

# Structure LE™ Advanced Sample Player

Version 1.0



## Legal Notices

This guide is copyrighted ©2007 by Digidesign, a division of Avid Technology, Inc. (hereafter "Digidesign"), with all rights reserved. Under copyright laws, this guide may not be duplicated in whole or in part without the written consent of Digidesign.

003, 003 Rack, 96 I/O, 96i I/O, 192 Digital I/O, 192 I/O, 888|24 I/O, 888|20 I/O, 1622 I/O, 24-Bit ADAT Bridge I/O, AudioSuite, Avid, Avid DNA, Avid Mojo, Avid Unity, Avid Unity ISIS, Avid Unity MediaNetwork, Avid Xpress, AVoption, AVoption|V10, Beat Detective, Bruno, Command|8, Control|24, D-Command, D-Control, D-Fi, D-fx, D-Show, DAE, Digi 002, Digi 002 Rack, DigiBase, DigiDelivery, Digidesign, Digidesign Audio Engine, Digidesign Intelligent Noise Reduction, Digidesign TDM Bus, DigiDrive, DigiRack, DigiTest, DigiTranslator, DINR, DV Toolkit, EditPack, Impact, Interplay, M-Audio, MachineControl, Maxim, Mbox, MediaComposer, MIDI I/O, MIX, MultiShell, OMF, OMF Interchange, PRE, ProControl, Pro Tools M-Powered, Pro Tools, Pro Tools|HD, Pro Tools LE, QuickPunch, Reel Tape, Reso, Reverb One, ReVibe, RTAS, Smack!, SoundReplacer, Sound Designer II, Strike, Structure, Structure Free, Structure LE, SYNC HD, SYNC I/O, Synchronic, TL Space, Velvet, and X-Form are trademarks or registered trademarks of Digidesign and/or Avid Technology, Inc. All other trademarks are the property of their respective owners.

Product features, specifications, system requirements, and availability are subject to change without notice.

PN 9320-58058-00 REV A 7/07

Comments or suggestions regarding our documentation?  
email: [techpubs@digidesign.com](mailto:techpubs@digidesign.com)

# contents

<b>Chapter 1. Introduction</b> .....	1
Contents of the Structure LE Box .....	2
System Requirements .....	2
Registering Your Plug-ins .....	3
Working with Plug-ins .....	3
Conventions Used in This Guide .....	3
About <a href="http://www.digidesign.com">www.digidesign.com</a> .....	4
<b>Chapter 2. Installation</b> .....	5
Installing the Structure LE Plug-in .....	5
Authorizing Structure LE .....	6
Uninstalling Structure LE .....	7
<b>Chapter 3. Overview</b> .....	9
Inserting Structure LE On a Pro Tools Instrument Track .....	9
Plug-in Window .....	10
Adjusting Parameters .....	11
Main Sections .....	13
Structure LE File Types .....	17
Importing Third Party Sample Libraries .....	19
MIDI Controller Mapping .....	19
<b>Chapter 4. QuickStart</b> .....	21


<b>Chapter 5. Structure LE Parameters</b> .....	27
Keyboard Section .....	27
Patch List .....	30
Part List .....	34
Sub-Patch .....	37
Main Page .....	39
Patch Parameter Page .....	40
Part Edit Sub-Pages .....	40
Effects Page .....	43
Database Page .....	46
Browser Page .....	48
<b>Appendix A. Audio FX</b> .....	51
<b>Appendix B. MIDI Processors</b> .....	63

# chapter 1

## Introduction

Welcome to the Structure LE™ Advanced Sample Player. Structure LE is an RTAS (Real Time Audio Suite) plug-in for Digidesign®-qualified Pro Tools™ systems.

Structure LE is a stripped down version of the Structure Professional Sampler Workstation. It delivers superior performance and reliability thanks to its direct integration with the Pro Tools audio engine. With its powerful database and integrated file browser, you can immediately find and load any supported sample library in your collection (native Structure, SampleCell, SampleCell II, Kontakt, Kontakt 2, and EXS 24). Structure LE comes with its own 3 GB sample library to get you started.

 *For more information on using plug-ins in Pro Tools, see the DigiRack Plug-ins Guide.*

### Structure LE Features

- ◆ Full session compatibility with all Structure versions (Structure, Structure Free). You can easily upgrade and still use your Pro Tools sessions, or open Pro Tools sessions which originally used Structure or Structure Free with Structure LE.
- ◆ 256-voice multitimbral sound engine
- ◆ Up to 8-channel multichannel sample support
- ◆ 3 GB sample library from AIR
- ◆ Imports native Structure, SampleCell, SampleCell II, Kontakt, Kontakt 2, and EXS 24 formats
- ◆ Drag-and-drop sample import from Pro Tools tracks
- ◆ Support of all common bit depths, sample rates, and surround formats up to 24-bit/192 kHz/7.1 surround (depending on the capabilities of your Pro Tools system).
- ◆ Support of the following audio file formats:
  - WAV
  - AIFF
  - SD1, SD2
  - REX1, REX2
  - MP3
  - WMA
- ◆ Multi-effects processing engine with over 20 effect types and hundreds of presets
- ◆ Stereo and surround convolution reverb
- ◆ Powerful database and file browser for comfortable sample search
- ◆ Unlimited number of parts, audio effects, and MIDI processors per patch
- ◆ Easy real-time sound manipulation via Smart knobs
- ◆ MIDI Learn functionality for quick and easy assignment of hardware MIDI controllers

---

## Contents of the Structure LE Box

The Structure LE box contains the following components:

- 1 Structure LE Installation disc
- 1 Activation Card for authorizing Structure LE and the Structure LE content with an iLok USB Smart Key (not supplied).

---

## System Requirements

To use Digidesign RTAS plug-ins you need one of the following:

- ◆ A Digidesign-qualified Pro Tools|HD system, Pro Tools LE system, 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

For complete system requirements visit the Digidesign website ([www.digidesign.com](http://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, refer to the Digidesign website ([www.digidesign.com](http://www.digidesign.com)).

---

## Registering Your Plug-ins

You will be automatically registered when authorizing your plug-in. See “Authorizing Structure LE” on page 6 for more information.

Registered users will receive periodic software update and upgrade notices.

Please refer to the Digidesign website ([www.digidesign.com](http://www.digidesign.com)) or the Digidesign Registration Information Card for information on technical support.

---

## Working with Plug-ins

Refer to the *DigiRack Plug-ins Guide* for information on working with plug-ins, including:

- Using Clip indicators
- Automating 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 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](http://www.digidesign.com)

The Digidesign website ([www.digidesign.com](http://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. See the enclosed registration form for details.

**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** See a series of free tutorial videos hosted by musician, producer and veteran clinician Phil Jackson. Accelerated Videos are designed to help you get up and running with Pro Tools and its plug-ins fast.

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



# Installation

---

## Installing the Structure LE Plug-in

### To install the Structure LE plug-in:

- 1 Insert the Structure LE Install disc into your computer.
- 2 Double-click the Structure LE Installer application:
  - Structure\_LE\_Setup.exe (Windows)
  - Structure\_LE\_Setup.pkg (Mac OS X)
- 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 Structure LE Installer copies the Structure LE plug-in file (Structure.dpm) to the following location:


- Program Files\Common Files\Digidesign\DAE\Plug-Ins folder (Windows)
- or –
- Library/Application Support/Digidesign/Plug-Ins folder (Mac).

The Structure LE installer copies all factory patches to a folder named Structure Factory Libraries on your computer's hard drive. If you do not choose another location, it is created in the following place, depending on your OS:

**Windows** Program Files\Digidesign\Structure LE\Structure Factory Libraries\Structure LE

**Mac OS X** /Applications/Digidesign/Structure LE/Structure Factory Libraries/Structure LE

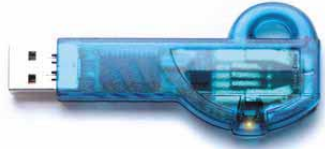
 *You can have only one version of Structure installed on your computer at a time: Structure, Structure LE, or Structure Free.*

 *To allow Structure LE to find the samples belonging to the factory library patches, do not separate the folder named Structure Encrypted Samples and the Patch folder in Structure Factory Libraries. Structure LE will find and load its relevant samples on any drive as long as the folder layout is intact.*

---

## Authorizing Structure LE

Structure LE is authorized using the 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 online with the Activation Code included with your purchase (see “Authorizing Structure LE Using an Activation Code” on page 6).

 *See the iLok Usage Guide for details, or visit the iLok website ([www.iLok.com](http://www.iLok.com)).*

## Authorizing Structure LE Using an Activation Code

### **To authorize Structure LE using an Activation Code:**

- 1** If you do not have an existing iLok.com account, visit [www.iLok.com](http://www.iLok.com) and sign up for an iLok.com account.
- 2** Transfer your Structure LE 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](http://www.iLok.com) and log in.
  - Follow the on-screen instructions for transferring your licenses 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 installed unauthorized plugins or software options, you will be prompted to authorize them. Follow the on-screen instructions to complete the authorization process.

---

## Uninstalling Structure LE

If you need to remove the Structure LE plug-in from your system, follow the instructions below for your computer platform.

### Windows

#### To uninstall the Structure LE plug-in:

- 1 From the Start menu, choose Control Panel and double-click Add or Remove Programs.
- 2 Select the Structure LE plug-in from the list of installed applications and click the Change/Remove button.
- 3 Follow the on-screen instructions to remove the plug-in.
- 4 When removal is complete, click OK to close the window.
- 5 Manually delete the Structure Factory Libraries folder from your disk.

### Mac OS X

#### To remove the Structure LE plug-in:

- 1 Locate and open the Plug-Ins folder on your Startup drive (Library/Application Support/Digidesign/Plug-Ins).
- 2 Drag the Structure plug-in to the Trash, or to the Plug-Ins (Unused) folder.
- 3 Drag the folder to which you installed the Structure Factory Libraries to the trash.



## chapter 3

# Overview

Structure LE is an RTAS plug-in that adds the flexibility and power of an advanced sample player to any Pro Tools system.

In order to get the most out of this instrument, this chapter introduces you to Structure LE's layout and basic workflow concepts and explains how to work with Structure LE's different types of controls.

---

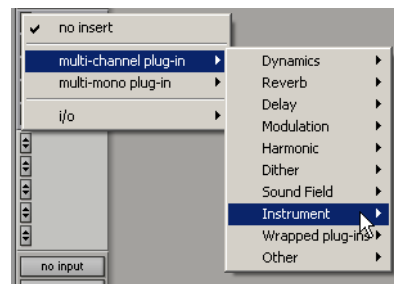
### Inserting Structure LE On a Pro Tools Instrument Track

To use the Structure LE plug-in, you have to insert it on a stereo, mono, or surround Instrument track (recommended), Auxiliary input, or Audio track. You can then play Structure LE using its on-screen keyboard, an external MIDI controller, or a track with MIDI data.

Structure LE is the sole audio input source for any Instrument track, audio track, or Auxiliary input on which it is inserted. When Structure LE is inserted on an audio track, any audio regions on that track will not sound during playback. Additionally, the track input will effectively be muted during playback if Structure LE is inserted on the track. If Structure LE is inserted more than once in a single track, only the last Structure LE insert will produce sound. You can use Structure LE as an insert on more than one track at a time.

#### To add a Structure LE plug-in to a track:

- 1 Create a new stereo, mono, or surround Instrument track in Pro Tools.
- 2 Click the track's Insert selector and choose Structure LE from the list.

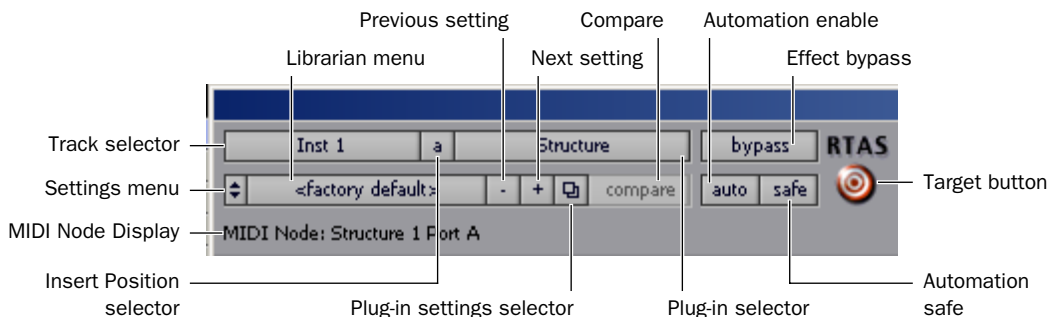


*Inserting Structure LE on a stereo Instrument track*

#### To remove the plug-in:

- Click the Insert selector and choose No Insert.

## Plug-in Window



### Plug-in Window

The Plug-in window, which appears whenever you click an insert on a track, lets you access and edit the parameters for any real-time plug-in that is in use.

**Track Selector** Selects any non-MIDI track in a session.

**Insert Position Selector** Selects any insert on the current track.

**Plug-in Selector** Selects any real-time plug-in installed in the Plug-Ins folder.

**Effects Bypass Button** Disables the currently displayed plug-in. Use this to compare the track with and without the effect. To re-enable a plug-in, click this button again.

**Settings Menu** Lets you copy, paste, save, and import plug-in settings.

**Librarian Menu** Recalls settings files saved in the plug-in's root settings folder or in the current session's Settings folder.

**Next (+) and Previous (-) Setting Buttons** Let you select the next or previous plug-in setting from the Librarian menu.

**Plug-in Settings Selector** Accesses the Plug-in Settings dialog which lists the settings files for the current plug-in. From this list, you can select a new setting, or audition a series of settings.

**Compare** Toggles between the original saved plug-in setting and any changes you have made to it so you can compare them.

**Auto** Lets you enable individual plug-in controls for automation recording.

**Automation Safe** When enabled, prevents existing plug-in automation from being overwritten.

**Target Button** When multiple Plug-in windows are open, clicking this button selects that plug-in as the target for any keyboard commands.

**MIDI Node Display** Shows MIDI node information for MIDI-enabled plug-ins. MIDI nodes are virtual connections from Pro Tools to software instruments and other MIDI-enabled plug-ins. MIDI nodes are useful for routing multiple MIDI or Instrument tracks to different channels of a single virtual MIDI device. MIDI node numbers are also displayed in a track's MIDI Output selector.

---

## Adjusting Parameters

You can adjust all controls by using the computer mouse. Some controls are adjusted by selecting a value from a pop-up menu or by activating a button.

## Parameter Ranges and Resolution

Most controls have a range of 0–100%. Some controls are *bipolar*, meaning they support negative values and usually have a range of –100% to +100%.

## Using a Mouse

You can adjust controls by clicking and dragging the control's slider or knob, or by moving over it with the cursor and scrolling up or down with the scroll wheel. Adjust rotary controls by clicking and dragging horizontally or vertically. Parameter values increase as you drag upward or to the right, and decrease as you drag downward or to the left.



*Dragging a knob*

## Activating Buttons

Some controls are enabled or disabled using buttons.

### To enable a button:

- Click the button. Click again to disable it.



*Enabling a button*

## Zone Mode

Some buttons not only have an On or Off state but feature a third state, called Zone mode. This state is indicated by a black dot in the middle of the lit button. If Zone mode is activated, the state of this parameter is taken from each sample zone in the part. (The settings for sample zones are only accessible in the full version of Structure: Structure Professional Sampler Workstation).



*Buttons in Zone mode*

## Keyboard Shortcuts

- ◆ For finer adjustments, hold down Control (Windows) or Command (Mac) while moving the control.
- ◆ To return a control to its default value, Alt-click (Windows) or Option-click (Mac) the control.

## Displaying Values

Parameter values of knobs and faders can be displayed in the Info display without editing them.

**To display the value of a control in the Info display:**

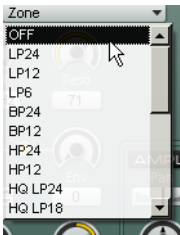
- Click the control without dragging it.

## Using Pop-up Menus

Some controls have pop-up menus for selecting values.

**To choose a value from a pop-up menu:**

- 1 Click the parameter's selector.
- 2 Select a value from the parameter's pop-up menu.



Selecting a value from a pop-up menu

## Scroll Wheel on Knobs, Faders, and Menus

If your mouse has a scroll wheel, you can use it to adjust Structure LE parameters.

**To change a value with a scroll wheel:**

- 1 Move the cursor over a rotary knob or fader.
- 2 Scroll the wheel up to increase values. Scroll the wheel down to decrease values.

## Adjusting Values by MIDI

In the Editor window, you can adjust text box values by MIDI input. This can be helpful when defining, for example, key ranges.

**To adjust a value using MIDI input:**

- 1 Click into the text field.
- 2 Play the desired note on your MIDI keyboard.



Adjusting the zone's key range using MIDI input



## Main Sections



Structure LE Main page

### Patch List

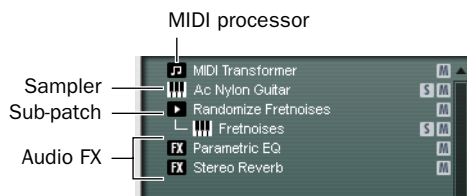
In the Patch list on the left side of Structure LE, all loaded patches are shown. You can create, select, mix, MIDI-assign, route, and group patches in the Patch list. Click a patch to select it for editing in the Parameter panel on the right. The handle on the left of the selected patch module is lit yellow. You can create, edit and save patches using the Patch menu on top of the Patch list. To learn more about the Patch list, see “Patch List” on page 30.

### Part List

The Part list shows the parts that are contained in a patch. A part can be a multisample, an insert effect, a Sub-patch, or a MIDI processor. The Part list contains all parts within the selected patch and reflects their grouping as well as audio and MIDI routing. You can create, select, move, and edit parts in the Part list. The vertical order of parts reflects the actual signal flow from top to bottom. This means that the audio output of a Sampler part is fed through any Audio FX parts below it. The resulting signal at the bot-

tom of the Part list is sent to the Patch output. You can change the position of parts within the routing using drag and drop. See “Part List” on page 34 for more information.

## The Different Types of Parts



Parts within a Patch shown

**MIDI Processor** Contains a MIDI processor with its settings, for example, a tuning scale. MIDI processors are placed before Sampler parts and change the way a Sampler part is played.

**Sampler** Contains a multisample, its mapping information, metadata, and several sound shaping options, such as filters, envelopes and modulation.

**Sub-Patch** Groups multiple Sampler parts, insert effects, or MIDI effect parts within a patch for applying combined playback conditions within a patch. For example, in a patch that holds piano and string Sampler parts, you might want to route only the piano through a reverb effect. In this case, you would group the piano part and an effect part using a Sub-patch. Sub-patches can be dragged to the Patch list to become patches. Patches can be dragged into the Part list of another patch to become a Sub-patch. See “Sub-Patch” on page 37 for more information on using Sub-patches.

**Audio FX** Contains an Insert effect with its parameter and output settings.

## Keyboard/Smart Knob Section



Keyboard section

The Keyboard section provides 88 keys for playing Structure LE, six Smart knobs, and the Master output control. You can play and control Structure LE by clicking the keys, using MIDI input from a MIDI keyboard, or using MIDI data in an Instrument or MIDI track in Pro Tools.

When Structure LE receives MIDI data, the keys reflect the MIDI note input. See “Keyboard Section” on page 27 for more information.

## Smart Knobs

Each patch has six Smart knobs. Each Smart knob can be assigned to one or more Structure LE parameters within the patch. These linked parameters can then be remote controlled at the same time by one Smart knob. This can be useful for easily designing complex sounds or to quickly adjust a patch to your session in terms of feel, timbre, enveloping, or any other sensible sound shaping parameter.

## Master (Output Volume)

The Master control on the right adjusts Structure LE’s Main volume for all outputs.

## Parameter Panel



*Empty Parameter panel*

The Parameter panel displays the different control pages selected by Page tabs. This could be the controls of a patch or a part on the Main page, the global effect slots on the Effects page, the Database, or the Browser. When a patch or part is selected, its parameters (such as playback settings or output assignments) are displayed in the Parameter panel and sorted into sub-pages where necessary.

## Page Tabs

Above the Parameter panel, you can select between five global Control pages covering parameters for all aspects of sampler programming. These Control pages are accessible by clicking their corresponding Page tab.



*Accessing a Control page*

## Main (Main Page)

After loading Structure LE, the Main page is selected by default. Coming from another page, click the Main tab to access the parameters for patches and parts.



*The Main page*

The Main page provides controls for all available playback parameters of patches and parts, such as transpose or FX Send level. These controls affect the patch or part which is currently selected. To learn more about the Main page, see “Main Page” on page 39.

## Effects (Global Send Effects)

- Click the Effects tab in the Parameter panel to display the Effects page.



Effects page

The Effects page provides four global effect slots with four inserts each. Audio from each patch, part, or zone can be sent individually to these on its Output sub-page. On the right, there is Structure LE's Main output which also provides four inserts. The handling of effects within the inserts works in the same way as in the Pro Tools Mix window. To learn more about the Effects page, see "Effects Page" on page 43.

## Database

- Click the Database tab in the Parameter panel to access the Database page.



Accessing the Database

The Database provides tools for quick searching and browsing for files that have previously been registered in the database. The database reads out metadata including comments, manufacturer, and ranking for each file. Supported file types are Patch files, Part files, and samples (audio files). Three columns of freely selectable metadata fields enable you to find the files you need. You are searching for a mellow (Style) string (Sound) patch from East West (Manufacturer)? Within four clicks, all patches on your computer matching these criteria are displayed in the Result list. To learn more about the Database, see "Database Page" on page 46.

## Browser

- Click the Browser tab to access the Browser page.



Accessing the Browser page

The Browser lets you search the local file system. Files like patches, parts, and samples can comfortably be loaded from here using drag and drop. To learn more about the Browser, see “Browser Page” on page 48.

---

## Structure LE File Types

Three types of files can be loaded and saved with Structure LE:

- Settings
- Patch
- Part

### Settings

Using the Settings menu, you can save the complete state of the plug-in including all loaded patches, parts, their parameters, and routing.

#### To save a settings file:

- 1 Click the Settings menu and select Save Settings
- 2 In the following dialog enter a name and location for the setting and click Save.

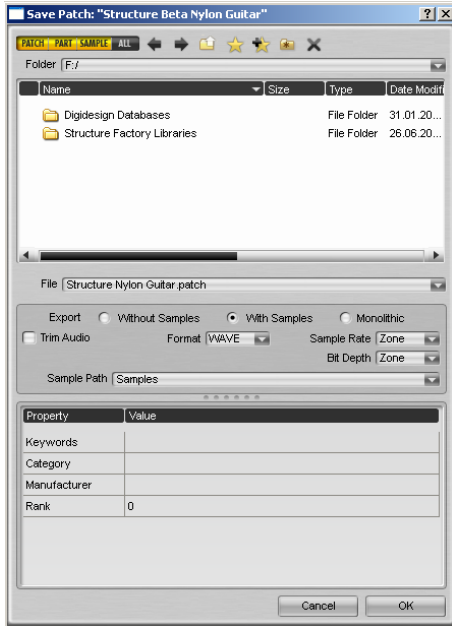
### Patch

You can save a single patch including its parts and all parameters in the Patch menu.

#### To save a patch:

- 1 Select the desired patch in the Patch list.
- 2 Select Save Patch from the Patch menu.
- 3 In the following dialog, enter a name and location for the patch and select one of the Export check boxes depending on how you want to export the patch.
  - Without Samples means that just the Patch file is saved without copying the used samples.
  - With Samples means that the used samples are copied into a folder named Samples next to the patch. The saved patch will point to the samples in this folder.

- Monolithic means that a single Patch file is saved that contains all used samples.



Save Dialog

## Part

You can save a single part with all parameters in the Part menu.


### To save a part:


- 1 Select the desired part in the Part list.
- 2 Select Save part from the Part menu.
- 3 In the following dialog, enter a name and location and select one of the Export check boxes depending on how you want to export the part.
  - Without Samples means that just the Part file is saved without copying the used samples.
  - With Samples means that the used samples are copied into a folder named Samples next to the part. The saved part will point to the samples in this folder.
  - Monolithic means that a single Part file is saved which contains all used samples.


---

## Importing Third Party Sample Libraries

You can import sampler programs, patches and libraries from other software samplers and manufacturers into Structure LE. The supported formats are SampleCell, SampleCell II, Kontakt, Kontakt2, and EXS 24. You can load these just like genuine Structure LE patches from the Browser or using the Load dialog from the Patch menu.

 Please see the *Structure LE Read me document* for possible known issues with the import of foreign sample formats.

 Encrypted content from third party vendors cannot be loaded in Structure LE.

 The iLok protected Structure LE content and other protected or encrypted sample libraries can only be saved as patches (not with samples or as monolithic files) in Structure LE. For more information see “Loading and Saving Patches” on page 32.

---

## MIDI Controller Mapping

Structure LE lets you assign standard MIDI controllers to virtually any parameter so that you can control Structure LE from a MIDI controller in real-time.

**To assign a MIDI controller to a parameter:**

- 1 Right-click (Windows or Mac) or Control-click (Mac) a rotary control or fader.
- 2 Click Learn MIDI CC, and move the desired control on your MIDI controller. The parameter is automatically assigned to that control.



Assigning a MIDI CC





## chapter 4

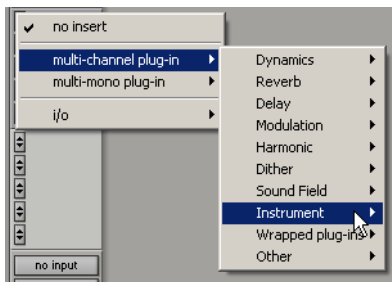
# QuickStart

The following chapter helps you to explore Structure LE's basic concepts with a hands-on approach. You will touch the most important functions, understand the basic concepts and make the first guided steps to get Structure LE to sound.

Before we start, please make sure that you have installed Structure LE and inserted it on a stereo instrument track in a Pro Tools session.

### Loading Structure LE

- 1 Create a new stereo Instrument track in Pro Tools.
- 2 Click the track's Insert selector and choose Structure LE from the list.



*Inserting Structure LE on a stereo Instrument track*

### Making Sound

- 1 If you have a MIDI keyboard available and prefer to use it, connect it to Structure LE's MIDI input, and route it to Structure LE on MIDI channel 1. If there is no MIDI keyboard available, you can play Structure LE by clicking the keyboard on screen, or using MIDI input from the Instrument track in Pro Tools.
- 2 Play some notes on your MIDI keyboard. If all is well so far, you are hearing a sine wave signal from the default Sine Wave Patch at the top of the Patch list.



*The default Sine Wave Patch*

## Loading a Patch

1 Click the Browser tab in the Parameter panel to display the Browser page.



Browsing for Patches

2 Click your way through the folders to access the QuickStart content folder. If you chose the suggested path during installation, it is located here, depending on your OS:

**Windows** Program Files\Digidesign\  
Structure\Structure QuickStart

**Mac OS X** /Applications/Digidesign/  
Structure/Structure QuickStart

3 Drag the Patch named 01 Six String Guitar.patch onto the Sine Wave Patch to load it replacing the Sine Wave patch. A red frame around the patch when dragging indicates that you are replacing the existing patch with the new one. Wait until the Loading message in the display beneath the Parameter panel disappears.

4 After loading, the multi-purpose display shows a short description of the Patch, and the Parameter panel above displays its Patch parameters.

5 Play some notes and chords. Adjust the Patch volume using the horizontal fader on the Patch module in the Patch list.

## Finding Missing Samples

If samples are not found, the concerned patches and parts are marked by a red exclamation point.



Missing samples

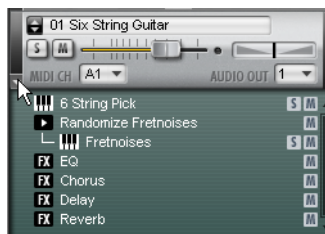
**To find the missing samples for a patch or part:**

1 In the Patch or Part menu, select Find Missing Samples.

2 In the following dialog, navigate to the new sample location and click OK.

## Exploring the Part List

1 Click the small triangle on the lower left of the Patch module to show the Part list.



Revealing the Part List

2 As you can see here, the Patch consists of multiple parts: sampler parts (indicated by a keyboard symbol), and insert effect parts (indicated by an FX symbol).

3 Select the sampler part to show its parameters in the Parameter panel.

4 Click the EQ and Reverb effect parts to display their parameters in the Parameter panel.

## Editing Part Parameters

- 1 Click the 6 String Pick part to bring up its parameters in the Parameter panel.
- 2 Click the Part Edit 2 sub-page tab to go to the part's filter settings.
- 3 Set the Cutoff and Resonance controls at will.



Adjusting Cutoff

## Adding a Sampler Part

- 1 Click the Browser Page tab to display the Browser in the Parameter panel.
- 2 Drag the part 02 High String Guitar.part into the Part list below the 6 String Pick part. This adds a sampler part with high string guitar samples to the patch.
- 3 Play some notes and chords, the six string guitar has now become a twelve string.

## Adding an Effect Part

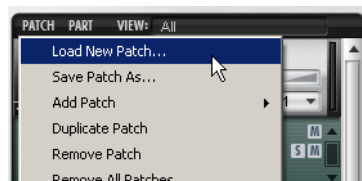
- 1 Right-click the Part list below all parts.
- 2 Select Add Part > Modulation > Phaser Stoned from the context menu.
- 3 Play some notes and chords, adjust the Effect controls in the Parameter panel.

## Saving the Patch

- 1 To save the edited Patch, choose Save Patch from the Patch menu.
- 2 In the file dialog choose a name and destination for the Patch, and click OK.

## Adding Another Patch

- 1 Click the Patch menu on the upper left of the Patch list and select Load New Patch from the menu.



Loading a patch from the Patch menu

- 2 Load Moving Synth Pad.patch from the QuickStart content in the dialog. Wait until the loading message disappears. Another Patch module is added under the guitar patch.
- 3 The new Patch is assigned to MIDI channel 2. Assign it to MIDI channel 1 using the MIDI Input pop-up menu in the Patch module.



Assigning a Patch to MIDI channel 1

- 4 Play a few notes to hear guitar and synth pad play together. In the next steps we will adjust the synth pad to make up a nice combination with the guitar using Smart Knobs.

## Using Smart Knobs

- 1 Every Patch has six Smart Knob assignments which are (in the factory content) pre-assigned to useful parameters. You can use them to easily adjust a patch to fit your session. Select the synth patch to display its Smart Knob assignments in the Keyboard section.
- 2 Set the Smart Knob for Cutoff to 30%.
- 3 Set the Smart Knob for Attack to 65%.
- 4 Set the Smart Knobs for Phaser and Delay to 30%.
- 5 Set the Smart Knob for Release to 75%.

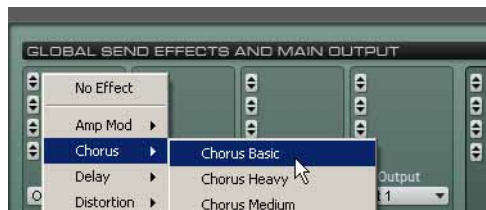
## Using Global Send Effects

- 1 Select the guitar patch, and go to its Output sub-page in the Parameter panel.
- 2 Move the FX Send 1 fader all the way to the right to feed the Patch into the first Effect slot.



*Sending a Patch into Global effects*

- 3 Click the Effects tab to show the Effects page in the Parameter panel.
- 4 Click the first insert on the first Effect slot and select a Chorus preset.



*Inserting a global effect*

- 5 Click the Effect insert to adjust the effect parameters in the Parameter panel. Click Back when done.

## Using Key Switches

Key Switches are special MIDI notes or keys that are assigned to switch control values instead of triggering notes. For example, they can switch between different Smart Knob settings for a Patch or mute certain parts within a patch. Nearly every control in Structure LE can be assigned to a Key switch.

- 1 Load the Patch 04 Electronic Drum Kit.patch, and play with it on your keyboard.
- 2 The different Effect parts in this specific Patch are not audible initially. Their Mix parameters and Smart Knobs are assigned to key switches so you can mix them in by just clicking or playing a Key Switch. All available Key Switches appear blue on the screen keyboard. The currently activated Key switch is green. After activating a Key Switch, a short description is shown in the multi-purpose display. A Key switch does not trigger samples that are mapped in the corresponding key range.
- 3 Click the second Key Switch C#0, or play the corresponding key to add dirt to the kit's sound.



Key Switches

- 4 Try out the other Key Switches.
- 5 The synth pad patch has Key Switches too. Check them out!

## Working with REX Files

Structure LE is capable of directly importing REX files. When you load a REX file in Structure LE as a patch it is automatically split up in two parts: a sampler part which holds the slices of audio and a MIDI part which plays back these slices in the correct tempo and order.

- 1 Drag the REX file 05 4 On The Floor Loop.rx2 from the QuickStart folder into the Patch list.
- 2 Structure LE automatically creates a new Patch module with two parts: a Rex Player and a sampler part.
- 3 Assign the patch to MIDI channel 1.
- 4 Solo the patch. Play notes between C0 and B0 to trigger single slices of the loop.
- 5 Hold down a note from C1 upwards to trigger the REX loop at different pitches. The loop tempo automatically matches your session tempo.



## chapter 5

# Structure LE Parameters

### Keyboard Section



*Keyboard section*

The Keyboard section provides 88 keys for playing Structure LE, six Smart knobs, and a context sensitive Info display, as well as the Master volume control for the whole plug-in. You can play and control Structure LE by clicking the keys,

using MIDI input from a MIDI keyboard, or using MIDI data in an Instrument or MIDI track in Pro Tools. When Structure LE receives MIDI data, the keys reflect the MIDI note input.

## Smart Knobs

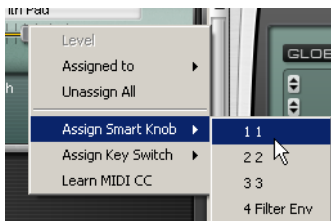


Smart knob

The Smart knobs are special controls which can be assigned to one or more Structure LE parameters in the currently selected patch. These parameters can then be remote controlled at the same time by moving the Smart knob. This comes in handy for easily designing complex sounds or quickly adjusting a patch to suit your session in terms of feel, timbre, enveloping, or any other sensible sound shaping parameter. In Structure LE's factory content, each patch has Smart knobs pre-assigned to important parameters. The Smart knob can be named in the field above each knob.

### To assign a parameter to a Smart knob:

- 1 Right-click (Windows or Mac) or Control-click (Mac) a control.
- 2 Select the desired Smart knob from the Assign Smart Knob pop-up menu.



Assigning a Smart knob

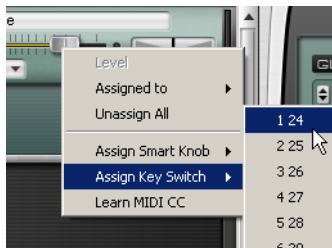
### To remove a Smart knob assignment:

- 1 Right-click (Windows or Mac) or Control-click (Mac) the control.
- 2 In the Assigned to pop-up menu, click the control name field and select Delete Assignment.

## Key Switches

Key Switches are special MIDI notes or keys that are assigned to controls and act as a switch. For example, they can switch between different Smart Knob settings for a patch or mute and solo parts within a patch.

### To assign a parameter to a Key switch:



Assigning a Key switch

- 1 Right-click (Windows or Mac) or Control-click (Mac) a control.
- 2 Select the desired Key switch from the Assign Key switch pop-up menu.

### To remove a Key switch assignment:

- 1 Right-click (Windows or Mac) or Control-click (Mac) the control.
- 2 In the Assigned to pop-up menu, click the control name field and select Delete Assignment.



Removing a Key switch assignment



## Master (Output Volume)



*Adjusting the Master output control*

The Master control adjusts the volume of all Structure LE outputs to Pro Tools. All patches are mixed down to the Main output by default, and then output to the Instrument or Auxiliary Input track on which Structure LE is inserted.

## Info Display



*Info display*

The Info display above the Keyboard section is a context-sensitive text display. When you load something into Structure LE, it displays a progress bar. When loading a commented patch, it displays the Patch comment. When editing controls, it displays parameter name and value.

### **To display the control's current value:**

- Click the control without moving the mouse.

### **To edit the patch comment:**

- 1 Select a patch.
- 2 Double-click into the Info display.
- 3 Type in your comment.
- 4 Press Enter.



*The Display does not show parameter values of incoming automation, as multiple parameters in different patches could be changing simultaneously. Only values edited using the mouse are shown.*

## Patch List

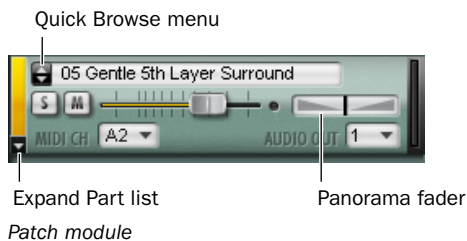


Patch list

In the Patch list on the left side of Structure LE, you can create, select, mix, MIDI-assign, route, and group patches. A patch holds a virtually unlimited number of parts (a part can be a multi-sample, an insert effect, or a MIDI module) with a defined audio and MIDI routing.

Click a Patch module to select it for editing in the Parameter panel. The handle on the left of the selected patch is lit. When a patch is selected all of its parameters are displayed in the Parameter panel on the right and assorted into sub-pages. You can create, edit and save patches using the Patch menu on top of the Patch list.

## Patch Module Controls



**Quick Browse Menu for Favorite Folders** Gives quick access to the factory content folders and folders that have been added to the favorites. Click the double arrow to bring up the favorite folders menu from which you can directly select Structure LE Patches. See “Browser Page” on page 48 for more information on how to add a folder to your favorites.

**Mute Button** Mutes the patch.

**Solo Button** Solos the patch.

**Volume Fader** Adjusts the Patch volume.

**Panorama Fader** Adjusts the patch’s position in the stereo panorama.

**MIDI Channel Selector** Selects the channel on which the patch receives MIDI data.

**Audio Out Selector** Selects the patch’s individual audio output.

## **Patch Menu**

The Patch Menu provides commands for modifying and managing the patches in the Patch list.

### **Load New Patch**

The Load New Patch entry brings up a dialog for selecting a patch that will be added below the currently selected patch in the Patch list.

### **Save Patch As**

The Save Patch entry brings up a dialog for saving the selected patch to disk. See “Save Dialog Controls” on page 33 for more information.

### **Add Patch**

The Add Patch sub menu lets you add a new patch to the end of the patch list. Like the Quick Browse Menu, it gives access to your Favorite folders for loading patches.

### **Duplicate Patch**

The duplicate Patch entry adds an exact copy of the selected patch below it in the Patch list.

### **Remove Patch**

The Remove Patch entry unloads the selected patch removing it from the Patch list.

### **Remove All Patches**

The Remove All Patches entry clears the Patch list of all loaded patches. Click OK in the prompted security dialog if you really want to clear the whole Patch list.

## **Cut Patch**

The Cut Patch entry copies the selected patch to the clipboard and removes it from the Patch list.

### **Copy Patch**

The Copy Patch entry copies the selected patch to the clipboard.

### **Paste Patch**

The Paste Patch entry inserts the copied patch on the clipboard at the end of the Patch list.

### **Paste Patch Parameter**

The Paste Patch Parameter entry inserts only the parameter settings of the copied patch to the selected patch.

## **Automation Channel**

Structure LE automatically assigns an automation channel to each patch, each of which provides automation for the most important Patch parameters like level, solo, mute, and Smart knobs. In the Pro Tools plug-in automation dialog, the automatable parameters for each channel are distinguishable by the corresponding letter. For example, A Level for the Volume fader of the patch assigned to automation channel A. Automation channels are assigned subsequent to the patches in the Patch list by default. The currently selected patch’s assignment is displayed in the Patch menu.

## **Edit Metadata**

If you use the integrated Database, you can use the Edit Metadata dialog to edit a file’s metadata tags. Metadata tags provide information which is used for improved searching in the Database. See “Database Page” on page 46 for more information.

## Find Missing Samples

If a loaded patch does not find its samples, you can use the Find Missing Samples dialog to point Structure LE to the location of the samples. For more information, see “Finding Missing Samples” on page 37.

## Unload Unused Samples

The Unload Unused Samples command lets you remove all samples that are not used in the current part, patch, or Pro Tools session from your computer’s RAM. You can use this function to lower Structure LE’s RAM consumption. For more information, see “Removing Redundant Samples from RAM” on page 33.

## Reload Unused Samples

The Reload Unused Samples loads previously removed samples back into RAM, either for the selected patch, all patches, or the whole Session.

## Copy Samples to Session Folder

If you have loaded samples from removable media like a CD, DVD, or over the network into Structure LE, a yellow exclamation mark symbol indicates the affected patches and parts. Use the Copy Samples to Session function to transfer the loaded samples to your computer’s disk. After transferring the samples, Structure LE can load the concerned patches and parts without requiring the source CD, DVD, or network folder.

**Selected Patch** copies the samples of the selected patch to disk.

**All Patches** copies the samples of all patches of the Structure LE instance to disk.

**Session** copies the samples of all patches of all Structure LE instances in your session to disk.

## Loading and Saving Patches

You can load and save patches using the Patch menu.

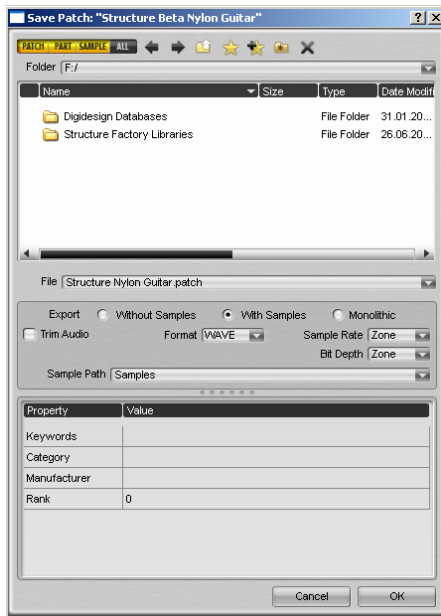
### To load a patch from the browser:

- 1 Go to the Browser page.
- 2 Navigate to the desired folder.
- 3 Click and drag the patch file into the Patch list.

### To save a patch:

- 1 Go to the Patch menu and click Save Patch As.
- 2 In the following file dialog, name the patch and select a location.
- 3 Click OK.

## Save Dialog Controls



Saving a patch

**Export Without Samples** Saves the patch without creating a new copy of the samples.

**Export With Samples** Saves the patch file and a copy of all used samples. The exported samples are placed into a folder called Samples next to the saved Patch file.

**Export Monolithic** Saves one monolithic Patch file that contains all used samples.

**Trim Audio** Removes all audio data before the sample start and after the sample end marker from the exported samples.

**Format** Selects a file format the exported samples are saved in (AIFF or WAVE).

**Sample Rate** Selects a sample rate for the sample export. The Zone setting uses the same sample rate as the loaded sample.

**Bit Depth** Selects a bit depth for the sample export.

**!** *The iLok protected Structure LE content and other protected or encrypted sample libraries can only be saved as patches (not with samples or monolithic).*

## Removing Redundant Samples from RAM

The Unload Unused Samples command lets you remove samples that are not used in the current part, patch, or Pro Tools session from your computer's RAM. To find out which samples can be removed, Structure LE needs to analyze your session as described in the following procedure.

### To remove the unused samples from RAM:

- 1 Go to the Patch menu and select Patch, All Patches, or Session from the Unload Unused Samples sub-menu. Depending on whether you want to remove samples for the selected patch, all patches, or all Structure LE instances in your session.
- 2 The Info display will show a message asking to start playback of the session for analysis. Start Pro Tools and play back the whole session.
- 3 After playback has been stopped, click Apply in the Info display to remove all unused samples from RAM, or click Cancel if you want to keep the samples in RAM.

## Reload Unused Samples

The Reload Unused Samples command loads previously removed samples back into RAM, either for the selected patch, all patches, or all Structure LE instances in the whole Session.

---

## Part List

The Part list shows the parts that are contained in a patch. A part can be a multisample, an insert effect, a Sub-patch, or a MIDI processor. The Part list contains all parts within the selected patch and reflects their grouping as well as audio and MIDI routing. You can create, select, move, and edit parts in the Part list.

### To expand and collapse a patch's Part list:

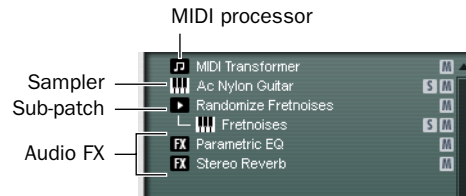
- Click the small triangle on the left of the patch.



Revealing the Part list

The vertical order of parts reflects the actual signal flow from top to bottom. This means that the audio output of a sampler part is fed through any Audio FX parts below it. The resulting signal at the bottom of the Part list is sent to the Patch output. You can change the position of parts within the routing using drag and drop.

## The Different Types of Parts



Parts within a Patch shown

**MIDI Processor** Contains a MIDI processor with its settings, for example, a tuning scale. MIDI processors are placed before Sampler parts and change the way a Sampler part is played.

**Sampler** Contains a multisample, its mapping information, metadata, and several sound shaping options, such as filters, envelopes and modulation.

**Sub-Patch** Groups multiple Sampler parts, insert effects, or MIDI effect parts within a patch for applying combined playback conditions within a patch. For example, in a patch that holds piano and string Sampler parts, you might want to route only the piano through a reverb effect. In this case, you would group the piano part and an effect part using a Sub-patch. Sub-patches can be dragged to the Patch list to become patches. Patches can be dragged into the Part list of another patch to become a Sub-patch. See “Sub-Patch” on page 37 for more information on using Sub-patches.

**Audio FX** Contains an Insert effect with its parameter and output settings.

## Part Parameters

**Mute Button** Mutes/bypasses the part.

**Solo Button** Solos the part.

## **Part Menu**

The Part Menu provides commands for modifying and managing the parts in the selected patch.

### **Load Part**

The Load Part entry brings up a file dialog for selecting a part that will be added below the last part in the Part list.

### **Save Part**

The Save Part entry brings up a dialog for saving the selected part to disk.

### **Add Part**

The Add Part sub-menu lets you add a new part to the selected patch.

### **Remove Part**

The Remove Part entry removes the selected part from the Part list.

### **Duplicate Part**

The duplicate Part entry adds an exact copy of the selected part at the end of the Part list.

### **Cut Part**

The Cut Part entry copies the selected part to the clipboard and removes it from the Part list.

### **Copy Part**

The Copy Part entry copies the selected Part to the clipboard.

### **Paste Part**

The Paste Part entry inserts the copied Part from the clipboard at the end of the Part list.

## **Paste Part Parameters**

The Paste Part Parameters entry inserts only the parameter settings of the copied part to the selected part. This function can only be used with the same types of parts. Zones and Zone parameters are not pasted.

## **Find Missing Samples**

If a loaded part does not find its samples, you can use the Find Missing Samples file dialog to point Structure LE to the location of the samples. For more information, see “Finding Missing Samples” on page 37.

## **Replace Samples**

The Replace samples function brings up a dialog to locate samples to replace the ones currently used in the part. The new samples must be named exactly as the ones to be replaced. You would commonly use this function to replace samples in a part with newer, or processed versions.

## **Move Part Up**

The Move Part Up entry moves the selected part one level up in the routing.

## **Move Part Down**

The Move Part Down entry moves the selected part one level down in the routing.

## **Edit Metadata**

If you use the integrated Database, you can use the Edit Metadata dialog to edit a part’s metadata tags. Metadata tags provide information which is used for improved searching in the Database. See “Database Page” on page 46 for more information.

## Loading and Saving Parts

You can load and save parts using the Part menu in the Patch list.

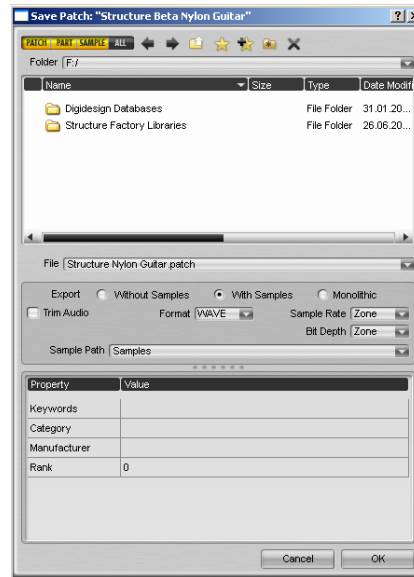
### To load a part from the browser:

- 1 Go to the Browser page.
- 2 Navigate to the desired folder.
- 3 Click and drag the part file into the part list.

### To save a part:

- 1 Go to the Part menu and click Save Part As.
- 2 In the following file dialog name the part and select a location.
- 3 Click OK.

## Save Dialog Controls



Save dialog

**Export Without Samples** Saves the part without creating a new copy of the samples.

**Export With Samples** Saves the part file and a copy of all used samples. The exported samples are placed into a folder called Samples next to the saved Part file.

**Export Monolithic** Saves a monolithic Part file that contains all used samples.

**Trim Audio** Removes all audio data before the sample start and after the sample end marker from the exported samples.

**Format** Selects a file format the exported samples are saved in (AIFF or WAVE).

**Sample Rate** Selects a sample rate for the sample export.

**Bit Depth** Selects a bit depth for the sample export.



## Finding Missing Samples

If a loaded patch or part does not find its samples because folders have been renamed or moved to another location, you can use the Find Missing Samples file dialog to point Structure LE to the new location of the samples. Patches and parts which are missing samples are indicated by a red exclamation mark symbol.



Missing samples

### To find the missing samples for a patch or part:

- 1 Right-click (Windows or Mac) or Control-click (Mac) the concerned patch or part, and select Find Missing Samples from the menu.
- 2 In the following dialog navigate to the new sample location and click OK.

**Full Recursive Search** Searches for missing samples in the specified folder and all its subfolders.

## Sub-Patch

A Sub-patch is a special type of part. You can use a Sub-patch to group any combination of parts, and to control how they are played.



Sub-patch controls

### Common uses for a Sub-patch:

- Grouping Sampler and FX parts. For example, FX parts in a Sub-patch only affect Sampler parts within the same Sub-patch.
- Setting playback conditions for parts. For example, setting a Sampler part to only play when keys are released (on MIDI note-off messages).

**Octave** Transposes the incoming MIDI notes for the Sub-patch in octave steps.

**Semi** Transposes the incoming MIDI notes for the Sub-patch in semitone steps.

**Fine Tune** tunes the Sub-patch up and down by cents.

**Pitch Bend** Activates the reception of MIDI Pitch Bend for the Sub-patch.

**Condition** Selects up to three play conditions for the Sub-patch, selected from the following:

Key	Key number of incoming note
Velocity	Velocity of incoming note
Modwheel	Current CC1 value
Sustain Pedal	Current CC64 value
Soft Pedal	Current CC67 value
Playing Speed	Time since last note-on
Legato Interval	Distance on keyboard from last key played
Held Notes	Number of keys currently held
Random Value	Different random value for each note played
Smart Knob	Positions of Smart Knobs 1–6
Key Switch	Last Key switch pressed

**Range** Adjusts the range for the selected condition.

**Trigger On** Sets when notes will be triggered in all Sampler parts contained the Sub-patch.

Note On	Triggers the Sub-patch when a note is received.
Note Off	Triggers the Sub-patch when a note is released, including notes released by lifting the sustain pedal.
Key Up	Triggers the Sub-patch when a note is released, even if the sustain pedal is held.
Condition A True	Triggers the Sub-patch when the value of the first condition enters the specified range. (For example, useful for piano sustain resonance that starts when the sustain pedal is pressed).

**Velocity Source** Selects whether the velocity of notes sent to contained parts is taken from the note-on velocity or the note-off velocity of the incoming note, when Trigger On is set to Note Off or Key Up.

**Level Decay** Reduces the amplitude of Note Off and Key Up triggers depending on how long the note has been held.

**Velocity Decay** Reduces the velocity of Note Off and Key Up triggers depending on how long the note has been held. Velocity may then have an effect on amplitude as programmed in the Sampler part, but may also be used for sample selection.

**Decay Keytrack** Makes Level Decay and Velocity Decay faster for higher notes on the keyboard. Emulates the behavior of pianos, guitars, and other similar instruments.

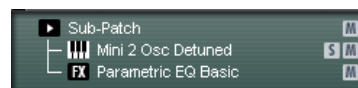
0	No keytracking
100	Each octave decays twice as fast as the octave below.

#### To add a Sub-patch to the Part-list:

- Right-click (Windows or Mac) or Control-click (Mac) into the Part list, and choose Add Part > Sub-Patch from the pop-up menu.

#### To group a part in a Sub-patch:

- Click and drag the desired part under the Sub-patch until a red line appears.
- Release the mouse button. Parts grouped in a Sub-patch appear indented in the Part list.



Sub-patch holding a Sampler part

## Sub-Patch Output Page

On the Output Sub-page you can assign the Sub-patch to individual outputs, and adjust its output level and send amount to each of the four Send Effect slots on the Effects page.

**FX Send On** Activates the Effect Send for the Sub-patch.

**FX Send Level** Adjusts the level sent from the Sub-patch to the Effect send.

**Pre** Sets the Effect send to pre-fader routing. When activated the Send level is only controlled by the Send fader, not the patch level or output level faders.

**Level Trim** Adjusts the Sub-patch's output level.

**Output Bus** Selects an individual Output bus for the Sub-patch. If an output is selected here, audio from the Sub-patch will not pass into the patch containing it, and will not be affected by the patch's output settings.

---

## Main Page



A Patch's Play parameters on Main page

After inserting Structure LE, the Main page is selected by default. Coming from another page, click the Main tab to access the parameters for patches and parts. The Main page provides easy access to all useful Patch and Part parameters like transposition and filter on sub-pages. If a patch or part is selected Structure LE switches automatically to the Main page.

---

## Patch Parameter Page

On the Patch Parameter page, you can edit the main parameters of a patch.

**Octave** Transposes the incoming MIDI notes for the patch in octave steps.

**Semi** Transposes the incoming MIDI notes for the patch in semitone steps.

**Fine Tune** Tunes the patch up and down in cents.

**Pitch Bend Up** Sets the upward pitch bend range for the patch in semitones.

**Pitch Bend Down** Sets the downward pitch bend range for the patch in semitones.

**Max Polyphony** Sets the maximum number of voices available for the patch.

**Key Range** Sets the key range in which the patch plays. You can define the upper and lower borders and a transition.

**FX Send On** Activates the Effect Send for the patch.

**FX Send Level** Adjusts the level sent from the patch to the Effect Send.

**Level Trim** Adjusts the patch's output level.

**Output Bus** Selects an individual Output bus for the patch.

---

## Part Edit Sub-Pages

**To access the sub-pages for Sampler parts:**

- 1 Select a Sampler part in the Part list.
- 2 Click the sub-page tabs in the Parameter panel.



*Selecting the Part sub-page*

### Part Edit 1 Sub-Page

**Octave** Transposes the incoming MIDI notes for the patch in octave steps.

**Semi** Transposes the incoming MIDI notes for the patch in semitone steps.

**Fine Tune** tunes the patch up and down in cents.

**Mono** Limits the part to monophonic playback.

**Legato** Activates Legato mode. If Mono mode is on, samples are not retriggered from the start when playing overlapping notes.

**Glide** Selects a glide mode. Off disables pitch glide. Legato glides only between legato played notes. On glides all the time.

**Glide Time** Sets the time needed to glide from one note to the other.

**Max Polyphony** Sets the maximum number of voices available for the part.

**Key Range** Sets the key range in which the part plays. You can define the upper and lower borders and a transition.

**FX Send On** Activates the Effect Send for the part.

**FX Send Level** Adjusts the level sent from the part to the corresponding Effect Send on the Effects page.

**Preload Buffer** Adjusts the amount of sample data that is preloaded into RAM. This parameter depends on the Pro Tools Plug-in Streaming Buffer setting under Setup > Playback engine. Higher settings for both parameters allow for more sample data to be preloaded. This can be useful when using extreme transposition, or when modulating the sample start point, but should be set to lower values to minimize RAM usage. Set this value to maximum to load samples completely into RAM.

## Part Edit 2 Sub-Page

### Filter Section

**Filter Type** Selects a filter type.

**Cutoff** Adjusts the filter cutoff frequency.

**Envelope On** Activates enveloping of the cutoff frequency.

**Envelope Inv (Inversion)** Inverts the polarity of the filter envelope.

**Envelope Level** Adjusts how strongly the filter envelope modulates filter cutoff.

**Keytrack** Adjusts the cutoff frequency across the keyboard.

**Vel (Velocity)** Adjusts how strongly the incoming velocity affects filter cutoff.

### Filter Envelope Section

**Attack** Sets the time needed for the filter envelope to reach its maximum value.

**Hold** Adjusts the length of the Filter envelope's Hold time.

**Decay** Adjusts the time for the filter envelope needed to fall from hold level to sustain level.

**Sustain** Adjusts the level of the sustain segment. The envelope's signal remains on this level as long as the note is held.

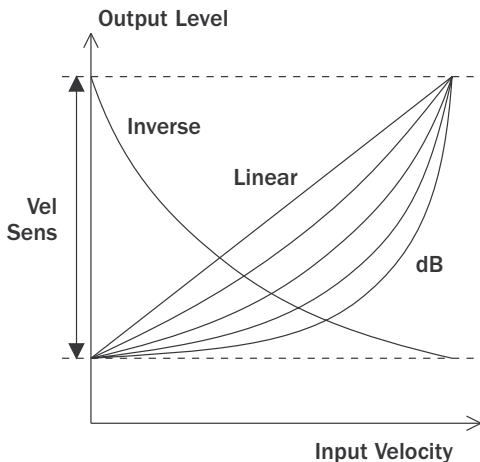
**Release** Adjusts the time for the envelope's release segment to fall to zero when the note is released. Use shorter times for an immediate closing of the filter. Longer times cause the filter cutoff to decay slowly.

## Amplifier Section

**Level** Adjusts the part's amplifier level.

**Pan** Adjusts the part's stereo panorama position.

**Envelope Velocity Curve Selector** Curve for translating incoming velocity values to envelope level (Inverse, Linear, Normal, Squared, Cubed, dB).



Velocity curves

**Vel Sens (Velocity Sensitivity)** Adjusts the envelope velocity sensitivity (range in dB between lowest and highest velocity).

## Amp Envelope Section

**Attack** Softens the attack phase of Instruments by applying an amplitude envelope to the start of each Instrument hit. Move the control to the right to increase the time needed for the attack to rise to full amplitude.

**Hold** Adjusts the length of the Amp envelope's Hold time at the end of the attack phase.

**Decay** Shortens the played instrument hits by applying an amplitude decay after the hold time.

**Sustain** Adjusts the level of the sustain segment. The envelope's signal remains at this level as long as the note is held.

**Release** Adjusts the time for the release segment to fall to zero when the note is released. Use shorter times for an immediate stop of the sound. Longer times cause the sound to fade out.

## Effects Page



Mix page

The Effects page provides four global Send Effect slots (Send 1–4) and the Main output, each of which provides four effects Inserts. Signals from each patch or part can be sent individually to the Send Effect slots using its Output sub-page. The handling of Insert effects within the slots works in the same way as in the Pro Tools Mix window.

**The Effects page in the Parameter panel is divided into two sub-pages:**

- 1 The rack with a channel strip for each effect slot. Each slot can hold 4 inserts and therefore allows for complex multi effects. The outputs of the Slots are by default sent to the Main output of Structure LE, but they can also be routed to individual outputs. An effect slot provides the following controls:
  - Insert 1–4
  - Output selector
  - Level control
  - On/Off switch
- 2 The Effect parameter page provides controls for editing the selected effect algorithm. Click the Insert effect to access the Effect parameter page.

## Send 1–4

**Insert Selector** Selects an insert effect.

**Output Selector** Selects an individual Output bus for the Send Effect slot.

**Level** Adjusts the Send Effect slot's output volume.

**Send On/Off** Activates or deactivates the Insert effects.

## Out 1 (Main Output)

**Insert Selector** Selects an insert effect.

**Level** Adjusts Structure LE's output volume.

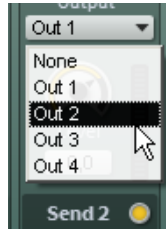
**Send On/Off** Activates or deactivates the Main output's Insert effects. When activated the LED is lit.

## Assigning Individual Channel Outputs

You can assign Send 1–4 and Out 1 to individual outputs. These can be used as inputs for Pro Tools Auxiliary Input tracks for further mixing and processing.

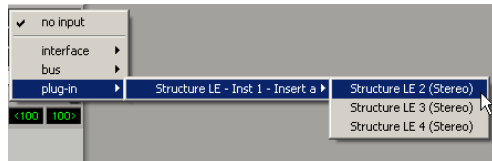
**To assign an individual output:**

**1** Select an output for the channel from the Output pop-up menu.



**2** Create an Auxiliary Input track in your Pro Tools session.

**3** Select the Structure LE output as an input for the Auxiliary Input Track.

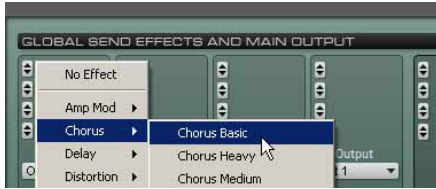




## Editing Effects

### To insert an effect:

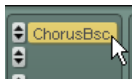
- Click the Insert selector and select an effect from the pop-up menu.



Inserting an effect

### To bring up the Parameter page of an effect:

- Click the effect insert.



Clicking an insert

### To return to the Effect slots:

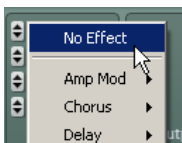
- Click the Back button on the Parameter page.



Returning to the Effect slots

### To remove an effect:

- Click the Insert selector and choose No Effect from the pop-up menu.



Removing an effect

### To send a patch, part, or zone signal to a global Send Effect slot:

- Activate the corresponding FX Send and adjust the Level fader.



Sending a part to a global Send Effect slot 1

### To bypass an Effect insert:

- Control-click the Effect insert. A bypassed Effect insert appears greyed out.

## Database Page

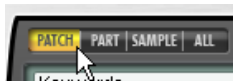


Database page

The Database provides tools for key word based searching of patches, parts and samples (audio files) on the local file system. Files can be registered to the database and metadata tagged with information like manufacturer or category. Three columns of selectable metadata tags enable you to find the files you need. Files on your computer matching the requirements are instantly displayed in the Result list and can be loaded directly by dragging them into the Patch or Part list.

### To display only certain file types in the database:

- Click the desired file type button (one or more) in the menu so that it is highlighted.



Searching only patches

### To find all files that contain a certain text string in their name or metadata.

- Type the words you are searching for into the Search field and press Enter, or click the Looking Glass button. The Result list displays all matching files.

### To load a patch, part, or sample from the result list:

- Drag and drop the desired file from the Result list to the Patch or Part list.

## Database Controls

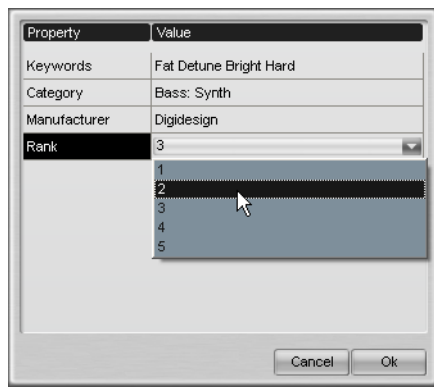
**Patch** Activates the displaying of only patches.

**Parts** Activates the displaying of only parts.

**Sample** Activates the displaying of only samples.

**Show All** Activates the displaying of all file types.

**Open Metadata Editor** Brings up a dialog to edit the selected file's metadata tags.



*Editing a patch's metadata*

**Remove from Database** Unregisters the selected file from the database. Unregistered files will not be found in a database search.

## Database Management Commands

**Remove Missing Files** Removes files that are no longer available on disk from the database.

**Get Metadata from Registered Files** Refreshes the database entries of all selected files. This is useful to update the database information for patches, parts, or samples that have been previously tagged by other users.

**Write Metadata to Registered Files** Writes the current metadata tags into the actual files. This also happens automatically when files are saved.

## Browser Page



Browser page

The Browser lets you search and display the local file system. Files like patches, parts, and samples can comfortably be loaded from here using drag and drop. The Browser is not supposed to be a file manager. Modifying operations like copying, moving, or deleting are not available.

### To display only certain file types in the browser:

- Click the desired file type button (one or more) in the menu so that it is highlighted.

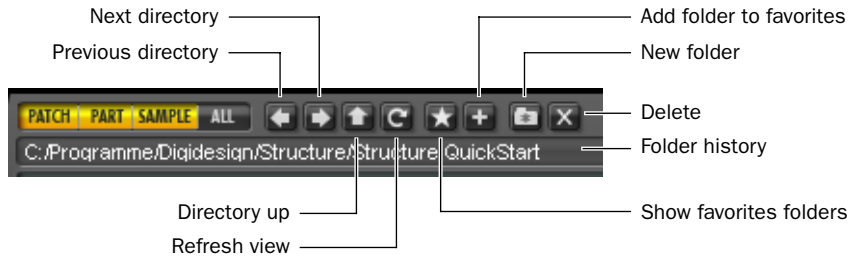


Searching only patches

### Common operations in the Browser:

- Drag a patch into the Patch list to load it.
- Drag a patch onto another in the Patch list to replace it at the same position using the previous settings for MIDI input, Individual output, and Automation channel.
- Drag a part into a Part list to load it.
- Drag one or more audio files onto a Patch module or into a Part list to load. If no sampler part is selected, a new one is created at the end of the Part list. If no patch is selected, a new patch with a sampler part is created.

## Browser Controls



*Browser controls*

**Patch** Activates the displaying of only patches.

**Parts** Activates the displaying of only parts.

**Sample** Activates the displaying of only samples.

**Show All** Activates the displaying of all file types.

**Previous Directory** Navigates to the previous folder.

**Next Directory** Navigates to the next folder.

**Directory Up** Navigates one folder level up.

**Show Favorites** Shows your Favorite folders.

**Add to Favorites** Adds the selected folder to your Favorite folders (accessible through the up and down arrows in the patch module).

**New Folder** Creates a new folder.

**Delete** Deletes the selected file or folder.

**Folder History** Shows the 20 last selected folders.



## appendix a

# Audio FX

<b>Chorus</b> Stereo chorus with control over Rate, Depth, and Phase to emulate the voice doubling of two instruments played in unison. Rate and Depth add richness by controlling the amount of detuning.	Mix	Adjusts the amount of effect signal.
	Rate	Adjusts speed of modulation (0.01 Hz to 10.00 Hz).
	Depth	Adjusts amount of modulation.
	Delay	Adjusts Pre-Delay time for adding spatial depth.
	Feedback	Adjusts amount of signal feedback.
	LFO Wave	Selects static (Triangle) or cyclic (Sine) Pitch modulation.
	Bypass	Bypasses the effect.
<b>Compressor</b> Compressor/Limiter with control over Threshold, Ratio, Attack time, Release time, and Gain. Signals above the Threshold get attenuated by the amount set by the Ratio. Attack and Release tell the compressor how fast to react to signals that are above the threshold.	Mode	Selects basic behavior: Peak (hard), RMS, Opto (soft).
	Threshold	Sets the level above which the signal is attenuated (-60.0 dB to 0.0 dB).
	Ratio	Adjusts the strength of compression applied to signals above the threshold level.
	Attack	Adjusts the time for the compressor to react.
	Release	Adjusts the time for the compressor to recover.
	Output	Adjusts the output volume. (-20 dB to +20.0 dB).
	Sensitivity Low	Equalizes the internal sidechain. Adjusts the sensitivity to low frequencies.
	Sensitivity High	Equalizes the internal sidechain. Adjusts the sensitivity to high frequencies.
	Bypass	Bypasses the effect.

<b>Distortion</b> Effect for classic distortion and overdrive.	Mix	Adjusts the amount of effect signal.
	Pre-Shape	Adjusts the signal tone before being sent to the distortion.
	Drive	Adjusts the amount of amplification and distortion.
	Distortion Mode	Selects the distortion character: Distortion (hard clipping) and Overdrive (soft clipping).
	Edge	Creates special asymmetrical clipping for a tube-like sound at low Drive levels.
	High Cut	Adjusts the color of the distortion from dark to bright.
	Output	Adjusts the peak output level in dBFS.
	Stereo Mode	Activates full stereo processing, instead of summed mono.
	Headroom	Moves the clipping threshold without changing the level of the unclipped signal.
	Bypass	Bypasses the effect.
<b>Enhancer</b> Specialized filters for sound enhancement. The filters can be tuned in two frequency bands with adjustable gain and synthesized high frequency harmonics can be added.	Low Gain	Boosts the low band.
	Low Freq	Adjusts the frequency of the low band (40.0 Hz to 640 Hz).
	High Gain	Boosts the high band (0.0 dB to 12.0 dB).
	High Freq	Adjusts the frequency of the high band (1.00 kHz to 10.0 kHz).
	Harmonics	Adjusts the amount of synthesized harmonics (0.0 dB to 12 dB).
	Output	Adjusts the overall output gain (-inf. to 0.0 dB).
	Invert	Phase-inverts the generated harmonics changing the sound color.
	Bypass	Bypasses the effect.



<p><b>Parametric EQ/ Surround Parametric EQ</b></p> <p>4 band parametric equalizer with two additional cut filters. All bands can be activated separately. The bands of the parametric part offer control over frequency, gain and Q-factor in different ranges. The two mid bands have a bell characteristic. The low and high bands have selectable characteristics: Shelf or Bell. The cut filters have an adjustable frequency and the attenuation can be set in decibels per octave. The surround version of this equalizer offers the same set of parameters over five linked channels. The LFE channel passes through unprocessed.</p>	Low Cut Freq	Attenuates frequencies below this value. (20 Hz to 8.00 kHz).
	Low Cut Type	Amount of attenuation indicated by decibels per octave (6dB/oct, 12dB/oct, 18dB/oct, 24dB/oct).
	Low Cut In	Activates the low cut filter.
	Low Freq	Adjusts the frequency of the low band (20.0 Hz to 1.00 kHz).
	Low Gain	Cuts or boosts the low band, the maximum amount depends on the low band type (-12 dB to +12 dB/-18 dB to + 18 dB).
	Low Q	Adjusts the Q-factor or width of the low band, the maximum amount depends on the low band type (0.40 to 2.00/0.40 to 10.00).
	Low Type	Chooses shelf or bell characteristic.
	Low In	Activates the low band.
	Low Mid Freq	Adjusts the frequency of the low mid band (40.0 Hz to 8.00 kHz).
	Low Mid Gain	Cuts or boosts the low mid band (-18.0 dB to + 18.0 dB).
	Low Mid Q	Adjusts the Q-factor or width of the low mid band (0.40 to 10.00).
	Low Mid In	Activates the low mid band.
	High Mid Freq	Adjusts the frequency of the high mid band (120 Hz to 16.0 kHz).
	High Mid Gain	Cuts or boosts the high mid band (-18.0 dB to + 18.0 dB).
	High Mid Q	Adjusts the Q-factor or width of the high mid band (0.40 to 10.00).
High Mid In	Activates the high mid band.	
High Freq	Adjusts the frequency of the high band (1.20 kHz to 20.0 kHz).	

	High Gain	Cuts or boosts the high band, the maximum amount depends on the high band type (−12 dB to +12 dB/−18 dB to + 18 dB).
	High Q	Adjusts the Q-factor or width of the high band, the maximum amount depends on the high band type (0.40 to 2.00/0.40 to 10.00).
	High Type	Chooses shelf or bell characteristic.
	High In	Activates the high band.
	High Cut Freq	Attenuates frequencies above this value (120 Hz to 20.0 kHz).
	High Cut Type	Amount of attenuation indicated by decibels per octave (6dB/oct, 12dB/oct, 18dB/oct, 24dB/oct).
	High Cut In	Activates the high cut filter.
	Output	Overall output gain (−20.0 dB to +20.0 dB).
	Bypass	Bypasses the effect.
<b>Flanger</b> Stereo flanger with control over Rate, Depth and Feedback. The flanger produces jet-like effects by modulating a delay line and mixing with the original signal. Feedback and Depth both have influence on the amount and color of this jet-effect. Rate and Depth add richness by controlling the amount of detuning.	Mix	Adjusts the amount of effect signal.
	Sync	Activates/deactivates tempo synchronization.
	Rate	Adjusts the modulation speed (0.01 Hz to 10.00 Hz, or 8/4 to 1/16 beats).
	Depth	Adjusts the amount of modulation (0 to 12 ms).
	Delay	Creates a initial delay to adjust the highest notch frequency (0 to 12 ms).
	Feedback	Adjusts the amount of feedback (−100% to +100 %).
	Low Cut	Adds a high pass filter to reduce flanging of low frequencies (20 Hz to 1 kHz)
	LFO Wave	Adjusts modulation from triangle to sine waveform. A setting of 50% gives a parabola wave.
	Offset	Adjusts the phase offset between left and right modulation (−180° to +180°).
	Bypass	Bypasses the effect.

<p><b>Multi Chorus</b></p> <p>Stereo multi-voice chorus with Rate and Depth parameters to emulate the voice doubling of three, four or six instruments played in unison (ensemble effect). Use Mode to choose the number of voices for the ensemble effect. Rate and Depth add richness by controlling the amount of detuning. The Pre-Delay allows for adding spatial depth.</p>	Mix	Adjusts the amount of effect signal.
	Rate	Adjusts the modulation speed (0.01 Hz to 10.00 Hz).
	Depth	Adjusts the amount of modulation (0 to 100 %).
	Delay	Adjusts pre-delay for adding spatial depth (0.0 to 24.0 ms).
	Width	Adjusts the stereo width (0 to 100 %).
	Low Cut	Reduces modulation of low frequencies (20 Hz to 1.0 kHz).
	Voices	Selects the number of chorus voices (3, 4, 6).
	LFO Wave	Chooses between static (Triangle) or cyclic (Sine) pitch modulation.
	Bypass	Bypasses the effect.
<p><b>Phaser</b></p> <p>Stereo phaser with control over Rate, Depth, and Feedback. The phaser produces a swoosh effect by modulating a chain of allpass filters. The basic character of this effect can be selected by choosing the number of poles that produce a notch in the frequency response. Depth, Center and Feedback have influence on the amount and color of the swoosh effect.</p>	Mix	Adjusts the amount of effect signal.
	Rate	Adjusts the modulation speed in Hertz or fractions of beats.
	Sync	Activates tempo synchronization.
	Depth	Adjusts the range of modulation.
	Feedback	Adjusts the amount of feedback.
	Low Cut	Reduces modulation of low frequencies.
	Center	Shifts the center frequency around (100 Hz to 10.0 kHz).
	Poles	Selects the number of poles (2, 4, 6, 8).
	LFO Wave	Adjusts the shape of the modulation waveform.
	Offset	Adjusts the phase offset between left and right modulation ( $-180^\circ$ to $+180^\circ$ ).
Bypass	Bypasses the effect.	

<p><b>Tremolo/Autopan</b> This effect delivers cyclic amplitude (tremolo) or pan modulation with two different wave shapes at various speeds.</p>	Depth	Adjusts the strength of modulation (0 to 100 %).
	Rate	Adjusts the modulation speed in Hertz or fractions of beats.
	Sync	Activates tempo synchronization.
	Sync Phase	Changes the start phase of the modulation wave when tempo synchronization is activated, to align the modulation to on-beats or off-beats.
	Shape	Selects the shape of the modulation waveform (Sine, Square).
	Mode	Switches between amplitude (Trem) and panorama (Pan) modulation.
	Bypass	Bypasses the effect.
<p><b>Convolution Reverb</b> Loads mono or stereo impulse responses from any supported audio file.</p>	Sum Inputs	Combines the left and right channel before adding reverb. Set to 100 for a mono input signal, or of independent left and right channels.
	Pre-Delay	Adjusts the pre-delay of the wet signal (0 to 250 ms).
	Fade In	Adjusts the fade in time of the wet signal.
	Fade Out	Adjusts the fade out time of the wet signal.
	Length	Adjusts the length of the reverb tail.
	Level Trim	Adjusts the level of the reverb tail.
	Reverse	Reverses the reverb tail.
	Mix	Adjusts the amount of effect signal.
	Bypass	Bypasses the effect.

<b>Non-linear Reverb</b> Algorithmic reverb with two non-linear shapes.	Mix	Adjusts the amount of effect signal.
	Dry Delay	Delays the dry signal (0 to 1500 ms).
	Pre-Delay	Adjusts the pre-delay of the wet signal (0 to 250 ms).
	Time	Sets the maximum reverb time (0 to 1000 ms).
	Diffusion	Adjusts the reverb density (0 to 100%).
	Low Cut	Changes the reverb character. Attenuates frequencies below this value (20 Hz to 1.00 kHz).
	High Cut	Changes the reverb character. Attenuates frequencies above this value (1.00 kHz to 20.0 kHz).
	Width	Adjusts the stereo width (0 to 100 %).
	Shape	Selects the reverb type: Gated (builds up fast and stops abruptly after the period set by Time), Reverse (builds up slowly and ends suddenly after the period specified by Time).
	Bypass	Bypasses the effect.
<b>Stereo Reverb</b> True stereo reverb. The character of the room is chosen via presets.	Mix	Adjusts the amount of effect signal.
	Pre-Delay	Adjusts the pre-delay of the wet signal (0 to 250 ms).
	ER/Tail Mix	Adjusts the balance between early reflections and reverb tail.
	High Cut	Changes the reverb character. Attenuates frequencies above this value (1.00 kHz to 20.0 kHz).
	Room Size	Adjusts the size of the simulated room.
	Rev Time	Sets the reverb time (0.5 s to inf.).
	Rev Freq High	Selects a high frequency range to adjust (2.00 kHz to 20.0 kHz).
	Rev Time High	Adjusts the reverb time of high frequencies relative to the main reverb time.
	Bypass	Bypasses the effect.

<b>Surround Convolution Reverb</b> Loads 4.0 or 5.0 impulse responses from any supported audio file.	Sum Inputs	Combines all channels before adding reverb. Set to 100 for a mono signal.
	Pre-Delay	Adjusts the pre-delay of the wet signal (0 to 250 ms).
	Fade In	Adjusts the fade in time of the wet signal.
	Fade Out	Adjusts the fade out time of the wet signal.
	Length	Adjusts the length of the reverb tail.
	Level Trim	Adjusts the level of the reverb tail.
	Reverse	Reverses the reverb tail.
	Mix	Adjusts the amount of effect signal.
	Bypass	Bypasses the effect.
<b>Surround Reverb</b> True surround reverb (5.1 input/5.1 output). The character of the room is chosen via presets.	Mix	Adjusts the amount of effect signal.
	Pre-Delay	Adjusts the pre-delay of the wet signal (0 to 250 ms).
	ER/Tail	Adjusts the balance between early reflections and reverb tail.
	Room Size	Adjusts the simulated room size.
	High Cut	Changes the reverb character. Attenuates frequencies above this value (1.00 kHz to 20.0 kHz).
	Rev Time	Sets the reverb time (0.5 s to inf.).
	Rev Freq High	Selects a high frequency range to adjust (2.00 kHz to 20.0 kHz).
	Rev Time High	Adjusts the reverb time of high frequencies relative to the main reverb time (-100 % to +100 %).
	Bypass	Bypasses the effect.

<p><b>Surround Downmix</b> Downmix tool from 5.1 channels to stereo channels. Before the channels are fed into the downmix stage each of them can be attenuated to adjust the composition of the resulting downmix.</p>	Level L	Attenuates the signal of the front left channel (-inf. to 0.0 dB).
	Level R	Attenuates the signal of the front right channel (-inf. to 0.0 dB).
	L-R Width	Mixes the left to the right channel and vice versa to reduce the stereo width
	Level C	Attenuates the signal of the center channel (-inf. to 0.0 dB).
	On	Activates/deactivates center channel downmix.
	Level Ls	Attenuates the signal of the left surround channel (-inf. to 0.0 dB).
	Level Rs	Attenuates the signal of the right surround channel (-inf. to 0.0 dB).
	Ls-Rs Width	Mixes the rear left to the rear right channel and vice versa to reduce the stereo width on the rear channels.
	On	Activates/deactivates rear channel downmix.
	Level LFE	Attenuates the signal of the LFE channel (-inf. to 0.0 dB).
	On	Activates/deactivates LFE channel downmix.
	Output	Adjusts the stereo output level (-inf. to 0.0 dB).
	Bypass	Bypasses the effect.

<b>Delay</b> The Delay effect repeats the source signal for an adjustable period of time, creating a repeating echo.	Mix	Adjusts the amount of effect signal.
	Sync	Activates/deactivates tempo synchronization.
	Delay Time	Adjusts the delay time in milliseconds/seconds or fractions of beats.
	Feedback	Adjusts the feedback amount (delay pattern repetitions).
	Ratio	Adjusts the ratio between left and right delay time relative to the displayed delay time (50:100 to 100:50).
	Width	Adjusts the stereo width (0 to 100 %).
	Low Cut	Changes the delay character. Attenuates frequencies below this value (20 Hz to 1.00 kHz).
	High Cut	Changes the delay character. Attenuates frequencies above this value (1.00 kHz to 20.0 kHz).
	Mode	Selects delay type: Mono (mono input, stereo output), Stereo (stereo input, stereo output), or Cross (stereo input, stereo output with crossed feedback paths).
	Bypass	Bypasses the effect.



<p><b>Multi-Tap Delay</b> Five delay taps with selectable feedback path allowing for manifold rhythmic patterns. “From” chooses the source and “To” the destination of the feedback. Both parameters describe positions in time on the delay line. The times of From and To follow that of the selected tap. Please note that feedback is not possible if the time of the From-tap is equal to or smaller than the To-tap. The two parameters display in red when this is the case. The Multi-Tap Delay has mono input. It uses the mix of the stereo input channels as input signal. The outputs of the delays are fed into a stereo mixer with control over level and pan. Tempo synchronization may be used to control the delay times.</p>	Mix	Balance between dry and wet signal.
	Pattern Type	Selects a pattern for the multi-tap delay.
	Sync	Activates tempo synchronization.
	Delay	Sets the overall delay time in milliseconds and seconds or fractions of 16th (0 ms to 4.000 s/0 to 16.00).
	Feedback	Amount of feedback (0 to 100 %). The higher the feedback the more times the delay pattern repeats.
	From	Source of the feedback signal (Tap 1, Tap 2, Tap 3, Tap 4, Tap 5).
	To	Destination of the feedback signal (Input, Tap1, Tap2, Tap 3, Tap 4, Tap 5).
	Low Cut	Changes the characteristic of the delay from fat to thin. Frequencies below this setting get attenuated (20 Hz to 1.00 kHz).
	High Cut	Adjusts the color of the delay from dark to bright. Frequencies above this setting get attenuated (1.00 kHz to 20.0 kHz).
	Bypass	Bypasses the effect.
<p><b>Rotary Speaker</b> Simulates a rotating speaker cabinet often used with organs. The signal is split into low and high frequency ranges which are sent into separate rotating speakers.</p>	Mix	Adjusts the amount of effect signal.
	Speed	Switches between Off, Slow, and Fast rotation.
	Slow	Sets the value for the slow rotation speed. (0.7–2.1 Hz)
	Fast	Sets the value for the fast rotation speed. (3.0–9.0 Hz)
	Drive	Adjusts the saturation level of the built-in amplifier.
	Width	Adjust the stereo width of the signal.
	Crossover	Sets the split frequency between low and high speaker. (400–1600 Hz)
	Balance	Adjusts the level balance between the low and high frequency speakers.



## appendix b

# MIDI Processors

<b>Rex Player</b> Triggers rhythmic playback of slices in a loaded REX file.	Latch On/Off	Activates/deactivates Latched playback. When activated, playback continues after notes have been released.
	Speed	Adjusts the playback speed (half time, normal, double time).
	Split Mode	Sets a split point on the keyboard that divides looped playback and individual slice keys.
	Keytracking	Adjusts how much the loop is chromatically transposed when played across the keyboard.
	Retrigger	Restarts loop on each note-on.
	Swing	Adjusts the swing amount. (Shuffle)
	Swing Mode	Selects to which notes swing is applied.
	Current Variation	Selects one of four programmable variations of the loop.
	Quantize Depth	Quantizes the loop relatively to the selected Quantize grid.
	Quantize Grid	Selects a timing grid.
	Host Sync	Syncs playback to the current host playback position.
	Loop Length	Limits the loop length to 1, 2, or 4 bars.

<b>Alternation Control</b> Controls the selection between multiple Sampler parts or layered zones within a Sampler part.	Min Time	Notes played within this time will trigger the same alternation.
	Max Time	Sets the timeout for reverting to first alternation.
	First Alternate	Selects which alternation plays first.
	Reset After	Resets to the first alternation after the specified number of steps.
	Reset	Manually reset to the first alternation. Available for assignment to a Key switch or MIDI controller.
	Destination	Alternates between layered zones in a Sampler part, or between whole parts.
<b>Controller To Note</b> Generates note-on and note-off messages from incoming MIDI controller values. Useful for adding pedal noises to a piano patch, for example.	Sus Down	Selects a note to be triggered when the Sustain pedal is pressed.
	Sus Up	Selects a note to be triggered when the Sustain pedal is released.
	Sost Down	Selects a note to be triggered when the Sostenuto pedal is pressed.
	Sost Up	Selects a note to be triggered when the Sostenuto pedal is released.
	Soft Down	Selects a note to be triggered when the Soft pedal is pressed.
	Soft Up	Selects a note to be triggered when the Soft pedal is released.
	User CC	Selects a MIDI CC to be converted to note triggers.
	User On	Note triggered when value of specified MIDI CC increases above 63.
	User Off	Note triggered when value of specified MIDI decreases below 64.
	User Trigger	Triggers the user-defined note(s)

<p><b>MIDI Transformer</b> Adjusts a selected type of MIDI data, with the option of converting it to a different type.</p>	Input	Selects a type of event to transform.
	Random	Adds a random offset to the event value.
	Smooth	Smooth output values.
	Convert	<p>Off: The value of the selected Input event type is modified, for example: apply a velocity curve.</p> <p>On: The selected input event is converted to the Output event type, for example: convert mod wheel to expression.</p> <p>Replace: The selected output event gets its value replaced by the last Input event value, for example: use the mod wheel to set note velocity</p> <p>Offset: The last input event value is added to the value of the selected output event, for example: use the mod wheel to increase note velocity.</p>
	Output	Selects a event type to output.
<p><b>Tuning Scale</b> Applies a different fine tuning to each note in the scale.</p>	Length	Sets the number of notes in the scale (up to 128 for whole-keyboard scales such as stretch tunings)
	Root	Shifts the scale left or right to change the root note.
	Depth	Increases/decreases the detuning depth of the whole scale.
	Mode	<p>Transpose: If after applying the tuning scale, the resulting pitch is nearer to a different note than the one played, the nearest note is played.</p> <p>Re-Pitch: Useful when you have a different drum sound on each key, so you want the tuning scale to adjust the pitch of each drum, not select a different drum from an adjacent key.</p>
	Select Scale	There are two scale memories. At any time one of these is the active scale applied to incoming notes. The scales can be selected automatically depending on if you play higher or lower than the previous note (some arabic scales are different when playing up or down the keyboard).



[www.digidesign.com](http://www.digidesign.com)

---

**DIGIDESIGN**

2001 Junipero Serra Boulevard  
Daly City, CA 94014-3886 USA  
Tel: 650.731.6300  
Fax: 650.731.6399

**TECHNICAL SUPPORT (USA)**

Tel: 650.731.6100  
Fax: 650.731.6384

**PRODUCT INFORMATION (USA)**

Tel: 800.333.2137

**INTERNATIONAL OFFICES**

Visit the Digidesign website  
for contact information