the most from your Pro Tools system.*

⚠ *Important Notices include information that could affect your Pro Tools session data or the performance of your Pro Tools system.*

⌨ *Shortcuts show you useful keyboard or mouse shortcuts.*

▤ *Cross References point to related sections in this guide and other Digidesign guides.*

About www.digidesign.com

The Digidesign website (www.digidesign.com) is your best online source for information to help you get the most out of your Pro Tools system. The following are just a few of the services and features available.

Product Registration Register your purchase online.

Support and Downloads Contact Digidesign Technical Support or Customer Service; download software updates and the latest online manuals; browse the Compatibility documents for system requirements; search the online Answerbase or join the worldwide Pro Tools community on the Digidesign User Conference.

Training and Education Study on your own using courses available online or find out how you can learn in a classroom setting at a certified Pro Tools training center.

Products and Developers Learn about Digidesign products; download demo software or learn about our Development Partners and their plug-ins, applications, and hardware.

News and Events Get the latest news from Digidesign or sign up for a Pro Tools demo.

Pro Tools Accelerated Videos Watch the series of free tutorial videos. Accelerated Videos are designed to help you get up and running with Pro Tools and its plug-ins quickly.

To learn more about these and other resources available from Digidesign, visit the Digidesign website (www.digidesign.com).

chapter 2

Installation

Installing Transfuser

To install the Transfuser plug-in:

1 Do one of the following:

- Purchase and download the Transfuser installer from the DigiStore website.

– or –

- Insert the Transfuser Install disc (included in the purchased boxed version of the Transfuser plug-in) into your computer.

2 Double-click the Transfuser Installer application:

Windows Transfuser_Setup.exe

Mac Transfuser_Setup.pkg

3 Follow the on-screen instructions to complete the installation of the plug-in and patch files.

4 When installation is complete, click Finish (Windows) or Quit (Mac).

The Transfuser Installer copies the Transfuser plug-in (Transfuser.dpm) to the following location:

Windows Program Files\Common Files\ Digidesign\DAE\Plug-Ins

Mac Library/Application Support/Digidesign/ Plug-Ins

The Transfuser Installer copies all factory patches and content to your computer's hard drive. Unless you choose another location, the Transfuser Content is placed in the following location:

Windows Program Files\Digidesign\Transfuser

Mac /Applications/Digidesign/Transfuser

Authorizing Transfuser

Transfuser is authorized using an iLok USB Smart Key (iLok), manufactured by PACE Anti-Piracy, Inc.
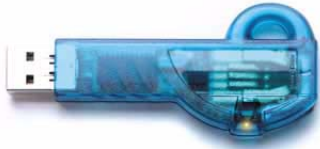
iLok USB Smart Key

The iLok is similar to a dongle, but unlike a dongle, it is designed to securely authorize multiple software applications from a variety of software developers.

This key can hold over 100 licenses for all of your iLok-enabled software. Once an iLok is authorized for a given piece of software, you can use the iLok to authorize that software on any computer.

⚠ *The iLok USB Smart Key is not supplied with your plug-in or software option. You can use the one included with certain Pro Tools systems (such as Pro Tools|HD-series systems), or purchase one separately.*

You have to authorize your plug-in online with the Activation Code included with your purchase (see "Authorizing Transfuser Using an Activation Code" on page 6).

📖 *See the iLok Usage Guide for details, or visit the iLok website (www.iLok.com).*

Authorizing Transfuser Using an Activation Code

To authorize Transfuser using an Activation Code:

1 If you do not have an existing iLok.com account, visit www.iLok.com and sign up for an iLok.com account.

2 Transfer your Transfuser license to your iLok.com account by doing the following:

- Visit http://secure.digidesign.com/activation.
- Input your Activation Code (listed on the Activation Card) and your iLok.com User ID. Your iLok.com User ID is the name you create for your iLok.com account.

3 Transfer the licenses from your iLok.com account to your iLok USB Smart Key by doing the following:

- Insert the iLok into an available USB port on your computer.
- Go to www.iLok.com and log in.
- Follow the on-screen instructions for transferring your licences to your iLok.

📖 *For additional information about iLok technology and licenses, see the iLok Usage Guide.*

4 Launch Pro Tools.

5 If you have any unauthorized plug-ins or software options installed on your system, you will be prompted to authorize them. Follow the on-screen instructions to complete the authorization process.

Uninstalling Transfuser

If you need to uninstall the Transfuser plug-in from your system, follow the instructions below for your computer platform.

Windows Vista

To remove the Transfuser plug-in:

1 Choose Control Panel.

2 Under Programs, click Uninstall a Program.

3 Select the Transfuser plug-in from the list of installed applications.

4 Click Uninstall.

5 Follow the on-screen instructions to remove the plug-in.

Windows XP

To remove the Transfuser plug-in:

1 Choose Start > Control Panel.

2 Double-click Add or Remove Programs.

3 Select the Transfuser plug-in from the list of installed applications.

4 Click Remove.

5 Follow the on-screen instructions to remove the plug-in.

Mac OS X

To remove the Transfuser plug-in:

1 Locate and open the Plug-ins folder on your Startup drive (Library/Application Support /Digidesign/Plug-ins).

2 Drag the plug-in to the Trash.

3 Empty the Trash.

Removing Transfuser Content

In addition to the plug-in, Transfuser includes quite a bit of media content. If you are uninstalling Transfuser, you may also want to remove the Transfuser Content to free up drive space.

To remove Transfuser Content:

■ Delete (Windows) or Trash (Mac) the Transfuser folder:

Windows Program Files\Digidesign\Transfuser\

Mac /Applications/Digidesign/Transfuser/

chapter 3

Overview

Transfuser is an RTAS instrument plug-in for slicing, dicing, shuffling, triggering, rephrasing, and resequencing audio loops and phrases to come up with exciting new beats, loops, and phrases for sequencing and performing music in Pro Tools.

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

Transfuser plug-in window, main panes and sections

Browser Pane
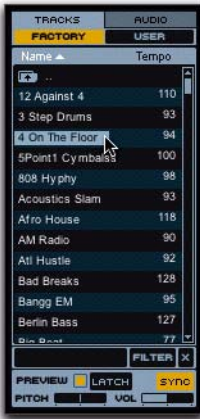
The Browser pane lets you access both Factory and user-created Tracks, and Factory audio files as well as any other audio files on your computer. Using the Browser pane, you can quickly and easily find the Transfuser Tracks or audio files you want, preview them, and drag and drop them into the Tracks pane.

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).

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 insert Transfuser on a Pro Tools track, the Transfuser Tracks pane is empty ("Drag Track Or Audio Files Here"). Drag and drop Transfuser Track files or audio files from the Transfuser Browser to add or create Transfuser Tracks. (You can also drag and drop audio files and regions from Pro Tools audio tracks, the Region List, DigiBase Browsers, or even from the Desktop.)
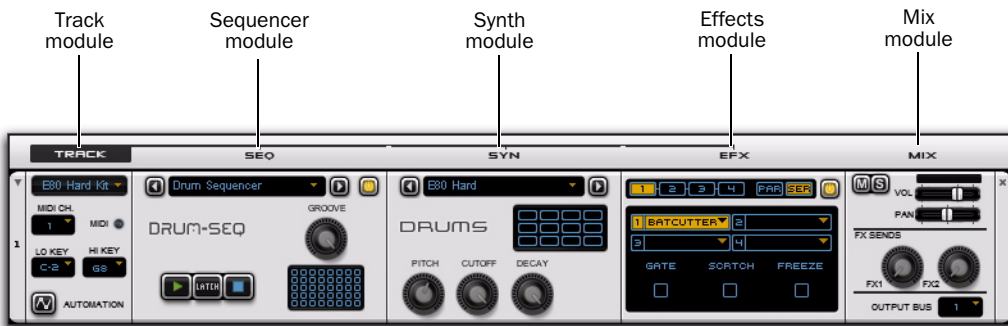
Figure 1. A Transfuser Track with Drum Sequencer and Drums Synth modules in the Tracks Pane

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.

Figure 2. Editor pane: Drum Sequencer Editor shown

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 Smart knobs, eight Trigger Pads, a four-octave keyboard for selecting patterns, triggering and transposing sounds, and a fader for crossfading between Transfuser Output Busses 1 and 2. The Controller section also displays the MIDI Input channel for any selected Transfuser Track.

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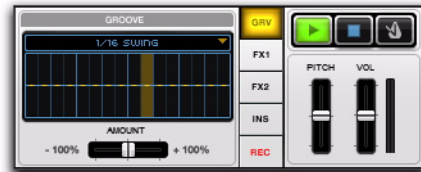
The Master section provides access to the Master Groove, Effects Sends 1 and 2, Main Effects Inserts, and Recorder. It also provides controls for the Master Transport and Click, as well as Pitch and Volume of the main output.

chapter 4

Getting Started with Transfuser

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 (see Chapter 2, "Installation").
- Launch Pro Tools.
- Create a new Pro Tools session or open an existing session.

Inserting Transfuser on a Pro Tools Instrument Track

To use Transfuser to its best advantage, insert it on a stereo Instrument track in your Pro Tools session.

To insert Transfuser on an Instrument track:

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.
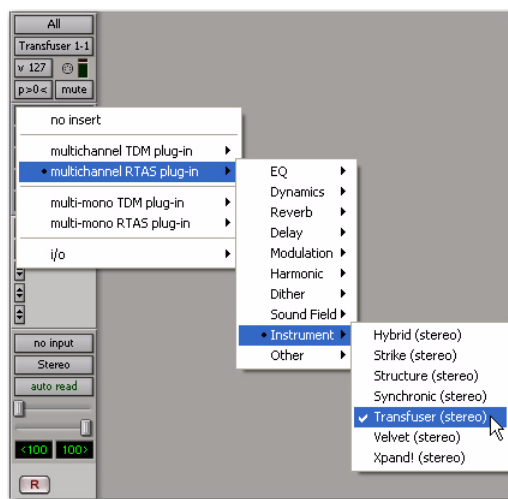
Inserting Transfuser on a stereo Instrument track

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 and dropping 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 and drop 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 and explore what comes up in the Editor section.

5 Don't forget to play around with the Effects module!

Figure 3. Playing Transfuser

Basic Operation

First, let's look at what Transfuser can do with an audio loop.

"Transfusing" 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).

Preview enable button

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.

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 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. If Latch is enabled, playback stops as soon as you release the key.

Note that stopping the Pro Tools Transport also stops the Transfuser Main Transport.

Starting the Pro Tools Transport does not necessarily start playback Transfuser. You need to send MIDI notes to Transfuser from (or thru) Pro Tools Instrument and MIDI tracks.

Explore the Sequencer Editor:

1 Click the Sequencer module on the Track and take a look at its editor in the Editor pane.

2 Start playback and adjust the various controls in the Editor to explore the possibilities.

Slice Sequencer Editor

Explore the Synth Editor:

1 Click the Synth module on the Track and take a look at its editor in the Editor pane.

2 With Transfuser still playing back, adjust the various controls and explore the possibilities.

Slicer Synth Editor

Loading and Editing a Drum Groove:

1 Select <Factory Default> from the Librarian pop-up menu. This way you can start from scratch.

2 Click the Tracks tab at the top of the Transfuser Browser, then click the Factory tab.
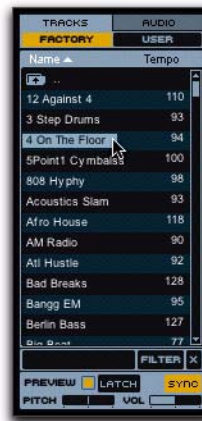
3 Locate a Factory Drum Track (such as "4 On The Floor") and drag it into the Tracks pane.

4 Click the Sequencer module on the Track and take a look at its Editor in the Editor pane.

5 Start playback and adjust the various controls in the Editor to explore the possibilities.

Drum:Seq Editor

6 Click the Synth module on the Track and take a look at its editor in the Editor pane.

7 With Transfuser still playing back, adjust the various controls and explore the possibilities.

Drums Editor

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 Select <Factory Default> from the Librarian pop-up menu.

2 Drag in a factory Track or an audio file from the Browser section.

You can also drag and drop audio regions from audio tracks or the Region List in your Pro Tools session to create new Transfuser Tracks.

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.

Selecting the MIDI Channel Input for a Transfuser Track

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

💡 *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 Pro Tools session. For more information, see Chapter 6, "Using Transfuser In Pro Tools."*

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.

💡 *You can also bus record Transfuser to Pro Tools audio tracks to capture longer performances for further editing, mixing, and processing (see "Mixing and Recording Transfuser in Pro Tools" on page 46).*

To record in Transfuser:

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

Recorder

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.

Selecting the Record Length

4 Use the Recorder Transport to Stop, Play, or Record.

5 At any time, click and 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.

Dragging and dropping waveform to Synth module

6 The Recorder can keep recording, or you can click Stop. After you stop recording, the recorded audio remains available.

💡 *You can also drag and drop the waveform to a Pro Tools audio track or to the Region List for further editing, arranging, and mixing in your Pro Tools session.*

Creating New Patterns with 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 simply by clicking a single button.

1 Select <Factory Default> from the Librarian pop-up menu.

2 Click the Tracks tab at the top of the Transfuser Browser, and then 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.

Clicking C1 on-screen to play Pattern 1

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

💡 *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 high-hat.*

7 Start playback in the Sequencer so you can hear the changes you'll make with M.A.R.I.O. as you apply them.

8 In the Drum Sequencer Editor pane, locate the M.A.R.I.O. Apply button.

Apply

M.A.R.I.O. in the Drum Sequencer Editor

9 With the pattern playing back, click the M.A.R.I.O. Apply button. Notice the changes to the pattern playing back.

10 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.

Back　　　　　　　　　　Forward

M.A.R.I.O. history buttons

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

less M.A.R.I.O.　　　　more M.A.R.I.O.

M.A.R.I.O. Depth dial

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 pop-up menu.

Target pop-up menu

M.A.R.I.O. Target pop-up menu

Editing and Storing Patterns

Transfuser lets you edit and store up to twelve 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)

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 is as you please.

To build your own Drum Pattern:

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

Drum Sequencer, Pattern 1 selected

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

3 Select the Pencil 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 Pencil up or down to increase or decrease the Velocity for the note.
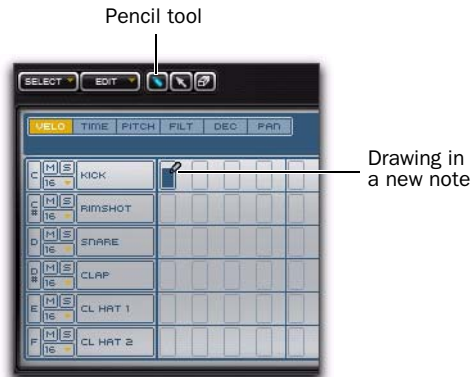
4 Go ahead and draw in the rest of the pattern as you like.

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.

To create a Drum Pattern from a Template:

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.

Drum Sequencer, "Kick" row selected

3 Click the Edit button and choose Create > Rhythmic Template 1,2,3,4.
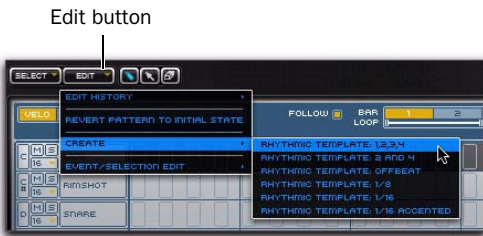
Notice that Transfuser has created notes on each downbeat of the Kick row.

4 Select other rows (like the Snare) and select other Rhythmic 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.

Adjusting the Probability value for a note in Beatcutter

6 You can also change the Speed of the probability pattern. Select one of the following from the Speed pop-up menu:

- 1/8th note
- 1/16th note
- 1/8 note triplet
- 1/16 note triplet

Changing the Note Speed in Beatcutter

💡 *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)!*

💡 *Don't restrict yourself to cutting up beats—try a vocal phrase and see what Beatcutter can do!*

Chop Up External Audio from Another Pro Tools Track or Input

You can process audio from a Pro Tools audio track or live input on your audio interface with Transfuser—and not just with Beatcutter, but with any Transfuser Effects.

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.

3 Set that Instrument Track's audio Input path to receive the same bus that your source track's Output is assigned (such as Bus1–2).

Bussing audio track Output to the Transfuser Input

4 In Transfuser, drag the "Default Audio Input" Track preset from the Browser to the Tracks pane.

Thru control

Figure 4. Default Audio Input through Beatcutter

5 Start playback in Pro Tools.

Or play an external source though the track's Input (such as a guitar or vocals).

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!

chapter 5

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 Pro Tools (or maybe a happy medium somewhere in between), Transfuser lets you quickly and easily assign MIDI notes and MIDI continuous controllers (MIDI CC) to virtually any pattern trigger or control available.

💡 *In Pro Tools, you can record your performance as both MIDI and audio. This gives you the opportunity to further refine your performance using the myriad editing and mixing possibilities in Pro Tools.*

📄 *For information on routing MIDI to Transfuser from (or through) Pro Tools, see "Routing MIDI to Transfuser" on page 43.*

Assigning MIDI Control

Transfuser makes it easy to assign MIDI control to any of its performance controls. This lets you play Transfuser from Pro Tools MIDI tracks, or in real-time through Pro Tools using an external MIDI controller (such as an M-Audio Axiom 49). Using sensibly-mapped MIDI controllers, you set up Transfuser as a profoundly compelling and expressive instrument for performance and arranging.

To assign (learn) 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).

Right-click to assign
MIDI CC
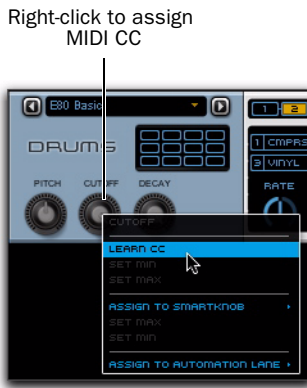
2 Select Learn CC.

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

Aftertouch is treated as a generic MIDI CC and it can be learned by any control just like any other MIDI CC number.

Pitchbend is not uniquely 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 the M-Audio Axiom series) 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 Busses 1 and 2. The Controller section also displays the input MIDI channel for any selected Track.

Smart Knobs

Transfuser provides six Smart 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 received 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.

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.

For information on assigning and using Smart knobs, see "Configuring the Smart Knobs" on page 31.

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, select the corresponding Sequencer Pattern (see "Sequencer Patterns" on page 103).

The Pattern Switch keys only affect those Tracks assigned to the same MIDI Input Channel as displayed in the Channel indicator (see "Channel" on page 30).

When playing the Transfuser Pattern Switch Keys from an external MIDI keyboard or from another Pro Tools MIDI track, be sure to select the corresponding MIDI channel for the "Transfuser *n*" port from the Pro Tools MIDI track Output 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 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 (see "Channel" on page 30).

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).

When playing the Transfuser Note Range Keys from an external MIDI keyboard or from another Pro Tools MIDI track, be sure to select the corresponding MIDI channel for the "Transfuser *n*" port from the Pro Tools MIDI track Output selector (where *n* is the number of the MIDI node for a specific Transfuser insert). To play a Synth module directly, select the corresponding MIDI channel for the "Transfuser *n* Synth" port.

For information on using the Note Range keys, see "Configuring Note Range Control" on page 33.

Channel

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 48–71) to Sequencer and Synth modules. A single Trigger Pad can be assigned to multiple target modules.

You can also set the default MIDI input channel and octave range for the Trigger Pads in the Transfuser Preferences (see "Transfuser Preferences" on page 39).

For information on using the Trigger Pads, see "Configuring the Trigger Pads" on page 34.

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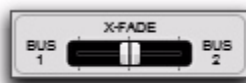
The X-Fade slider lets you crossfade between all Tracks set to Output Bus 1 and all Tracks set to Output Bus 2, much like a DJ mixer.

For information on crossfading between Output Bus 1 and 2, see "Crossfading Between Bus 1 and 2" on page 36.

Configuring the Smart Knobs

Smart 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 Pro Tools plug-in automation. Smart knobs can also be controlled by any assigned MIDI CC.

Smart knobs

To assign a Smart knob:

1 Right-click the control you want to assign.

For example, you may want to assign the Pitch control for the Slicer module to Smart knob 1.

Assigning a Slicer Synth Pitch Control to Smart knob 1

2 From the pop-up menu, select Assign To Smart-knob > 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.

Assign Smart knob 1 to affect Pitch controls of Synth modules on multiple Tracks

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, such as an M-Audio Oxygen 8 (see "Assigning MIDI Control" on page 27).

To name a Smart knob:

1 Click the text above the Smart knob you want to change.

Naming a Smart knob

2 Type the text you want (for example, type "Track Pitch").

3 Press Enter (Windows) or Return (Mac).

To show an assigned control in the Editor section:

1 Right-click the Smart knob.

2 From the pop-up menu, select the assigned control and choose Target from its submenu.

Targeting a control assigned to Smart knob 1

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 pop-up menu, select the assigned control and choose Unassign from its submenu.

Unassigning an assigned control from Smart knob 1

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

1 Right-click the control you want to unassign.

2 From the pop-up menu, select Unassign Smart Knob 1, or whichever Smart knob is assigned (1–6).

Unassigning Smart knob 1 from a Slicer Synth Pitch Control

Configuring 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).

Keyboard Note Range keyboard

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

Note Range selector, Drum Sequencer

Trigger Pattern Keys in the note range 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 Keys in the note range play the individual pads (1–12) in the Drums Synth.

Phrase Sequencer

Note Range selector, Phrase Sequencer

Trigger Phrase Keys in the Note Range trigger and re-trigger the Phrase Pattern.

Transpose Phrase Keys in the Note Range and re-trigger 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

Note Range
selector

Note Range selector, 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 Pro Tools MIDI and Instrument tracks.

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 provides 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.

To assign a Trigger Pad:

1 Right-click the Trigger Pad you want to assign.

2 From the pop-up 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.
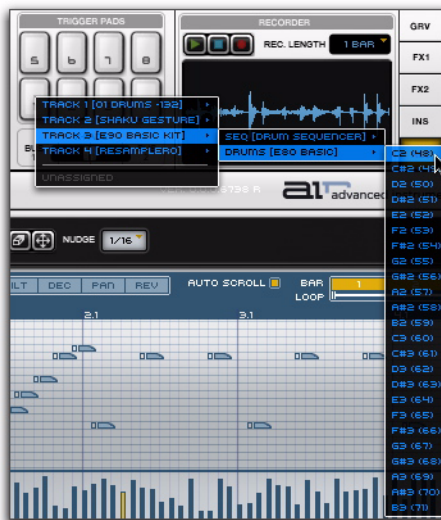
Assigning a Trigger Pad to play a Kick Drum sound

3 You can assign the same Trigger Pad to trigger another pattern or MIDI note in other Track modules as well. This is especially useful if you want to trigger different patterns in different Track Sequencer modules simultaneously.

4 Repeat the preceding steps for other Trigger Pads.

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.

Unassigning a Trigger Pad

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 busses, 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.

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).

💡 *To audition Tracks before bringing them into the mix, set up a Pro Tools Auxiliary Input track for cueing Transfuser Tracks set to the Cue Bus.*

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.

Assigning a Track to an Output Bus

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 Tracks is assigned to no audio Output Bus. However, the signal can still pass through the Effects Sends.

1–8 Can be selected as Inputs on other Pro Tools audio, Auxiliary Input, and Instrument tracks for further mixing, processing, and recording in your Pro Tools session. All Output Busses (1–8 and Cue) are routed to the Transfuser Main Output unless they are selected as a Track Input in Pro Tools.

💡 *Use X-Fade control to crossfade between Transfuser Tracks assigned to Output Busses 1 and 2.*

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 Pro Tools session for monitoring the Cue Bus from Transfuser. Route the output of the Pro Tools Auxiliary Input track to your Pro Tools headphone mix.

Selecting the Output Bus for a Transfuser Track

Crossfading Between Bus 1 and 2

Assign two (or more!) different Tracks to Output Busses 1 and 2 respectively. Transfuser lets you crossfade between these two Output Busses 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 crossfade between Output Busses 1 and 2:

■ Click and drag the X-Fade control left for more of Output Bus 1 and right for more of Output Bus 2.

💡 *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.*

Hiding and Showing 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.

To hide the Browser pane in Transfuser:

■ Click the Hide Browser Pane button.

Hide

Hide Browser pane

To show the Browser pane in Transfuser:

■ Click the Show Browser Pane button.

Show

Show Browser pane

To hide the Editor pane in Transfuser:

■ Click the Hide Editor Pane button.

Hide

Hide Editor pane

To show the Editor pane in Transfuser:

■ Click the Show Editor Pane button.
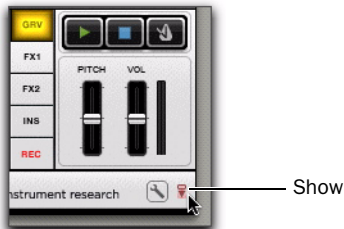
Show

Show Editor pane

Adjusting the Transfuser Plug-in 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 Plug-in window and drag up or down to increase or decrease the height of the Plug-in window.

Window height

Adjusting the Plug-in window height

Transfuser Preferences

As part of getting Transfuser set up for use in your Pro Tools sessions, you may want check the Transfuser preferences to make sure everything works the way you want.
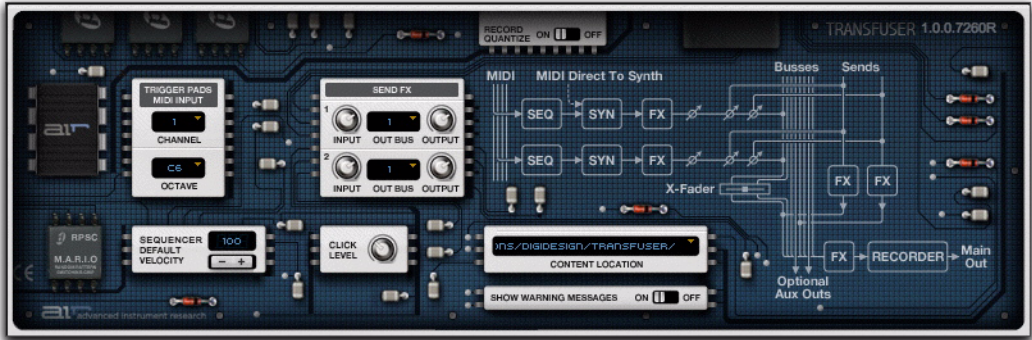
Transfuser Preferences

To show the Transfuser Preferences:

■ Click the Show Preferences button. The Transfuser Preferences appear in the Editor pane.

Show Preferences

Show Transfuser Preferences

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.

Trigger Pads MIDI Input

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.

Send FX

Send FX Preferences

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.

Sequencer Default Velocity

Sequencer Default Velocity

The Sequencer Default Velocity preference lets you set the default velocity for automatically created Events in the Sequencer modules.

Click Level

Click Level

The Click Level preference lets you set the volume level for the click in the Transfuser Metronome.

Content Location

Transfuser Content Location Preference

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.

Show Warning Messages

Show Warning Messages setting

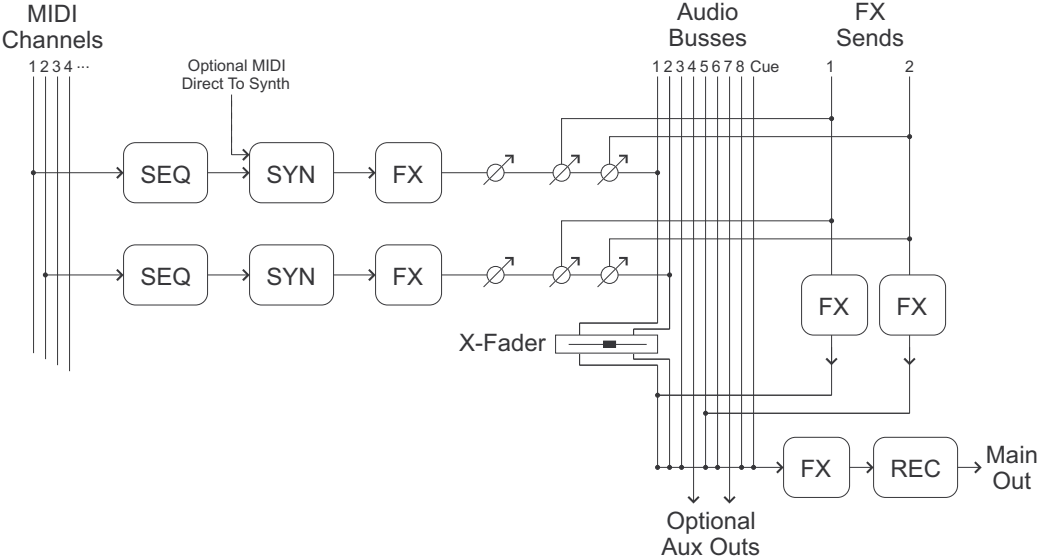The Show Warning Messages preference can be set to On or Off. When performing destructive edits, this setting determines whether or not Transfuser warns you before committing to the edit.

Transfuser MIDI and Audio Signal Flow

The Transfuser Preferences also displays MIDI signal and Audio signal flow for Transfuser.

chapter 6

Using Transfuser In Pro Tools

Using Transfuser in conjunction with Pro Tools provides you with some very powerful and sophisticated arrangement tools. Certainly, you can use Transfuser as a self-contained arranging and mixing environment, but when you combine it with all of the power of Pro Tools MIDI sequencing and audio mixing, processing, and recording capabilities, the possibilities are truly staggering.

Once you have created Transfuser Tracks, you can assign each Track a unique MIDI input channel (1–16). You can then send MIDI from multiple Pro Tools tracks on discrete MIDI channels to Transfuser Tracks for triggering Transfuser Sequencer Patterns and for playing Transfuser Synth modules directly.

📖 *For information on assigning MIDI input channels for Transfuser Tracks, see "Assigning MIDI Input Channels" on page 56.*

💡 *For more than 16 independently controlled Transfuser Tracks, insert additional instances of Transfuser on additional Pro Tools Instrument tracks.*

You can also assign the audio output of Transfuser Tracks to separate audio Output Busses (1–8) that can be independently routed to multiple Pro Tools Auxiliary Input and audio tracks for further mixing, processing, and recording.

💡 *Use the Pro Tools Plug-in Librarian to save complete Transfuser configurations with multiple Transfuser Tracks. For information on using the Pro Tools Plug-in Librarian, see the Pro Tools Reference Guide.*

Routing MIDI to Transfuser

There are several ways you can work with MIDI routing to control Transfuser through Pro Tools. Probably the most immediately gratifying way is to route an external MIDI keyboard controller through a Pro Tools Instrument or MIDI track to Transfuser.

Using a Single Instrument Track

You can easily control Transfuser with MIDI when it is inserted on an Instrument track. The MIDI Output of the Pro Tools Instrument track is automatically routed to Transfuser on MIDI channel 1. By default, the Instrument track is set to receive MIDI from all MIDI Input Devices, so if you have a MIDI controller already connected and configured, you can start playing Transfuser right away.
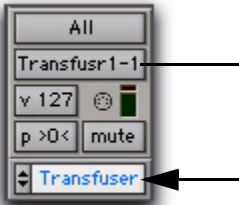
Instrument track MIDI Output automatically routed to Transfuser on MIDI channel 1

💡 *Depending on the setting for the Default Thru Instrument preference, you may need to Record enable the Instrument or MIDI track to pass MIDI from the track Input to its Output. Also, check to make sure that Options > MIDI Thru is enabled.*

Assigning MIDI Tracks to Transfuser Sequencer Modules

You can assign multiple Pro Tools MIDI and Instrument tracks to Transfuser Sequencer modules on different MIDI channels. This lets you trigger individual Sequencer modules from external MIDI controllers or from sequences on Pro Tools MIDI tracks.

To assign Pro Tools MIDI tracks to control Transfuser Sequencer modules:

■ Select the corresponding MIDI channel for the "Transfuser *n*" port from the Pro Tools MIDI track Output selector (where *n* is the number of the MIDI node for a specific Transfuser insert).
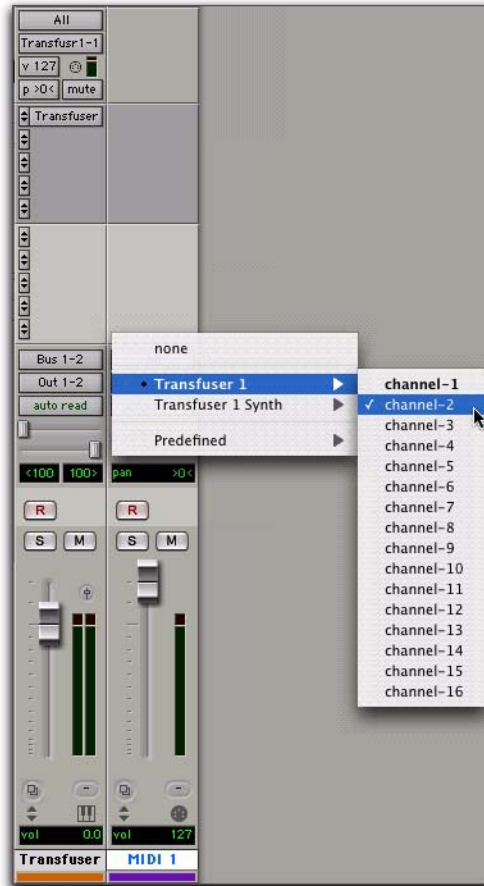
Assigning a Pro Tools MIDI track output to control Transfuser Tracks and Sequencer modules on MIDI channel 2

Assigning MIDI Tracks to Transfuser Synth Modules

You can assign multiple Pro Tools MIDI and Instrument tracks to bypass the Sequencer module and control Transfuser Synth modules directly on different MIDI channels. This lets you control individual Synth modules from external MIDI controllers or from sequences on Pro Tools MIDI tracks.

To assign Pro Tools MIDI tracks to control Transfuser Synth modules:

■ Select the corresponding MIDI channel for the "Transfuser *n* Synth" port.
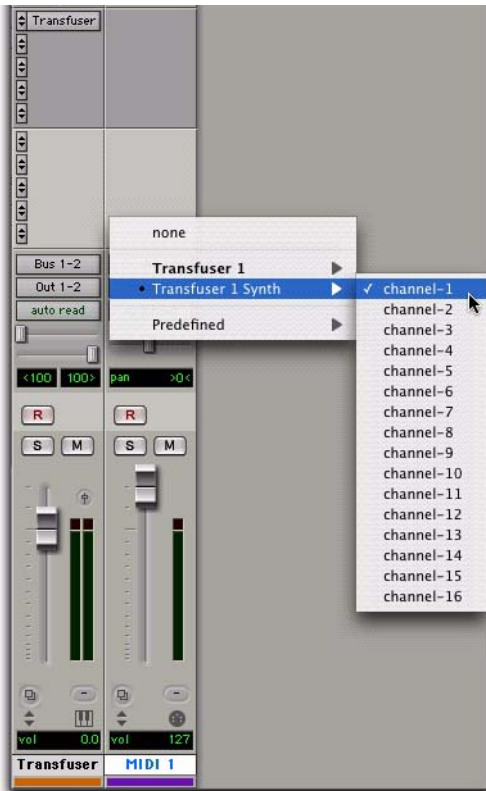
Assigning a Pro Tools MIDI track output to control Transfuser Synth modules on MIDI channel 1

Using Multiple MIDI and Instrument Tracks

You can arrange MIDI notes and continuous controller data on multiple Pro Tools tracks to control multiple Transfuser Tracks independently. This technique lets you create extremely detailed, nuanced, and carefully controlled arrangements (perfect for the control freak in all of us).

Use some MIDI tracks to trigger different Transfuser Sequencer Patterns at different times for multiple Transfuser Tracks set to different MIDI channel inputs. At the same time, use other MIDI tracks to play Transfuser Synth modules directly using longer, more involved MIDI sequences straight from Pro Tools tracks (or from your external MIDI controller through Pro Tools tracks—don't forget to record your MIDI performance in Pro Tools!).

To configure Pro Tools to control multiple Transfuser Sequencer and Synth modules:

1 Set each Transfuser Track to receive MIDI on different MIDI channels (see "Assigning MIDI Input Channels" on page 56).

2 Create as many MIDI tracks as you need.

3 Assign some MIDI track Outputs to Transfuser Sequencer modules on unique MIDI channels.

4 Assign other MIDI track Outputs to Transfuser Synth modules on unique MIDI channels.

5 Create your MIDI arrangement for Transfuser in the Pro Tools MIDI tracks.

If you have more than one external MIDI controller that you want to use to play Transfuser, set up the corresponding additional number of MIDI tracks and set each MIDI track Input to a specific device (including the Instrument track on which Transfuser is inserted).

Mixing and Recording Transfuser in Pro Tools

With Transfuser, you can take advantage of the vast capabilities of Pro Tools as a powerful recording, editing, and mixing environment with one or even multiple instances of Transfuser.

Bus Recording Transfuser in Pro Tools

One of the first and easiest things you might want to do is capture your performance using a single instance of Transfuser.

To bus record Transfuser in Pro Tools:

1 If you haven't already done so, insert Transfuser on a stereo Instrument track and set it up for performance.

2 Create a new stereo audio track.

3 Assign the audio Output of the Instrument track on which Transfuser is inserted to a bus (such as Bus 1–2).

4 Select the same bus (such as Bus 1–2) as the Input of the stereo audio track for recording (see Figure 5 below).
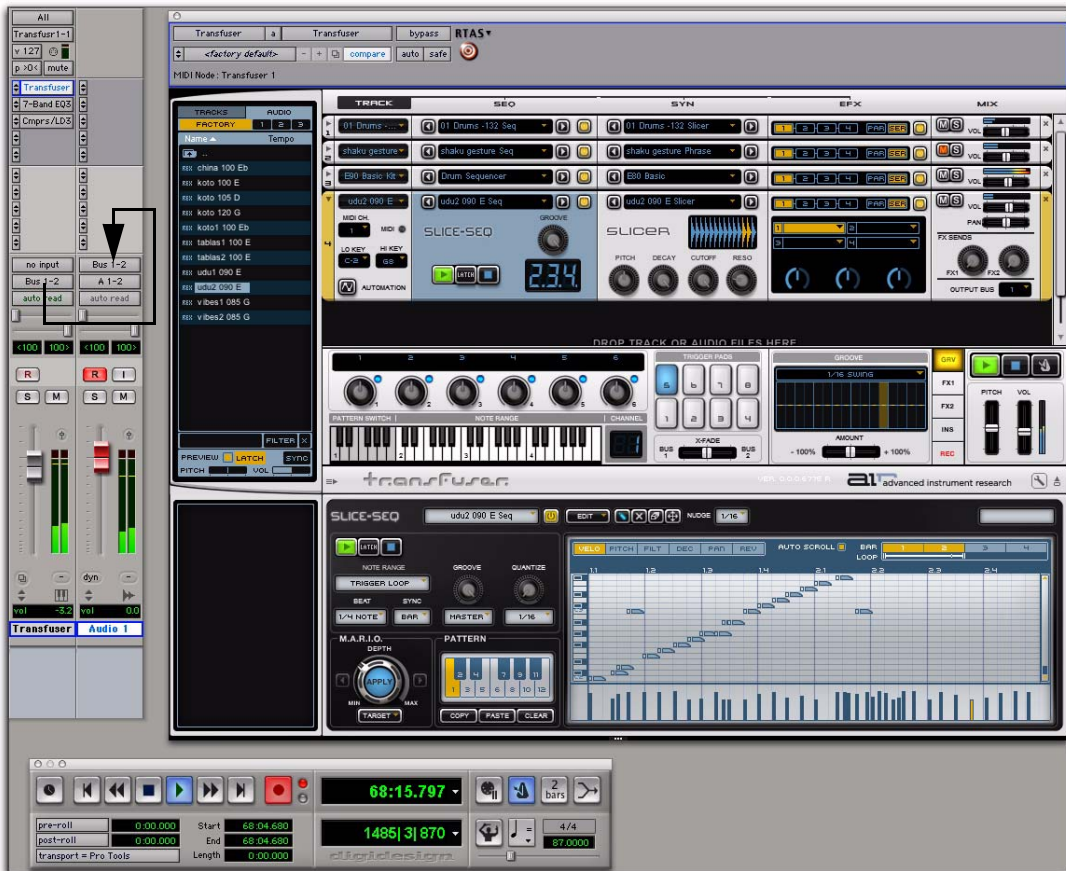
Figure 5. Bus recording the output of Transfuser in Pro Tools

Bussing Transfuser Tracks to Multiple Pro Tools Tracks

A more sophisticated way to work with Transfuser is to assign different Tracks in Transfuser to multiple tracks in your Pro Tools session for further multitrack mixing, processing, and recording.

To bus Transfuser Tracks to multiple Pro Tools tracks:

1 Configure any number of Transfuser Tracks. Strive for a nice mix of different drum sequences, sliced-up loops, and phrases.

2 Assign the different Transfuser Tracks to different Output Busses (see "Assigning a Track to an Output Bus" on page 36).

3 In your Pro Tools session, create enough new stereo audio tracks for each Output Bus from Transfuser.

4 Select the corresponding Transfuser Output Bus from each audio track Input selector.

Note that all of the Transfuser Output Bus assignments play through the Transfuser Main Outputs (which play through the Pro Tools track on which Transfuser is inserted) until they are selected as the Input to a Pro Tools Auxiliary Input or audio track.

You can now record, mix, and process your Transfuser Tracks independently in your Pro Tools session.

Figure 6. Selecting Transfuser Bus 1 as the input for an audio track in Pro Tools

Monitoring the Transfuser Cue Bus in Pro Tools

Assign Transfuser Tracks to the Cue Output Bus for auditioning in your headphone mix. Then select the Transfuser Cue Output Bus as the Input for an Auxiliary Input track. Assign the Output of the Auxiliary Input track to your headphone monitoring path (not the main output).

Using an Auxiliary Input track to monitor the Transfuser Cue Output Bus

Pro Tools File Management with Transfuser

(Pro Tools 7.3 and Higher)

Pro Tools provides integrated file management for Transfuser. When saving a session copy, you can choose to copy all sampler audio files (audio files loaded into Transfuser). Pro Tools also tries to find and relink to missing Transfuser files.

Save Session Copy In

When saving a session copy in Pro Tools, the All Sampler Audio Files option is available if Transfuser is installed on your system. When this option is selected, Transfuser samples are copied to the new location, and session references are updated to point to the copied files.
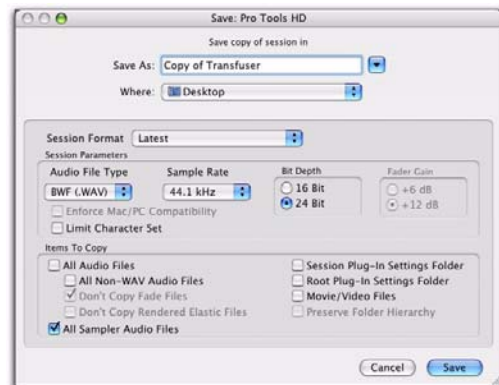
Save Session Copy In, All Sampler Audio Files selected

Find and Relink

When opening a Pro Tools session that is missing audio files used by Transfuser, those files are automatically found and relinked when possible. You can also manually find and relink missing files.

chapter 7

Working with Transfuser Tracks and Modules

This chapter describes working with Transfuser Tracks and Modules.

📖 *For an overview of Transfuser's layout, see Chapter 3, "Overview."*

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.
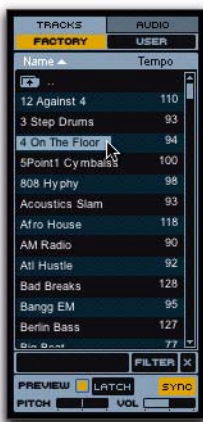
The Transfuser Browser viewing Factory Tracks

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.

Factory Audio content folders

4 In the Browser list, select the Factory Audio you want to preview and import.

selected file

Selecting Factory audio for previewing 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.

selected tab

User Audio tab 3 showing hard drives on the computer

3 Double-click the folder whose contents you want to view.

4 Select the audio file you want to preview and import.

Audio file selected in a folder on a computer's drive

💡 *The User Audio tabs 1, 2, and 3 are "sticky." That way you can navigate to three different locations of your favorite audio for easy access in every Transfuser instance in all of your Pro Tools sessions.*

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.

Move Up One Directory Level icon

Navigating up one directory level

Filtering Tracks and Audio in the Browser List

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.
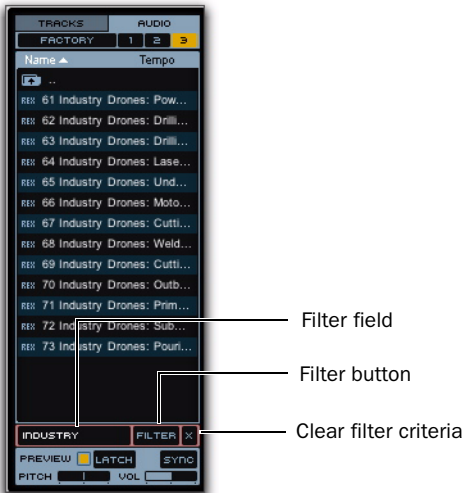
Filter by the letters "Industry"

2 Click the Filter button.

3 To clear the filter criteria, click the X button.

Previewing Tracks and Audio in the Browser

Transfuser lets you preview Tracks and audio from its Browser. The audio path for previewing is the main Transfuser audio output to the Pro Tools track on which it is inserted.

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 as desired:

Latch Enable Latches preview of the selected file.

Sync Enable Synchronizes preview to the Pro Tools 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.
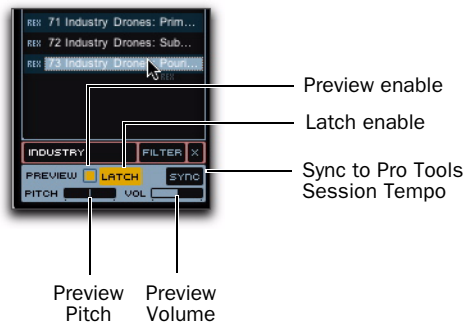
Browser Preview controls

Once you have found the Track or audio file you want, drag and drop it into the Transfuser Tracks pane.

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 Pro Tools or even in real-time using Transfuser's on-screen interface or an external MIDI controller.

💡 *For more than 16 independently controlled Transfuser Tracks, insert additional instances of Transfuser on additional Pro Tools Instrument tracks.*

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

Track Sequencer → Synth → Effects → 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 and drop a Factory Track from the Transfuser Browser to the Tracks pane.
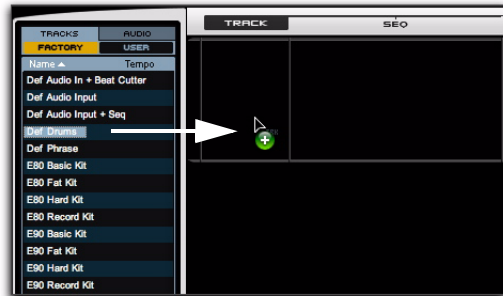
Loading a factory Track in Transfuser

To create new Tracks in Transfuser:

1 Drag and drop audio files (REX, ACID, AIFF, or WAV) or audio regions to the Tracks pane from any of the following:

• Transfuser Browser pane
• Pro Tools audio tracks
• Pro Tools Region List
• DigiBase browsers
• The Desktop

Drag and drop audio to create a Track in Transfuser

2 In the resulting Import As dialog, select the type of Track you want.

Import As dialog

There are three 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 triggered (by mapped MIDI notes), beat-matched audio.

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.

3 To create another Track, repeat the previous steps.

� *You can also have a Thru Sequencer and 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 Pro Tools session folder. 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) a Track in Transfuser:

■ Click the Track Collapse button.
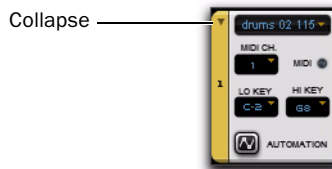
Collapsing a Track

To maximize (expand) a Track in Transfuser:

■ Click the Track Expand button.
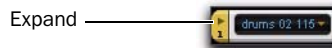
Expanding a Track

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

Cut or Copy and Paste 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).

Copying a Track

2 From the Track menu of the Track you want to replace, select Paste.

Pasting a Track

� *You can drag and drop one Track over another to replace it, just like Cut and Paste, by clicking and dragging the Track module. You can Alt-drag (Windows) or Option-drag (Mac) 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.

� *Use the Pro Tools Plug-in Librarian to save complete Transfuser configurations with multiple Transfuser Tracks. For information on using the Pro Tools Plug-in Librarian, see the Pro Tools Reference Guide.*

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.

Saving a Track

☝ *You can also drag and drop the Track module from the Tracks pane to the Browser to save with samples.*

2 In the Save dialog, specify Path, Name, and BPM as desired.
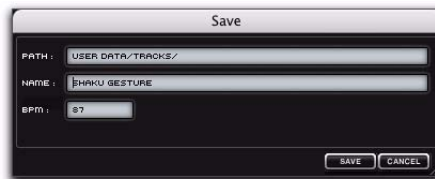
Save dialog

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 "Transfuser Preferences" on page 39).*

Moving Tracks

To move a Track, simply click and drag it to the location you want between (or before or after) other Tracks.

Moving a Track to between two other Tracks

Result

⚠ *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.

Removing a Track

– or –

■ 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).
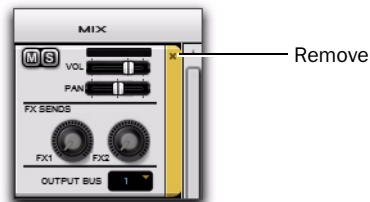
Removing a Track

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 Pro Tools MIDI tracks to independently play multiple corresponding Transfuser Tracks (see "Routing MIDI to Transfuser" on page 43).

☀ *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.
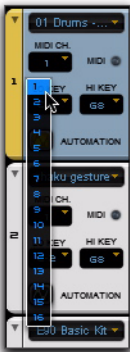
Selecting the MIDI channel input for controlling a Track

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 Pro Tools session. MIDI note numbers below or above the assigned note key range have no effect on the Track.

To assign the Low Key Note for a Track:

■ Select the MIDI note and octave from the Lo Key pop-up menu.

Selecting the Low Key range for a Track

To assign the High Key Note for a Track:

■ Select the MIDI note and octave from the Hi Key pop-up menu.

Selecting the High Key range for a Track

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 Chapter 8, "Transfuser Track Automation."

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
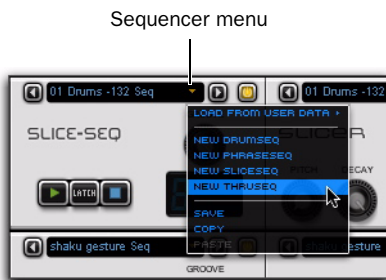
Sequencer menu

Selecting New ThruSeq from the Sequencer menu

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

■ From the Sequencer menu, select one of the following:

New DrumSeq Creates a new Drum Sequencer module.

New PhraseSeq Creates a new Phrase Sequencer module.

New SliceSeq Creates a new Slice Sequencer module.

New ThruSeq Creates a new Thru module (which effectively means no sequencer).

Creating a New Synth Module

Synth menu

Selecting New Audio Input from the Synth menu

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

■ From the Synth menu, select one of the following:

New Audio Input Creates a new Audio Input module. The Audio Input module passes audio from the audio Input Path of the Pro Tools track on which Transfuser is inserted (which can be live or from disk).

New Drums Creates a new Drums Synth module.

New Phrase Creates a new Phrase Synth module.

New Slice 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, instances of Transfuser, and Pro Tools sessions.

To save a Sequencer or Synth module:

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

Saving a custom Synth module

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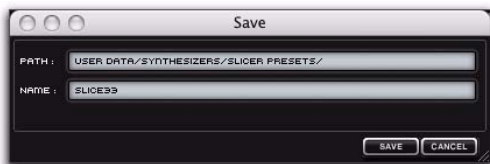
Save Preset dialog

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

You can also simply drag and drop the module to the Browser.

For information on saving Tracks, see "Saving Tracks" on page 54.

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.

Loading a custom Phrase Synth module

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.

You can also simply drag and drop 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).

Slice Sequencer module Enable/Disable button (enabled)

Also, the Effects Sends 1 and 2, and the Main Effects Inserts each provide an Enable/Disable button.

Sequencer Modules

Sequencer modules play back the audio loaded into Synth modules using Sequencer Patterns.

For information on creating, saving, and loading custom Sequencer modules, see "Creating, Saving, and Loading Modules" on page 57.

Transfuser provides four different types of Sequencer modules:

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.

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, see Chapter 9, "Sequencer Editors."

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 Sequencer Track Module

In the Tracks pane, the Drum Sequencer module provides the following high level controls:

Sequencer Menu Lets you replace the current Sequencer module with another Sequencer module. It also lets you load custom saved Sequencer modules (of the same type), and Copy and Paste Sequencer modules.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, and Stop controls for the sequencer module.

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

Drum Sequencer Editor

When you select the Drum Sequencer module on a Track, its Editor is available in the Editor pane. The Drum Sequencer editor provides the same high level controls as the Drum Sequencer Track module, a 12-note step sequencer, and other detailed sequencer controls and options.

Phrase Sequencer

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

Phrase Sequencer Track Module

In the Tracks pane, the Phrase Sequencer module provides the following high level controls:

Sequencer Menu Lets you replace the current Sequencer module with another Sequencer module. It also lets you load custom saved Sequencer modules (of the same type), and Copy and Paste Sequencer modules.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, and Stop controls for the sequencer module.

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

Phrase Sequencer Editor

When you select the Phrase Sequencer module on a Track, its Editor is available in the Editor pane. The Phrase Sequencer editor provides the same high level controls as the Phrase Sequencer Track module, a monophonic MIDI sequencer, and other detailed sequencer controls and options.

Slice Sequencer

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

Slice Sequencer Track Module

In the Tracks pane, the Slice Sequencer module provides the following high level controls:

Sequencer Menu Lets you replace the current Sequencer module with another Sequencer module. It also lets you load custom saved Sequencer modules (of the same type), and Copy and Paste Sequencer modules.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, and Stop controls for the sequencer module.

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

Slice Sequencer Editor

When you select the Slice Sequencer module on a Track, its Editor is available in the Editor pane. The Slice Sequencer editor provides the same high level controls as the Slice Sequencer Track module, a slice sequencer, and other detailed sequencer controls and options.

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.

Synth Modules

Synth modules generate sound using imported audio files. Audio files and regions can be dragged and dropped into Transfuser from the Transfuser Browser, Pro Tools tracks or the Region List in Pro Tools, from DigiBase browsers, or from the Desktop (Mac Finder or Windows Explorer). Synth modules are played back by corresponding Sequencer modules.

You can drag and drop audio files and regions into existing Synth modules to replace any currently loaded audio.

For information on creating, saving, and loading custom Synth modules, see "Creating, Saving, and Loading Modules" on page 57.

Transfuser provides four different types of Synth modules:

Drums Provides a sophisticated 12-pad drum sampler. Using the Drum Sequencer or MIDI input, you can play back simple to intricate drum patterns.

Phrase Converts imported audio to beat-matched, time compressed/expanded (TCE) 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 insered. This lets you directly process Pro Tools audio in Transfuser without having to import it.

📖 *For detailed information on the Synth Editors, see Chapter 10, "Synth Editors."*

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 and drop samples or choose from a number of factory samples.

Drums Synth Track Module

Synth Menu Lets you replace the current Synth module with another Synth module. It also lets you load custom saved Synth modules (of the same type), and Copy and Paste Synth modules.

Pitch Lets you raise or lower the pitch of the Drums in semitones and cents.

Cutoff Lets you adjust the Cutoff Frequency applied to the Drums.

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 Synth editor provides the same high level controls as the Drums Synth Track module, twelve sampled drum pads, and other detailed controls and options.

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.

Synth Menu Lets you replace the current Synth module with another Synth module. It also lets you load custom saved Synth modules (of the same type), and Copy and Paste Synth modules.

Pitch Lets you raise or lower the pitch of the audio in the Phrase Synth in semitones.

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 Synth editor provides the same high level controls as the Phrase Synth Track module, and other detailed controls and options.

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

Synth Menu Lets you replace the current Synth module with another Synth module. It also lets you load custom saved Synth modules (of the same type), and Copy and Paste Synth modules.

Pitch Lets you raise or lower the pitch of the audio slices in the Slicer Synth in semitones.

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.

Cutoff Lets you adjust the Cutoff frequency of the Filter applied to the audio slices.

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 Synth editor provides the same high level controls as the Slicer Synth Track module, and other detailed controls and options.

Input

The Input Synth module passes audio from the Input of the Pro Tools 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.

Synth Menu Lets you replace the current Synth module with another Synth module. It also lets you load custom saved Synth modules (of the same type), and Copy and Paste Synth modules.

Attack Lets you adjust the Attack time of the envelope for audio input.

Release Lets you adjust the Release time of the envelope for audio input.

Thru Lets you directly adjust the through level for the audio input.

Input Synth Editor

When you select the Input Synth module on a Track, its Editor is available in the Editor pane. The Input Synth editor provides the same high level controls as the Input Synth Track module, as well as a few other detailed controls and options.

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 Chapter 11, "Effects Editors."*

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 Busses as the input for audio and Auxiliary Input tracks in Pro Tools for further mixing and processing.

📖 *Also see "Bussing and Mixing in Transfuser" on page 35.*

Mute

Click the Mute button to mute and unmute the Track. When muted, the Mute button is lit.

Solo

Click the Solo button to solo and unsolo the Track. When soloed, the Solo button is lit. All unsoloed Tracks are automatically muted.

Meters

The Track Meters show the output level for the Track.

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.

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.

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). Click and 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" on page 68.

Output Bus

The Output Bus selector lets you select any of the nine stereo Transfuser Output Busses.

Output Busses 1–8 Can be selected for discrete mixing in your Pro Tools session. Select the desired Output Busses for your Tracks in Transfuser, and then select the corresponding Output Busses in the audio Input Path selector on Pro Tools Auxiliary Input and audio tracks. For more information, see "Mixing and Recording Transfuser in Pro Tools" on page 46.

All Output Busses (1–8 and Cue) are routed to the Main Output unless they are selected as a Track Input in the Pro Tools.

Output Busses 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 Busses 1 and 2 respectively.

Cue Output Bus Can be used to audition Tracks before switching them to one of the main Output Busses. Set up an Auxiliary Input track in your Pro Tools session to monitor the Cue Output Bus from Transfuser and route it to the Headphone outputs on your Pro Tools or M-Audio audio interface. See "Monitoring the Transfuser Cue Bus in Pro Tools" on page 48.

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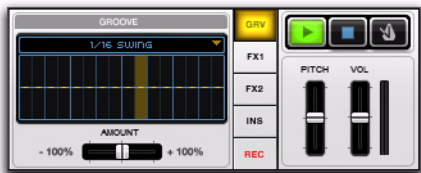
The Master section provides access to the Master Groove, Effects Sends 1 and 2, Main Effects Inserts, and Recorder. It also provides controls for the Master Transport and Click, and Pitch and Volume.

Master Transport

The Master Transport provides Play, Stop, Metronome, Pitch, and Volume controls for Transfuser.

Play

Click the Play button in the Master Transport to start play back in Transfuser regardless of whether or not the Pro Tools Transport is engaged.

Stop

Click the Stop button in the Master Transport to stop play back in Transfuser regardless of whether or not the Pro Tools Transport is engaged.

Metronome

When you want to play or record with the Drum Sequencer on-the-fly, without any other Transfuser Tracks or the Pro Tools Transport running, you can use the Metronome in the Master section to keep the beat.

The Transfuser Metronome always synchronizes to the Pro Tools session tempo.

⚠ *Audio from the Metronome is not recorded in Transfuser. However, it can be recorded to Pro Tools audio tracks.*

📄 *The level of the click for the Metronome can be set in the Transfuser Preferences. See "Transfuser Preferences" on page 39.*

To activate the Metronome

■ Click the Metronome button in the Master Transport section. Click it again to turn off the Metronome.

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.

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.

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.

To access the Master Groove editor:

■ Click Grv to the left of the Master Transport.
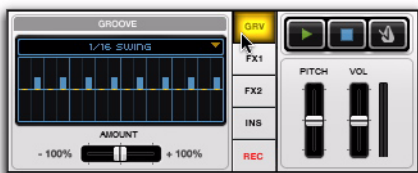
Viewing the Groove editor

To adjust the timing of a step in the Groove:

■ In the Groove section, click on the step whose timing you want to adjust. Draw up to adjust the timing after the grid (beat). Draw down to adjust the timing before the grid (beat).

Adjusting the timing of a step in the Groove section

Groove Presets

You can also select one of the preset Grooves, or even import a Pro Tools Groove Template.

To select a Groove preset:

■ From the Groove menu, 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 pushing Groove pattern that is a little bit ahead of the beat.

Import Pro Tools Groove Lets you select a Pro Tools Groove Template.

📖 *For information on Groove Templates, see the Pro Tools Reference Guide.*
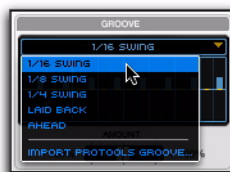
Selecting a Groove preset

Groove Amount

Use the Groove Amount control in the Groove section to adjust or invert the amount of groove microtiming available to Tracks and certain effects (such as Beatcutter or Gater).
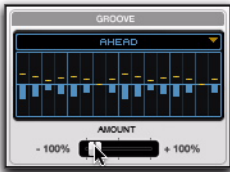
Applying a negative amount of Groove

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 the Sequencer Editor.

Applying Groove to a Slice Sequencer module

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 Chapter 11, "Effects Editors").

💡 *The returns for Effects Sends 1 and 2 can each be routed to any available Output Busses as set in the Transfuser Preferences (see "Send FX" on page 40).*

To access the controls for Send Effects 1 or 2:

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

Viewing Send Effects 1

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

■ Adjust the Track FX1 or FX2 control.
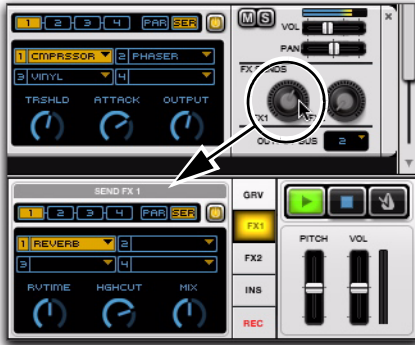
Sending audio from a Track to Send Effects 1

💡 *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 Chapter 11, "Effects Editors").

To access the controls for Main Effects Inserts:

■ Click Ins to the left of the Master Transport.

Viewing the Main Effects Inserts

💡 *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.

💡 *You can also bus record Transfuser to Pro Tools audio tracks to capture specific Output Busses and longer performances for further editing, mixing, and processing.*

To record in Transfuser:

1 Click REC (left of the Master Transport) to show the Recorder pane.

Recorder

2 Set the Record Length to 1, 2, or 4 Bars.

Selecting the Record Length

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, click and 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.

Dragging and dropping waveform to Synth module

💡 *You can also drag and drop the waveform to the Desktop or to a Pro Tools audio track or to the Region List for further editing, arranging, and mixing in your Pro Tools session.*

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 discreetly 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 pop-up menu, choose Assign Automation Lane and select the number for the Track Automation Lane you want assigned (1–12).

Assigning Automation Lane 1 to Slicer Synth Cutoff control

To unassign a control Track Automation:

1 Right-click the control you want to unassign.

2 From the pop-up menu, select Unassign Automation Lane.

Track Automation Controls

The Track Automation Editor provides several controls for selecting, creating, and editing Transfuser Track Automation.
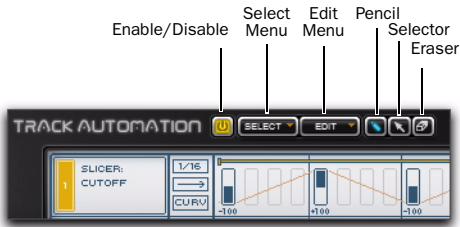
Track Automation controls

Enable/Disable

Click the Enable/Disable button to enable or disable Track Automation.

Select Menu

Select All Selects all Track automation.

Invert Selection Inverts the selection so that what was selected is unselected and what wasn't is.

Deselect Clears the current selection.

Edit Menu

Undo History Lets you regressively undo any Track Automation edits.

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 Pro Tools 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.

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.
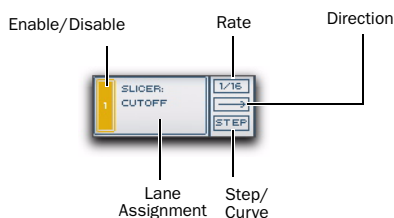
Track Automation Lane controls

Enable/Disable Enables or disables the Track Automation Lane. When enabled, the Enable/Disable button is highlighted.

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.

Rate Sets the rate (as a subdivision of the beat) at which Track Automation events play back. Select from the following note values:

- 1/32
- 1/32 Triplet
- 1/16
- 1/16 Triplet
- 1/8
- 1/8 Triplet
- 1/4

Direction Sets the playback direction for the Track Automation Lane. Click to toggle between Forward (—>) and Forward/Backward (<—>).

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.

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.

Creating an Automation Event

To change the value for an Automation Event:

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

> 🔲 *Alt-click (Windows) or Option-click (Mac) 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.

– or –

■ 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 simultaneaously. Commands from the Edit menu apply to selected events.

To select Automation Events:

1 Select the Selector tool.

2 Click and drag across one or more Automation Events on one or more Automation Lanes.

> 🔲 *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 Click and 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 the desired automation for that control.

To configure automation for a control:

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

Selecting the Track module to show the Track Automation editor

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.

Click Step to change it to Curve

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 pop-up menu.

Selecting the Step Rate

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.

Selecting the direction for automation playback

6 Now you are ready to draw in the automation. Click the Pencil tool to draw the automation.

Selecting the Pencil tool for drawing 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.

Drawing automation with the Pencil tool

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.

control offset due to automation

Current control setting

8 Draw in any other automation as desired.

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.

Loop Range indicator

Adjusting the duration of the automation loop

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.
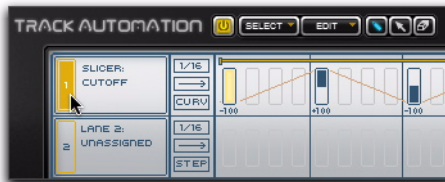
Enable the Automation Lane

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 pop-up menu (such as Randomize Step Values, Create Crescendo, and Create Decrescendo). Note that these only apply to any currently drawn automation events.

chapter 9

Sequencer Editors

Transfuser provides four different types of Sequencer modules:

Drum Sequencer Provides a 12-note step sequencer.

Phrase Sequencer Provides a monophonic sequencer.

Slice Sequencer Provides a slice sequencer.

Thru Module Provides no sequencing controls whatsoever.

Use the Thru module on Tracks where you want to play the Synth module directly using MIDI (without triggering Sequencer Patterns).

Typically, you will use corresponding Sequencer and Synth modules (such as playing a Drums synth with a Drum Sequencer). However, you may sometimes want to mix and match Sequencer and Synth modules (such as playing a Phrase synth with a Drum Sequencer).

For information on Sequencer module Track controls, see "Sequencer Modules" on page 59.

To access the Sequencer Editor for any Sequencer module on any Track:

■ Click the Sequencer module in the Track you want.

The Editor for the selected Sequencer module appears in the Editor pane.

Drum Sequencer Editor

When you select the Drum Sequencer module on a Track, its Editor is available in the Editor pane. The Drum Sequencer editor provides the same high level controls as the Drum Sequencer Track module, as well as a 12-note step sequencer, and other detailed sequencer controls and options.

Figure 7. Drum Sequencer editor

Master Controls

Drum Sequencer Master Controls

Sequencer Menu Lets you save your custom Sequencer arrangements, load custom saved Sequencers (of the same type), and Copy and Paste Sequencer modules. This functionality is also available in the Sequencer Track module menu.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, Stop, and Record controls for the Sequencer module.

☼ Use the Sequencer Record function to record your MIDI performances in the sequencer.

Note Range

The Note Range setting determines how the sequencer plays back the corresponding Synth module on the Track.

▤ See "Configuring Note Range Control" on page 33

Trigger Pattern Keys in the note range trigger the patterns (1–12) stored for the Drum Sequencer.

Play Pads Keys in the note range play the individual pads (1–12) in the Drums Synth.

Speed

Selecting the Speed value

The Speed setting lets you set the speed of the Sequencer as a ratio to the Pro Tools Tempo. Select from the following values:

1/1 Note Sets the Sequencer speed to four times the Pro Tools Tempo (the whole-note gets the beat).

1/2 Note Sets the Sequencer speed to twice the Pro Tools Tempo (the half-note gets the beat).

1/4 Note Sets the Sequencer speed to equal the Pro Tools Tempo (the quarter-note gets the beat).

1/8 Note Sets the Sequencer speed to half of the Pro Tools Tempo (the eighth-note gets the beat).

1/16 Note Sets the Sequencer speed to a quarter of the Pro Tools Tempo (the sixteenth-note gets the beat).

Sync

Selecting the Sync

The Sync setting lets you select at what point in the Sequencer Pattern the Sequence module starts playback when triggered in relation to the Pro Tools Timeline and other Transfuser Tracks.

◆ If the Pro Tools Transport is engaged, the Sequencer aligns with the Bar|Beat grid in the Pro Tools Timeline.

◆ If the Pro Tools Transport is not playing back, but other Transfuser Tracks are playing back, the Sequencer starts playback of the Sequencer Pattern in relation to other Transfuser Tracks playing back.

◆ If the Pro Tools Transport is not playing back, and Transfuser is not yet playing back, the Sequencer starts playback from the beginning of the Sequencer Pattern.

The following Sync options are available:

Bar The sequencer pattern starts playing back (when triggered) at the same Bar|Beat location as in the Pro Tools Timeline or other Transfuser Tracks. For example, if a two-bar Slice Sequence is triggered and a Drum Sequencer is already playing back at Bar 2|Beat 3, the sliced loop also starts playback at its Bar 2|Beat 3. This is generally the best option for triggering Sequencer Patterns using the on-screen keyboard, as well as when playing Transfuser "live" with an external MIDI keyboard.

Beat The sequencer pattern starts playing back (when triggered) at the same Beat location as in the Pro Tools Timeline or other Transfuser Tracks. For example, if a two-bar Slice Sequence is triggered and a Drum Sequencer is already playing back at Bar 2|Beat 3, the sliced loop starts playback at its Bar 1|Beat 3.

1/16 The sequencer pattern starts playing back (when triggered) at the same sixteenth-note location as in the Pro Tools Timeline or other Transfuser Tracks. For example, if a two-bar Slice Sequence is triggered and a Drum Sequencer is already playing back at Bar 2|Beat 3|2nd sixteenth note, the sliced loop starts playback at its Bar 1|Beat 1|2nd sixteenth note.

Off The sequencer does not synchronize to any grid and can start and stop freely against the Pro Tools Timeline. When the Sync is set to Off, the Sequencer always starts from the beginning of the Sequencer Pattern.

Setting Sync to Beat, 1/16, or Off provides more detailed control over when and where Sequencer Patterns start playback when sequencing and arranging in with MIDI notes in your Pro Tools session. Bar is generally the best setting for playing Transfuser "live" from an external MIDI controller.

Groove

The Groove control lets you apply 0–100% of Groove microtiming as specified in the Groove setting. You can use the Transfuser Master Groove or another local Groove option. Each Sequencer can be individually set to different grooves.

Selecting the Groove

Master Uses the Master Groove (see "Master Groove" on page 67).

1/32 SW Uses a thirty-second-note swing groove locally.

1/16 SW Uses a sixteenth-note swing groove locally.

1/8 SW Uses a eighth-note swing groove locally.

1/4 SW Uses a quarter-note swing groove locally.

Laid Back Uses a laid back groove locally that is just a little bit behind the beat.

Ahead Applies pushing groove locally that is a little bit ahead of the beat.

Random Uses a random groove locally.

Simplify

The Simplify control lets you gradually simplify any Drum Pattern by thinning out the number of notes playing. In the sequencer, notes that are thinned out (muted) gray out.

thinned out notes

Simplifying a Drum sequence

💡 *You can overwrite the Drum Pattern with the current "simplified" version using the Edit > Event/Selection Edit > Fix Pattern As Current Simplify Value command.*

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 simply by clicking a single button.

In the Drum Sequencer Editor, M.A.R.I.O. can only be applied to selected Note Events. If no Note Events are selected, M.A.R.I.O. has no effect. This can be useful for applying M.A.R.I.O. to just one part of the Pattern, such as one bar, or for applying M.A.R.I.O. to only one instrument in the kit, such as just the high-hat.

For information, see "Using M.A.R.I.O." on page 102.

The Drum Sequencer lets you apply M.A.R.I.O. to the following Target parameters for selected Note Events:

- Rhythm
- Level
- Timing
- Pitch
- Filter
- Decay
- Pan

Patterns

The Pattern section lets you create and recall up to twelve different Sequencer Patterns.

For more information, see "Sequencer Patterns" on page 103.

Drum Pattern Editor

The Drum Pattern editor lets you create and edit a 12-note step sequencer.
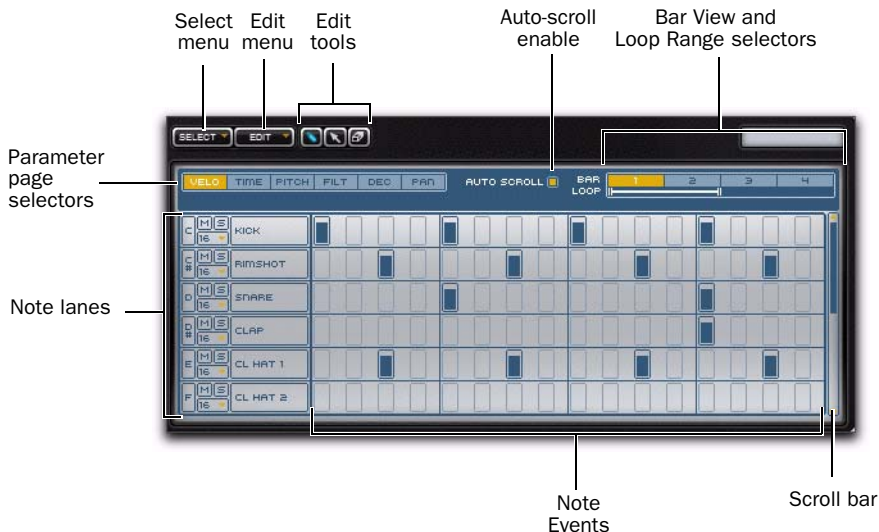
Figure 8. Drum Pattern editor

Select Menu

The Select menu provides the following commands for changing the Note Event selection.

Select All

This command selects all Note Events in all Bars across all Lanes.

Select Bar

This command selects all Note Events across all Lanes in the currently viewed Bar (1, 2, 3, or 4) only.

Invert Selection

This command deselects the current selection and selects all other unselected Note Events in all Bars across all Lanes.

Deselect

This command clears the current selection.

Rhythmify Selection

This command changes the selection to non-contiguous Note Event selections in any of the following rhythmic patterns:

1, 2, 3, 4 Changes the current selection to only the Note Events on beats 1, 2, 3, and 4.

2 and 4 Changes the current selection to only the Note Events on beats 2 and 4.

Offbeat Changes the current selection to only the Note Events on the "and" of each beat (the third of every four sixteenths).

Odd 1/16 Changes the current selection to only the Note Events on every other sixteenth (the second and fourth of every four sixteenths).

To select and entire Note Lane, click the Lane Name (such as "Kick"). Then Rhythmify the selection on the Lane.

Edit Menu

The Edit menu provides the following commands that can be applied to the Sequencer Pattern.

Undo History

The Undo History submenu provides a list of all undo-able edits to the current Sequencer Pattern. Select any item in the Undo History submenu to return to that state.

Revert Pattern to Initial State

This command reverts the entire current Sequencer Pattern to its initial state (effectively an "Undo All"), or to the state of the Sequencer Pattern when it was loaded.

Create Rhythmic Template

Select any of the following rhythmic patterns to create Note Events at the Default Velocity, as set in the Transfuser Preferences (see "Sequencer Default Velocity" on page 40), within the current selection:

1, 2, 3, 4 Creates Note Events in the current selection on beats 1, 2, 3, and 4.

2 and 4 Creates Note Events in the current selection on beats 2 and 4.

Offbeat Creates Note Events in the current selection on the "and" of each beat (the third of every four sixteenths).

Odd 1/16 Creates Note Events in the current selection on every other sixteenth (the second and fourth of every four sixteenths).

Creating Note Events using the selected template

💡 *To select and entire Note Lane, click the Lane Name (such as "Kick"). Then create Note Events on that Lane according to the Rhythmic Template.*

Event/Selection Edit

The Event/Selection Edit submenu provides a number of commands for modifying selected Note Events and their parameters.

Event/Selection Edit options

Clear Current Bar Clears all Note Events in the current, viewed bar.

Copy Current Bar Copies all Note Events in the current, viewed bar.

Paste Current Bar Pastes copied Note Events in the current, viewed bar.

Set all Event Parameters To Default Sets all Note Event parameters (such as Velocity and Pitch) to their default setting.

Increase Dynamic Range Increases the Velocities of selected Note Events proportionally.

Decrease Dynamic Range Decreases the Velocities of selected Note Events proportionally.

Create Crescendo Ramps the Velocities of selected Note Events sequentially, from lowest to highest.

Create Decrescendo Ramps the Velocities of selected Note Events sequentially, from highest to lowest.

Fix Pattern As Current Simplify Value Deletes any Note Events that are muted due to the current Simplify setting from the Drum Pattern.

Edit Tools

The Edit tools let you create, edit, select, and erase Note Events and their various parameters in the Sequencer Pattern Editor.
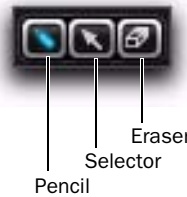
Edit tools

Pencil

The Pencil tool is a "smart tool" that lets you:

- Draw Note Events and adjust their parameter values when the cursor shows the pencil.
- Set a selection of events when the cursor shows the arrow.
- Move or copy selected events when the cursor shows the hand.

📓 *For more information on creating and editing Note Events, see "Note Events" on page 84.*

Selector

The Selector tool lets you click and drag to make contiguous selections of Note Events (within a single Lane or across multiple Lanes).

Eraser

The Eraser tool lets you click and drag to erase individual notes or all notes in a selection.

Lane Controls
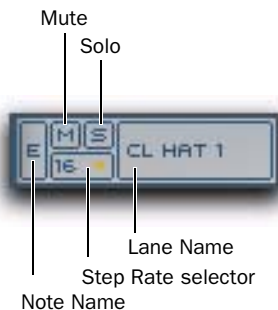
Lane controls

Each of the twelve Note Lanes provide the following common controls and indicators:

Note Name Displays the Note Name of the lane, such as "E."

Mute Mutes and unmutes the lane.

Solo Solos and unsolos the lane

Step Rate Lets you select the resolution of steps for possible Note Events in the lane. The number of available steps changes depending on the selected Step Rate. Select from the following:

- 1/8 Triplet
- 1/16
- 1/16 Triplet
- 1/32
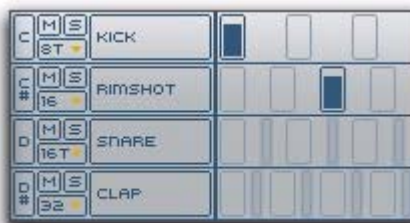
4 Note Lanes, each set to different Step Rates

Lane Name Displays, quite simply, the name of the Note Lane (such as "SNARE"). Click the Lane Name to select the entire lane (all Note Events in the lane). Double-click the Lane Name to enter a new name.

Note Events

Note Events in the Drum Pattern are MIDI notes (C2–B2) that trigger sampled drums in the Drums Synth.

The selected Drum Pattern can be triggered by any of the following:

- Play on the Drum Sequencer Transport
- Play on the Master Transport
- MIDI notes from the Note Range Keyboard, a Pro Tools MIDI or Instrument track, or an external MIDI keyboard controller (if Note Range is set to Trigger Pattern).

To create a Note Event:

1 Select the Pencil tool.

2 Click the Step in the Sequencer Pattern Editor where you want to create the Note Event.

3 Depending on the current Parameter page (see "Parameter Pages" on page 94) drag up and down, or right and left, to increase and decrease the parameter value.

To record a Drum Pattern:

1 Configure the MIDI routing in Pro Tools and Transfuser as necessary.

2 Click the Record button in the Drum Sequencer Editor Transport.

3 Play your external MIDI controller.

⚠ *Recording overwrites any existing Note Events.*

While recording in the Drum Sequencer, MIDI note below C2 are note recorded. Instead, they erase corresponding Note Events in the current Sequencer Pattern during playback. This can be very useful for altering the Sequencer Pattern during playback.

To mute a Note Event:

1 Select the Mute tool.

2 Click the Note Event you want to mute. Click it again to unmute it.

To delete a Note Event, do one of the following:

▪ With the Eraser tool, click the Note Event you want to delete.

   – or –

▪ With the Pencil tool, click the Note Event you want to delete.

Editing Selected Note Events

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

To select Note Events:

1 Select the Selector tool.

2 Click and drag across one or more Note Events on one or more Lanes.

   🔲 *Shift-click to extend or contract the selection.*

   🔲 *Shift-click to edit all notes in a lane simultaneously. Alt-Shift-click (Windows) or Option-Shift-click (Mac) to edit all notes in a column simultaneously.*

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 Click and drag the selection from the current location to the location to where you want to move the selected events.

Parameter Pages

The Drum Pattern Editor lets you create and delete Note Events in any of its Parameter pages. However, you can only edit the parameter value for Note Events in the corresponding page.

💡 *M.A.R.I.O. can "target" the individual (or all!) parameters in the Drum Sequencer Pattern Editor.*

To view a particular parameter page in the Drum Pattern Editor:

■ Click the corresponding option in the Parameter Page selector.

Drum Sequencer Parameter Page selector

The Drum Sequencer lets you edit the following parameters each on their own page:

Velocity

The Velocity page lets you create and delete Note Events, and edit their velocities.

To increase (or decrease) Note Event velocity:

■ Click the Note Event and drag up (or down).

Editing Note Velocity in the Drum Sequence Editor

Time

The Time page lets you create and delete Note Events, and edit their microtiming (placement time in relation to the Step grid).

To adjust the microtiming of a Note Event later (or earlier) in time:

■ Click the Note Event and drag to the right (or left).

Editing Note Timing in the Drum Sequence Editor

Pitch

The Pitch page lets you create and delete Note Events, and edit their pitch transposition.

To transpose a Note Event up (or down):

■ Click the Note Event and drag up (or down).

Editing Note Transposition in the Drum Sequence Editor

Filter

The Filter page lets you create and delete Note Events, and edit their Filter control values.

To increase (or decrease) the Filter value for a Note Event:

▪ Click the Note Event and drag up (or down).

Editing Note Filter in the Drum Sequence Editor

Decay

The Decay page lets you create and delete Note Events, and edit their Decay times.

To increase (or decrease) the Decay time for a Note Event:

▪ Click the Note Event and drag up (or down).

Editing Note Decay in the Drum Sequence Editor

Pan

The Pan page lets you create and delete Note Events, and edit their Pan control values.

To pan a Note Event right:

▪ Click the Note Event and drag up.

Editing Note Pan in the Drum Sequence Editor

To pan a Note Event left:

▪ Click the Note Event and drag down.

Auto Scroll

The Sequencer Pattern Editor can only display one bar (out of four). When the Auto Scroll option is enabled, the Sequencer Pattern Editor view scrolls bar by bar during playback for the selected Loop duration. When it is disabled, the Sequencer Pattern Editor view shows only the currently selected Bar View.

Bar View

The Sequencer Pattern Editor only has room to display one bar at a time, so the Bar View selector lets you select the Bar you want to view. The currently viewed bar is lit in the Bar View selector.
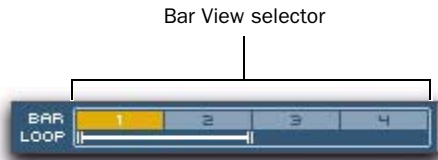
Bar View selector

Bar View selector

To view a specific bar in the Sequencer Pattern Editor:

■ Click the Bar number in the Bar View selector.

Loop Range

The Loop Range selector lets you set the loop points for the Sequencer Pattern. You can adjust both the beginning and ending of the Loop Range selector in quarter-note increments. You can measure the loop length and start and end point locations against the Bar View selector.

To adjust the Loop Range start or end points:

■ Click the start or end point of the Loop Range selector and drag left or right as desired.

Adjusting the Loop Range end point

Phrase Sequencer Editor

When you select the Phrase Sequencer module on a Track, its Editor is available in the Editor pane. The Phrase Sequencer Editor provides the same high level controls as the Phrase Sequencer Track module, as well as a monophonic sequencer, and other detailed sequencer controls and options.
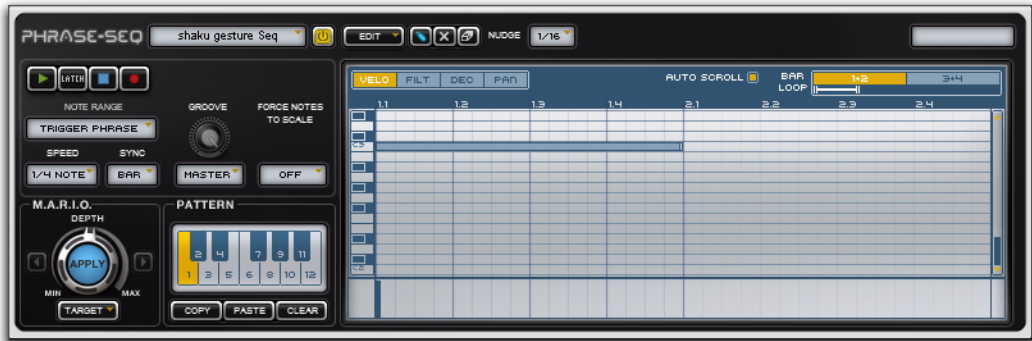
Figure 9. Phrase Sequencer Editor

Phrase Sequencer Master Controls

Phrase Sequencer Master Controls

Sequencer Menu Lets you save your custom Sequencer arrangements, load custom saved Sequencers (of the same type), and Copy and Paste Sequencer modules. This functionality is also available in the Sequencer Track module menu.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, Stop, and Record controls for the Sequencer module.

☼ *Use the Sequencer Record function to record your MIDI performances in the MIDI sequencer.*

Note Range

The Note Range setting determines how the sequencer plays back the corresponding Synth module on the Track.

📖 *See "Configuring Note Range Control" on page 33*

Trigger Phrase Keys in the note range trigger phrases subsequently

Transpose Phrase Keys in the note range trigger the current phrase subsequently (chromatically) pitched. C3 is the original pitch.

Play Notes Keys in the note range get passed through so they play the module directly. This way you can play whole new melodies.

Speed

The Speed setting functions exactly the same as in the Drum Sequence Editor, see "Speed" on page 79.

Sync

The Sync setting functions exactly the same as in the Drum Sequence Editor, see "Sync" on page 79.

Groove

The Groove control functions exactly the same as in the Drum Sequence Editor, see "Groove" on page 80.

Force Notes to Scale

The Force Notes to Scale setting restricts the MIDI notes allowed in the Phrase Pattern. This assures that any notes in the Sequencer Pattern will be limited to a single diatonic scale.

Notes that do not match the scale remain visible in the Pattern Editor, but they do not play. The nearest notes that match the scale are played instead. These appear as grayed-out notes in the Pattern Editor.

To constrain all notes to any major or minor scale:

■ From the Force Notes To Scale pop-up menu, select any of the 12 diatonic major and minor modes.

Select Off to disable this option.

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 simply by clicking a single button.

📖 *For information, see "Using M.A.R.I.O." on page 102.*

The Phrase Sequencer lets you apply M.A.R.I.O. to the following Target parameters:

- Phrase (Affects the note number, duration, and Velocity of notes in the Phrase Sequencer Pattern)
- Level
- Cutoff
- Decay
- Pan

Patterns

The Pattern section lets you create and recall up to twelve different Sequencer Patterns.

📖 *For more information, see "Sequencer Patterns" on page 103.*

Phrase Pattern Editor

The Phrase Pattern Editor lets you create and edit monophonic MIDI sequences.
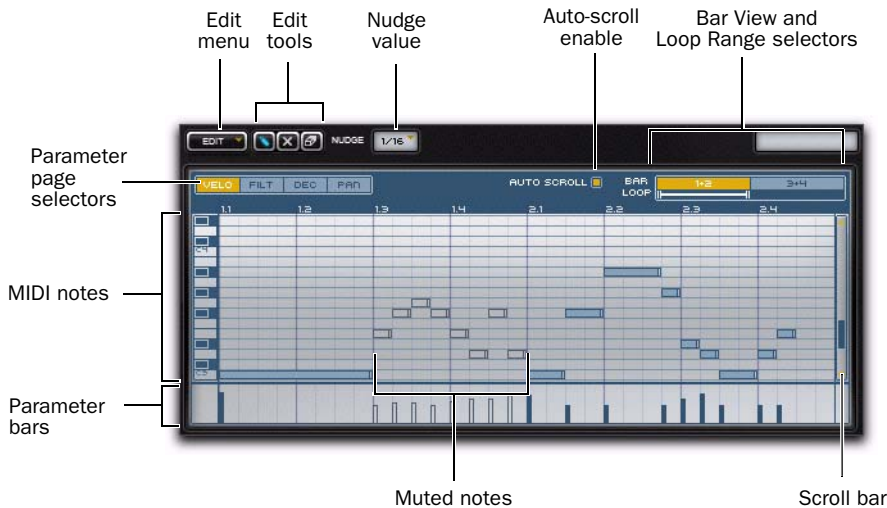
Figure 10. Phrase Pattern Editor

Edit Menu

The Edit menu provides the following commands:

Undo History

The Undo History submenu provides a list of all undo-able edits to the current MIDI Sequence. Select any item in the Undo History submenu to return to that state.

Revert All

This command reverts the entire current MIDI Sequence to its initial state (effectively an "Undo All"), or to the state of the MIDI Sequence at the last time you saved your Pro Tools session.

Event/Selection Edit

The Event/Selection Edit submenu provides commands for modifying MIDI notes in the sequence.

Event/Selection Edit commands

Move 1 Octave Up Transposes all MIDI notes up one octave.

Move 1 Octave Down Transposes all MIDI notes down one octave.

Transpose Events To Minor Triad Transposes all MIDI notes to the nearest notes of minor triad where the lowest note of the sequence is the root of the chord.

Transpose Events To Major Triad Transposes all MIDI notes to the nearest notes of major triad where the lowest note of the sequence is the root of the chord.

Copy Current Bars Copies the MIDI notes from the currently viewed bars. This is useful for copying Bars 1–2 to paste into 3–4 (or visa versa).

Paste Into Current Bars Pastes the copied MIDI notes into the currently viewed bars. This is useful for pasting the copied notes from Bars 1–2 into 3–4 (or visa-versa).

Fix Event Length As Grid Changes the durations of all MIDI notes to the current Grid values as set with the Nudge setting (see "Nudge" on page 93).

Edit Tools

The Edit tools let you create, edit, mute, and delete Note Events and their various parameters in the Sequencer Pattern Editor.
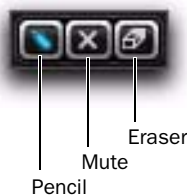
Edit tools

Pencil

The Pencil tool is a "smart tool" that lets you:

- Draw notes and adjust their parameter values when the cursor shows the pencil.
- Change the note length when the cursor shows the horizontal arrow.
- Move notes when the cursor shows the hand.

With the Pencil tool selected, hold down the Shift key and it changes to a brush in the Pattern Editor. The Brush tool lets you draw more than one event in a single click and drag. The selected Nudge setting determines note durations when using the Brush tool.

⊞ Shift-click to edit the parameter values (below the Pattern Editor) for all notes simultaniously.

📄 For more information on creating and editing Note Events, see "Note Events" on page 93.

Mute

The Mute tool lets you mute and unmute individual Note Events. Muted Note Events remain muted until you click them a second time.

Eraser

The Eraser tool lets you click to delete individual Note Events.

Nudge

The Nudge setting determines the minimum subdivision of the beat for MIDI notes. The selected option provides the rhythmic "grid" for creating and moving notes. Choose from the following:

- 1/32—thirty-second note
- 1/16T—sixteenth-note triplet
- 1/16—sixteenth note
- 1/8T—eighth-note triplet

Note Events

Note Events in the Phrase Pattern are MIDI notes (C2–G8) that play the audio in the Phrase Synth.

When creating Note Events in Transfuser, the MIDI note number in the Phrase Pattern Editor (vertical axis) determines the sounding pitch and the horizontal location determines when in time that note plays.

The selected Phrase Pattern can be triggered by any of the following:

- Play on the Phrase Sequencer Transport
- Play on the Master Transport
- MIDI notes from the Note Range Keyboard, a Pro Tools MIDI or Instrument track, or an external MIDI keyboard controller (if Note Range is set to either Trigger Phrase or Transpose Phrase).

To create a Note Event:

1 Select the Pencil tool.

2 Click the in the Sequence MIDI Editor where you want to create the Note Event. Use the keyboard on the left of the Editor to identify the desired pitch. The initial duration of the note is determined by the Nudge setting (see "Nudge" on page 93).

To change the duration of a Note Event:

1 Select the Pencil tool.

2 Click at the right end of the Note Event and drag right to increase the duration of the note and left to decrease the duration of the note. The duration of the note increments or decrements based on the selected Nudge setting. For example, if Nudge is set to 1/16, durations will be multiples of a sixteenth-note.

Changing the duration of a Note Event

To move a Note Event:

1 Select the Pencil tool.

2 Click the middle of the Note Event and drag to a new pitch and time location as desired.

Moving a Note Event

To mute a Note Event:

1 Select the Mute tool.

2 Click the Note Event you want to mute. Click it again to unmute it.

To record a MIDI sequence:

1 Configure the MIDI routing in Pro Tools and Transfuser as necessary.

2 Click the Record button in the Phrase Sequencer Editor Transport.

3 Play your external MIDI keyboard.

⚠ *Recording MIDI overwrites any existing MIDI notes.*

While recording in the Phrase Sequencer, MIDI note below C2 are note recorded. Instead, they erase corresponding notes in the current Sequencer Pattern during playback. This can be very useful for altering the Sequencer Pattern during playback.

To delete a Note Event, do one of the following:

▪ With the Eraser tool, click the Note Event you want to delete.

– or –

▪ With the Pencil tool, Alt-click (Windows) or Option-click (Mac) the Note Event you want to delete.

Parameter Pages

The Phrase MIDI Sequencer lets you create and delete Note Events in any of its Parameter pages. However, you can only edit the parameter value for Note Events in the corresponding page.

💡 *M.A.R.I.O. can "target" the individual (or all!) parameters in the Phrase MIDI Sequencer Editor.*

To view a particular parameter page in the Phrase MIDI Sequencer Editor:

▪ Click the corresponding option in the Parameter Page selector.

Phrase MIDI Sequencer Parameter Page selector

The Phrase MIDI Sequencer lets you edit the following parameters each on their own page:

Velocity

The Velocity page lets you create and delete Note Events, and edit their velocities.

To increase (or decrease) Note Event velocity:

1 Select the Velocity Parameter page.

2 With the Pencil tool, click the Velocity bar in the Parameter lane under the MIDI note and drag up (or down).

Editing Note Velocity in the MIDI Sequence Editor

Filter

The Filter page lets you create and delete Note Events, and edit their Filter control values.

To increase (or decrease) the Filter value for a Note Event:

1 Select the Filter Parameter page.

2 With the Pencil tool, click the Filter bar in the Parameter lane under the MIDI note and drag up (or down).

Decay

The Decay page lets you create and delete Note Events, and edit their Decay control values.

To increase (or decrease) the Decay value for a Note Event:

1 Select the Decay Parameter page.

2 With the Pencil tool, click the Decay bar in the Parameter lane under the MIDI note and drag up (or down).

Pan

The Pan page lets you create and delete Note Events, and edit their Pan control values.

To pan a Note Event right:

1 Select the Pan Parameter page.

2 With the Pencil tool, click the Pan bar in the Parameter lane under the MIDI note and drag up.

To pan a Note Event left:

1 Select the Pan Parameter page.

2 With the Pencil tool, click the Pan bar in the Parameter lane under the MIDI note and drag down.

Auto Scroll

The Sequencer MIDI Editor can only display two bars (out of four). When the Auto Scroll option is enabled, the Sequence MIDI Editor view scrolls by two bars during playback. When it is disabled, the Sequencer Pattern Editor view shows only the currently selected two bars.

Bar View

The Phrase Sequencer MIDI Editor only has room to display two bars at a time, so the Bar View selector lets you select which two bars you want to view. The currently viewed bars are lit in the Bar View selector.
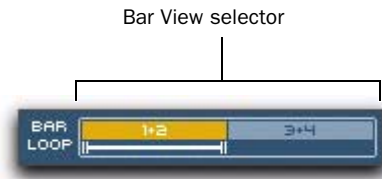
Bar View selector

To view bars 1–2 or 3–4 in the Sequencer MIDI Editor:

▪ Click Bars 1–2 or 3–4 in the Bar View selector.

Loop Range

The Loop Range selector lets you set the loop points for the MIDI Sequence. You can adjust both the beginning and ending of the Loop Range selector in quarter-note increments. You can measure the loop length and start and end point locations against the Bar View selector.

Adjusting the Loop Range end point

To adjust the Loop Range start or end points:

▪ Click the start or end point of the Loop Range selector and drag left or right as desired.

Slice Sequencer Editor

When you select the Slice Sequencer module on a Track, its Editor is available in the Editor pane. The Slice Sequencer editor provides the same high level controls as the Slice Sequencer Track module, as well as a slice sequencer, and other detailed sequencer controls and options.

Figure 11.   Slice Sequencer editor

Slice Sequencer Master Controls

Slice Sequencer Master Controls

Sequencer Menu Lets you save your custom Sequencer arrangements, load custom saved Sequencers (of the same type), and Copy and Paste Sequencer modules. This functionality is also available in the Sequencer Track module menu.

Module Enable Lets you enable or disable the module, effectively bypassing its function.

Module Transport Provides Play, Latch, and Stop controls for the Sequencer module.

Note Range

The Note Range setting determines how the sequencer plays back the corresponding Synth module on the Track.

See "Configuring Note Range Control" on page 33

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 the 37th 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 Pro Tools MIDI and Instrument tracks.

💡 *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.*

Speed

The Speed setting functions exactly the same as in the Drum Sequence Editor, see "Speed" on page 79.

Sync

The Sync setting functions exactly the same as in the Drum Sequence Editor, see "Sync" on page 79.

Groove

The Groove control functions exactly the same as in the Drum Sequence Editor, see "Groove" on page 80.

Quantize

The Quantize control lets you apply a variable amount of quantization to the timing of slices in the Slice Pattern.

Selecting the Quantize value

Select one of the following quantize values:

- 1/32—thirty-second note
- 1/16T—sixteenth-note triplet
- 1/16—sixteenth note
- 1/8T—eighth-note triplet

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 simply by clicking a single button.

📄 *For information, see "Using M.A.R.I.O." on page 102.*

The Slice Sequencer lets you apply M.A.R.I.O. to the following Target parameters:

- Reorder
- Level
- Pitch
- Filter
- Decay
- Pan
- Reverse

Patterns

The Pattern section lets you create and recall up to twelve different Sequencer Patterns.

📄 *For more information, see "Sequencer Patterns" on page 103.*

Slice Pattern Editor

The Slice Pattern Editor lets you create and edit Slice Events for triggering Slices in the Slicer Synth.
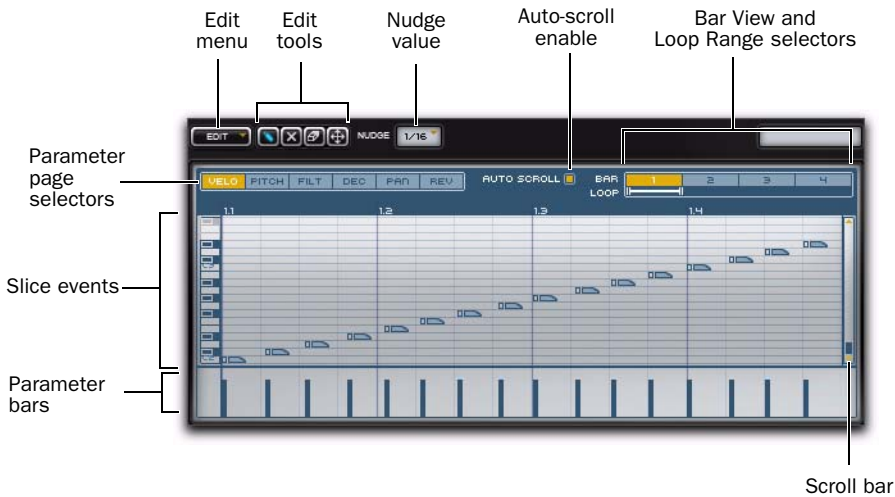
Figure 12. Slice Pattern Editor

Edit Menu

The Edit menu provides the following commands:

Undo History

The Undo History submenu provides a list of all undo-able edits to the current Slice Sequence. Select any item in the Undo History submenu to return to that state.

Revert Pattern to Initial State

This command reverts the entire current Slice Sequence to its initial state (effectively an "Undo All"), or to the state of the MIDI Sequence at the last time you saved your Pro Tools session.

Event Edit

The Event Edit submenu provides commands for modifying Slice Events in the sequence.

Set All Steps Parameters To Default Sets all Parameter values for all Slice Events to their default value.

Double Number Of Events Doubles the current total number of Slice Events. This is useful if you want to duplicate the pattern from one bar to fill two bars, or from two bars to fill four bars.

Edit Tools

The Edit tools let you create, edit, mute, and delete Note Events and their various parameters in the Sequencer Pattern Editor.
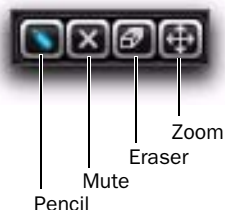
Edit tools

Pencil

The Pencil tool is a "smart tool" that lets you:

- Draw Slice Events and adjust their parameter values when the cursor shows the pencil.
- Move slice markers when the cursor shows the hand.

With the Pencil tool selected, hold down the Shift key and it changes to a brush in the Pattern Editor. The Brush tool lets you draw more than one event in a single click and drag. The selected Nudge setting determines note durations when using the Brush tool.

SHIFT *Shift-click to edit the parameter values (below the Pattern Editor) for all notes simultaniously.*

For more information on creating and editing Slice Events, see"Slice Events" on page 99.

Mute

The Mute tool lets you mute and unmute individual Slice Events. Muted Slice Events remain muted until you click them a second time.

Eraser

The Eraser tool lets you click to delete individual Slice Events.

Zoom

The Zoom tool lets you adjust the horizontal zoom of the Slice Pattern Editor. Click in the Slice Pattern Editor and drag down to zoom in or drag up to zoom out. You can also click and drag left to scroll left or drag right to scroll right.

Nudge

The Nudge setting determines the rhythmic grid for Slice Events. Choose from the following:

- Off—no grid
- 1/64—sixty-fourth note
- 1/32T—thirty-second note triplet
- 1/32—thirty-second note
- 1/16T—sixteenth-note triplet
- 1/16—sixteenth note
- 1/8T—eighth-note triplet

Slice Events

Slice Events in the Slice Pattern are used to trigger Slices in the Slicer Synth. Each Slice in the Slicer Synth is assigned a MIDI note number in order: the first Slice is always assigned to MIDI note number C2, the second to C#2, the third to D2, and so on.

When creating Slice Events in Transfuser, the MIDI note number in the Slice Pattern Editor (vertical axis) determines which Slice is played, and the horizontal location determines when in time that Slice is played.

The selected Slice Pattern can be triggered by any of the following:

- Play on the Slice Sequencer Transport
- Play on the Master Transport
- MIDI notes from the Note Range Keyboard, a Pro Tools MIDI or Instrument track, or an external MIDI keyboard controller (if Note Range is set to Trigger Loop or Transpose Loop).

To create a Slice Event:

1 Select the Pencil tool.

2 Click the in the Slice Pattern Editor where you want to create the Slice Event. Use the keyboard on the left of the Editor to identify which Slice you want to play.

To move a Slice Event:

1 Select the Pencil tool.

2 Click the Slice Event and drag to a new location as desired.

Moving a Slice Event up or down changes which Slice is played. Moving a Slice Event left or right determines when it is played.

Moving a Slice Event

To mute a Slice Event:

1 Select the Mute tool.

2 Click the Slice Event you want to mute. Click it again to unmute it.

To delete a Slice Event, do one of the following:

■ With the Eraser tool, click the Slice Event you want to delete.

– or –

■ With the Pencil tool, Alt-click (Windows) or Option-click (Mac) the Slice Event you want to delete.

Parameter Pages

The Slice Pattern Editor lets you create and delete Slice Events in any of its Parameter pages. However, you can only edit the parameter value for Slice Events in the corresponding page.

💡 *M.A.R.I.O. can "target" the individual (or all!) parameters in the Slice Pattern Editor.*

To view a particular parameter page in the Slice Pattern Editor:

■ Click the corresponding option in the Parameter Page selector.
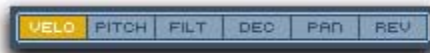
Slice Pattern Parameter Page selector

The Slice Pattern Editor lets you edit the following parameters each on their own page:

Velocity

The Velocity page lets you create and delete Slice Events, and edit their velocities.

To increase (or decrease) Slice Event velocity:

1 Select the Velocity Parameter page.

2 With the Pencil tool, click the Velocity bar in the Parameter lane under the Slice Event and drag up (or down).

Editing the Velocity of a Slice Event

Pitch

The Pitch page lets you create and delete Slice Events, and edit their pitch transpositions.

To transpose a Slice Event up (or down):

1 Select the Pitch Parameter page.

2 With the Pencil tool, click the Pitch bar in the Parameter lane under the Slice Event and drag up (or down).

Filter

The Filter page lets you create and delete Slice Events, and edit their Filter values.

To increase (or decrease) the Filter value for a Slice Event:

1 Select the Filter Parameter page.

2 With the Pencil tool, click the Filter bar in the Parameter lane under the Slice Event and drag up or down.

Decay

The Decay page lets you create and delete Slice Events, and edit their Decay times.

To increase or decrease the Decay time for a Slice Event:

1 Select the Decay Parameter page.

2 With the Pencil tool, click the Decay bar in the Parameter lane under the Slice Event and drag up (or down).

Reverse

The Reverse page lets you create and delete Slice Events, and set whether a Slice plays forward or backward.

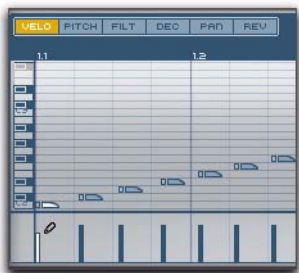**To reverse a Slice Event:**

1 Select the Reverse Parameter page.

2 With the Pencil tool, click the Reverse bar in the Parameter lane under the Slice Event and drag up.

When the bar is all the way down, the Slice plays forward. When the bar is all the way up, it plays in reverse.

Auto Scroll

The Slice Pattern Editor can display up to four bars depending on the Zoom level. When the Auto Scroll option is enabled, the Slice Sequence Editor view scrolls during playback.

Bar View

If the Slice Pattern Editor Zoom level is such that not all bars are displayed, use the Bar View selector to view bars that are currently off-screen. The range of currently viewed bars is highlighted in the Bar View selector.
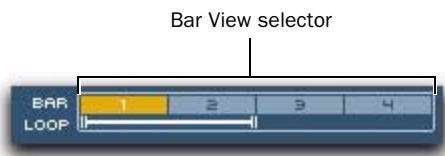
Bar View selector

To change which bars are viewed in the Slice Sequencer Pattern Editor:

■ Click in the Bar View selector.

Loop Range

The Loop Range selector lets you set the loop points for the Slice Pattern. You can adjust both the beginning and ending of the Loop Range selector in quarter-note increments. You can measure the loop length and start and end point locations against the Bar View selector.

Adjusting the Loop Range end point

To adjust the Loop Range start or end points:

■ Click the start or end point of the Loop Range selector and drag left or right as desired.

Using 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 simply by clicking a single button. M.A.R.I.O. uses customized algorithms for each of the sequencers, the randomization is tailored to deliver best possible, musically intelligent results.

🔅 *In the Drum Sequencer, M.A.R.I.O. is only applied to selected Note Events. This is useful for applying M.A.R.I.O.to just one part of the pattern, such as one bar, or even to only one instrument in the kit, such as the high-hat.*

◆ Click the Apply button to apply M.A.R.I.O. to the current Sequencer Pattern.

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

M.A.R.I.O. Depth dial

◆ 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. To get back to the original, pre-M.A.R.I.O. version, click the Back button until you can go back no more.

M.A.R.I.O. history buttons

◆ Select any parameters you want to affect from the Target menu.

M.A.R.I.O. Target pop-up menu (Drum Sequencer shown)

Sequencer Patterns

The Pattern section in Sequence Editors lets you create, edit, and recall up to twelve different Sequencer Patterns.

Pattern Section

To create a Sequencer Pattern:

1 Click the Pattern Key where you want to create your Sequencer Pattern.

2 Create the Sequence in the Sequencer Pattern editor.

Transfuser dynamically updates the Sequencer Pattern stored with the selected Pattern Key.

To copy and paste a Sequencer Pattern:

1 Click the Pattern Key for the stored Sequencer Pattern you want to copy.

2 Click the Copy button.

3 Click the Pattern Key where you want to paste the copied Sequencer Pattern.

4 Click the Paste button.

To clear a Sequencer Pattern:

1 Click the Pattern Key for the Sequencer Pattern you want to clear.

2 Click the Clear button.

To recall a Sequencer Pattern, do one of the following:

■ In the Sequencer Editor, click the Pattern Key for the Sequencer Pattern you want to recall.

Selecting a Sequencer Pattern in a Sequencer Editor

■ Click one of the Pattern Switch keys in the Controller section. This changes all Sequencer modules on all Tracks that are set to the same MIDI input channel.
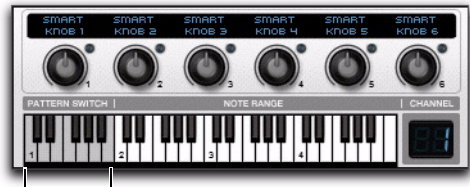
Pattern Switch keys

Selecting a Sequencer Pattern in the Controller section

■ Play the corresponding MIDI note on your external MIDI keyboard controller or from a Pro Tools Instrument or MIDI track (C1–B1). This changes all Sequencer modules on all Tracks that are set to the same MIDI input channel.

Depending on the Note Range setting for the sequencer, the keys on the Note Range keyboard can also trigger Sequencer Patterns.

Exporting Sequencer Patterns to Pro Tools

You can export Sequencer Patterns from Transfuser to Pro Tools MIDI and Instrument tracks, and the Region List. This lets you further develop Sequencer Patterns on Pro Tools tracks to control Transfuser Synth modules directly.

You can also drag and drop Sequencer Patterns to the Desktop for later use in other Pro Tools sessions. You can even drag and drop Sequencer Patterns from one Sequencer module to another. When dragging from one Sequencer module to another, the pattern is simply copied if the Sequencers are of the same type, or it is converted when dragging to a different type of Sequencer (such as from a Drum Sequencer to a Phrase Sequencer).

To export a Sequencer Pattern to your Pro Tools session as a MIDI region:

1 Identify the Sequencer Pattern you want on the Sequencer Editor Pattern keys.

2 Click the key and drag and drop to one of the following in your Pro Tools session:

- MIDI track
- Instrument track
- Timeline
- Tracks List
- Region List
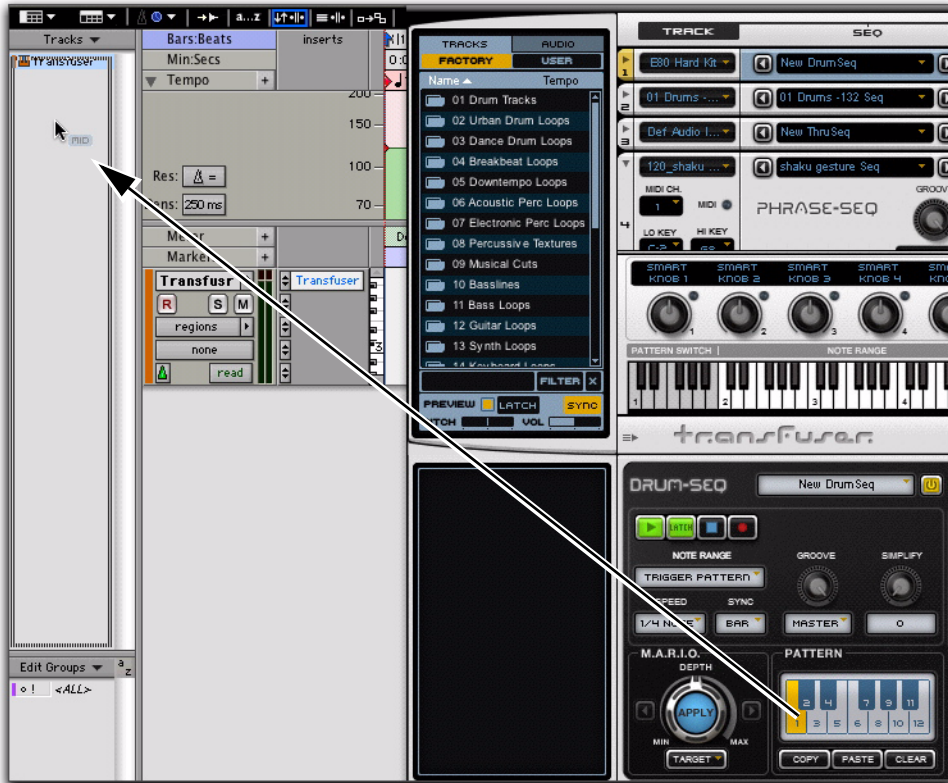
Figure 13. Dragging and dropping a Transfuser Drum Sequencer Pattern to the Pro Tools Tracks List

Synth Editors

Transfuser provides four different types of Synth modules:

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.

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.

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 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 insered. This lets you directly process Pro Tools audio in Transfuser without having to import it.

For information on Synth module Track controls, see "Synth Modules" on page 61.

Drums Synth Editor

The Drums Synth module is a sample-based drum machine that can be played back by the Drum Sequencer module. When you select the Drum Synth module on a Track, its Editor is available in the Editor pane. The Drum Synth Editor provides twelve sample pads to which you can drag and drop samples or choose from a number of factory samples.

Figure 14. Drums Synth editor

Drums Synth Master Controls

Synth Menu

In the Editor, the Synth menu lets you save custom Synth module configurations, load custom saved Synth modules (of the same type), and Copy and Paste Synth modules. The Synth menu is also available in the Drums Synth Track module.

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.

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.

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.

Drum Pads

Each of the twelve Drum Pads lets you load factory or custom samples for playback by the Drum Sequencer.

Drum Pad menu

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.

Drum Sample Name

MIDI Note number

To load a Drum Sample, do one of the following:

▪ Drag and drop and audio file, or region, from any of the following:

- Transfuser Browser
- Pro Tools Timeline (a region on an audio track)
- Pro Tools Region List
- DigiBase browser
- Windows Explorer or Mac Finder
- With the Grabber tool from a Slice in the Slicer Synth Editor.

– or –

▪ Load a factory Drum Sample by doing the following:

- Select the Pad you want.
- From the Drum Pad menu, choose the type of drum sound you want (such as Kicks) and select any of the available factory Drum Samples.

The Sample loads into Sample A or Sample B (whichever is currently selected) for the selected Pad.


Selecting a Factory Drum Sample for a Pad

☼ *You can also drag and drop an audio slice from the Slicer Synth to any Drum Pad using the Slicer Synth Grabber tool (see "Slicer Synth Editor" on page 122.*

Drum Pad Editor

The Drum Pad Editor lets you change the start and end points for samples loaded into the selected Drum Pad (Sample A or B). It also provides multiple controls for sculpting the sound.
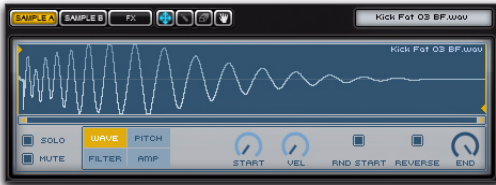
Drum Pad Editor

Sample A and Sample B

Transfuser provides two layers of samples for each Drum Pad: Sample A and Sample B. It plays both samples when triggered. This lets you layer samples to create more complex Drum sounds. Select either Sample A or Sample B for loading samples to a Drum Pad and for editing. You can mix Sample A and B by adjusting the Level controls on their respective Amp pages. In fact, you can filter and re-pitch Sample A and B independently as well.

Edit Tools
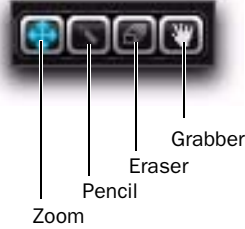
Drums Synth Edit tools (in Wave Page view, the Pencil and Eraser are unavailable)

Zoom Lets you adjust the horizontal zoom of the Drum Pad Editor. Click in the Drum Pad Editor and drag down to zoom in or drag up to zoom out.

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 grab and drag and drop samples from a Drums Synth to any other Synth module. You can also drag and drop samples from the Drums Synth to the Pro Tools Region List, Tracks List, or Timeline, or to the Desktop.

Solo

The Solo button is available in all Page views and simply solos (or unsolos) the selected Drum Pad (both Samples A and B).

Mute

The Mute button is available in all Page views and simply mutes (or unmutes) the selected Drum Pad (both Samples A and B).

Sample Parameter Pages

Each Sample (A and B) for each Pad provides four different Parameter pages.

To view a specific parameter page for a Drum Pad Sample (A or B):

1 Select the Drum Pad you want to edit.

2 Select Sample A or Sample B.

3 Select the desired Parameter Page.

Selecting the Pitch Page for Sample B

Wave Page

The Wave Page lets you set the start and end points for the loaded sample.

Start Lets you adjust the Start setting to determine where in the sample playback starts triggered. The Start Flag identifies the start point against the Waveform display.
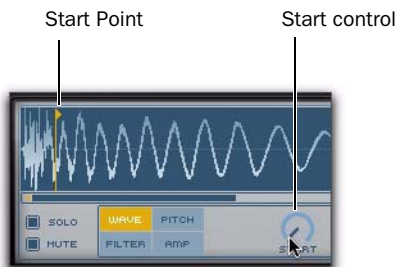
Adjusting the start point for a drum sample

Velocity Lets you adjust how much the incoming MIDI velocity affects the start point.

Random Start Randomizes the start point. When enabled, adjust the Velocity control to determine how much randomization is applied.

Reverse When enabled, plays the sample in reverse.

End Lets you determine where in the sample playback ends in the sample. The End Flag identifies the end point against the Waveform display.
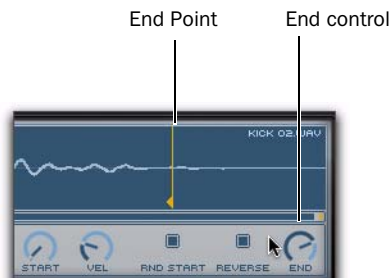
Adjusting the end point for a drum sample

Pitch Page

The Pitch Page lets you create a Pitch Envelope for the selected Drum Pad sample.

To create breakpoints for the Pitch Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Pitch Page.

4 Select the Pencil tool.

5 Click in the Pitch Envelope Editor to create a breakpoint.

6 Drag the breakpoint to the desired pitch and time location.

Breakpoint

Creating a breakpoint in the Pitch Envelope

7 Repeat the preceding steps to create more breakpoints in the Pitch Envelope.

To delete breakpoints from the Pitch Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Pitch Page.

4 Select the Eraser tool.

5 Click an existing breakpoint in the Pitch Envelope Editor to delete it.

Pitch Lets you transpose the base pitch level for the sample up or down.

Envelope Depth Lets you adjust how much the Pitch Envelope affects the sample.

Velocity Lets you adjust the velocity sensitivity of the Pitch Envelope. This can be useful at higher settings for affecting the pitch of the sample when it is played hard.

Filter Page

The Filter Page lets you create a Filter Envelope for the selected Drum Pad sample.

To create breakpoints for the Filter Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Filter Page.

4 Select the Pencil tool.

5 Click in the Filter Envelope Editor to create a breakpoint.

6 Drag the breakpoint to the desired Filter value and time location.

7 Repeat the preceding steps to create more breakpoints in the Filter Envelope.

To delete breakpoints from the Filter Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Filter Page.

4 Select the Eraser tool.

5 Click an existing breakpoint in the Filter Envelope Editor to delete it.

Filter Lets you enable or disable the Filter, and also lets you select one of the following types of Filters:

- LP (Low Pass Filter)
- BP (Band Pass Filter)
- HP (High Pass Filter)
- EQ (Equalizer)

Cutoff Adjusts the Cutoff Frequency.

Envelope Depth Lets you adjust how much the Filter Envelope affects the sample.

Velocity Lets you adjust how much incoming MIDI velocities affect the Filter Envelope.

Amp Page

The Amp Page lets you create an Amplitude Envelope for the selected Drum Pad sample.

To create breakpoints for the Amplitude Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Amp Page.

4 Select the Pencil tool.

5 Click in the Amplitude Envelope Editor to create a breakpoint.

6 Drag the breakpoint to the desired Level and time location.

7 Repeat the preceding steps to create more breakpoints in the pitch envelope.

To delete breakpoints from the Filter Envelope:

1 Select the Drum Pad you want.

2 Select Sample A or Sample B.

3 Select the Filter Page.

4 Select the Eraser tool.

5 Click an existing breakpoint in the Amplitude Envelope Editor to delete it.

Level Lets you adjust the overall Amplitude Level for the selected Drum Sample.

Velocity Lets you adjust the velocity sensitivity for the Amplitude Envelope. When centered, velocity does not affect the level of the sound. Increase it so that higher velocities increase the level. Decrease it so that higher velocities decrease the level. This can be useful for layering and crossfading Samples A and B at different velocities.

Drum Pad Effects

Each Drum Pad (both Samples A and B) provides individual Effects. You can have up to three different effects modules in series on any Drum Pad. These Effects modules are unique from the Track, Effects Sends 1 and 2, and Master Insert Effects modules.

The final module in the Drum Pad Editor determines the routing of the Output signal from the Drum Pad (through the effects).

Effects Editor selector   Effects module enable
                           Effect pop-up menu
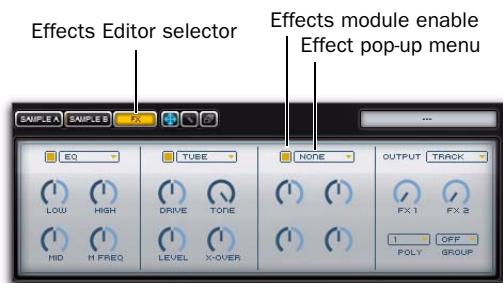
Drum Sample Effects

To apply an effect to the selected Drum Pad:

1 Select the Drum Pad you want.

2 Select FX to view the Drum Pad Effects Editor.

3 From the any of the three Effect pop-up menus, select the desired effect.

Selecting Ring Modulation for Drum Pad Effect 1

4 Ensure that the Effect Enable button is selected.

Available Effects include:

- EQ
- Parametric EQ
- Filter
- Limiter
- Compressor
- Gate
- AutoPan
- Phaser
- Clip
- Tube
- Crush
- Ring Modulation

Effect Controls

Each available Effect provides four controls appropriate to the individual Effect. For example, the Ring Modulator provides controls for Frequency, Frequency Modulation, Noise, and Mix.

Output Module

The Output module lets you select the Output Bus for the Drum Pad and provides controls for routing the signal to Effects Sends 1 and 2. You can also set the Polyphony for the Drum Pad Samples and assign the Drum Pad to a Group.

Output Lets you set the audio output to the selected Track Output Bus or any other available Output Bus. Setting different Drum Pads to different Output Busses lets you mix and process individual Drum Pads independently in Pro Tools.

FX 1 and FX 2 Each lets you send signal from the Drum Pad audio output to Effects Sends 1 and 2 in Transfuser.

Poly Lets you set the Polyphony for the selected Drum Pad between 1 and 8 voices. If a Drum Pad is likely to be frequently re-triggered before the end of the sample has been reached, higher settings keep consecutive Drum Samples from being cut off. Higher settings are definitely better for sounds like ride cymbal samples that sound better overlapping rather than cutting each other off. Set Poly to 1 for vintage drum machine sounds; subsequent notes cut off the sounding note.

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.

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 Drum Pad samples up or down.

Cutoff Adjust to increase or decrease the Cutoff Frequency for the Drum Pad samples.

Resonance Adjust to increase or decrease the amount of Resonance for the Cutoff Frequency for the Drum Pad samples.

Hold Adjust to increase or decrease the duration of Hold for Drum Pad samples.

Release Adjust to increase or decrease the duration of the Release for 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.

Phrase Synth Editor

The Phrase Synth module is a sample-based synthesizer that can be played back by the Phrase Sequencer module. When you select the Phrase Synth module on a Track, its Editor is available in the Editor pane. The Phrase Synth Editor provides a Waveform view editor for setting start, end, and loop points. You can also change the pitch, cutoff frequency, and Filter and Amplitude Envelopes for the loaded sample.

Figure 15. Phrase Synth editor

Phrase Synth Master Controls

Synth Menu

In the Editor, the Synth menu lets you save custom Synth module configurations, load custom saved Synth modules (of the same type), and Copy and Paste Synth modules. The Synth menu is also available in the Phrase Synth Track module.

Mode

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.

Original BPM

The Original BPM setting represents the analyzed original tempo of the audio file. This setting is only available if the Tempo Sync option is enabled (see "Sync" on page 118).

Original BPM controls available when Sync is enabled

You can enter an alternate Original 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 BPM setting can be off by a factor of two. To correct this, click one of the following:

/2 If the currently analyzed Original BPM is double-time of the actual tempo, click this option.

*2 If the currently analyzed Original BPM is half-time of the actual tempo, click this option.

Formant

Adjust the Formant control to shift formants up or down. The Formant control is only available in Solo/Vocals or Vocodize mode.

Key Track

Adjust the Key Track control to increase or decrease how much the triggering MIDI note number (higher or lower) affects Formant correction. The Key Track control is only available in Solo/Vocals or Vocodize mode.

Grain Size

Adjust the Grain Size control to increase or decrease the size of the grains used for the granular synthesis time stretching. The Grain Size control is only available in Lo-Fi mode.

Random

Adjust the Random control to increase or decrease the amount of randomization of the Grain Size. The Random control is only available in Lo-Fi mode.

Speed

Adjust the Speed control to increase or decrease the rate at which Transfuser plays through the sample. When Sync is disabled, the Speed control is available in all modes. However, when Sync is enabled, the Speed control is only available in Sampler mode.

Tempo

The Tempo section lets you synchronize the audio with the Pro Tools session tempo (or not) 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 Pro Tools 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.

Speed control available when Sync is disabled

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.

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.

Waveform Display

The Phrase Synth Editor lets you set the Start and Loop points for the loaded audio against a Waveform display. The Phrase Synth Editor also provides breakpoint editing against the Waveform display for Levels and Panning. Additionally, you can adjust the Filter and Amplitude Envelopes for the loaded audio.

Edit Tools
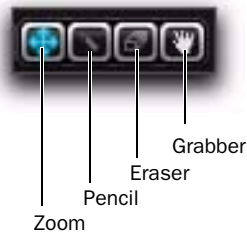
Phrase Synth Edit tools (in Loop Page view, the Pencil and Eraser are unavailable)

Zoom 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.

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 grab and drag and drop samples from a Phrase Synth to any other Synth module. You can also drag and drop samples from the Phrase Synth to the Pro Tools Region List, Tracks List, or Timeline, or to the Desktop.

Edit Menu

The Edit menu lets you select which parameters are available for editing against the Waveform display.

Loop

Select Loop view to edit the Play Start point as well as the Loop Start and End points.

Play Start   Loop Start   Loop End
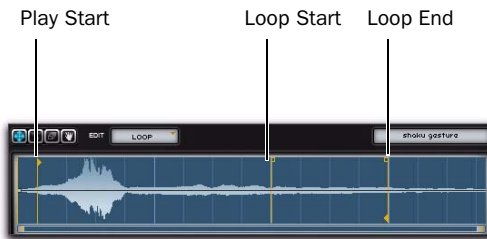
*Editing Play Start, and Loop Start and End markers*

Play Start Click and drag the Play Start marker left or right to set the playback start location in the audio file.

Loop Start Click and drag the Loop Start marker left or right to set the Loop Start point in the audio file. When the Loop option is the selected Play Mode setting, playback loops starting from this point.

Loop End Click and drag the Loop End marker left or right to set the loop end point in the audio file. When the Loop option is the selected Play Mode setting, playback loops ends at this point and loops back to the Loop Start point.

Level

Select Level view for breakpoint editing of the playback level against the Waveform display.

Creating a Level breakpoint Level breakpoint
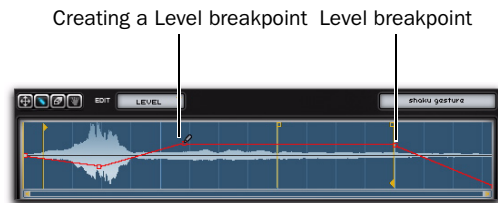
Editing Level breakpoints

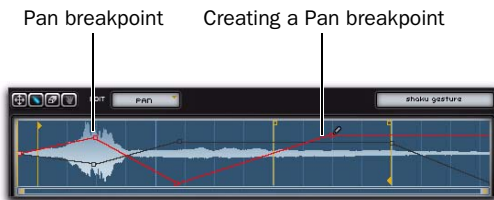**To create a Level breakpoint:**

1 From the Edit menu, select Level.

2 Select the Pencil Tool.

3 Click at the location in the Waveform display where you want to create a Level breakpoint.

4 Drag the breakpoint up to increase the level and down to decrease the level.

To delete a Level breakpoint:

1 From the Edit menu, select Level.

2 Select the Eraser Tool.

3 Click the Level breakpoint you want to delete.

Pan

Select Pan view for breakpoint editing of the panning (left/right) against the Waveform display.

Pan breakpoint   Creating a Pan breakpoint

Editing Pan breakpoints

To create a Pan breakpoint:

1 From the Edit menu, select Pan.

2 Select the Pencil Tool.

3 Click at the location in the Waveform display where you want to create a Pan breakpoint.

4 Drag the breakpoint up to pan right and down to pan left.

To delete a Pan breakpoint:

1 From the Edit menu, select Pan.

2 Select the Eraser Tool.

3 Click the Pan breakpoint you want to delete.

Filter

The Phrase Synth Filter controls are available regardless of which Edit view is selected.

Filter Type
Enable/Disable
Release
Sustain
Decay
Hold
Attack
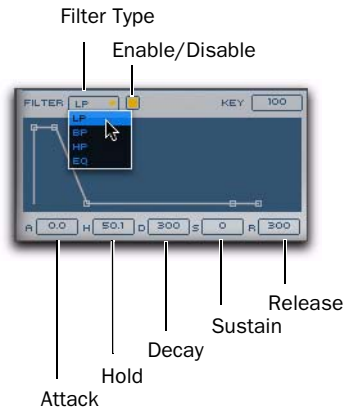
Phrase Synth Filter Envelope

Type

Select one of the following types of Filters:

- LP—Low Pass Filter
- BP—Band Pass Filter
- HP—High Pass Filter
- EQ—Equalizer

Enable

Select or deselect the Enable button to engage or bypass the Filter. The Enable button is lit when selected.

Key

The Key setting lets you adjust how much the Cutoff Filter tracks the keyboard (MIDI notes) from 0% (no tracking) to 100% (full tracking). Keyboard tracking is usefully for playing melodies with synth sounds (like a synth lead or bass sound).

Key Pan

The Key Pan setting determines how the automatic panning (if any) of the Phrase Synth works when it receives a MIDI note (such as when you play a key on the Note Range keyboard or on your external MIDI keyboard).

0 Sets Key Pan to off so there is no automatic panning.

1–10 Make panning track the keyboard (MIDI notes), so low notes are panned left and high notes right, relative to middle C (MIDI note number 60). Lower settings provide less panning variation and higher settings provide the most panning variation.

Alt Alternates panning between left and right with each note.

Rnd Randomly pans between left and right with each note.

Envelope

The Phrase Synth Editor provides a five point envelope for the Filter.

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 0–100%.

Release Lets you set the duration of the Release portion of the Envelope.

Cutoff

Click and drag left to decrease and right to increase the Cutoff Frequency.
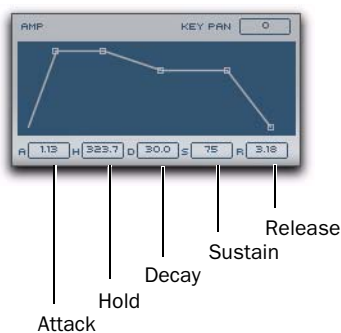
Envelope Depth

Click and 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.

Amp

The Phrase Synth Editor provides a five point Amplitude envelope.

Phrase Synth Amplitude Envelope

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 0–100%.

Release Lets you set the duration of the Release portion of the Envelope.

Level

The Level control lets you adjust the master volume for playback from the Phrase Synth module. Drag up to increase and drag down to decrease the playback level for Phrase Synth.

Velocity

The Velocity control lets you adjust how much incoming MIDI velocities affect the output level of the Phrase 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.

Figure 16. Slicer Synth editor

Slicer Synth Controls

Synth Menu

Synth menu

In the Editor, the Synth menu lets you save custom Synth module configurations, load custom saved Synth modules (of the same type), and Copy and Paste Synth modules. The Synth menu is also available in the Slicer Synth Track module.

Pitch

The Pitch control 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.

Play Slices

The Play Slices options pass certain slices by frequency band (High, Middle, Low) when enabled and filter out certain slices by frequency band when disabled. The Play Slices options are enabled when lit.
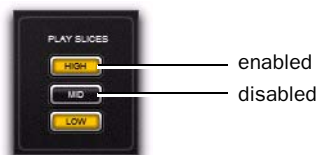
High When disabled, filters out High-range slices (like high-hat sounds).

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).

Start

Adjust the Start control to set where in each individual slice playback starts as a percentage of the total duration of the slice. Higher settings will start playback after the initial attack portion of the slice.

Length

Adjust the Length control to increase or decrease the total length of each individual slice. Lower settings cutoff 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.

Original Tempo

The Original Tempo setting represents the analyzed original tempo of the imported audio file. You can also enter an alternate Original 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 double-time of the actual tempo, click this option.

*2 If the currently analyzed Original Tempo is half-time of the actual tempo, click this option.

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.

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.

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).

Edit Tools
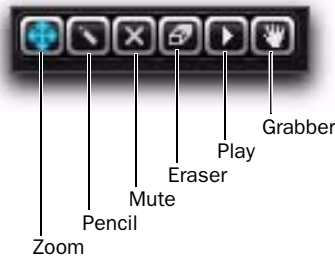
Slicer Edit tools

Zoom 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.

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" on page 123).

Pencil Lets you create new Slice markers in any Edit view (Slice, Level, or Flag).

Eraser Lets you delete Slice markers in any Edit view (Slice, Level, or Flag).

Play Lets you play a single slice.

Grabber Lets you grab and drag and drop samples from a Slicer Synth to any other Synth module. You can also drag and drop samples from the Slicer Synth to the Pro Tools Region List, Tracks List, or Timeline, or to the Desktop.

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). Choose from the following:

- Off—no grid
- 4—quarter-note grid
- 8—eight-note grid
- 16—sixteenth note grid
- 32—thirty-second note grid

Edit Menu

The Edit menu lets you select which parameters are available for editing against the Waveform display.

Slice

Slice view show s the individual Slice markers against the Waveform display. For more information, see "Slices" on page 126.

Level

Level view shows the individual slices, each with an independent level control.

Slice Level controls
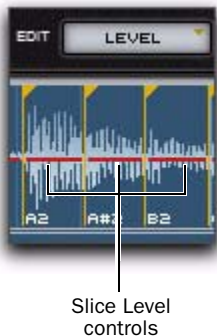
Level view

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

1 Select Level view.

2 With the Zoom tool selected, click the Slice Level control and drag up (or down).

Flag

Flag view 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.


High Flag
Mid Flag
Low Flag
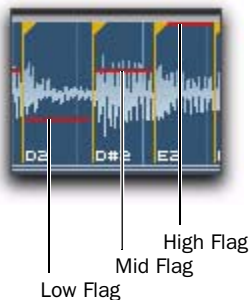
Flag view

To change a Flag:

1 Select Flag view.

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.

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

Slice marker Slices

MIDI note name
for Slice playback
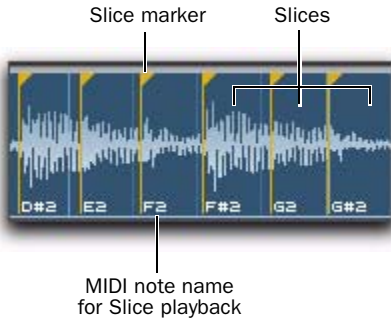
You can add, delete, mute, and play individual Slices in any Edit view.

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) as desired.

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 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.

  – or –

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

When adding a Slice marker, it will snap to the selected grid if Nudge is set 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.

  – or –

■ With the Zoom tool selected, double-click the Slice marker you want to delete.

The preceding Slice now includes the audio of the deleted Slice marker. Note that 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.

🔅 *Audition individual slices to find one you might want to use for a Drum Pad in a Drums Synth module.*

To drag and drop an audio slice from the Slicer Synth to a Drum Pad in a Drums Synth:
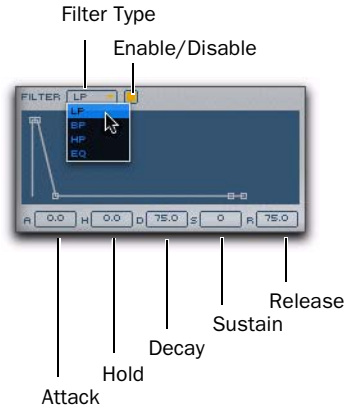
1 With the Grabber tool selected, click the Slice you want and drag it to a Drums Synth module in the Tracks pane.

2 When the Drums Synth Editor appears in the Editor pane, drop the Slice on the Drum Pad you want.

Dragging and dropping waveform to Synth module

Filter

The Slicer Synth Filter controls are available regardless of which Edit view is selected.

Slicer Synth Filter Envelope

Type

Select one of the following types of Filters:

- LP—Low Pass Filter
- BP—Band Pass Filter
- HP—High Pass Filter
- EQ—Equalizer

Enable

Select or deselect the Enable button to engage or bypass the Filter. The Enable button is lit when selected.

Envelope

The Slicer Synth Editor provides a five point envelope for the Filter.

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 0–100%.

Release Lets you set the duration of the Release portion of the Envelope.

Cutoff

Click and drag left to decrease and right to increase the Cutoff Frequency.

Envelope Depth

Click and 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.

Amp

The Slicer Synth Editor provides a five point Amplitude envelope.
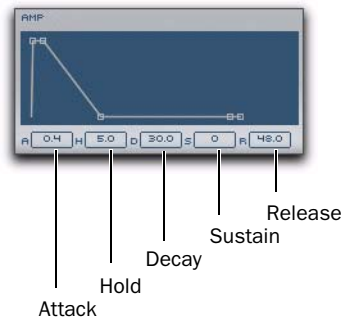
Slicer Synth Amplitude Envelope

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 0–100%.

Release Lets you set the duration of the Release portion of the Envelope.

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.

Input Synth Editor

The Input Synth module passes audio from the audio input of the track on which Transfuser is inserted. This lets you use Transfuser to process Pro Tools audio just like any other effects plug-in, without having to import the audio into Transfuser. When you select the Input Synth module on a Track, its Editor is available in the Editor pane. The Input Synth Editor provides only a few controls for selecting the Input, adjusting the Thru control, and editing the Envelope Trigger.

Figure 17. Input Synth editor

Input Synth Controls

Synth Menu

Synth menu

In the Editor, the Synth menu lets you save custom Synth module configurations, load custom, saved Synth modules (of the same type), and Copy and Paste Synth modules. The Synth menu is also available in the Input Synth Track module.

Input

The Input setting lets you select any of the following options for audio input:

Stereo Passes the stereo signal from the Pro Tools track.

Left Passes only signal from the left channel of the Pro Tools track.

Right Passes only signal from the right channel of the Pro Tools 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 –INF to +12.0 dB.

Envelope Trigger

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.

Envelope Trigger indicator

Release
Sustain
Decay
Hold
Attack
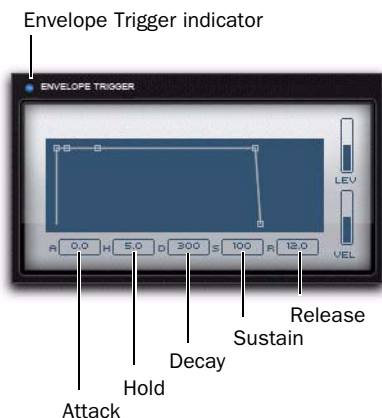
Slicer Synth Amplitude Envelope

Envelope Trigger Indicator Lights when a MIDI is received.

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 0–100%.

Release Lets you set the duration of the Release portion of the Envelope.

Level

The Level control lets you adjust the master volume for playback from the Input Synth module. Drag up to increase and drag down to decrease the output level for Input Synth.

Velocity

The Velocity control lets you adjust how much incoming MIDI velocities affect the Envelope Trigger of the Input Synth module.

Output Meter

The Output meter displays the audio output level as it passes through the Input Synth module.

Effects Editors

The Effects modules, Effects Sends 1 and 2, and the Main Effects Inserts all provide up to four different Effects Inserts. This chapter describes the controls for each Effect available in Transfuser:

- Beatcutter
- Chorus
- Compressor
- Delay
- Distortion
- Enhancer
- Filter
- Flanger
- Gater
- Kill EQ
- Lo-Fi
- Maximizer
- Multi Delay
- Phaser
- Pumper
- Reverb
- Spring Reverb
- Tape Delay
- Tube Drive
- Vinyl

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 pop-up menu, choose Load and select the effect you want.

Selecting the Beatcutter effect for the first Effects Insert in the Main Effects Inserts

To remove an effect:

■ From the Effects Insert pop-up menu, choose Remove.

To move an effect:

■ Drag and drop the Effect from one Effects Insert to another.

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

■ Drag and drop the Effects module from one Track to another.

Cutting, Copying, and Pasting Effects Inserts

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.

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

1 From the source Effects Insert pop-up menu, choose Cut or Copy.

2 From the destination Effects Insert pop-up menu, choose Paste.

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

Effects Module Controls
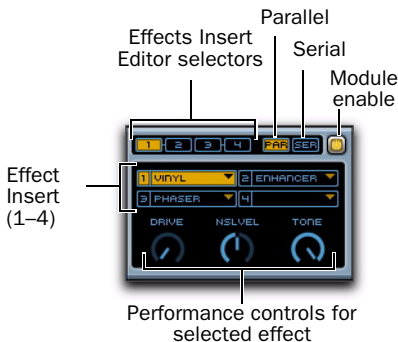
Selecting the Beatcutter effect for the first Effects Insert in the Main Effects Inserts

Each Effects module (Tracks, Send Effects 1 and 2, and Main Inserts) provides the same high level controls.

Effects Insert (1–4) Lets you select any of the Transfuser Effects as an Effects Insert. The selected Effects Editor appears in the Editor pane. Also, the selected Effects performance controls appear in the Effects module below the Effects Inserts.

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.

Parallel When selected, the audio signal is routed through Effects Inserts 1 and 2 in series, parallel to 3 and 4 in series.

Serial When selected, the audio signal is routed through all the Effects Inserts serially in order (1–4).

Module Enable Lets you enable or disable the module, effectively bypassing its function.

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 CC. The available controls vary depending on the selected Effect. For example, the Compressor effect provides Threshold, Attack, and Output controls.

Viewing an Effects Editor

To view an Effects Editor:

■ Click either the Effects Insert or the Effects Insert Editor selector.

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.

Figure 18. Beatcutter Editor

Force Buttons

Beatcutter 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.

Probability

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.

Adjusting the probability of whether or not Step 1 applies Beatcutter effects

Speed

Depending on the Speed setting, there are 16 or 12 probability steps.
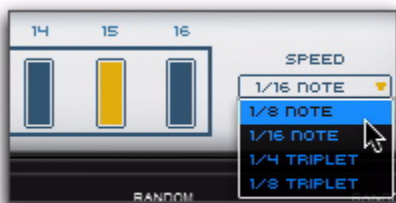
Selecting a Speed for the Probability step sequencer

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.

Beatcutter Effect Controls

The likelihood that each individual effect will be applied at anytime is determined by the probability setting for that effect. Any of the following Beatcutter effects can be force applied using its corresponding Force button ("Force Buttons" on page 133).

Repeat

The Repeat control lets you adjust the probability (0–100%) of any step repeating playback of the previously played slice.

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.

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.

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.

Type

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.

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 "freezed" 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 give depth and space to the audio signal.

Figure 19.   Chorus Editor

Pre-Delay

Set the Pre-Delay in milliseconds (0.00–24.00 ms).

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).

Voices

Select the number of voices (3, 4, or 6). For a thicker sound, use more voices.

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.

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.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) 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.

Figure 20. Compressor Editor

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.

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.

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.

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.

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.

The graphic display updates to show changes to the Knee control.

Attack

The Attack control sets how quickly (10.5 μs to 100 ms) to the compressor responds to the "front" of an audio signal once it crosses the selected threshold. Long settings let peaks through unaffected.

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.

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.

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

Use the Delay effect for a single delay line that can synchronize to the Pro Tools session tempo.

Figure 21. Delay Editor

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 on the opposite channel. For example, the dry signal coming in on the left channel is delayed and then output on the right channel.

Sync

When Sync is enabled, the delay time synchronizes to the Pro Tools session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the Pro Tools session tempo. The Sync button is lit when it is enabled.

Time

When Sync is enabled, the Delay control lets you select a rhythmic subdivision or multiple of the beat (based on the Pro Tools session tempo) for the delay time.

Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16d (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 7/4 (seven tied quarter notes)
- 8/4 (double whole note)

When Sync is disabled, the Time control lets you set the delay time in milliseconds and seconds (1 ms to 4.00 seconds).

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) the right channel delay time is half the left channel delay time.

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 centred.

Low Cut

The Low Cut control lets you adjust the frequency for the Low Cut filter. For less bass, raise the frequency.

High Cut

The High Cut control lets you adjust the frequency for the High Cut filter. For less treble, lower the frequency.

Width

The Width control lets you adjust the width of the delay effect in the stereo field.

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 and varying amounts of distortion.

Figure 22. Distortion Editor

Mode

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.

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

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 1 of 2 decibels can make a big difference on the amount and quality of distortion.

Tone

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. Pre-Shape is essentially a pre-distortion tone control that makes the distortion bite at different frequencies.

distortion), while lower setting 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.

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.

Output

The Output control lets you lower the Output level of the distorted signal from 0–100%. At 0%, no distorted signal passes through the output. At 100%, the distorted signal passes through the output at full volume.

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

Use the Enhancer effect to enhance the low and high broadband frequencies of the audio signal.

Figure 23.   Enhancer Editor

Low Frequency

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).

High Frequency

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 addition high frequency harmonics in the signal (0.0–12.0 dB).

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.

Figure 24. Filter Editor

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

The Cutoff control lets you adjust the Cutoff frequency (20.0 Hz to 20.0 kHz) of the filter.

Resonance

The Resonance control lets you adjust the amount filter Resonance (0–100%). At 100%, the filter feeds back on itself.

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.

LFO

The Filter effect provides a sinusodal 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.

Envelope

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.

Output

The Output control lets you lower the Output level from 0.0 dB to –INF dB.

Flanger

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

Figure 25. Flanger Editor

Modulation

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 Pro Tools session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the Pro Tools 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. Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16d (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 8/4 (double whole note)

When Sync is disabled, the Rate control lets you the modulation rate in independently of the Pro Tools 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.

Delay

The Delay 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.

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.

Figure 26. Gater Editor

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.

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.

Off Provides no filtering.

LP Provides a Low Pass filter.

BP Provides a Band Pass filter.

HP Provides a High Pass filter.

Phaser Provides a Phaser.

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, 5, 6, 7, 8, 9, 10, 11, 12, 16, 24, 32, 48, 64, 96, 128, 192, or 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.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) signal. 0% is all dry, and 100% is all wet, while 50% is an equal mix of both.

Pattern Editor

The Gater Pattern Editor lets you edit a 32-step pattern sequencer of variable loop length for five Gater parameters. You can select and edit up to ten different patterns.

Pattern (1–32)

From the Pattern selector, select any of the thirty-two available (1–32) Patterns for playback and editing.

Rate

From the Rate selector, select any of the following rhythmic note values as the Step rate for all Patterns.

- 1/2 Dotted (dotted half note)
- 1/4 Dotted (dotted quarter note)
- 1/8 Dotted (dotted eighth note)
- 1/16 Dotted (dotted sixteenth note)
- 1/32 Dotted (dotted thirty-second note)
- 1/2 Note (half note)
- 1/4 Note (quarter note)
- 1/8 Note (eighth note)
- 1/16 Note (sixteenth note)
- 1/32 Note (thirty-second note)
- 1/2 Triplet (half-note triplet)
- 1/4 Triplet (quarter-note triplet)
- 1/8 Triplet (eighth-note triplet)
- 1/16 Triplet (sixteenth-note triplet)
- 1/32 Triplet (thirty-second note triplet)

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.

Bar View Selector

The Gater Pattern Editor only has room to display one bar at a time, so the Bar View selector lets you select the Bar you want to view. The currently viewed bar is lit in the Bar View selector.

Bar View selector

To view a specific bar in the Gater Pattern Editor:

■ Click the Bar number in the Bar View selector.

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.

To adjust the Loop Range end point:

■ Click the end point of the Loop Range selector and drag left or right as desired.
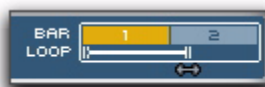
Adjusting the Loop Range end point

Pattern Step Events

The Gater Pattern Editor provides five lanes for five different Gater parameters. Each parameter can be set to different values on a Step by Step basis.

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.

To change the amount of gating for a step:

■ In the Gate lane, click the Step you want to adjust and drag up or down.

Adjusting the amount of gating for a step

Cutoff

The Cutoff parameter lets you adjust the Cutoff frequency for a Step.

To change the cutoff frequency of the filter for a step:

■ In the Cutoff lane, click the step you want to adjust and drag up or down.

Reso

The Reso parameter lets you adjust the amount of filter resonance for a Step.

To change the resonance of the filter for a step:

■ In the Reso lane, click the step you want to adjust and drag up or down.

Amp

The Amp parameter lets you adjust the amount of amplification for a Step. Higher setting increase the level of the gated signal and lower settings decrease it.

To change the amplitude (level) for a step:

■ In the Amp lane, click the step you want to adjust and drag up or down.

Pan

The Pan parameter lets you adjust the panning for a Step in the stereo field.

To change the panning for a step:

■ In the Pan lane, click the step you want to adjust and drag up to pan that step right or down to pan that step left.

Adjusting the panning for a step

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).

Figure 27. Kill EQ Editor

Kill

The Kill buttons let you apply a broadband band pass for Low, Mid, and 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.

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.

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 cross-over 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 bandpass filter by "killing" the low and high frequency bands and sweep the mid band.

Mid-High

The Mid-High control lets you adjust the cross-over frequency between the mid and high bands.

Lo-Fi

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

Figure 28. Lo-Fi Editor

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.

Clip

The Clip control lets you increase the gain (0.0–40.0 dB) of the audio signal so that it clips.

Rectify

The Rectify control lets you adjust the amount of Rectification of the signal (making negative peaks positive) from 0–100%.

Noise

The Noise control lets you adjust the amount of noise in the clipped signal from 0–100%.

Sample Rate

The Sample Rate 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 downsampling 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 anti-aliasing filter cutoff applied to the audio signal before resampling. The filter is applied as a multiplier of the sample frequency (Fs) between 0.12 Fs and 2.00 Fs.

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 (Fs) between 0.12 Fs and 2.00 Fs.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) signal. 0% is all dry, and 100% is all wet, while 50% is an equal mix of both.

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.

Sine Provides a sine wave.

Tri Provides a triangle wave.

Saw Provides a saw-tooth wave.

Square Provides a square wave.

Morse Provides a Morse code–like rhythmic effect.

S&H Provides Sample and Hold (S&H) modulation.

Random Provides random modulation.

Sync

Enable Sync to synchronize the LFO Rate to the Pro Tools session tempo. When Sync is disabled, you can set the Rate time in milliseconds independently of the Pro Tools 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. Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16d (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 8/4 (double whole note)

When Sync is disabled, the Rate control lets you the modulation rate in independently of the Pro Tools session tempo (0.01–10.0 Hz).

Depth

The Depth control lets you adjust the amount of modulation applied to the Sample Rate.

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 determines 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.

Figure 29. Maximizer Editor

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.

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.

Level

The Level meter displays the input level of the audio signal.

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.

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.

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.

Figure 30. Multi Delay Editor

Randomize

Click the Randomize button to randomize all of the control settings in the Multi Delay effect.

Delay

When Sync is enabled, the Delay control lets you select a rhythmic subdivision or multiple of the beat (based on the Pro Tools session tempo) for the delay time.

Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16d (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 7/4 (seven tied quarter notes)
- 8/4 (double whole note)

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 Pro Tools session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the Pro Tools session tempo. The Sync button is lit when it is enabled.

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 (or not) to the Pro Tools session tempo.

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.

Low Cut

The Low Cut control lets you adjust the frequency for the Low Cut filter. For less bass, raise the frequency.

High Cut

The High Cut control lets you adjust the frequency for the High Cut filter. For less treble, lower the frequency.

Mod

The Mod controls let you modulate the main delay time.

Mode

The Mode setting lets you select any of the following options for the modulating waveform.

Off Turns off modulation.

Sine Provides a sine wave for LFO modulation.

Square Provides a square wave for LFO modulation.

S&H Provides Sample and Hold modulation.

Saw Provides a sawtooth wave for LFO modulation.

Pitch Modulates the pitch of the delayed signal. You can set the Rate to 0 for a fixed pitch shift.

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.

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. The controls for each Tap are available on separate pages within the Multi Delay Tap pane. You can enable or disable (bypass) any of the eight available Taps.
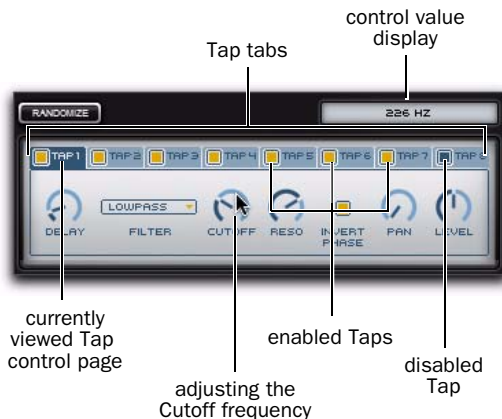
Control page for Tap 1

To view the any Tap control page:

■ Click the tab for the Tap page you want to view (for example, click the tab for Tap 1 to view its control page).

To enable (or disable) any Tap:

■ Click the Tap enable/disable button for the Tap you want. The Tap enable/disable button is lit when enabled.

Tap Controls

Each Tap page provides the following controls:

Delay

Adjust the Delay control to set the length of delay for the tap, relative to the main Delay setting.

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.

Cutoff

Adjust the Cutoff control to set the Cutoff frequency (40.0 Hz to 16.0 kHz) for the selected filter type.

Reso

Adjust the Reso control to change the amount of Resonance for the selected filter type.

Invert Phase

Enable Invert Phase to invert the phase of the selected filter. When enabled, the Invert Phase button is lit.

Pan

Adjust the Pan control to pan the audio signal from the Tap left or right in the stereo field.

Level

Adjust the Level control to change the output level (–INF to +12 dB) of the Tap.

Phaser

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

Figure 31. Phaser Editor

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.

Sync

When Sync is enabled, the Phaser Rate control synchronizes to the Pro Tools session tempo. When Sync is disabled, you can set the Rate in milliseconds independently of the Pro Tools 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 Phaser Modulation Rate. Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16d (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 8/4 (double whole note)

When Sync is disabled, the Rate control lets you the rate of the Phaser in independently of the Pro Tools session tempo (0.01–10.0 Hz).

Depth

The Depth control lets you adjust the depth of modulation, which in turn affects the amount of phasing applied to the audio signal.

Wave

The Wave control lets you interpolate between a triangle wave and a sine wave for modulating the Phaser.

Center

The Center control lets you change the frequency center (100 Hz to 10.0 kHz) for the phaser poles.

Offset

The Offset control lets you adjust the phase offset (–180° to +180°) for the Phaser applied to the left and right channels.

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.

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.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) 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.

Figure 32. Pumper Editor

Automatic Trigger

Turn the Automatic Trigger On to trigger the Pumper at the selected Speed. When it is turned Off, the Pumper will only be trigger when you click the Manual Trigger button.

Speed

The Speed setting synchronizes to the Pro Tools session tempo. Select one of the following rhythmic note values for the Automatic Trigger:

- Bar
- 1/2 (half note)
- 1/2T (half-note triplet)
- 1/4 (quarter note)
- 1/4T (quarter-note triplet)
- 1/8 (eighth note)
- 1/8T (eighth-note triplet)
- 1/16 (sixteenth note)
- 1/16T (sixteenth-note triplet)
- 1/32 (thirty-second note)
- 1/32 (thirty-second-note triplet)

Trigger Offset

Adjust the Trigger Offset control to offset the Automatic Trigger by +/–100.0 ms.

Manual Trigger

Click the Manual Trigger button to immediately trigger the Pumper regardless of whether the Automatic Trigger is On or Off.

Envelope

The Envelope 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 Pro Tools session tempo.
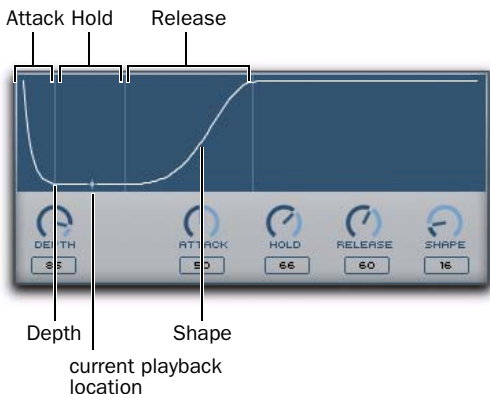
Pumper Envelope

Depth

Adjust the Depth control to set the depth of the Pumper. Higher values provide a greater amount of pumping and lower values less.

Attack

Adjust the Attack control to increase or decrease the attack time of the Pumper.

Hold

Adjust the Hold control to increase or decrease the hold time of the Pumper.

Release

Adjust the Release control to increase or decrease the release time of the Pumper.

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.

Figure 33. Reverb Editor

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, and 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.

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

The Transfuser Reverb provides the following Types of Early Reflection models:

Booth Simulates a vocal recording booth.

Club Simulates a small, clear, natural-sounding club ambience.

Room Simulates the center of a small room without many reflections.

Small Chamber Simulates a bright, small-sized room.

Medium Chamber Simulates a bright, medium-sized room.

Large Chamber Simulates a bright, large-sized room.

Small Studio Simulates a small, live, empty room.

Large Studio Simulates a large, live, empty room.

Scoring Stage Simulates a scoring stage in a medium-sized hall.

Philharmonic Simulates the space and ambience of a large, symphonic, concert hall.

Concert Hall Simulates the space and ambience of a large concert hall.

Church Simulates a medium-sized space with natural, clear-sounding reflections.

Opera House Simulates the space and ambience of an opera house.

Vintage 1 Simulates a vintage digital reverb effect.

Vintage 2 Simulates a vintage digital reverb effect.

ER/Tail Mix

Adjust 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.

Reverb Time

Adjust 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.

Room Size

Adjust the Room Size control to change the apparent size of the space.

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.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) signal. 0% is all dry, and 100% is all wet, while 50% is an equal mix of both.

Spring Reverb

Use the Spring Reverb effect for that classic spring reverb sound. Just don't kick your computer trying to get the springs to rattle!

Figure 34. Spring Reverb Editor

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.

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.

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.

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.

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 more fluttery echo.

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.

Mix

The Mix control lets you adjust the Mix between the "wet" (effected) and "dry" (uneffected) 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).

Figure 35. Tape Delay Editor

Delay

The Delay control lets you specify the duration of the tape delay—effectively the distance between the recording and playback heads with the tape running at a certain speed, such as 15 inches per second (ips).

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 Pro Tools session tempo) for the tape length.

Select from the following rhythmic values:

- 16 (sixteenth note)
- 8T (eighth-note triplet)
- 16D (dotted sixteenth-note)
- 8 (eighth note)
- 4T (quarter-note triplet)
- 8D (dotted eighth-note)
- 4 (quarter note)
- 2T (half-note triplet)
- 4D (dotted quarter-note)
- 2 (half note)
- 1T (whole-note triplet)
- 3/4 (dotted half note)
- 4/4 (whole note)
- 5/4 (five tied quarter notes)
- 6/4 (dotted whole note)
- 7/4 (seven tied quarter notes)
- 8/4 (double whole note)

Sync

When Sync is enabled, the Delay time synchronizes to the Pro Tools session tempo. When Sync is disabled, you can set the delay time in milliseconds independently of the Pro Tools session tempo. The Sync button is lit when it is enabled.

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.

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.

Low Cut

The Low Cut control lets you adjust the frequency for the Low Cut filter. For less bass, raise the frequency.

High Cut

The High Cut control lets you adjust the frequency for the High Cut filter. For less treble, lower the frequency.

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.

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.

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.

Delay Taps

The Tape Delay provides four separate Taps (delay lines). Each Tap provides the same set of controls. 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.
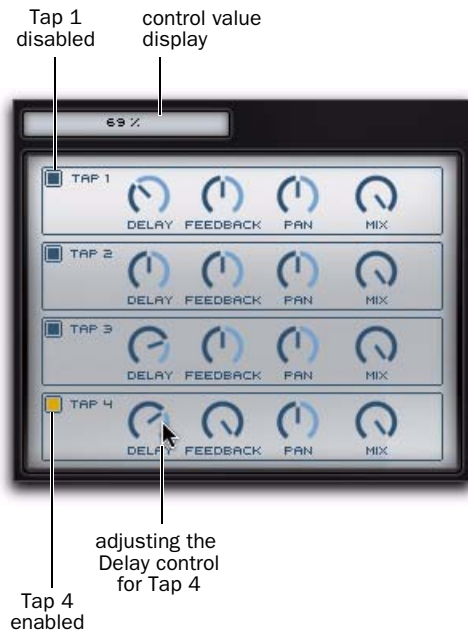
Tape Delay Tap (1–4) controls

To enable (or disable) any Tap:

■ Click the Tap enable/disable button for the Tap you want. The Tap enable/disable button is lit when enabled.

Tap Controls

Each of the four Tape Delay Taps provide the following controls:

Delay

Adjust the Delay control to set the amount of delay for the Tap.

Feedback

Adjust the Feedback control to set the amount of Feedback for the Tap.

Pan

Adjust the Pan control to pan the audio signal from the Tap left or right in the stereo field.

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 over-driven, tube-saturated distortion to the audio signal.

Figure 36. Tube Drive Editor

Drive

The Drive control lets you increase the amount of drive (input volume) of the signal.

Headroom

The Headroom control lets you adjust the headroom for the headroom of the signal (between –30.0 dB and 0.0 dB) when the maximum Drive is being applied.

Saturation

The Saturation control lets you adjust the amount of tube saturation.

Output

The Output control 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.

Vinyl

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 authenticity to your Transfuser Tracks.

Figure 37. Vinyl Editor

Distortion

Drive

The Drive control 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

Enable the Wide button to get a broader spread of the Drive distortion in the stereo field. When enabled, the Wide button is lit.

Frequency

The Frequency control lets you adjust the cutoff frequency 50 Hz–5.00 kHz) used to filter the distortion.

Resonance

The Resonance control lets you adjust the amount of resonance of the cutoff frequency used to filter the distortion.

Saturation

The Saturation control lets you adjust the amount of saturation in the distortion.

Noise

The Noise controls let you adjust the Level, Density, and Tone of "scratchy record" noise in the audio signal.

Level

Adjust the Level control to change 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

Adjust the Density control to change the relative density of noise components in the audio signal. For just 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

Adjust the Tone control to change the bandwidth (3.5–14 kHz) of the added noise components.

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

Adjust the Hold setting to change the Hold time (10.0 ms–10.0 seconds) for the Noise Gate.

Release

Adjust the Release setting to change the Release time (10.0 ms–10.0 seconds) for the Noise Gate.

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