ELEVEN | RACK

User Guide

Version 8.0.1

Documentation Feedback

At Digidesign, we're always looking for ways to improve our documentation. If you have comments, corrections, or suggestions regarding our documentation, email us at *techpubs@digidesign.com*.

Communications and Safety Regulation Information

Compliance Statement
This model Digidesign Eleven Rack complies with the following standards regulating interference and EMC:
· FCC Part 15 Class B
· EN 55103-1 E1 Class B
· EN 55103-2 E1 Class B
· AS/NZS 3548 Class B
· CISPR 22 Class B

Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

DECLARATION OF CONFORMITY

We Digidesign,

2001 Junipero Serra Boulevard, Suite 200

Daly City, CA 94014 USA

tel: 650-731-6300

declare under our sole responsibility that the product

Eleven Rack

complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Communication Statement

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:
· Reorient or locate the receiving antenna.
· Increase the separation between the equipment and receiver.
· Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
· Consult the dealer or an experienced radio/TV technician for help.

Digidesign   Eleven Rack

FC   **Tested To Comply**
       with FCC Standards

FOR HOME OR OFFICE USE

Any modifications to the unit, unless expressly approved by Digidesign, could void the user's authority to operate the equipment.

CE Compliance Statement:

Digidesign is authorized to apply the CE (Conformité Europénne) mark on this compliant equipment thereby declaring conformity to EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC.

Safety Statement

This equipment has been tested to comply with USA and Canadian safety certification in accordance with the specifications of UL Standards: UL60065 7th /IEC 60065 7th and Canadian CAN/CSA C22.2 60065:03. Digidesign Inc., has been authorized to apply the appropriate UL & CUL mark on its compliant equipment.

Warning

Important Safety Instructions

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Unplug this apparatus during lightning storms or when unused for long periods of time.

13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

14) The apparatus shall not be exposed to drippings or splashing and no objects filled with liquids (such as vases) shall be placed on the apparatus.
Warning! To reduce the risk of fire or electric shock, do not expose this apparatus to rain or mositure.

15) The apparatus should be connected to a properly-grounded (earthed) receptable.

16) The mains switch is located on the front of the Eleven Rack. It should remain accessible after installation.

Contents

Part II   Setting Up and Using Pro Tools With Eleven Rack

Part III   Reference

Part I: Playing Guitar through Eleven Rack

Chapter 1: Introduction

Quick Start Instructions

You've Got Eleven Rack, You've Got Your Guitar. What's Next?

Eleven Rack is a high-quality audio and MIDI interface, with classic guitar amp and effects processing built right in. This means that Eleven Rack is useful both when recording, and when playing guitar live or in practice.

At home or in the studio, you can plug guitars, microphones, and other instruments into Eleven Rack, and record directly into Pro Tools. You can use the amp and effects modelling capabilities of Eleven Rack to process signals as you record them, or to process previously recorded audio.

When away from the computer, you can use Eleven Rack as a standalone guitar processor, sending classic guitar tones straight to a venue's PA system, to a guitar amp, or both. You can also simply plug in a pair of headphones and practice by yourself.

You're probably excited to start playing with your new Eleven Rack right away, so let's get started!

To get started playing guitar with Eleven Rack:

1 Connect outputs from Eleven Rack to your monitors or headphones:

- If you're connecting to self-powered studio monitors, a stereo power amp and speakers, or mixer inputs, use the Main outputs.

Eleven Rack Main outputs (back panel)

– or –

- If you're using a pair of headphones, connect them to the Phones output.

Phones output (front panel)

2 Connect your guitar to the Guitar Input on the front panel of Eleven Rack.

Guitar input (front panel)

3 Connect the power cable and set the Power switch to On. The Eleven Rack logo will appear. As Eleven Rack warms up, check your guitar to make sure that its volume is turned up.

4 When the name of the first Rig is displayed, try playing your guitar. How's it sound? You may want to adjust the output volume of Eleven Rack by turning the Volume knob on the front panel.

Volume knob (front panel)

5 You can browse through Eleven Rack's various preset sounds, called Rigs, by turning the Scroll wheel.

Scroll wheel (front panel)

6 Try adjusting the lit Control Knobs to change the featured amp or effects settings. You can see what kind of control each knob is assigned to on the display.

7 Try pressing the Effects Bypass buttons, like Dist, Mod, Delay, and Rev, to toggle the various effects on and off.

System Requirements and Compatibility

To use Eleven Rack with Pro Tools, you need.

- One of the following:
  - A qualified Mac or Windows computer (when using Eleven Rack with Pro Tools LE)

  – or –
  - A qualified Pro Tools|HD^{TM} system running Pro Tools HD 8.0.1 software or higher (when using Eleven Rack as an external signal processing device)

- DVD drive for Installation disc
- Internet access for registration purposes

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

For complete system requirements and a list of qualified computers, operating systems, hard drives, and third-party devices, refer to the latest information on the Digidesign website:

www.digidesign.com/compatibility

Getting Around This Guide

There are two main ways to use Eleven Rack. In Part 1, we'll cover using Eleven Rack as a live guitar processor, and in Part 2, we'll get into how to use Eleven Rack as an audio and MIDI interface, and effects processor with Pro Tools.

Part 1: Eleven Rack for Guitar

You're looking at it. In Part 1, we take you through the hardware features of Eleven Rack in Chapter 2, "Hardware Overview," show you how to edit and create your own Rigs in Chapter 3, "Exploring Rigs," and teach you how to use Eleven Rack as a live guitar processor in Chapter 4, "Eleven Rack Live Setup."

Part 2: Working With Pro Tools LE

In Part 2, you can learn how to set up and use Eleven Rack as part of a Pro Tools system. We cover installation details in Chapter 5, "Installing Pro Tools on Mac," and Chapter 6, "Installing Pro Tools On Windows," setting up your studio in Chapter 8, "Eleven Rack Studio Setup," and getting the most out of Eleven Rack with Pro Tools in Chapter 9, "Eleven Rack with Pro Tools."

Part 3: Reference

In Part 3, we get into the technical details behind the scenes. Learn all about Eleven Rack's User Options in Chapter 10, "User Options," and how to control Eleven Rack with MIDI in Chapter 11, "Controlling Eleven Rack with MIDI." Hard drive setup for Pro Tools, general troubleshooting and how to get help with Eleven Rack are covered in Appendixes C, D, and E.

Conventions Used in This Guide

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

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

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

The following symbols are used to highlight important information:

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

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

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

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

Chapter 2: Hardware Overview

Eleven Rack Front Panel
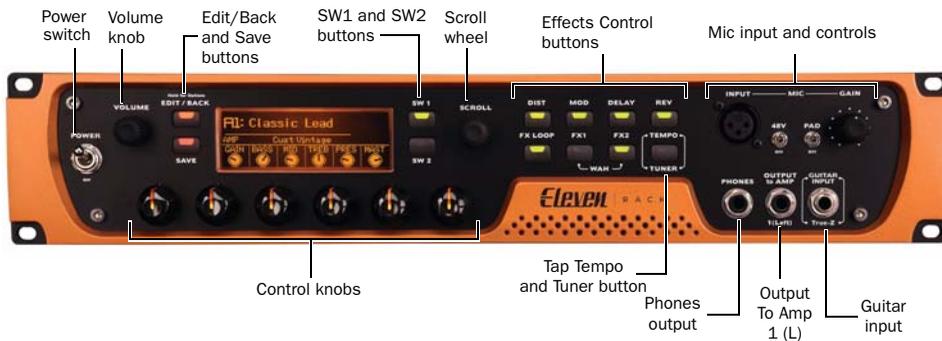
Figure 1. Eleven Rack front panel

The Eleven Rack front panel provides the following:

Power Switch

Use the heavy-duty Power switch to turn Eleven Rack on and off. Eleven Rack will take a few seconds to warm up. When the Rig name appears on the display, you're ready to rock.

Volume Knob

Turning the Volume knob will simultaneously adjust the output level of the Main outputs and the Headphone outputs.

Edit/Back and Save Buttons

Use the Edit/Back button to enter Rig View, which gives you access to the inner workings of the current Rig (preset). When in Rig View or any other special mode, press Edit/back to step backwards to the previous view. When you're satisfied with the changes you've made, press the Save button to save your settings.

📖 *For more information on Rig View, see Chapter 3, "Exploring Rigs."*

User Options Mode

Hold the Edit/Back button to enter User Options mode, where many settings that change the behavior and configuration of Eleven Rack can be found.

📑 *For information on User Options mode, see Chapter 10, "User Options."*

SW1 and SW2 Buttons

Use the SW1 and SW2 buttons to toggle various switched behaviors and navigate through editing views in Eleven Rack. The part of the display next to the SW1 and SW2 buttons shows the current function of the buttons.

When one of the SW buttons are actively usable in the current screen, they will be lit.

Scroll Wheel

Use the Scroll wheel to browse through Rigs, and navigate through sections in Rig View, along with other miscellaneous scrolling tasks throughout Eleven Rack.

Effects Control Buttons

Use the Effects Control buttons to toggle effects on and off by type. Press and hold any of the effects buttons to access the controls for that effect. Pressing the FX1 and FX2 buttons simultaneously toggles the Wah effect on and off.

Tap Tempo/Tuner Button

Tap the Tap Tempo/Tuner button at quarternote intervals to set the current Rig's FX tempo. Time-based effects like Delay and Tremolo can be set to synchronize with the new tempo. If you want to save the new tempo setting with the current Rig, press the Save button.

To access the built-in guitar tuner, hold the Tap Tempo/Tuner button down for one second. The display shows the Tuner view.

Tuner view

The guitar signal can be muted by pressing SW1. The reference pitch can be adjusted by turning the lit Control knob.

When you're finished tuning, press any button to return to the previous screen.

Mic Input and Controls

Use the Mic input to record and/or process mic-level signals. Controls for preamp gain, phantom power, and pad are provided.

About Phantom Power

Dynamic microphones (such as a Shure SM57) do not require phantom power, but are not harmed by it. Most *condenser* microphones (like an AKG C3000) *do* require phantom power to operate.

⚠ *Although phantom power is safe for most microphones, it is possible to damage some ribbon mics with it. Always turn off phantom power and wait at least ten seconds before connecting or disconnecting a ribbon microphone.*

If you are not sure about the phantom power requirements for your microphone, consult your microphone's documentation or contact the manufacturer.

Control Knobs

Use the Control knobs to access amp and effects controls, as well as other settings throughout Eleven Rack. The controls are pre-assigned, depending on the current mode. The knobs light up in different colors, depending on their state:

Amber The current knob is assigned to an amp, cab, or FX loop parameter.

Green The current knob is assigned to an effects parameter.

Red The current knob is positioned differently than the assigned control's saved position in the current Rig. You can match the knob position to the saved parameter by turning the knob until it lights Amber or Green again.

When a Control knob isn't active in the current screen, it is not lit.

Phones Output

The Phones output is a 1/4-inch TRS jack that drives a pair of headphones with the same signal that is being sent out of the Main outputs of Eleven Rack. This can be either the output of the current Rig when using Eleven Rack, or the output of Pro Tools or other applications when using Eleven Rack as an audio interface.

The headphone output level is adjusted in tandem with the Main volume when you turn the Volume knob on the front panel of Eleven Rack or adjust the Main volume from within Pro Tools. If you want the headphone volume to differ from that going to your speakers, you can adjust the Headphone Offset setting in User Options mode.

For more information on Headphone Offset, see "Headphone Volume" on page 94.

Output To Amp 1 (L)

The Output To Amp 1 (L) is one of two outputs specifically designed for connecting to the input of a guitar amplifier. Since most amplifier input jacks are located on the amp's front panel, we put one of these jacks on the front panel of Eleven Rack for easy patching.

The other Output to Amp jack is located on the back of Eleven Rack. It can be used independently of Output 1, or along with it for stereo amplifier configurations. The Output to Amp jacks can output a live guitar signal in real time as you play, or a pre-recorded signal from Pro Tools, for re-amping purposes.

You can select from specific points in the signal chain to feed each Output To Amp jack. This lets you choose the amount of processing you want on the output signal.

Guitar Input with True-Z

The Guitar input is a 1/4" TS, instrument-level input. Designed for electric guitars, the jack also works well with bass and acoustic guitars with pickups, or even vintage electric pianos.

⚠ *Most recent keyboards have line-level outputs and should be connected to the Line inputs on the back panel of Eleven Rack.*

Eleven Rack features a special variable-impedance circuit called True-Z, which automatically changes the input impedance of the Eleven Rack guitar input depending on which amp or effects model is first in the signal chain of the current Rig.

True-Z alters the frequency response of your guitar signal by loading your pickups in the same manner as plugging into a real amp or effect. This feature can also be manually controlled and saved as part of a Rig setting.

Eleven Rack Back Panel

Figure 2 identifies each port on the back panel of the Eleven Rack.
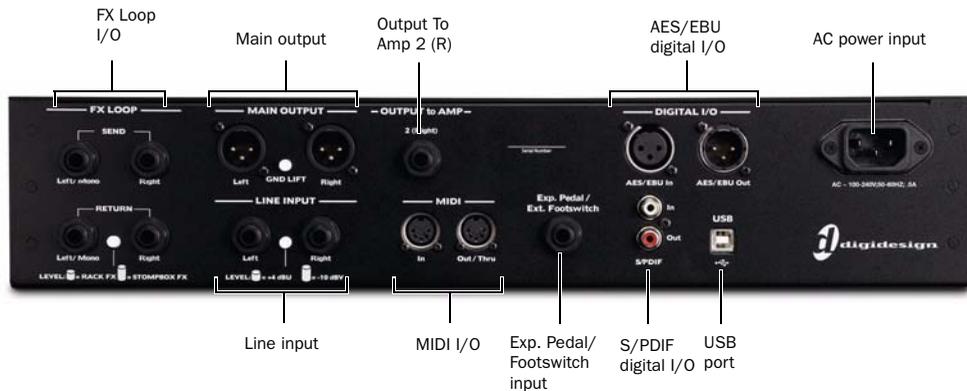
Figure 2. Eleven Rack back panel

The Eleven Rack back panel provides the following:

FX Loop I/O

The FX Loop I/O is a pair of 1/4-inch TRS inputs and outputs, which can be used to insert a mono or stereo external effects processor into the guitar signal. A switch is provided to adjust the signal level to be suitable for either a line-level effects processor (Rack FX) or a guitar-level effects processors (Stompbox FX).

Main Outputs

The Main output section includes a stereo, XLR, line-level analog output pair. Connect these to studio monitors, a power amp, mixer, or PA system.

The Gnd Lift switch is useful for suppressing hum in some situations, but should usually be left switched off unless it is really needed.

Output To Amp 2 (R)

The Output To Amp 2 (R) is one of two outputs specifically designed for connecting to the input of a guitar amplifier or effect. It can be used independently of Output 1 (located on the front panel), or along with it for stereo amplifier configurations.

Digital Inputs and Outputs

AES/EBU

The AES/EBU In and Out ports are balanced three-conductor XLR connectors that can run at up to 24-bit, 96 kHz resolution.

The AES/EBU format is used in many professional digital converters, recorders, and signal processors.

S/PDIF

The S/PDIF In and Out ports are unbalanced two-conductor phono (RCA) connectors that can run at up to 24-bit, 96 kHz resolution.

The Sony/Philips Digital Interface Format (S/PDIF) is used in many professional and consumer CD recorders and DAT recorders. To avoid RF interference, use 75-ohm coaxial cable for S/PDIF transfers and keep the cable length to a maximum of 10 meters.

⚠ *Eleven Rack can use either AES/EBU or S/PDIF, but not both at once. For information on switching between digital formats, see "Digital Format" on page 58.*

AC Power Input

The AC power input accepts a standard IEC power cable (one is included with Eleven Rack). The power supply in Eleven Rack is universal, so wherever you go, all you need is a standard IEC power cable with the correct plug for your region.

Line Inputs

The Line inputs accept one stereo or two mono line-level analog signals. The Level switch lets you choose between +4 or –10 dBV, for compatibility with professional and consumer gear.

MIDI I/O

The MIDI In and MIDI Out ports are standard 5-pin MIDI ports, each providing 16 channels of MIDI input or output. These ports can interface with a variety of MIDI devices

When Eleven Rack is used as a standalone processor, the MIDI jacks are used to communicate with MIDI foot controllers, sending and receiving program changes and continuous controller data.

Exp Pedal/Ext Footswitch Input

The Exp Pedal/Ext Footswitch input supports an expression pedal or a momentary footswitch (single or dual). You can control sweepable parameters (like Wah, Volume and Multi FX) with an expression pedal, or switchable settings (like Rig switching, amp channel switching, and effects on/off) with a footswitch.

Chapter 3: Exploring Rigs

Overview

Eleven Rack is a powerful guitar signal processor that delivers the tone of a wide variety of amplifiers, speaker cabinets, microphones, and effects units. The combination of all of this gear and their control settings make up a *Rig*.

Eleven Rack comes loaded with over 100 Rigs that showcase the range of tones our collection of amps and effects can achieve. The built-in Rigs are a good place to start, but the power of Eleven Rack really comes into play when you create your own.

You can audition, manage, edit and create Rigs right from the front panel of Eleven Rack. When using Eleven Rack with Pro Tools LE, the built-in Eleven Rack Control window offers another convenient way to do this work.

📄 *For details on working with Rigs from within Pro Tools, see "The Eleven Rack Control Window" on page 76.*

Rig Select Mode

When you turn on Eleven Rack, it's already in Rig Select mode. In this mode, you can turn the Scroll wheel to select a Rig. Pressing the SW 1 button will cycle the display through these three display modes:

- Default mode
- Simple mode
- Details mode

Default Mode

This mode shows the Rig number and name, and provides a set of amp or effects controls that you can change without entering Rig View.

Simple Mode

This mode shows the Rig number and name in the largest type possible. Perfect for seeing from across a dark stage.

Details Mode

This mode lists the amp, cabinet, and effects models that are used in the current Rig, plus their on/off status.

Rig Organization

Eleven Rack has storage for 208 Rigs. Half of these are factory presets, and the other half are user-editable Rigs. You can also save and store an unlimited number of your favorite Rigs as plug-in settings files on your computer.

The 208 Rigs in Eleven Rack are arranged into two sets of 26 banks, each containing four Rigs. Each bank is marked with a letter, from A to Z. For example, the third preset in bank D is referred to as D3. Banks with lowercase letters are factory presets, and those with uppercase letters are the user banks.

User Rigs and Factory Rigs

By default, all 104 user Rigs are copies of the 104 factory Rigs. This gives you a place to start when you set out to make your own Rigs. As you scroll through, notice that when you get past the end of the uppercase (user) Rigs, you'll then begin to see the lowercase (preset) Rigs.

The user Rigs are yours to edit, change, copy, and mangle as you see fit. The preset Rigs will always stay the same. If you make changes to a preset Rig and want to save it, you can save it as a new User Rig.

Selecting Rigs Live

When using Eleven Rack in live performance situations, we recommend using a footswitch accessory or a dedicated MIDI foot controller to switch from Rig to Rig.

What's In A Rig?

Figure 3. Eleven Rack Rig devices

Each Rig in Eleven Rack contains the following devices for processing your guitar signal, and each of them has settings you can control:

• Amplifier

• Speaker cabinet and microphone

• Seven simultaneous effects (such as Wah, Distortion, Modulation, and Reverb)

• Volume pedal

• FX Loop

In addition, there are a group of "Utility" settings in each Rig:

• Input, which lets you manipulate the True-Z input impedance circuitry

• Output, which lets you change the Rig volume, To Amp output volume, and switch the Rig output between mono and stereo

• Tempo, which lets you set the Rig tempo

• Pedal, which lets you configure an external footswitch or expression pedal accessory

• Display, which lets you set the device whose controls are displayed in Rig Select view (like Amp, Mod, or FX1)

Rig View

Rig View is a special editing mode you access by pressing the Edit/Back button on the front panel of Eleven Rack. When you're done editing, press the Edit/Back button again to get back to the main Rig Select mode.

⚠ *If you make changes you want to save, be sure to use the Save button before switching to a different Rig. For details, see "Saving Your Work" on page 19.*

In Rig View, you can access every aspect of the current Rig, from the amp, cabinet, and microphone type, all the way to choosing effects, and changing their order in the signal chain.

Rig View

Once you've entered Rig View, you'll see a selection of icons, each representing a different device or utility setting within the current Rig. Turn the Scroll wheel to select the element you want to access.

As you scroll through the list, certain functions will be assigned to the lit Control Knobs, like choosing the type of amp or effect you want to use.

Page Indicator

In Eleven Rack's editing screens, a Page indicator appears on the display if there is more than one page of controls. The Page indicator shows the number of pages, as well as the name of the page you're viewing. Turn the Scroll wheel to switch between pages.

Page indicator, showing page two of four

Rig Device and Utility Settings in Rig View

This section describes the functions of the device and utility settings pages found in Rig View.

If the device or setting you select in Rig View has additional controls, pressing SW1 (labeled CONTROLS) takes you to a special Control page for that device. When you're finished, press Edit/Back to go back to Rig View.

📑 *For more details on working in Control pages, see "Control Pages" on page 19.*

Amplifier, Cabinet, and Microphone

AMP

Turn the lit Control knob to select the type of simulated amp you want to use. Press CONTROLS to access additional amp settings.

CAB

Turn the lit Control knobs to select the type of cabinet and microphone you want to use. Press SW1 to bypass the cab and mic simulations. Press SW2 to toggle the microphone position on or off-axis.

💡 *When playing Eleven Rack through a guitar amp, it is recommended that you bypass the Cab and Mic simulations. Unless the guitar amplifier has a very flat frequency response, its own speakers will affect the tone and make Cab and Mic simulation unneccessary.*

Effects

VOL

Press CONTROLS to access a Control page where you can adjust the position and minimum volume of the Volume pedal, using the lit Control knobs.

WAH

Turn the lit Control knob to select the type of Wah pedal you want to use. Press CONTROLS to access a Control page, where you can adjust the position of the Wah pedal.

DIST

Turn the lit Control knob to select the type of Distortion effect you want to use. Press CONTROLS to access additional settings for the chosen Distortion effect.

MOD

Turn the lit Control knob to select the type of Modulation effect you want to use. Press CONTROLS to access additional settings for the chosen Modulation effect.

FX1 and FX2

The FX1 and FX2 pages let you choose two additional effects not found in the other categories (such as compressor or graphic EQ) as well as a variety of modulation effects, using the lit Control knob. Press CONTROLS to access additional settings for the chosen effect.

REV

Turn the lit Control knob to select the type of Reverb effect you want to use. Press CONTROLS to access additional settings for the chosen Reverb effect.

DLY

Turn the lit Control knob to select the type of Delay effect you want to use. Press CONTROLS to access additional settings for the chosen Delay effect.

FX LOOP

Press CONTROLS to access a Control page where you can adjust the gain and blend settings of the FX Loop, using the lit Control knobs.

📄 *Effects and the FX Loop can be moved to different locations in the signal chain of the Rig. For that reason, when an effect or the FX Loop is selected in Rig View, SW2 is labeled MOVE. For more details, see "Signal Routing" on page 18.*

Utility Settings

INPUT

Turn the lit Control knob to manipulate the True-Z impedance circuitry in Eleven Rack. When set to Auto, the input impedance is determined by the first active effect or amp in the signal chain. You can also choose a specific load value to best match your pickups.

OUTPUT

Turn the lit Control knob to set the output level of the Rig (known as the Rig volume). Press CONTROLS to access a Control page, where you can set the volume of the signals feeding the To Amp outputs. Press MONO to toggle between stereo or mono output.

The Rig volume setting is a tonally transparent volume control, intended for making fine adjustments to the relative volume levels of different Rigs.

The To Amp output volume settings let you optimize signal level for the amp(s) or external processors you are sending signal to.

DISPLAY

Turn the lit Control knob to specify what controls are displayed in the Default view of Rig Select mode.

TEMPO

Turn the lit Control knob to set the Rig tempo. Any amp or effects settings that have a control set to sync to a specific subdivision of Rig tempo will lock to this tempo.

Press MIDI to toggle sync of Rig tempo to incoming MIDI clock (from the MIDI input of Eleven Rack) on or off.

Press FINE to toggle fine tempo editing mode on or off. In this mode, turn the Scroll wheel to adjust the Rig tempo in tenths of a BPM, rather than the coarse adjustments that are made with the Control knob. Press FINE again to return to the normal mode.

PEDAL

Turn the lit Control knob to choose the parameter controlled by an external expression pedal, if attached. The following choices are available:

Wah Lets you control the sweep of the Wah effect.

Volume Pedal Lets you control the sweep of the Volume Pedal effect.

Rig Volume Lets you control the overall Rig volume.

Multi FX Lets you control up to four different amp and/or effects parameters at once. Press FX-Sel for options. There are four pages of options, each one addressing one parameter that is to be controlled.

On each page, set the device you want to control and the parameter you want to sweep. The Toe and Heel settings govern the range of the control that is able to be swept.

💡 *If you set the Heel number higher than the Toe number, the control can be swept in reverse.*

None No parameter will be affected when the pedal is moved.

💡 *For information on how to toggle Eleven Rack between expression pedal and footswitch control, see "External Pedals" on page 93.*

Signal Routing

The position of many of the devices in the signal chain can be changed. The order that effects units are plugged into each other can make a large difference in the sound you get.

Most effects can be moved anywhere before or after the amp and cabinet models. The FX Loop can be moved to one of four places; the beginning of the chain, before the amp and cab, after the amp and cab, or before the final output.

To move an effect:

1 Turn the Scroll wheel to select the effect you want to move.

1 Press SW2 to enter Move mode.

2 Turn the Scroll wheel to move the effect to a different position in the signal chain.

3 Press SW2 again to keep the change, or SW1 to cancel the move.

Controls Takes you to a page with additional controls for the selected element. Press Edit/Back to return to Rig View when you're finished.

Move Lets you move an effect or the FX loop to a different point in the signal chain.

Control Pages

When there are additional controls available for the device or utility setting you've selected, pressing SW1 (labeled CONTROLS) takes you to a special editing screen for that device, called a Control page.

Control page for Green JRC OD effect

The Control knobs that are assigned to controls in the current device will light amber, if you're editing Amp, Cab, or FX Loop settings, or green, if you're editing an effect. The display shows what parameter each knob is assigned to, and each knob's current setting.

When you turn a knob away from its saved setting, it will light red, to show you that the setting has changed. If you want to return a control to its saved setting, turn the knob until it goes back to amber or green.

SW1 and SW2 are assigned to various functions, like BYPASS, which toggles the current element on and off, and other switched behaviors, like BRIGHT (bright switch) and TREMOLO (tremolo on/off).

Individual effects may be toggled on and off at any time by pressing the corresponding Effects Control button on the front panel of Eleven Rack. The Wah effect can be toggled on and off by pressing FX1 and FX2 simultaneously.

If there is more than one page of controls available for the current device or utility setting, a Page indicator is displayed. Turn the scroll wheel to switch between pages. You can also use the Scroll wheel to scroll quickly through all of the Control pages in the current Rig.

When you're finished editing, press Edit/Back to go back to Rig View.

Saving Your Work

When you're done editing the current Rig, you may want to save its settings, or save the new settings to a different user Rig without affecting the current Rig.

Keep in mind, if you switch to another Rig before saving your work, the edits you've made will be lost.

Save page

To save the new settings to the current Rig:

1 Press the Save button. The display will show the Save View.

2 Press Save again to save the updated settings to the current Rig.

To create a new Rig with the new settings:

1 Press the Save button. The display will show the Save View.

2 Turn the scroll wheel to select a preset Rig that you don't mind overwriting.

3 Choose a name for your new Rig, using the lit Control knobs and SW switches:

- The first lit knob moves the cursor from left to right.
- The second knob lets you choose an upper-case letter from A-Z.
- The third knob lets you choose an lower-case letter from a-z.
- The fourth knob lets you choose a number or symbol.
- SW1 lets you insert a space.
- SW2 lets you delete an unwanted character.

4 Press Save again to save the new Rig.

The Amps

This section takes you through all of the emulated amplifiers available in Eleven Rack, and touches on any special features and controls each amp offers.

'59 Tweed Lux

Based on a classic late-50s tube combo amp with a single 12-inch speaker and a pair of 6V6 tubes delivering 15 watts, the '59 Tweed Lux model is the picture of vintage simplicity. With just a simple treble-cutting tone control, the Tweed Lux delivers crunchy clean sounds when used with single-coil pickups, and fat leads when driven with humbucking pickups.

The inputs on this model are "jumped" so you can feed both the Instrument and Mic inputs in parallel.

'59 Tweed Bass

Based on a late-50s low-wattage tube bass combo amp, the '59 Tweed Bass model has a tight bass response and a warm, twang-friendly high-end. Along with controls for Bass, Middle (midrange), and Treble, a negative feedback Presence control also allows for more tweaking of the high-end frequencies.

Just like the Tweed Lux, the Tweed Bass is also "jumped" so you can feed both the Bright and Normal inputs in parallel.

'64 Black Panel Lux Vibrato and Normal

The amp we based the '64 Black Panel Lux Vibrato and Normal models on is regarded by some as the ultimate small club amp. A 60s tube combo with a single 12-inch ceramic-magnet speaker and a pair of 6V6s putting out just over 20 watts, this amp has long been a standard in the studio as well as onstage.

At low volumes its crisp, clean high-end has been favored by country rockers, but push the amp past 7 with a humbucking pickup, and you've got an amazingly dynamic lead tone. For Eleven, we've modeled both channels of this classic blackface-era amp.

The Lux Vibrato model has two gain stages and the tremolo effect is toggled using SW2. Lux Normal has a single gain stage and tremolo is always on, unless the Intensity control is rolled all the way off.

'66 AC Hi Boost

Originally released in 1958, the British amp we based our '66 AC Hi Boost model upon went through a few design changes that would eventually define the sound of British pop/rock in the '60s.

First available as a modification mounted in the back of the amp, the "Top Boost" circuit added an extra tube and controls for Treble and Bass. It became so popular that it eventually became a part of the standard componentry of the amp.

The glassy high-end and chime of the AC Hi Boost lends a classic propulsion to rhythm guitar parts, and at higher gain settings, singing lead tones are a snap to achieve.

For our model, we've "jumped" the Normal and Brilliant channels. The Cut (presence) control is active on both channels. However, just like the original, the Treble and Bass controls are only part of the Brilliant channel, and have no effect on the Normal channel.

Go to the second Control page and press SW2 to toggle the tremolo on and off.

'67 Black Panel Duo

Without a doubt, the blackface-era amp we based our '67 Black Panel Duo model upon is considered one of the greatest combo amps ever made. With two 12-inch ceramic-magnet speakers and a quartet of 6L6 tubes pushing 80 watts, no concert stage has been complete without one since it was introduced in the late 60s.

One of the main reasons for the amp's popularity is that it can maintain classic vintage clean sounds even at high volume levels. Another special Black Duo feature is the inclusion of a Bright switch.

For our model, just like the original, as you turn the Volume knob up, the Bright switch has less of an effect. Dial the Volume knob around 3 or 4 with the Bright switch on, and you'll get that ultra-clean snap that it's famous for.

On the first Control page, SW2 is set to toggle the Bright switch on and off. On the second page, SW2 toggles vibrato on and off.

'69 Plexiglas

Based on one of the most highly sought-after high-volume amplifiers of the late 1960s, our '69 Plexiglas model delivers no-nonsense British crunch. The original amp's dual 4x12 cabinets and 100-watt head offered unprecedented volume and power for the time, helping to usher in the era of the Guitar God.

For our model, we've based it on the legendary 100-watt 1968/69 version. We've also "jumped" both channels, for further gain.

'82 Lead 800

Based on the early-80s descendent of the amp we based our Plexiglas model upon, the '82 Lead 800 adds a higher-gain cascaded preamp design and a master volume control. Unlike the high-volume heads of the 60s, which needed to be on 10 to achieve an overdrive sound, this amp could conjure up real distortion at any volume level, and that made it very popular in the burgeoning 80s heavy metal scene.

'85 M-2 Lead

Based on a classic mid-80s high-end tube combo amp, the '85 M-2 Lead model delivers hot-rodded overdrive and searing solo tones. With a full complement of tone controls and independent input volume, overdrive and master volume controls, the gain structure can be tweaked to your heart's content.

The M-2 Lead emulation is based on the lead channel with the fat, bright, and gain boost options on.

'89 SL100 Drive, Crunch, and Clean

Our '89 SL100 model is based on a late-80s high-gain 100-watt tube head, which was popular for its singing sustain and clear articulation. The Bright switch on the Clean and Crunch models boosts the high-end for lead lines and cutting tones.

For the Drive model, we simulated a bright switch modification that was popular for this amp. Set to Normal, the amp is stock. With Bright engaged, the treble boost that would normally happen at lower gain settings is removed,

which leads to a rounder, thicker sound. The Bright switch circuit has progressively less effect as the gain is raised, and no effect when the pre-amp is set to 10.

Toggle the Bright switch on and off with the SW2 button.

'92 Treadplate Modern and Vintage

Released in 1989, the amp that inspired our '92 Treadplate Modern and Vintage models seemed cooler than a high-performance racecar. With more tone-tweaking options and distortion than any amp before it, the amp became the industry standard for players looking to achieve a massive sound.

With the ability to run on either 6L6 or EL34 tubes, this amp offered a choice between either tube or silicon diode rectifier circuits. On top of that, an AC power selection switch offered a Bold or a Spongy option, which would drop the voltage like a Variac for a more "brown" sound.

For our Treadplate, we modeled two different channels and selected the appropriate rectifier and AC power switch setting. For Treadplate M (for Modern), we set it on the Red channel using 6L6s, a silicon rectifier, and the Bold power setting for a tight, aggressive tone. For Treadplate V (for Vintage), we modeled the orange channel with 6L6s, a tube rectifier, and the spongy power setting for a more fluid lead tone.

DC Modern Overdrive and DC Vintage Crunch

Rather than base these two models on any two specific amps, we blended the characteristics and features of many of our favorite amps to create a couple of absolute monsters.

The Modern model augments a modified high-gain British amp flavor with a Bright switch and classic American-style Tremolo. The Vintage model combines tonal attributes of 50s and 60s-era American tube amps, with added gain potential and a Bright switch.

On the first Control page, SW2 is set to toggle the Bright switch on and off. On the second page, SW2 toggles vibrato on and off.

Digidesign Eleven Rack is not affiliated with, sponsored, or endorsed by the makers of the amplifiers that are emulated in this product.

General Amp Controls

The Amp controls can be accessed in the Default view of Rig Select mode, or by selecting the AMP device in Rig View and pressing CONTROLS. There are two pages of controls for every amp. These controls are configured and named to closely match the amps we modeled for Eleven Rack.

When you view the Amp controls, a Page indicator is displayed to show you which page of controls you're viewing. Turn the Scroll wheel to switch pages.

Amp Control page

Tremolo Controls

Some amps, like the '64 Black Panel Lux Vibrato, '66 AC Hi Boost, and DC Modern Overdrive, feature authentic Tremolo circuits. Here's what those controls do:

Speed Lets you set the speed of the Tremolo effect's amplitude modulation.

Sync When set to a rhythmic value, the SYNC control sets the Tremolo's speed to cycle at the selected rhythmic interval, in sync with the Rig tempo. When set to "OFF", the speed is not synchronized and can be manually set with the SPEED control.

Depth Sets the amount of amplitude modulation.

When using Eleven Rack with Pro Tools, you can choose to sync tremolo and other effects to either the Rig tempo or the tempo of the Pro Tools session. For more details, see "Rig Tempo" on page 79.

Noise Gate Controls

Each of the amps in Eleven Rack has a Noise Gate, which can be used to suppress noise coming from the instrument before the signal reaches the amp model. Noise can be especially problematic when boosted heavily at high-gain settings. Its controls are:

Noise Gate Lets you set the threshold of the Noise Gate. Adjust this control until you find a good balance between effective gating and cutting off the signal prematurely on sustained notes.

Rel Sets the release time for the envelope that runs the Noise Gate. A longer release time can sound more natural, while a shorter release can help to rein in a really noisy signal.

The Noise Gate remains usable even when the amp model has been bypassed.

Amp Output

The amp models in Eleven Rack are so faithful to the classics they're based on that the output level can increase significantly as the preamp, volume or master controls are cranked. Also, from one amp the next, output levels will vary depending on their design.

The OUTPUT control lets you compensate for those differences with no coloration added to the tone you're getting.

The amp output volume can also be accessed in Rig View, by selecting AMP and manipulating the Amp Out Vol Control knob.

Bypass

The Bypass control toggles the amp simulation on and off, leaving any effects in the Rig unchanged.

The Speaker Cabinets

This section describes all of the emulated speaker cabinets available in Eleven Rack.

The Cab page in Rig View

1x12 Black Lux

This cab model is based on the original speaker and cabinet that match the Lux Vibrato and Lux Normal amp models. With a single 12-inch ceramic speaker in an open back cabinet, it offers a bright, warm, dynamic sound.

1x12 Tweed Lux

This cab model is based on the original speaker and cabinet that match the Tweed Lux amp model. With a single 12-inch alnico speaker in an open-back cabinet, it offers mellow, sweet warm tones with a hint of vintage grit.

2x12 AC Blue

This cab model is based on the original speakers and cabinet that match the AC Hi Boost amp model. With two British ceramic 12-inch speakers in an open-back cabinet, it offers chimey, mid-focused tones.

2x12 Black Duo

This cab model is based on the original speakers and cabinet that match the Black Duo amp model. With two ceramic 12-inch speakers in an open-back cabinet, it offers bright, full-range tones.

4x10 Tweed Bass

This cab model is based on the original speakers and cabinet that match the Tweed Bass amp model. With four alnico 10-inch speakers in an open-back cabinet, it offers warm, bright, tones with tight bass.

4x12 Classic 30

This cab model is based on a classic 1960s 4x12 British closed-back cabinet. The classic 30 watt speakers we modeled for this unit give it a wide frequency response and major power.

4x12 Green 25Watt

This cab model is based on a classic 1960s 4x12 British closed-back cabinet. The vintage 25 watt speakers we modeled for this unit give it a smooth, thick tone, perfect for soulful leads.

The Microphones

This section describes all of the emulated microphones available in Eleven Rack.

Dyn 7

Based on a large-diaphragm American dynamic microphone, the Dyn 7 model has a smooth, powerful tone quality.

Dyn 57

Based on a midsize-diaphragm American dynamic mic, the Dyn 57 model has a classic aggressive tone with a bright edge and pronounced mids.

Dyn 409

Based on a midsize-diaphragm German dynamic mic, the Dyn 409 offers a detailed midrange and a focused, tight pickup pattern.

Dyn 421

Based on a large-diaphragm German dynamic mic, the Dyn 421 model offers deep bass, solid mids, and smooth treble.

Cond 67

Based on a classic German tube condenser mic, the Cond 67 model offers a warm, crisp sound.

Cond 87

Based on a solid-state German condenser mic, the Cond 87 model lacks the fuzzy tube warmth of Cond 67, but retains a high level of treble detail and nuanced midrange.

Ribbon 121

Based on a modern ribbon microphone, the Ribbon 121 model offers rounded, sweet highs and mids, and solid, deep lows.

Digidesign Eleven Rack is not affiliated with, sponsored, or endorsed by the makers of the speaker cabinets or microphones that are emulated in this product.

The Effects

This section takes you through the effects available in Eleven Rack.

Volume Pedal

The Volume Pedal is a sweepable volume control. You can use it to fade notes or chords in and out, or to vary the volume of your signal in real time, for timbral or rhythmic effects.

The Volume Pedal is most useful when controlled with an expression pedal or MIDI foot controller.

📖 *For more information about using an expression pedal or MIDI foot controller, see "External Foot Controllers" on page 38.*

Wah Effects

Black Wah

Black Wah is a standard wah pedal effect, offering a sweepable resonant filter that lets you add animation and special timbral effects to the guitar signal.

Like the Volume Pedal, wah effects like Black Wah are particularly useful when controlled with an expression pedal or MIDI foot controller.

Shine Wah

Shine Wah works and sounds similar to Black Wah, but with a vintage-style filter circuit and sweep response.

Distortion Effects

Tri-Knob Fuzz

The pedal that inspired Tri-Knob Fuzz was a transistor-based unit, originally popular with lead guitarists searching for ever-higher gain in the 70s. It shone again in the 90s grunge rock scene, probably pushed further into woolly grind than its makers would have ever anticipated.

Volume Sets the overall output volume of the effect.

Sustain Sets the gain of the fuzz circuit.

Tone Changes the tonal balance of the effect, from deep and full of sub-bass to high and shrill.

BlackOp Distortion

Inspired by an 80s-era op-amp-based distortion pedal, BlackOp Distortion offers massive crunch and power. Its hard-clipping drive can squeeze aggressive rhythm and lead tones out of soft-sounding vintage amps, and create surprisingly hard-edged tones when paired with more modern amps.

Green JRC Overdrive

Green JRC Overdrive was inspired by a low-gain 70s overdrive pedal, loved by blues and blues-rock players the world over for its sweet, singing sting. It can be used to simply drive an amp's input section into gentle clipping, or supply some dirty glow of its own.

Modulation Effects

Flanger

Originating from the act of pressing on the flanges of tape reels, and becoming even more popular with the advent of analog pedals, the Flanger effect can be coaxed into bell-like resonant sweeps, or add a silky, shimmering sheen. This effect works well when positioned before or after the amplifier in the signal chain.

Pre-DI Sets the amount of pre-delay, which changes the phase relationship between the dry signal and the delayed signal, with timbral results.

Depth Sets the amount of delay. The higher the setting, the more "jet-engine" artifacts will be introduced.

Fdback Sets the amount of signal fed back into the modulated delay. Higher settings introduce more ringing, whistling artifacts.

C1 Chorus/Vibrato

Based on a heavyweight late-70s analog chorus/vibrato pedal, CI Chorus/Vibrato offers warm, liquid modulation effects. In Chorus mode, the signal is routed through a modulated short delay, which is mixed with the dry signal, creating a washy, doubled sound.

In Vibrato mode, the dry signal is absent and there is more control over the depth of pitch modulation, allowing for everything from an understated "wobble" to wacky, synth-like pitch modulation.

Chorus Sets the intensity and speed of the Chorus effect, only when the Chorus/Vibrato switch is set to Chorus.

Depth Sets the depth of the Vibrato effect, only when the Chorus/Vibrato switch is set to Vibrato.

Rate Controls the Vibrato rate, only when the Chorus/Vibrato switch is set to on.

Chorus/Vibrato Toggles the effect between Chorus and Vibrato.

When set to CHORUS, the Rate and Depth controls are inactive. Likewise, when set to VIBRATO, the Chorus control will not function.

U Phaser

The psychedelic-era phaser that inspired our U Phaser effect was traditionally paired with an expression pedal that could be used to vary the rate of pitch modulation over time. Like the C1, you can choose to run it as a Chorus, with the modulated and dry signals mixed together, or in Vibrato mode, which leaves the pitch-modulated signal alone, with rippling, disorienting effects.

Chorus/Vibrato Toggles the dry signal on (Chorus) and off (Vibrato).

Orange Phaser

Based on a more basic analog phaser, Orange Phaser offers a more subtle, warm phasing effect.

Speed Controls the Phaser effect's rate of modulation.

Sync Synchronizes the modulation rate to the Rig tempo by a specific rhythmic subdivision.

Roto Speaker

Inspired by the rotating speaker cabinets that made classic tonewheel organs roar, Roto Speaker offers added motion and vintage grit.

Speed Sets the speed of the rotating speaker effect, in three increments, Slow, Fast, and Brake (stopped).

Balance Sets the blend between the upper and lower rotors of the rotating speaker.

Type Chooses between various types of rotary speakers.

Reverb Effects

Blackpanel Spring Reverb

Blackpanel Spring Reverb was inspired by a classic outboard tube-driven spring reverb. It can add a surfy twang and dark, warm ambience to your signal.

Mix Controls the blend between dry and reverbed signal.

Decay Controls the length of the reverb's decay.

Tone Applies a high-cut EQ, making the reverb tone darker.

Eleven SR

A smooth, clean digital reverb, Eleven SR is based on the popular Reverb One Pro Tools plug-in from Digidesign.

Pre-Dly Sets the amount of pre-delay, which changes the time relationship between the dry signal and the reverbed signal. As this setting is turned higher, the apparent size of the synthesized reverb "room" grows larger.

Type Selects from a variety of different reverb types.

Delay Effects

Tape Echo

Inspired by the ultimate vintage solid state tape echo unit, Tape Echo supplies supple, crunchy echoes, and can, with a flick of the wrist, can be pushed into swells of wild self-oscillation, each repeat more murky, dusty, and gritty than the next. A classic.

Rec Lev Controls the signal level running to the tape circuitry. Higher settings create a more distorted tone color.

Head Simulates the alignment (or misalignment) of the tape head with the tape, which affects the tone of the delay.

Wow Controls the amount of wow and flutter in the tape mechanism. Lower settings minimize fluctuations of pitch and tone color, and higher settings accentuate it.

Hiss For some serious authenticity in your tape echo tone, this switch Toggles modeled analog tape hiss in or out of the signal. With high feedback settings, the tape hiss can push the echo into self-oscillating mayhem.

BBD Delay

When "bucket brigade" analog delays arrived in the mid-70s, their relatively small size and solid-state reliability made them a godsend to tape loop-addled guitarists. It went on to become a classic of its own, with a smooth, round delay sound and a Chorus-Vibrato mode that let it double as a modulation effect.

Input Sets the input level to the delay effect. Cranked up, it can push the signal into useful distortion.

Mod Switches the modulation effect between Vibrato (only the delayed signal is passed) and Chorus (both the dry and delayed signal are passed.)

Depth Controls the level of modulation of the delayed signal.

Noise Toggles modeled analog hiss in or out of the signal.

⚠ *When Hiss or Noise is turned on in one of the delay effects and the feedback level is sufficiently high, the delay will self-oscillate and make noise, even when bypassed. If this occurs, turn down the feedback control.*

EQ & Compressor Effects

Graphic EQ

Useful for simple frequency sculpting, a good Graphic EQ can find a place in almost any pedalboard. Graphic EQ can wring a variety of tones out of other pedals, such as when placed before Distortion effects. The EQ can also be used as a signal booster when positioned in front of amps.

Gray Comp

Inspired by a well-loved solid-state 70s compressor pedal, Gray Comp can add singing sustain to leads or lend power and girth to chunky rhythm guitar parts.

Sustain Sets the threshold, and thus, the amount of compression, in the Compressor effect.

Level Sets the overall output volume of the effect.

Digidesign Eleven Rack is not affiliated with, sponsored, or endorsed by the makers of the effects that are emulated by this product.

General Effects Controls

Sync

The time-based effects in Eleven Rack (such as Chorus, Delay and Flanger) can be set to synchronize with Rig or Session tempo. When the Sync control on these effects is set to a rhythmic subdivision of the incoming tempo, the effect will lock to it. When Sync is set to Off, the Rate or Delay control on the effect will take over, and the rate of modulation or delay can be set by hand.

Delay+ & Fine

These two controls are included in both delay effects. Delay+ quadruples the available delay time, for when longer echoes are needed. Fine switches the delay's Rate control into a fine-adjust mode, where the delay time can be set by the millisecond with the Scroll wheel. Press Fine again to return to normal mode.

Don't Forget to Save!

Remember, when you've got things tweaked just right, make sure to save your settings. If you switch to a different Rig before saving, you'll lose your changes. To simply save the current state of the Rig you're working on to the same Rig memory location, press the Save button, then press it again.

Chapter 4: Eleven Rack Live Setup

In live performance or practice, Eleven Rack can be used as a standalone guitar preamp and processor, connected to an amplifier and/or direct to a PA system. This chapter will describe how to make the necessary connections.

Figure 4. Eleven Rack Live Setup

Basic Live Setup

Figure 5. Eleven Rack connected directly to the PA mixer

Plugging in Your Guitar

Connect your guitar to the Guitar input on the front of Eleven Rack with a 1/4" TS cable.

Connecting Eleven Rack to a PA System

The simplest way to play live with Eleven Rack is to connect it directly to the PA mixer using the Main XLR outputs. When doing so, it is recommended to tell the person running the PA system that you are providing a line-level signal, rather than a mic-level signal, so that they can correctly set the input on the console.

If a buzz or hum occurs, try toggling the Gnd Lift switch.

Using an Amp Onstage

Figure 6. Eleven Rack connected to the PA mixer and an onstage amplifier

In some cases, having an amplifier onstage can be handy for monitoring or tone reasons. Eleven Rack makes it easy to feed your signal to both a PA mixer and an amp.

Connecting Eleven Rack to a Guitar Amplifier

The Output To Amp outputs on Eleven Rack can be connected to one or more guitar amplifiers using standard 1/4" TS cables.

- If using a single, mono amplifier, use the Output To Amp 1 (L) output.

- If using two amplifiers, or an amp with stereo inputs, connect each Output To Amp output to a separate amp or channel input.

Sending the Correct Signal

Eleven Rack lets you choose the point in the signal path that feeds each Output To Amp jack. If you're using an amplifier with a distinct tone of its own, you may want to send it a signal with little processing (for example, only the effects) so the sound of the amp can ring through clearly.

If you prefer to use the amp simulations in Eleven Rack to set your tone, you will want to send the signal just after the amp simulation, but before the cabinet simulation, to your amplifier.

To set the type of signal to send to the amp:

1 Press and hold the Edit/Back button to show the User Options mode.

2 Scroll to Outputs To Amp with the Scroll wheel.

3 Press SW1 to enter the Outputs To Amp screen.

4 Choose the output you plan to use to feed the amp, with the Scroll wheel.

5 Set the Signal control to one of the following, using the first lit Control knob:

- Rig Input (no processing)
- Amp Input (pre-amp effects only)
- Amp Output (effects and amp simulation)

6 Press Edit/Back twice to leave User Options mode.

The signal level running to each Output To Amp output can be set on a per-rig basis in the Output section in Rig View or in the Eleven Rack Control window. For more details, see "OUTPUT" on page 17, or "Output to Amp Selectors" on page 80.

Because Eleven Rack simulates various pre-amps and tone circuits, you may want to bypass your amp's preamp and tone circuitry by plugging into the amplifier's effects return jack(s), if available, rather than the standard input(s). If your amp does not have an effects loop, try setting the amp controls for maximum transparency (EQ flat, gain stages set to clean.)

Effects and Foot Controllers
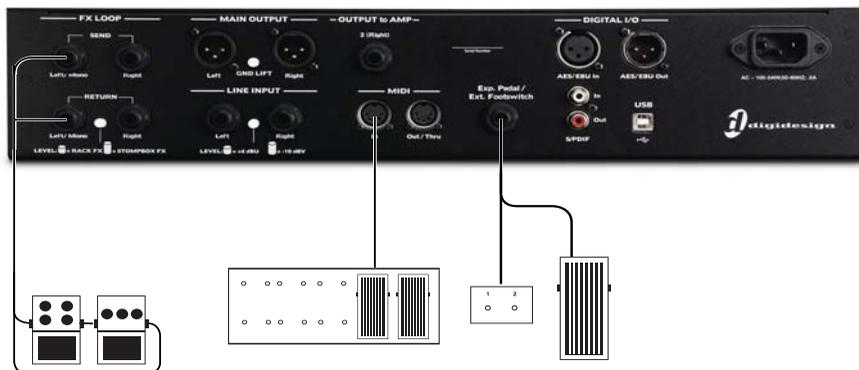
Figure 7. Effects and foot controller connections

Connecting Effects

Use the FX loop jacks to connect stomp boxes, rack effects or other external processors to the live guitar signal. These can be either rack or stompbox effects, or a combination thereof, in mono or stereo. The FX Loop accepts 1/4" plugs.

To connect external effects to Eleven Rack:

1 Connect the FX Loop Send output on Eleven Rack to the input of your first (or only) effects unit. If the unit is mono, use the Left/Mono output. If the unit is stereo, use both outputs.

2 Connect the output of the final (or only) effects unit to the FX Loop Return input on Eleven Rack. If the unit is mono, use the Left/Mono input. If the unit is stereo, use both inputs.

If using a combination of mono and stereo effects, it is usually best to put the mono effects units first in the chain, with the final mono unit connected to the mono input on the first stereo unit.

3 If using a line-level rack effect, toggle the Rack FX/Stompbox FX switch to the Rack FX position. If using a guitar-level stompbox effect, toggle the switch to the Stompbox FX position.

If using a combination of guitar-level (stompbox) and line-level (rack) effects, it may be preferable to put the guitar-level unit(s) first in the chain. If your line-level unit(s) have guitar-level outputs available, the order is not important. See your effects unit(s) documentation for more details.

The User Options and Rig View modes in Eleven Rack contain a variety of settings that control the behavior of the FX loop. For more information, see "The Amps" on page 20 and "FX Loop" on page 93.

External Foot Controllers

Eleven Rack has a 1/4" TRS input that can accept input from an expression pedal or a single or dual momentary footswitch.

Expression Pedal

An expression pedal can be used to control continuously variable parameters within Eleven Rack, such as volume or wah position.

In addition to commonly-used expression pedals, a standard volume pedal with a "Y" adapter cable (two 1/4-inch TS plugs to one 1/4-inch TRS plug) can be used, though keep in mind that the taper of the potentiometer in a volume pedal is exponential, rather than linear as in an expression pedal.

Momentary Footswitch

(Single or Dual)

Most single or dual momentary footswitches can be used to toggle various switched functions within Eleven Rack, such as effects on/off and cycling through rigs.

Choose a momentary footswitch with a 1/4-inch TS (single switch) or 1/4-inch TRS (dual switch) connection.

📄 *For more information on the use of pedals and footswitches with Eleven Rack, "External Pedals" on page 93.*

MIDI Foot Controller

You can connect a MIDI foot controller to the MIDI input on Eleven Rack, providing control over a larger range of simultaneous parameters.

📄 *For details on Eleven Rack controls you can control with a MIDI foot controller, see "Eleven Rack MIDI CC Controllers" on page 95.*

Display Mode and Visibility

When playing live, you may find it easier to keep track of what Rig is selected by switching the display to Simple mode.

📄 *For information on switching display modes, "Rig Select Mode" on page 13.*

Part II: Setting Up and Using Pro Tools With Eleven Rack

Chapter 5: Installing Pro Tools on Mac

This chapter contains information for Mac systems only. If you are installing Pro Tools on a Windows computer, see Chapter 6, "Installing Pro Tools On Windows."

If you're installing or upgrading Pro Tools HD to work with Eleven Rack, please refer to the Setup Guide for your system.

⚠ *Before installing this version of Pro Tools, refer to the Read Me information included on the Pro Tools Installer disc.*

Installation Overview

Installation of the Eleven Rack on a Mac includes the following steps:

1 "Installing Pro Tools LE and Connecting Eleven Rack" on page 41.

2 "Launching Pro Tools LE" on page 43.

3 Configuring your system for improved performance (see Chapter 7, "Pro Tools Configuration").

4 Making audio connections to the Eleven Rack (see Chapter 8, "Eleven Rack Studio Setup").

💡 *The Pro Tools Installer disc includes additional software for your system. For more information, see "Additional Software on the Pro Tools Installer Disc" on page 43.*

Installing Pro Tools LE and Connecting Eleven Rack

Before connecting your Eleven Rack to the computer, you need to install Pro Tools LE software.

⚠ *Do not start this procedure with your Eleven Rack connected to your computer.*

To install Pro Tools LE on Mac OS X:

1 Make sure you are logged in as an Administrator for the account where you want to install Pro Tools.

📄 *For details on Administrator privileges in Mac OS X, see your Apple OS X documentation.*

2 Insert the Pro Tools LE Installer disc in your DVD drive.

3 On the Installer disc, locate and double-click Install Pro Tools LE.mpkg.

Install Pro Tools LE.mpkg icon

4 Follow the on-screen instructions to proceed with installation.

5 Click Continue each time you are prompted.

6 At the Installation Type page, do one of the following:

- To install all Pro Tools application files and free plug-in suites (and associated content), leave the default Installation options selected and click Continue.

– or –

- Select (or deselect) a custom configuration of Installation options (see "Installation Options" on page 42) and click Continue.

7 Click Install.

8 If prompted, enter your Administrator password and click OK to authenticate the installation.

9 Follow the remaining on-screen instructions.

10 When installation is complete, click Restart.

11 After the computer has started, connect the small end of the included USB cable to the USB port on Eleven Rack and connect the other end to any available USB port on your computer.

⚠️ *Eleven Rack may not function properly if connected to a USB hub. If you need to use a hub for other USB peripherals, connect the hub to a separate USB port; Eleven Rack must be connected to a dedicated port on the computer in order to function properly.*

Installation Options

Pro Tools LE Options

To install a subset of Pro Tools software and plug-ins (and associated content), click the reveal triangle for the Pro Tools LE option in the installer, and deselect any of the following options that you do *not* want installed.

Application Files (Required for Pro Tools) Installs the Pro Tools application and supporting library files needed to run Pro Tools. This option also installs the Digidesign CoreAudio Driver. This option must be selected to install Pro Tools.

DigiRack Plug-Ins Installs free plug-ins including DigiRack plug-ins, free Bomb Factory plug-ins, TL Utilities, and Digidesign D-Fi and Maxim plug-ins.

Pro Tools Creative Collection Installs a set of free RTAS effects plug-ins and virtual instrument plug-ins (including over 4 GB of associated sample content). For more information, see the *Creative Collection Plug-ins Guide*.

Additional Options

The Pro Tools installer provides the following additional options to install along with Pro Tools software and plug-ins.

Digidesign CoreAudio Driver This option installs the Digidesign CoreAudio Driver, which lets you use qualified audio interfaces with third-party applications that support the CoreAudio Driver standard.

Avid Video Engine This option lets you integrate Avid® video peripherals (such as the Avid Mojo® with your Pro Tools system).

MIDI I/O Driver The MIDI I/O™ Driver is required if you are using the Digidesign MIDI I/O interface.

Launching Pro Tools LE

When launching Pro Tools LE the first time, you are prompted to enter an authorization code to validate your software. The code begins with the letters "DIGI".

To authorize Pro Tools LE software:

1 Make sure Eleven Rack is connected to your computer.

2 Click the Pro Tools LE icon in the Dock (or double-click the application icon in the Pro Tools folder inside the Digidesign folder).

3 Enter the authorization code in the dialog (making sure to type it exactly as printed, and observing any spaces and capitalization), then click Validate. (Your authorization code is located on a sticker on the Pro Tools LE DVD wallet.)

4 Use the Quick Start dialog to do one of the following:

- Create a new session from template.
- Create a new blank session.
- Open any other session on your system.

Quick Start dialog

📖 *For more information on the Quick Start dialog and session templates, see the Pro Tools Reference Guide (Help > Pro Tools Reference Guide).*

Additional Software on the Pro Tools Installer Disc

The Pro Tools LE Installer disc provides additional software for your system, including audio drivers (for playing other audio applications through your Digidesign hardware) and a Pro Tools demo session.

💡 *Check your Pro Tools Installer disc for additional software and installers.*

Third-Party Applications and Plug-ins

Your Pro Tools package also includes several free applications and plug-ins from selected Digidesign Third Party developers. Once you've completed your Pro Tools installation, you can install these separately. Go to the Additional Files/3rd Party Content folder on the Pro Tools LE Installer disc.

Eleven Rack CoreAudio Driver

The Eleven Rack CoreAudio Driver is a multi-client, multichannel sound driver that allows CoreAudio compatible applications to record and play back through Digidesign hardware.

The Eleven Rack CoreAudio Driver is installed by default when you install Pro Tools.

📖 *For information on configuring the Eleven Rack CoreAudio Driver, see the CoreAudio Drivers Guide.*

Standalone Eleven Rack CoreAudio Driver

The Eleven Rack CoreAudio Driver can be installed as a standalone driver on Mac systems that do not have Pro Tools software installed. The standalone version of this driver is available on the Pro Tools Installer disc (in the Additional Files Folder).

📖 *For information on installing and configuring the standalone version of the Eleven Rack CoreAudio Driver, see the CoreAudio Drivers Guide.*

Pro Tools Demo Session

The Pro Tools LE Installer disc includes a demo session that you can use to verify that your system is working.

The demo session for Pro Tools LE is named "Filtered Dream."

⚠ *Before installing the demo session to your audio drive, make sure the drive is configured as described in "Formatting an Audio Drive" on page 100.*

To install the demo session:

1 Insert the Pro Tools LE Installer disc into your DVD drive.

2 On the Pro Tools LE Installer disc, locate and open the Additional Files/Pro Tools Demo Sessions Installer folder.

3 Double-click Install demo session.pkg.

4 Follow the on-screen instructions.

5 When prompted, select your audio drive as the install location and click Next to begin the installation. When installation is complete, click Close.

💡 *The demo session can be opened by double-clicking the Filtered Dream.ptf file (located in the Filtered Dream Demo Session folder).*

Uninstalling Pro Tools

If you need to uninstall Pro Tools software from your computer, use the Uninstaller application.

To remove Pro Tools from your computer:

1 Make sure you are logged in as an Administrator for the account where Pro Tools is installed.

📖 *For details on Administrator privileges in Mac OS X, see your Apple OS X documentation.*

2 Go to Applications/Digidesign/Pro Tools/ Pro Tools Utilities and double-click Uninstall Pro Tools.

3 Click Continue to proceed with the uninstall.

4 Choose the type of uninstall you want to perform:

Safe Uninstall Leaves certain plug-ins and system files needed for compatibility with some Avid products. Use Safe Uninstall if you are using an Avid application or preparing to update to a CS (customer support) release.

Clean Uninstall Removes all Pro Tools files, including system files, Digidesign plug-ins, and MIDI patch names. Use Clean Uninstall whenever you are preparing to upgrade, or to troubleshoot from a clean system.

5 Click Uninstall.

6 Enter your Administrator password and click OK.

7 Click Finish to close the Installer window.

Chapter 6: Installing Pro Tools On Windows

This chapter contains information for Windows systems only. If you are installing Pro Tools on a Mac computer, see Chapter 5, "Installing Pro Tools on Mac."

If you're installing or upgrading Pro Tools HD to work with Eleven Rack, please refer to the Setup Guide for your system.

⚠ *Before installing this version of Pro Tools, refer to the Read Me information included on the Pro Tools LE Installer disc.*

Installation Overview

Installing the Eleven Rack on a Windows computer includes the following steps:

1 "Installing Pro Tools LE and Connecting Your Interface" on page 46.

2 "Launching Pro Tools LE" on page 48.

3 Configuring your system for improved performance (see Chapter 7, "Pro Tools Configuration").

4 Making audio and MIDI connections to the Eleven Rack (see Chapter 8, "Eleven Rack Studio Setup" for details).

💡 *The Pro Tools Installer disc includes additional software for your system. For more information, see "Additional Software on the Pro Tools Installer Disc" on page 48.*

Installing Pro Tools LE and Connecting Your Interface

Before connecting your Pro Tools LE interface to the computer, you need to install Pro Tools LE software.

⚠️ *Do not start this procedure with your Eleven Rack connected to your computer.*

To install Pro Tools LE:

1 Start Windows, logging in with Administrator privileges. For details on Administrator privileges, refer to your Windows documentation.

2 Insert the Pro Tools LE Installer disc in your DVD drive and do one of the following:

- If Windows AutoRun is enabled, the installer splash screen will appear. Follow the on-screen instructions.

– or –

- If Windows AutoRun is disabled and the splash screen does not appear, locate and double-click Setup.exe on the installer disc.

Setup.exe icon

⚠️ *In Vista, if the User Account Control dialog appears, click Allow.*

3 Follow the on-screen instructions to proceed with installation and click Next when prompted.

4 To install the complete compliment of Pro Tools software and plug-ins, leave Pro Tools selected.

5 At the Select Features page, do one of the following:

- To install all Pro Tools application files and free plug-in suites (and associated content), leave the default Installation options selected and click Continue.

– or –

- Select (or deselect) a custom configuration of Installation options (see "Installation Options" on page 47) and click Continue.

6 Click Next.

7 Click Install.

8 When prompted, connect the small end of the included USB cable to the USB port on Eleven Rack.Connect the other end of the USB cable to any available USB port on your computer.

⚠️ *Eleven Rack may not function properly if connected to a USB hub. If you need to use a hub for other USB peripherals, connect the hub to a separate USB port; Eleven Rack must be connected to a dedicated port on the computer in order to function properly*

9 Click OK.

⚠️ *In Windows Vista, a series of Windows Security dialogs may appear. Click "Install" on each one until they go away.*

⚠ *In Windows XP, a series of Software Installation dialogs about the driver not passing Windows Logo testing may appear. Click Continue Anyway on each one until they go away.*

If any other dialogs appear (such as the "Found New Hardware" dialog), leave them open and do not click on them. These dialogs will close on their own.

10 Wait for the installer to finish installing all software components, drivers, and PACE System files before proceeding to the next step.

11 When installation is complete, click Finish and restart your computer.

Installation Options

Pro Tools LE Options

To install a subset of Pro Tools software and plug-ins (and associated content), click the plus (+) next to Pro Tools LE option in the Select Features page of the installer, and deselect any of the following options that you do *not* want installed.

Application Files (Required for Pro Tools) Installs the Pro Tools application and supporting library files needed to run Pro Tools. This option must be selected to install Pro Tools.

DigiRack Plug-Ins Installs free plug-ins including DigiRack plug-ins, free Bomb Factory plug-ins, TL Utilities, and Digidesign D-Fi and Maxim plug-ins.

Pro Tools Creative Collection Installs a set of free RTAS effects plug-ins and virtual instrument plug-ins (including over 4 GB of associated sample content). For more information, see the *Creative Collection Plug-ins Guide*.

Additional Options

The Pro Tools installer provides the following additional options to install along with Pro Tools software and plug-ins.

Mac HFS+ Disk Support Option This option lets your Pro Tools system read, write, record, and play back using Mac-formatted HFS+ disks. HFS+ disks are commonly referred to as Mac OS Extended disks.

Avid Video Engine The Avid Video Engine is required to use Pro Tools with Avid video peripherals such as the Avid Mojo.

Command|8 Controller and Driver The Command|8® driver is required if you are using the Digidesign Command|8 control surface.

Installing QuickTime

QuickTime is required for Pro Tools if you plan to include movie files, or import MP3 or MP4 (AAC) files in your sessions. QuickTime for Windows is available as a free download from the Apple website (www.apple.com).

⚠ *For information on which version of QuickTime is compatible with your version of Pro Tools, visit the compatibility pages of the Digidesign website: www.digidesign.com/compatibility*

To install QuickTime:

1 Visit www.apple.com and go to the QuickTime page.

2 Download the QuickTime installer application to your computer.

3 Double-click the QuickTime installer application and follow the on-screen installation instructions.

4 Restart your computer.

Launching Pro Tools LE

When launching Pro Tools LE the first time, you are prompted to enter an authorization code.

To authorize Pro Tools LE software:

1 Make sure Eleven Rack is connected to your computer.

2 Double-click the Pro Tools LE shortcut on your desktop (or the application icon in the Pro Tools folder inside the Digidesign folder).

3 Enter the authorization code in the dialog (making sure to type it exactly as printed, and observing any spaces and capitalization), then click Validate. (Your authorization code is located on a sticker on the Pro Tools LE DVD wallet.)

4 Use the Quick Start dialog to do one of the following:

- Create a new session from template.
- Create a new blank session.
- Open any other session on your system.

Quick Start dialog

📖 *For more information on the Quick Start dialog and session templates, see the Pro Tools Reference Guide (Help > Pro Tools Reference Guide).*

Additional Software on the Pro Tools Installer Disc

The Pro Tools LE Installer disc provides additional software for your system, including audio drivers (for playing other audio applications through your Digidesign hardware) and a Pro Tools demo session.

💡 *Refer to your Pro Tools Installer disc for additional software and installers.*

Third-Party Applications and Plug-ins

Your Pro Tools package also includes several free applications and plug-ins from selected Digidesign Third Party developers. Once you've completed your Pro Tools installation, you can install these separately. Go to the Additional Files\3rd Party Content folder on the Pro Tools LE Installer disc.

Windows Audio Drivers

The Digidesign ASIO Driver and WaveDriver Windows System Audio Driver let you use your Digidesign Eleven Rack hardware interface with third-party applications that support the ASIO Driver or WaveDriver MME (Multimedia Extension).

The Digidesign ASIO Driver and WaveDriver for Eleven Rack are automatically installed when you install Pro Tools.

Digidesign ASIO Driver

The Digidesign ASIO (Audio Sound Input Output) Driver is a single-client multichannel sound driver that allows third-party audio programs that support the ASIO standard to record and play back through Digidesign hardware.

📖 *For detailed information on configuring the Digidesign ASIO Driver, see the Windows Audio Drivers Guide.*

Digidesign WaveDriver

(Windows XP Only)

The Digidesign WaveDriver Windows System Audio Driver is a single-client, stereo sound driver that allows third-party audio programs that support the WaveDriver MME (Multimedia Extension) standard to play back through Digidesign hardware.

📖 *For detailed information on configuring the Digidesign WaveDriver, see the Windows Audio Drivers Guide.*

Standalone Windows Audio Drivers

Digidesign Windows Audio Drivers can be installed on Windows systems that do not have Pro Tools software installed. Use the standalone version of the Digidesign Windows Audio Drivers installer (Digidesign Audio Drivers Setup.exe), which is available on the Pro Tools LE Installer disc.

📖 *For information on installing and configuring the standalone version of the Digidesign Windows Audio Drivers, see the Windows Audio Drivers Guide.*

Pro Tools Demo Session

The Pro Tools LE Installer disc includes a demo session that you can use to verify that your system is working.

The demo session for Pro Tool LE is named "Filtered Dream."

⚠️ *Before installing the demo session to your audio drive, make sure the drive is configured as described in "Formatting an Audio Drive" on page 100.*

To install the demo session:

1 Insert the Pro Tools LE Installer disc into your DVD drive.

2 On the Pro Tools LE Installer disc, locate and open the Additional Files\Pro Tools Demo Sessions Installer folder.

3 Double-click LE Demo Session Setup.exe.

4 Follow the onscreen instructions.

5 When prompted, select your audio drive as the install location and click Next to begin the install.

6 When installation is complete, click Finish.

💡 *The demo session can be opened by double-clicking the Filtered Dream.ptf file (located in the Filtered Dream Demo Session folder).*

Uninstalling Pro Tools

Use the Uninstall Pro Tools application to uninstall Pro Tools software from your computer.

To uninstall Pro Tools from your computer:

1 Start Windows, logging in with Administrator privileges. For details on Administrator privileges, refer to your Windows documentation.

2 Go to C:\Program Files\Digidesign\ Pro Tools\Pro Tools Utilities and double-click Uninstall Pro Tools.exe.

3 Click Next.

4 Click Uninstall to proceed with the uninstallation.

Chapter 7: Pro Tools Configuration

After you have connected your system and installed Pro Tools software, you are ready to start up and configure your Pro Tools system.

Starting Up or Shutting Down Your System

To ensure that the components of your Pro Tools system communicate properly with each other, you need to start them in a particular order.

Start up your Pro Tools system in this order:

1 Lower the volume of all output devices in your system.

2 Turn on your Eleven Rack.

3 Turn on any external hard drives. Wait approximately ten seconds for them to spin up to speed.

4 Turn on any control surfaces (such as Command|8).

5 Turn on any MIDI interfaces, MIDI devices, or synchronization peripherals.

6 Turn on your computer.

7 Launch Pro Tools or any third-party audio or MIDI applications.

Shut down your Pro Tools system in this order:

1 Quit Pro Tools and any other running applications.

☼ *To quit Pro Tools, choose Pro Tools > Quit (Mac) or File > Exit (Windows).*

2 Turn off or lower the volume of all output devices in your system.

3 Turn off your computer.

4 Turn off any MIDI interfaces, MIDI devices, or synchronization peripherals.

5 Turn off any control surfaces.

6 Turn off any external hard drives.

7 Turn off your Eleven Rack.

Configuring Pro Tools LE

Pro Tools System Settings

In the Playback Engine dialog, Pro Tools LE lets you adjust the performance of your system by changing *system settings* that affect its capacity for processing, playback, and recording.

In most cases, the default settings for your system provide optimum performance, but you may want to adjust them to accommodate large or processing-intensive Pro Tools sessions.
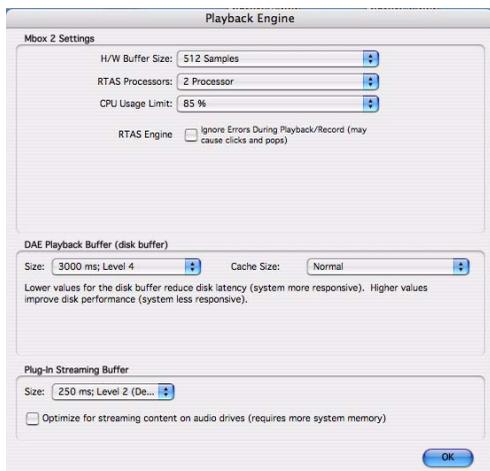
Playback Engine dialog (Structure plug-in installed)

Hardware Buffer Size

The Hardware Buffer Size (H/W Buffer Size) controls the size of the buffer used to handle host processing tasks such as RTAS plug-ins.

- Lower Hardware Buffer Size settings are useful for improving latency issues in certain recording situations or for improving certain system performance problems. On Pro Tools LE systems, lower settings reduce all input-to-output monitoring latency on any record-armed tracks or Auxiliary Input tracks with live inputs.

- Higher Hardware Buffer Size settings are useful for sessions that are using more RTAS plug-ins for playback. These settings allow for more audio processing. They can also be useful to reduce errors on machines that require a higher buffer size.

⚠ *In addition to causing slower screen response and monitoring latency, higher Hardware Buffer Size settings can increase the latency caused by RTAS plug-ins, and affect the accuracy of plug-in automation, mute data, and MIDI track timing.*

To change the Hardware Buffer Size:

1 Choose Setup > Playback Engine.

2 From the H/W Buffer Size pop-up menu, select the audio buffer size, in samples.

3 Click OK.

💡 *Low Latency Monitoring mode can be used to circumvent latency caused by higher buffer settings when recording. This can be toggled on and off by clicking Options > Low Latency Monitoring in Pro Tools.*

RTAS Processors

The RTAS Processors setting determines the number of processors in your computer allocated for RTAS (Real-Time AudioSuite) plug-in processing.

With computers that have multiple processors, or that feature multi-core processing or hyperthreading, this setting lets you enable multiprocessor support for RTAS plug-ins. Used in combination with the CPU Usage Limit setting, the RTAS Processors setting lets you control the way RTAS processing and other Pro Tools tasks are handled by the system.

For example:

- For sessions with large numbers of RTAS plug-ins, you can allocate 2 or more processors to RTAS processing and set a high CPU Usage Limit.

- For sessions with few RTAS plug-ins, you can allocate fewer processors to RTAS processing and set a low CPU Usage Limit to leave more CPU resources available for automation accuracy, screen response, and video.

- Depending on the importance of video and overall screen response, and on the density of automation being employed, try different combinations of RTAS Processors and CPU Usage Limit settings to achieve the best results. For example, to improve screen response in a medium-sized session using a moderate number of RTAS plug-ins, try reducing the number of RTAS plug-ins, but keep the CPU Usage Limit set to the maximum (up to 99% on a single processor system).

To set the number of RTAS Processors:

1 Choose Setup > Playback Engine.

2 From the RTAS Processing pop-up menu, select the number of available processors you want to allocate. The number of processors available varies depending on how many processors are available on your computer:

- Select 1 Processor to limit RTAS processing to one CPU in the system.

- Choose 2 Processors to enable load balancing across two available processors.

- On systems running four or more processors, choose the number of processors for RTAS processing.

3 Click OK.

System Usage Window and RTAS Processing

The System Usage window (Window > System Usage) displays the combined amount of RTAS processing occurring on all enabled processors with a single indicator, regardless of how many processors are available in the system. If the System Usage Window shows that you are at the limit of available resources, increase the number of RTAS processors and adjust the CPU Usage Limit setting.

CPU Usage Limit

The CPU Usage Limit setting controls the percentage of CPU resources allocated to Pro Tools host processing tasks. Used in combination with the RTAS Processors setting, the CPU Usage Limit setting lets you control the way Pro Tools tasks are carried out by the system.

- Lower CPU Usage Limit settings limit the effect of Pro Tools processing on other CPU-intensive tasks, such as screen redraws, and are useful when you are experiencing slow system response, or when running other applications at the same time as Pro Tools.

- Higher CPU Usage Limit settings allocate more processing power to Pro Tools, and are useful for playing back large sessions or using more RTAS plug-ins.

The maximum available CPU Usage Limit depends on the number of processors in your computer and on the number of processors you specify for RTAS processing. This value can range from 85% for single-processor computers, and 99% for multiprocessor computers (which dedicate one entire processor to Pro Tools).

On multiprocessor computers, the maximum CPU Usage Limit is reduced when you use all your processors (as selected in the RTAS Processing pop-up menu). For example, on dual-processors, the limit is 90%. On four-processor computers, the limit is 95%.

⚠ *Increasing the CPU Usage Limit may slow down screen responses on slower computers.*

To change the CPU Usage Limit:

1 Choose Setup > Playback Engine.

2 From the CPU Usage Limit pop-up menu, select the percentage of CPU processing you want to allocate to Pro Tools.

3 Click OK.

RTAS Engine (RTAS Error Suppression)

The RTAS Engine option determines RTAS error reporting during playback and recording. This is especially useful when working with instrument plug-ins.

You should only enable RTAS error suppression if you are experiencing frequent RTAS errors that are interrupting your creative workflow. When RTAS error suppression is enabled, you can experience a degradation of audio quality. However, this may be acceptable in order to avoid interrupting playback and recording when working with instrument plug-ins. Be sure to disable RTAS error suppression when you need to ensure the highest possible audio quality, such as for a final mix.

To enable RTAS error suppression:

1 Choose Setup > Playback Engine.

2 Select Ignore Errors During Playback/Record.

3 On Mac, you can also select Minimize Additional I/O Latency.

4 Click OK.

RTAS Error Suppression Options

Ignore Errors During Playback/Record When enabled, Pro Tools continues to play and record even if the RTAS processing requirements exceed the selected CPU Usage Limit. This can result in pops and clicks in the audio, but does not stop the transport.

Minimize Additional I/O Latency (Mac Only) When enabled, any additional latency due to suppressing RTAS errors during playback and record is minimized to 128 samples. Suppressing RTAS errors requires at least 128 samples of additional buffering on some systems. If this option is disabled, the buffer is half the H/W Buffer Size, or at least 128 samples (whichever is greater). If you are on an older, slower computer, you may want to disable this option to avoid adverse performance.

This option is only available on Mac if the Ignore Errors During Playback/Record option is enabled.

DAE Playback Buffer Size

The DAE Playback Buffer Size setting determines the amount of memory DAE allocates for disk buffers. In addition to levels, the DAE Playback Buffer Size shows values in milliseconds, which indicate the amount of audio buffered when the system reads from disk.

The optimum DAE Playback Buffer Size for most disk operations is 1500 msec; Level 2 (Default).

• DAE Playback Buffer Size settings lower than 1500 msec; Level 2 (Default) may improve playback and recording initiation speed, as well as preview in context in DigiBase browsers. However, a lower setting may make it difficult to play or record tracks reliably with sessions containing a large number of tracks or a high density of edits, or with systems that have slower or heavily-fragmented hard drives.

• DAE Playback Buffer Size settings higher than 1500 msec; Level 2 (Default) allow higher track count, higher density of edits in a session, or the use of slower hard drives. However, a higher setting may increase the time lag when starting playback or recording, starting preview in context from DigiBase browsers, or cause a longer audible time lag while editing during playback.

Using a larger DAE Playback Buffer Size leaves less system memory for other tasks. The default setting of 1500 msec (Level 2) is recommended unless you are encountering –9073 ("Disk too slow or fragmented") errors.

To change the DAE Playback Buffer Size:

1 Choose Setup > Playback Engine.

2 From the DAE Playback Buffer pop-up menu, select a buffer size. Memory requirements for each setting are shown at the bottom of the Playback Engine dialog.

3 Click OK.

If Pro Tools needs more system memory for the DAE Playback Buffer, it will prompt you to restart your computer.

Cache Size

The Cache Size setting determines the amount of memory DAE allocates to pre-buffer audio for playback and looping when using Elastic Audio.

Minimum Reduces the amount of system memory used for disk operations and frees up memory for other system tasks. However, performance when using Elastic Audio features may decrease.

Normal Is the optimum Cache Size for most sessions.

Large Improves performance when using Elastic Audio features, but it also decreases the amount of memory available for other system tasks, such as RTAS processing.

Using a larger Cache Size leaves less system memory for other tasks. The default setting of Normal is recommended unless you are encountering -9500 ("Cache too small") errors.

To change the Cache Size:

1 Choose Setup > Playback Engine.

2 From the Cache Size pop-up menu, select a disk cache size.

3 Click OK.

Plug-in Streaming Buffer Size

(Structure Plug-in Only)

This setting appears in the Playback Engine dialog only if Structure, Structure LE, or Structure Free is installed on your system. The Plug-in Streaming Buffer Size determines the amount of memory DAE allocates for streaming playback from disk with the Structure plug-in. This setting only affects playback if disk streaming is activated in Structure's plug-in controls (see the *Structure Plug-in Guide* for more information).

The optimum Plug-in Streaming Buffer Size for most sessions is 250 ms (Level 2).

- Plug-in Streaming Buffer Size settings lower than 250 msec (Level 2) reduce the amount of system memory used for sample playback and frees up memory for other system tasks. However, audio quality of sample playback may decrease.

- Plug-in Streaming Buffer Size settings higher than 250 msec (Level 2) improve the audio quality of sample playback, but they also decrease the amount of memory available for other system tasks, such as RTAS processing.

Using a larger Plug-in Streaming Buffer Size leaves less system memory for other tasks. The default setting of 250 ms (Level 2) is recommended unless you are experiencing problems with the audio quality of sample playback.

To change the Plug-in Streaming Buffer Size:

1 Choose Setup > Playback Engine.

2 From the Plug-in Streaming Buffer Size pop-up menu, select a buffer size.

3 Click OK.

Optimizing the Plug-in Streaming Buffer Size

(Structure Plug-in Only)

This option appears in the Playback Engine dialog only if one of the Structure sampler instrument plug-in is installed on your system. This option is useful when you are playing samples from the same drive that contains audio for the current session. When this option is selected, Pro Tools automatically optimizes the size of the Plug-in Streaming Buffer to facilitate disk access for both Pro Tools and Structure. The Plug-in Streaming Buffer Size pop-up menu is unavailable when this option is selected.

To set Pro Tools to optimize the Plug-in Streaming Buffer Size:

1 Choose Setup > Playback Engine.

2 Select the Optimize for Streaming Content option.

3 Click OK.

Pro Tools Hardware Settings

In the Hardware Setup dialog, Pro Tools lets you set the default sample rate and clock source for your system, as well as a range of controls specific to each type of audio interface.

Default Sample Rate

The Sample Rate setting appears as the default sample rate when you create a new session. (This setting is available in the Hardware Setup dialog only when no session is open.) The following sample rates are available:

- 44.1 kHz

- 48 kHz

- 88.2 kHz

- 96 kHz

💡 *You can change the sample rate when creating a new Pro Tools session by selecting a different sample rate in the New Session dialog. (Refer to the Pro Tools Reference Guide for details.)*

To change the default Sample Rate:

1 Choose Setup > Hardware.

Hardware Setup dialog for Eleven Rack

2 Select the sample rate from the Sample Rate pop-up menu.

3 Click OK.

Clock Source

The Pro Tools Hardware Setup dialog lets you select the Clock Source for the system.

Internal Use this setting if you are recording analog signals directly into Eleven Rack, and/or are recording digital inputs into the AES/EBU or S/PDIF ports on Eleven Rack, where the digital device is synchronized to the appropriate digital output.

AES/EBU Use this setting if you are recording through the Eleven Rack AES/EBU inputs from an external digital device. This setting will synchronize Pro Tools to that digital device.

S/PDIF Use this setting if you are recording through the Eleven Rack S/PDIF inputs from an external digital device. This setting will synchronize Pro Tools to that digital device.

To select the Clock Source:

1 Choose Setup > Hardware.

2 Choose the clock source from the Clock Source pop-up menu.

3 Click OK.

⚠️ *Your digital input device must be connected and powered on for Pro Tools to synchronize to it. If your input device is not powered on, leave the Clock Source set to Internal.*

Digital Format

The Pro Tools Hardware Setup dialog lets you select the format of Eleven Rack's digital I/Os.

AES/EBU Use this setting if you are interfacing Eleven Rack with a digital device that uses the AES/EBU format.

S/PDIF Use this setting if you are interfacing Eleven Rack with a digital device that uses the S/PDIF format.

To select the Digital Format:

1 Choose Setup > Hardware.

2 Select which digital I/O port on Eleven Rack will be active under Digital Format.

3 Click OK.

Configuring I/O Setup

Using the I/O Setup dialog, you can label Pro Tools LE input, output, insert, and bus *signal paths*. The I/O Setup dialog provides a graphical representation of the inputs, outputs, and signal routing of the Eleven Rack.

Pro Tools LE has default I/O Setup settings that will get you started. Use the I/O Setup dialog only if you want to rename the default I/O paths.

To rename I/O paths in I/O Setup:

1 Choose Setup > I/O.
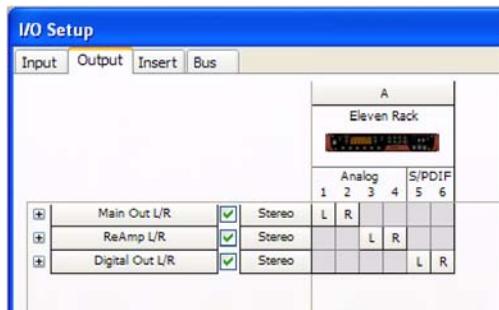
I/O Setup dialog for Eleven Rack

2 Click the Input, Output, Insert, or Bus tab to display the corresponding connections.

3 To change the name of a path or subpath, double-click directly on the Path Name, type a new name for the path, and press Enter.

4 Click OK.

📄 *See the Pro Tools Reference Guide (Help > Pro Tools Reference Guide) for more information on renaming I/O paths.*

Configuring MIDI Setup

If you plan to use any MIDI devices with Pro Tools, do one of the following:

▪ On Mac, configure your MIDI setup with Audio MIDI Setup.

– or –

▪ On Windows, configure your MIDI setup with MIDI Studio Setup.

Backing Up your System Configuration

After configuring your system and Pro Tools, you should save an image of your system drive using a backup utility such as Norton Ghost. By doing this, you can quickly restore your system configuration and settings if you encounter any problems.

Optimizing a Mac System for Pro Tools

To ensure optimum performance with Pro Tools, configure your computer before using Pro Tools hardware and software.

📄 *For Windows System Optimization, see "Optimizing a Windows System for Pro Tools" on page 62.*

Before configuring your computer, make sure you are logged in as an Administrator for the account where you want to install Pro Tools. For details on Administrator privileges in Mac OS X, refer to your Apple OS X documentation.

⚠ *Do not use the Mac OS X automatic Software Update feature, as it may upgrade your system to a version of Mac OS that has not yet been qualified for Pro Tools.*

For details on qualified versions of Mac OS, refer to the latest compatibility information on the Digidesign website (www.digidesign.com/compatibility).

Turning Off Software Update

To turn off the Software Update feature:

1 Choose System Preferences from the Apple menu and click Software Update.

2 Click the Software Update tab.

3 Deselect Check for Updates.

Turning Off Energy Saver

To turn off the Energy Saver feature:

1 Choose System Preferences from the Apple menu and click Energy Saver.

2 Click the Sleep tab and do the following:
- Set the computer sleep setting to Never.
- Set the display sleep setting to Never.
- Deselect Put the hard disk(s) to sleep when possible option.

Setting Processor Performance

(Mac G5 Computers and G4 Powerbooks Only)

To set the Processor Performance:

1 Choose System Preferences from the Apple menu and click Energy Saver.

2 Click the Options tab and set Processor Performance to Highest.

Disable or Reassign Mac Keyboard Shortcuts Used by Pro Tools

To have the full complement of Pro Tools keyboard shortcuts, you need to disable or reassign any conflicting Mac OS X Keyboard Shortcuts in the Apple System Preferences, including the following:

- "Show Help menu"
- Under "Keyboard Navigation"
  - "Move focus to the window drawer"
- Under "Dock, Exposé, and Dashboard"
  - "Automatically hide and show the Dock"
  - "All windows"
  - "Application windows"
  - "Desktop"
  - "Dashboard"
  - "Spaces"
- Under "Spotlight"
  - "Show Spotlight search field"
  - "Show Spotlight window"

📄 *For a complete list of Pro Tools keyboard shortcuts, see the Keyboard Shortcuts Guide (Help > Keyboard Shortcuts).*

To disable or reassign Mac OS X keyboard shortcuts:

1 Choose System Preferences from the Apple menu and click Keyboard & Mouse.

2 Click the Keyboard Shortcuts tab.

3 Do one of the following:
- Deselect the Mac OS X options that conflict with Pro Tools keyboard shortcuts.

  – or –
- Assign different, non-conflicting keyboard shortcuts to the corresponding Mac OS X options.

Reassign Spaces Keyboard Shortcuts

If you want to use Spaces, you should reassign the Spaces keyboard shortcuts to avoid conflicts with important Pro Tools keyboard shortcuts. You can reassign Spaces keyboard shortcuts to use a combination of modifier keys (Command+Option+Control+Shift) in addition to the default Spaces keyboard shortcut assignments to avoid these conflicts.

To reassign Spaces keyboard shortcuts to use modifier key combinations that do not conflict with Pro Tools keyboard shortcuts:

1 Choose System Preferences from the Apple menu and click Exposé & Spaces.

2 Click the Spaces tab.

3 Ensure that Enable Spaces is selected.

4 Press and hold Command+Option+Control+Shift and select "Control+Option+Shift+Command+F8" from the "To activate Spaces" pop-up menu.

5 Press and hold Command+Option+Control+Shift and select "Control+Option+Shift+Command+Arrow Keys" from the "To switch between spaces" pop-up menu.

6 Press and hold Command+Option+Control+Shift and select "Control+Option+Shift+Command+Number Keys" from the "To switch directly to a space" pop-up menu.

Disabling Spotlight Indexing

The Mac OS X Spotlight feature automatically indexes files and folders on local hard drives in the background. In most cases, this is not a concern for normal Pro Tools operation. However, if Spotlight starts indexing drives while recording in a Pro Tools session with high track counts for an extended period of time, it can adversely affect Pro Tools system performance. You may want to disable Spotlight indexing for all local drives before using Pro Tools for big recording projects.

⚠ *Disabling Spotlight indexing also disables the Find function in Mac OS X.*

To disable Spotlight indexing:

1 Choose System Preferences from the Apple menu and click Spotlight.

2 In the Spotlight window, click the Privacy tab.

3 To prevent indexing of a drive, drag its icon from the desktop into the list.

Enabling Journaling for Audio Drives

To yield higher performance from audio drives, enable journaling.

To enable journaling:

1 Launch the Disk Utility application, located in Macintosh HD/Applications/Utilities.

2 Select the volume in the left column of the Disk Utility window.

3 Click Enable Journaling in the toolbar.

Optimizing a Windows System for Pro Tools

To ensure optimum performance with Pro Tools LE, configure your computer before using Pro Tools hardware and software.

📋 *For Mac System Optimization, see "Optimizing a Mac System for Pro Tools" on page 59.*

Before configuring your computer, make sure you are logged in as an Administrator for the account where you want to install Pro Tools. For details on Administrator privileges, see your Windows documentation.

Required Optimizations

To ensure optimum performance with Pro Tools, configure the following settings before using Pro Tools hardware and software.

⚠️ *When you are finished changing Windows system settings, restart your computer.*

Enabling DMA

Enabling your computer's DMA (Direct Memory Access) frees up CPU bandwidth so your computer can do other Pro Tools tasks.

In most cases the DMA option will already be set correctly, as Windows detects and activates DMA mode by default.

To enable DMA for any IDE hard drives:

1 Right-click Computer (Windows Vista) or My Computer (Windows XP).

2 In the left-hand pane of the Computer Management window under System Tools, click on Device Manager.

3 In the right-hand pane, click the plus (+) sign to expand IDE ATA/API Controllers.

4 Right-click on the Primary IDE Controller and select Properties.

5 Click the Advanced Settings tab.

6 For each device, do one of the following depending on your operating system:

- Check the box Enable DMA (Windows Vista)

– or –

- Set the Transfer Mode to DMA if available (Windows XP)

7 Click OK.

8 Repeat the above steps for any additional IDE Channels.

9 Close the Computer Management window.

Disabling System Standby and Power Management

When using Pro Tools, the Windows System Standby power scheme must be set to Always On. This helps prevent long record or playback passes from stopping due to system resources powering down.

To configure Windows Power Management (Windows Vista):

1 Choose Start > Control Panel.

2 Double-click Power Options.

3 In the Power Options window, select High Performance.

4 Click Change plan settings.

5 In the Edit Plan Settings window, click Change advanced power settings.

6 In the Power Options dialog, reveal Hard disk > Turn off hard disk after.

7 Click the Setting option.

8 Select the value in the Setting (Minutes) field and press Backspace on your computer keyboard.

9 Press Enter. The hard disk setting changes to Never and the Power Options dialog closes.

10 In the Edit Plan Settings window, click Save changes and close the window.

To configure Windows Power Management (Windows XP):

1 Choose Start > Control Panel.

2 Double-click Power Options.

3 Click the Power Schemes tab.

4 From the Power Schemes pop-up menu, select Always.

5 Verify that the following settings are set to Never:

- Turn off hard disks
- System standby
- System hibernates

6 Click OK.

Disabling User Account Control

(Windows Vista Only)

For optimal performance with Pro Tools on Windows Vista, disable User Account Control (UAC).

To disable User Account Control (UAC):

1 Choose Start > Control Panel.

2 Double-click User Accounts.

3 Click Turn User Account Control on or off.

4 Deselect the Use User Account Control (UAC) to help protect your computer option.

5 Click OK.

Recommended Optimizations

Pro Tools can also be affected by other software and hardware drivers installed on your computer. For best possible performance, it is recommended (but not required) that you do the following:

- Avoid running any unneeded programs at the same time as Pro Tools.
- Turn off any software utilities that run in the background, such as Windows Messenger, calendars, and disk maintenance programs.
- Turn off any non-essential USB devices while running Pro Tools.
- If your video display card supports it, enable Bus Mastering in the manufacturer's Control Panel. See the manufacturer's instructions for details.

Optional Optimizations

The following system optimizations may help Pro Tools perform better on some systems. It is recommended that you only try these optimizations if necessary, as they may disable or adversely affect the functionality of other programs on your system.

Disabling Network Cards

If applicable, disable any networking cards (other than a FireWire card that you might use to connect an external drive to your system).

To disable a network card:

1 Right-click Computer (Windows Vista) or My Computer (Windows XP) and choose Manage.

2 Under System Tools, select Device Manager.

3 In the Device Manager window, double-click Network adapters, then double-click the Network Adapter card you want to disable.

4 Under the General tab, choose "Do not use this device (disable)" from the Device Usage pop-up menu, and click OK.

5 Close the Computer Management window.

Adjusting Processor Scheduling

To adjust Processor Scheduling performance:

1 Right-click Computer (Windows Vista) or My Computer (Windows XP) and choose Properties.

2 in the System Properties window, click the Advanced tab.

3 Under the Performance section, click the Settings button.

4 In the Performance Options window, click the Advanced tab.

5 Under the Processor Scheduling section, select the Background Services option.

6 Under the Memory Usage section, select the System cache option.

7 Click OK to close the Performance Options window.

8 Click OK to close the System Properties window.

9 Restart the computer for the changes to take effect.

Disabling System Startup Items

The fewer items in use by your computer, the more resources are available for Pro Tools. Some startup applications may be consuming unnecessary CPU resources, and can be turned off.

If you disable any of the following startup items, do so carefully:

- Portable media serial number (required for some applications that utilize a copy protection key)
- The Plug and Play service
- Event log
- Cryptographic services

To Disable System Startup Items:

1 From the Start menu, type "msconfig" in Start Search (Windows Vista) or in Run (Windows XP) and click OK to open the System Configuration Utility.

2 Under the General tab, choose Selective Startup.

3 Deselect Load Startup Items and click OK.

4 Click Restart to restart the computer.

5 After restarting, the computer displays a System Configuration message. Check to see if Pro Tools performance has increased before you deselect the Don't show this message again option. If performance has not changed, run "msconfig" and return your computer Startup Selection back to Normal Startup - load all device drives and services. Alternatively, try disabling Startup items and non-essential processes individually.

Chapter 8: Eleven Rack Studio Setup

This chapter will take you through connecting and configuring Eleven Rack to work at its best with the other gear in your recording setup, like speakers, headphones, instruments and microphones.

Figure 8. Eleven Rack Studio Setup

📖 *This first section addresses the connections you'll want to make when recording with Pro Tools LE. If you're using Eleven Rack as a processor with a Pro Tools HD system, see "Using Eleven Rack with a Pro Tools|HD or M-Powered System" on page 71.*

Listen to Your Sound

To hear audio from Pro Tools, you will need to connect a set of speakers or a pair of headphones to Eleven Rack. Sound from Pro Tools *cannot* be played through your computer's speakers or your computer's sound output.

Connecting the Main Outputs

The Main outputs on the back of Eleven Rack are male XLR connectors. To listen to audio coming from Eleven Rack, these outputs should be connected to a set of monitor speakers (self-powered or with an external amplifier) or a mixer or monitor controller system.

Main outputs Left and Right output the audio that is routed to the Main Out L/R output path within Pro Tools.

⚠ *The signal coming out of the Main outputs is at line level (+4 dbu). Take care to use line-level (not mic-level) inputs when connecting Eleven Rack to a mixer.*

Connecting a Pair of Headphones

On the front panel of the Eleven Rack is a 1/4-inch jack to connect a pair of headphones.

.The Phones jack outputs the audio that is routed to the Main Out L/R output path within Pro Tools.

Setting Monitor Volume

The Volume knob on the front of Eleven Rack adjusts the output volume of the Main outputs and the Headphone Outs simultaneously. You can offset the Headphone volume from the Main output volume (higher or lower) by changing the setting in User Options Mode. For more details, see "Headphone Volume" on page 94.

Analog Audio Inputs

Eleven Rack features three types of analog inputs. There is a dedicated guitar (instrument-level) input, a stereo line input, and a mic-level input. Choose the input type that fits the signal you want to send to Pro Tools.

Connecting Your Guitar

Use the Guitar input for instruments such as electric guitar or electric bass that usually have a lower level of output than line level instruments.

To connect a guitar or other instrument-level device to Eleven Rack:

■ Connect your instrument to the Guitar input on the front panel of Eleven Rack using a standard 1/4-inch TS guitar cable.

Connecting Line-Level Devices

Use the Line inputs for line level devices, such as keyboards, mixers, and mic preamps.

To connect a keyboard, mixer or other line-level device to Eleven Rack:

1 Plug your device into the Line inputs on the back panel of Eleven Rack using one or two standard 1/4-inch (TRS or TS) cables. If the device is mono, plug it into one of the Line inputs. If the device is stereo, plug it into both the left and right Line inputs with two cables.

2 Set your device's output volume to its optimal level. For example, the optimal level for most keyboards is between 80% and 100% of maximum volume.

3 If your device has unbalanced (TS) outputs, set the line inputs on Eleven Rack to –10 dVB by toggling the Level switch between the Line input jacks to its outward position. If your device has balanced (TRS) outputs, set the Line inputs to +4 dVB by toggling the Level switch to its inward position.

Connecting a Microphone to Eleven Rack

Eleven Rack provides an XLR mic input. It can accept a microphone, DI box, or any other mic-level device.

Eleven Rack mic-level input and controls

To connect a microphone or other mic-level device to Eleven Rack:

1 If using a microphone that may be damaged by phantom power (some ribbons, some tube condensers), flip the Phantom Power switch (labeled *48V*) to OFF.

2 Plug your microphone cable into the Mic input on the front of Eleven Rack.

3 If your microphone requires phantom power, make sure the microphone is connected, then flip the Phantom Power switch to ON.

4 Carefully turn the Gain control up to increase the input level of your microphone signal.

5 If the incoming signal seems too loud or sounds distorted, even with the Gain knob all the way down, flip the Pad switch to ON to engage the –20 dB pad.

6 On the front of the Eleven Rack, carefully turn the Gain control to the right to increase the input level of your microphone signal.

Digital Audio Input and Output

Eleven Rack provides digital inputs and outputs for AES/EBU and S/PDIF format digital audio devices. You can use these connections to record from digital sources, use external digital effects, or send Pro Tools audio to an external digital recorder.

⚠ *Eleven Rack can have devices connected to both the AES/EBU and S/PDIF ports simultaneously, but only one format of device can be used at one time. You can switch between these two formats from within Pro Tools LE, or from the front panel of Eleven Rack, if using it as a standalone processor.*

To connect a digital device to Eleven Rack, do one of the following:

• Connect the AES/EBU output on the device to the AES/EBU input on Eleven Rack, and the device's AES/EBU input to Eleven Rack's AES/EBU output, with two AES/EBU-format XLR cables.

    – or –

• Connect the S/PDIF output on the device to the S/PDIF input on Eleven Rack, and the device's S/PDIF input to Eleven Rack's S/PDIF output port, using two 75-ohm coaxial cables with male RCA connectors on both ends.

Configuring Digital Devices

When connecting to external gear digitally, Eleven Rack and Pro Tools must be set to the same sample rate and digital format as your digital device. Pro Tools must also be set to clock from the digital device, or no audio can pass between them.

To configure Pro Tools to interface with a digital device:

1 Choose Setups > Hardware Setup.

2 Select AES External or S/PDIF External from the Clock Source pop-up menu, to match with the device.

3 Change the sample rate of your external device to match the rate you are using or plan to use in your Pro Tools session. If your device operates in a limited range of sample rates, you'll need to stay within that range when choosing the sample rate for your Pro Tools session.

4 Click OK.

At this point, you can try to record some signal from the digital device (if it is a sound source, like a keyboard or CD player), inserting it onto a pre-recorded track (if it's an effects processor), and so on.

💡 *If you get no signal or a compromised signal, double-check that Pro Tools and your external device are set to the same sample rate and digital I/O format, and that Pro Tools is set to receive sync from the external device.*
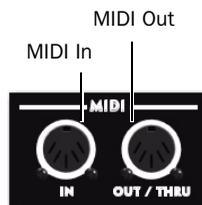
MIDI Connections

The two MIDI ports on Eleven Rack let you take advantage of all the MIDI features of Pro Tools LE, including recording and editing MIDI data for to automate controls on Eleven Rack, and/or compose using virtual or hardware MIDI sound sources.

If you need additional MIDI ports you can add a compatible USB-based MIDI interface to your system.

To connect a MIDI device to Eleven Rack:

1 Connect a standard 5-pin MIDI cable from the MIDI Out port of your device to the MIDI In port on the back of Eleven Rack.

2 If the device has a MIDI input and you plan to send MIDI signals to it from Pro Tools, connect another MIDI cable from the MIDI Out port on the back of Eleven Rack to the MIDI In port of your device.

Eleven Rack MIDI connections

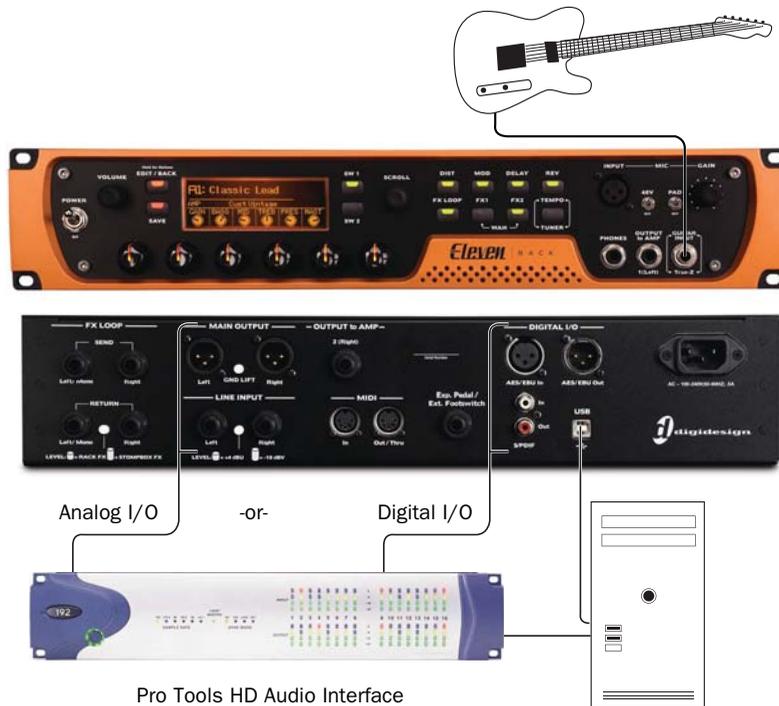# Using Eleven Rack with a Pro Tools|HD or M-Powered System

Analog I/O   -or-   Digital I/O

Pro Tools HD Audio Interface

Figure 9. Eleven Rack connected to a Pro Tools|HD system

Apart from its roles as a Pro Tools LE interface and standalone guitar processor, Eleven Rack can also be used alongside a Pro Tools|HD or Pro Tools M-Powered system, acting as a remote-controlled processing system and guitar preamp.

You'll need a digital or analog audio connection to and from the Pro Tools|HD or M-Powered system to run audio through Eleven Rack. If you want to use the Eleven Rack Control window in Pro Tools to control Eleven Rack and manage Rigs, Eleven Rack must be connected to the computer using USB.

You'll also need to install the included Pro Tools HD or M-Powered software update, unless you're already using version 8.0.1 or higher.

⚠ *The included update requires Pro Tools 8.0 software to update from. If your HD or M-Powered system has not already been updated to at least Pro Tools version 8.0, you'll need to purchase and install that upgrade before you can control Eleven Rack and manage Rigs from within Pro Tools. Visit www.digidesign.com for upgrade details.*

Audio Connections

To connect Eleven Rack to your Pro Tools interface using analog I/O:

1 Connect the Main outputs on Eleven Rack to an open pair of analog line inputs on your audio interface.

2 Hold the Edit/Back button on Eleven Rack to enter Edit mode.

3 Choose the input you need for the current task:

- If you want to re-amp pre-recorded signals through Eleven Rack, choose Line L+R.

– or –

- If you want to record an analog signal using Eleven Rack's input circuitry and Rig processing, choose the Guitar, Mic, or Line option, to match the input you're using.

4 Connect the Line inputs on Eleven Rack to an open pair of analog line outputs on your audio interface.

Press Edit/Back twice to return to the main Rig Select Screen.

To connect Eleven Rack to your Pro Tools interface using AES/EBU or S/PDIF digital I/O:

1 Connect the Eleven Rack to an open pair of digital inputs and outputs on your audio interface, either AES/EBU or S/PDIF.

2 Hold the Edit/Back button on Eleven Rack to enter User Options mode.

3 Select Rig Input, and press the SW1 button.

4 Choose the input you need for the current task:

- If you want to re-amp pre-recorded signals through Eleven Rack, choose Digital L+R.

- If you want to record an analog signal using the input circuitry and Rig processing in Eleven Rack, choose the Guitar, Mic, or Line option, to match the input you're using.

5 Press Edit/Back to move back to the previous screen.

6 Select Digital Clock/Input, and press SW1.

7 Set the Clock Source to External.

8 Set the Digital Input to AES/EBU or S/PDIF, to match the type of connection you're using.

9 Press Edit/Back to move back to the previous screen.

10 Select Digital Output, and press SW1.

11 Choose Rig Outputs.

12 Press Edit/Back twice to return to the main Rig Select Screen.

Configuring Your Pro Tools|HD or M-Powered System

First, you'll need to install the correct Pro Tools software and connect Eleven Rack to your computer using USB.

To configure your Pro Tools system to interface with Eleven Rack:

1 Install the included Pro Tools HD software update from the supplied DVD, unless Pro Tools version 8.0.1 or higher is already installed.

⚠ *A pre-existing installation of Pro Tools version 8.0 or higher is required to install this update.*

2 Use the supplied USB cable (or another USB 2.0 cable) to connect Eleven Rack to an open USB 2.0 port on your computer.

3 Launch Pro Tools. If the software has been installed correctly and Eleven Rack is connected via USB, the Eleven Rack Control window will open, giving you access to the controls and Rig management features.

📄 *For more information on controlling Eleven Rack from Pro Tools, see "The Eleven Rack Control Window" on page 76.*

Setting Eleven Rack Sample Rate and Clock Source

When Eleven Rack is connected to your computer via USB, the sample rate and clock source can no longer be set from within the User Options mode on the front panel.

When connecting Eleven Rack to your Pro Tools system digitally, clock source must be set to External, and the sample rate must match the rate of your current Pro Tools session. You can use the Digidesign Eleven Rack utility on your Mac or PC to change these settings.

To access Eleven Rack's sample rate and clock source settings when connected via USB:

1 Open the Digidesign Eleven Rack utility:
- On Mac, open System Preferences from the Apple menu and choose Digidesign Eleven Rack.

– or –
- On Windows, click the Start button, choose Control Panel and double-click Digidesign Eleven Rack.

2 The Digidesign Eleven Rack Properties window will appear.

3 Choose the desired clock source and sample rate.

4 Close the System Preferences window (Mac) or the Digidesign Eleven Rack Properties dialog (Windows) when finished.

Chapter 9: Eleven Rack with Pro Tools

This chapter shows you how to take advantage of some of the unique features that Eleven Rack brings to Pro Tools. If you've never recorded with Pro Tools before, be sure to check out the *Intro to Pro Tools Guide* that comes with Eleven Rack.

Pro Tools LE Capabilities

Pro Tools LE on Mac or Windows provides the-following capabilities with Eleven Rack:

- Eight channels of simultaneous audio input:
  - Stereo Rig output
  - All analog inputs
  - Stereo digital input
- Six channels of simultaneous audio output:
  - Main/Phones outputs
  - Output To Amp outputs
  - Stereo digital output
- Playback of up to 48 mono or stereo digital audio tracks, or a combination of playing back and recording up to 48 mono or stereo digital audio tracks, depending on the capabilities of your computer.

- Up to 128 audio tracks (with up to 48 active tracks), 128 Auxiliary Input tracks, 64 Master Fader tracks, 256 MIDI tracks, and 32 Instrument tracks per session.
- 16-bit or 24-bit audio resolution, at sample rates up to 96 kHz.
- Non-destructive, random-access editing and mix automation.
- Audio processing with up to 10 inserts per track (RTAS® plug-ins or hardware inserts).
- Up to 10 sends per track.
- Up to 32 internal mix busses.

📄 *For complete information on recording in Pro Tools, see the Pro Tools Reference Guide.*

The Eleven Rack Control Window

Figure 10. Eleven Rack Control window (in Pro Tools LE)

The Eleven Rack Control window is a special window in Pro Tools that lets you control Eleven Rack entirely from your computer. It can be accessed when using Eleven Rack as an interface with Pro Tools LE, as well as when connected to a Pro Tools HD system for control over USB.

You can open the Eleven Rack Control window by choosing Window > Eleven Rack.

Accessing the Eleven Rack Control Window

When Pro Tools LE, HD or M-Powered is launched and Eleven Rack is connected to your computer using USB, The Eleven Rack Control window is displayed. You can always access it by clicking Window > Eleven Rack.

The Eleven Rack Control window can be minimized to a basic floating window. When minimized, it shows the Rig Library menu, basic monitoring controls and a button which activates the Tuner.

Eleven Rack Control window, minimized

Similar controls can be accessed from the Guitar panel in the top bar of controls in the Edit window. Click the small amplifier-shaped icon in the Guitar panel to open the Eleven Rack Control window.

Opens Eleven Rack
Control window

Guitar panel in Edit window control toolbar

The Guitar panel can be hidden and/or moved within the toolbar. For more details, see the Pro Tools Reference guide by selecting Help > Pro Tools Reference Guide.

Rig View Section
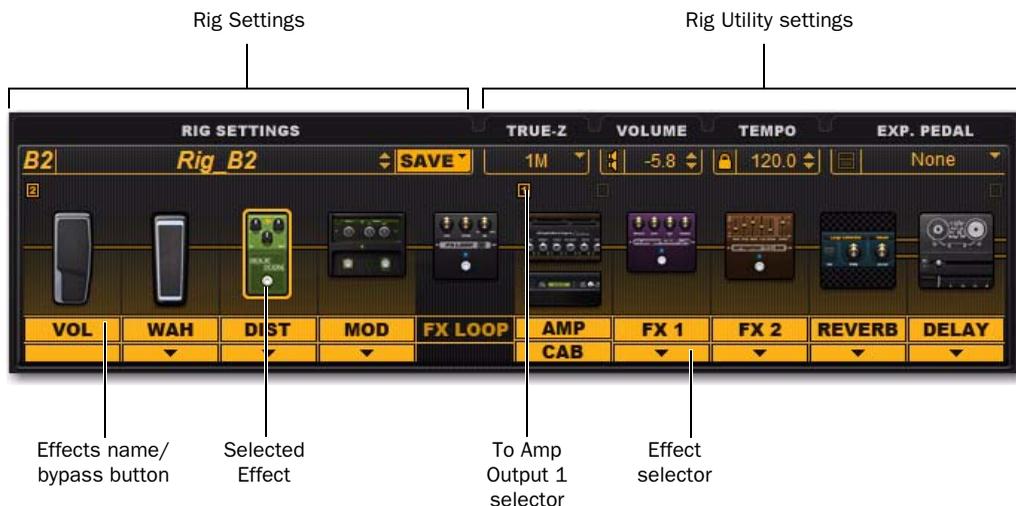
Figure 11. Eleven Rack Control window (in Pro Tools LE)

In the Rig View section, you can access all of the amp, cab, effects, and utility parameters of the current Rig, as well as load and save rigs to and from your computer.

Rig Settings

The Rig Settings section lets you load, access, and save Rigs to and from Eleven Rack and your computer.

Clicking on the Rig name brings up a menu where you can call up any Rig stored in the memory of Eleven Rack or in your computer, or load a Rig setting from an audio file with embedded Rig data.
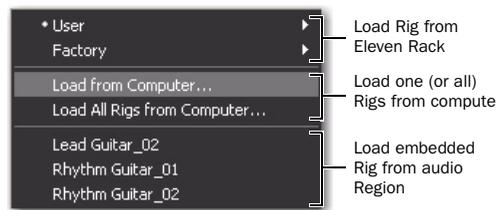
The chosen Rig will be loaded into Eleven Rack, and can then be edited via the Eleven Rack Control window or the front panel of Eleven Rack.

📖 *For info on embedding Rig data in audio, see "Embedding Rig Settings in Audio Regions" on page 84.*

Clicking on the Rig number brings up the Rig Librarian, an all-in-one view of all Rigs currently stored in the memory of Eleven Rack.

The name shown in the Rig Librarian is that of the most recently loaded Rig. When changes are been made to the Rig, the Save button turns red and the Rig number and name are shown in italics.

To save the current state of your Rig Settings:

■ Click on the Save button. You can choose to save the changes you've made to a Rig on Eleven Rack, to a file on your computer, or save all of the Rigs currently on Eleven Rack to the computer in one larger file.

The files you save to the computer can be sent to collaborators or brought with you as you work at other computers, so you always have access to your settings.

Rig Utility Settings

The Rig Utility settings section lets you control the True-Z impedance-matching circuitry, volume, tempo, and expression pedal functions for the current Rig.

Rig Tempo

The Rig Tempo menu sets the tempo of the current Rig. Set a tempo, and the time-based effects (tremolo, delay, etc) that are set to sync will follow the new tempo. You can also choose to have Rig tempo sync to the tempo of your Pro Tools session.

When Pro Tools is set to manual tempo (ignoring the Conductor track), and Eleven Rack is set to lock to Session tempo, changes in Rig tempo will shift the tempo of your Pro Tools session, and vice versa.

When Pro Tools is set to follow the Conductor track, and Eleven Rack is locked to Session tempo, any changes made in the Conductor track over time will be followed by Eleven Rack.

To lock Rig tempo to Pro Tools session tempo:

■ Click the small Lock icon next to the tempo display.

Exp. Pedal

The Exp. Pedal menu lets you set the behavior and assignment of an external expression pedal.

Multiple FX

When set to Multiple FX, the button to the left of the assignment name will highlight. Clicking this button will bring up a window where you can edit up to four parameters that will be swept by the pedal simultaneously.

Each of the four Configs can be set to one parameter of one of the devices in the Rig. The Toe and Heel settings govern the top and bottom of the sweep of the control.

💡 *If you set the Heel number higher than the Toe number, the control can be swept in reverse.*

Output to Amp Selectors

The Output to Amp selectors let you choose what point in the signal path feeds Output To Amp outputs one and two, and set the output volume for each, to better match the input sensitivity of the external amp or processor.

To set the volume of the signal sent to each To Amp output:

Left-click the chosen To Amp output selector, and adjust the volume using the fader.

To choose what signal feeds each To Amp output:

▪ Right-click one of the To Amp Output selectors, and do one of the following:

• If the selector you click is not yet assigned (greyed out), a menu is displayed, letting you choose to send the signal at the chosen location to Output to Amp output one, two, or both in stereo.

– or –

• If the selector you click is already assigned to an Output to Amp out (highlighted), you get a menu letting you assign that To Amp output to another point in the signal chain.

Amp/Cab, Effects and Pedal Settings

This section of the Rig View pane lets you reveal, select, move, and bypass all of the amp, cabinet, effects, and pedals in the current Rig. Click on a piece of gear to highlight it, and it will show up in the Control section below.

📄 *For more information on the functions of the amp, cab, and effects controls, "The Amps" on page 20, and "The Effects" on page 27.*

Bypassing Amps, Cabs, and Effects

You can toggle the various gear in the current Rig on and off by clicking the name of the desired element.

Changing The Order

In the Rig View pane, you can change the order of the pedals and effects in the current Rig just like you can in the Rig View on Eleven Rack. Visualize the signal travelling from left to right through the signal chain.

To change the order of gear in the signal path:

1 Click and drag a device.

2 Drop it into the desired position.

💡 *Some items in the Rig have restrictions about where they can be placed. When dragging a restricted item (like the FX Loop), it will snap between the allowed spots.*

📄 *For more information on signal routing, see "Don't Forget to Save!" on page 32.*

Selecting Effects

Most of the effects have more than one available model.

To select a different effect:

■ Click the Effect selector beneath the desired Effect type, and choose a new model from the menu.

This section will take you through the features of the Control window.

Control Section

When a device is highlighted in the Rig View pane, the controls of the device are shown in the Control section.

On the displayed device, you can turn the knobs, toggle the switches, and rock the pedals, and everything you do is transmitted to Eleven Rack, so you can hear the changes you make in real time.s

Effects Preset Selector

The Effects preset selector lets you save and re-call preset settings for individual Eleven Rack effects, within Pro Tools.

For example, if you've dialed in the perfect lead tone on the Tri-Knob Fuzz, you can save the settings for that effect and recall them without having to save or load a new Rig.

These presets are handled by the same system (using the same file types and functions) that manages plug-in presets in Pro Tools.

📄 *For more information on working with presets, see the Pro Tools Reference Guide.*

Master Control Section

Figure 12. Master Control section

The Master Control section houses the controls and features that apply to all of Eleven Rack.

Tuner

This tuner works like the one you can access using the front panel of Eleven Rack, but is much larger and easier to see when working in Pro Tools.

📄 *For more information on the Tuner controls, see "Tap Tempo/Tuner Button" on page 8.*

Input Selector

This menu lets you choose which input on Eleven Rack will be fed through the Rig. This can be a physical input, or the Re-Amp outputs from Pro Tools.

User Options Mode

Pressing the User Options button in the Master Control section brings up User Options mode, which lets you access many of the under-the-hood options you normally would access using the User Options mode on Eleven Rack.

📄 *For more information on User Options Mode and the settings it provides access to, see "Exploring the User Options" on page 91.*

Output Mute Buttons

These two buttons let you mute the Headphone output and the Main outputs on Eleven Rack from within Pro Tools.

This comes in handy when recording with a microphone while wearing headphones (mute the main outputs to cut out bleed from the speakers), or when headphones might bleed into a recording track (mute the headphones).

Main Volume Knob

This knob acts just like the Volume knob on the front panel of Eleven Rack, varying the overall output volume of the Main and Headphone outputs.

📄 *For more information on these controls, see "Eleven Rack Front Panel" on page 7, and "User Options" on page 91.*

Recording Guitars

The simplest way to record guitar with Eleven Rack is to simply plug in your guitar, create a track in Pro Tools, and record the sound coming from the Rig.

To record guitar through the Rig to a track in Pro Tools:

1 Click on the Track menu in Pro Tools and select New.

2 In the New Tracks dialog, create one stereo audio track.

3 Assign the input on the stereo track you've created to Interface > Eleven Rig L/R.

4 Record-enable the track.

5 Select a Rig in the Eleven Rack Control window, and tweak its settings, if necessary.

6 Press Record, then Play, in the Pro Tools transport.

7 Record your guitar part.

Input selector

Record-enable button

Recording Wet and Dry Signals

The Guitar Input on Eleven Rack shows up in Pro Tools as a standard mono input path (Guitar In). This input passes the guitar signal, unprocessed, to Pro Tools, where it can be recorded as normal.

The guitar signal also passes through the processing features of Eleven Rack, and the processed stereo output from the amp, cabinet, mic and effects simulations shows up as a second, stereo input path in Pro Tools for monitoring and/or recording (Eleven Rig L and R). Thus, the dry guitar signal and the output of the Rig can be recorded onto separate tracks, for processing and editing flexibility.

This means that when recording guitars with Eleven Rack, you can decide on a tone you enjoy and record your parts, but retain a clean version of those parts as well. Later, if you decide you want a different sound, or simply want to stack different tones on top of one another, you can re-amp those original, unaffected guitar tracks through a different set of Rig characteristics on Eleven Rack, or even another external guitar setup.

📄 *For information on the re-amping process, "Re-Amping" on page 86.*

To record wet and dry versions of a guitar part simultaneously for future re-amping:

1 Click on the Track menu in Pro Tools and select New.

2 In the New Tracks dialog, do one of the following:

- Create one mono audio track

– or –

- Create one stereo audio track.

3 Assign the input on the mono track you've created to Interface > Guitar In.

4 Assign the input on the stereo track you've created to Interface > Eleven Rig L/R.

5 Record-enable the two tracks.

6 Select a Rig in the Eleven Rack Control window, and tweak its settings, if necessary.

7 Press Record, then Play, in the Pro Tools transport.

8 Record your guitar part.

If you don't plan to use the dry signal right away, you can make the mono track inactive and hide it, using the functions of the Tracks pane in the Edit window.

The dry track will be hidden and will not play, but Pro Tools will retain the data for later use. You can access the track again at any time.

The Guitar In input signal will look quite low when compared to other recorded signals in Pro Tools. If you need to do intricate rhythmic editing, you may want to increase the vertical zoom level in the Edit window.

Embedding Rig Settings in Audio Regions

Despite the fact that we designed Eleven Rack to store Rig settings to your computer and to its internal memory, we felt there had to be a better way to keep track of which Rig settings you use as you track your guitar.

Pro Tools lets you embed the current Rig's settings into audio regions as you record them, so that you can retrieve that same setting for further use later.

This can also be helpful when collaborating or bringing sessions or regions to a different system using Eleven Rack, because your settings travel with the files.

To embed Rig settings in recorded audio:

1 Open the Eleven Rack Control window.

2 Click the User Options button. The Embed Setting From menu appears.

3 Set the Embed Setting From menu to the input you plan to record through, such as Eleven Rig L/R.

4 Create an audio track, and set its input to the input you've chosen, using the Input selector.

5 Record enable the track.

6 Record your part.

The settings of the currently loaded Rig will be embedded in each audio region that is recorded from the input you select in the Embed Setting From menu.

This same method applies when using Eleven Rack with Pro Tools|HD or M-Powered system.

Audio regions with embedded Rig data are marked with a small guitar pick-shaped icon in both the Edit Window and the Region Browser in Pro Tools.
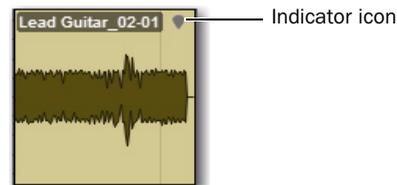

Indicator icon

Audio region with guitar pick-shaped indicator icon

Retrieving Embedded Rig Settings

You can access Rig settings from any region with embedded settings that has been recorded or imported into your Pro Tools session. You can do this by selecting regions directly in the Edit window, or you can access any embedded region in the session using the Eleven Rack Control Window.

To load a Rig setting from a region in the Edit window:

1 Open the Edit window by clicking Window > Edit.

2 Locate the region you want to load Rig Settings from.

3 Right-click the region and choose Load Guitar Rig Settings.

4 The Rig is loaded into Eleven Rack and is ready to use.
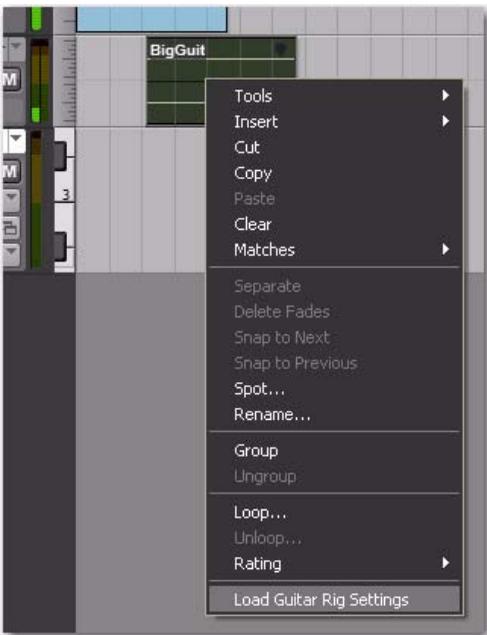
Loading settings from a region in the Edit window

To load an embedded Rig setting from within the Eleven Rack Control Window:

1 Open the Eleven Rack Control window by clicking Window > Eleven Rack.

2 Click the Rig Settings menu.

3 Any regions with embedded Rig data will show up as a list at the bottom of the menu.

4 The Rig is loaded into Eleven Rack and is ready to use.

Choosing a region from the Rig Settings menu

💡 *Once you have retrieved a Rig setting from a region, you may want to save it to your computer or the Eleven Rack memory.*

⚠ *Rig settings data can only be embedded in .WAV or .AIFF files. MP3 encoding strips audio files of their embedded Rig data, so be sure to choose .WAV or .AIFF format when exporting audio files with embedded Rig data.*

Re-Amping

Re-Amping is the process of sending pre-recorded audio (in this case, from within Pro Tools,) to an external guitar amplifier or effects unit, and then re-recording the processed audio to a new track.

This is sometimes done when a guitar track is recorded dry and the amp and effects sound is to be decided upon later (see "Recording Guitars" on page 83).

In the case of Eleven Rack, re-amping can be done one of two ways.

• Tracks can be sent from Pro Tools into the onboard guitar processor in Eleven Rack, and re-recorded to a new track.

– or –

• Tracks can be sent from Pro Tools, out through the Output To Amp outputs on Eleven Rack, into one or more external guitar amps or processors, and then re-recorded through the microphone, line, or guitar inputs on Eleven Rack, depending on the type of external devices being used.

To re-amp a signal using the guitar processor in Eleven Rack:

1 Choose the track in Pro Tools to be re-amped (mono tracks only).

2 Create a send from the track to Interface > ReAmp L/R.

3 Create a new stereo audio track, and assign its input to Interface > Eleven Rig L/R.

4 In Pro Tools Edit window, click with the Selector tool at the beginning of the first audio region on the track to be re-amped.

5 Select a Rig in the Eleven Rack Control window, and adjust the settings as desired.

6 Start recording in Pro Tools.

7 The audio from the chosen track will be processed through Eleven Rack, and re-recorded to the new stereo Audio track.

To re-amp a signal using the Output To Amp outputs on Eleven Rack:

1 Choose the track in Pro Tools to be re-amped.

2 In the Eleven Rack Control window, choose what point in the signal chain will be fed to one or both of the To Amp outputs using the To Amp Output selectors.

📖 *See "Output to Amp Selectors" on page 80 for details.*

3 Create a new audio track, and assign its input to match the device you are using to re-amp, as follows:

• If re-amping through a guitar amp and microphone, or a device with an XLR DI output, select Interface > Mic In.

• If re-amping through a guitar-level stompbox or processor, select Interface > Guitar In.

• If re-amping through a processor with a line-level output, select Interface > Line Input L.

4 Set up and connect your chosen external amp and microphone and/or processor to the Output To Amp 1 (L) output and the appropriate input on Eleven Rack.

• If using the mic input, ensure that the gain and other settings (such as phantom power and pad) are set correctly.

• If using an amplifier and microphone in the same room as your Pro Tools system, be sure to turn off or mute your monitor speakers, to avoid feedback.

5 Record-enable the new mono track.

6 In Pro Tools Edit window, click with the Selector tool at the beginning of the first audio region on the track to be re-amped.

7 Start recording in Pro Tools.

8 The audio from the selected track is sent out of Eleven Rack, processed through your amp or processor, and then re-recorded to the new Audio track.

Controlling Eleven Rack Parameters with MIDI Data

Using MIDI tracks in Pro Tools, you can record real time changes to your Rig settings, edit them, and play them back to Eleven Rack. This can be quite powerful when re-amping signals through Eleven Rack.

In the following example, you'll control the Rig Volume parameter in Eleven Rack with MIDI data from Pro Tools.

To control the Rig Volume on Eleven Rack with MIDI CC data from Pro Tools:

1 Create a MIDI track in Pro Tools.

2 Assign its output to Predefined > Eleven Rack > channel-1.

3 On Eleven Rack, press and hold the Edit button for 1 second to enter User Options mode.

4 Scroll with the Scroll wheel to MIDI, and press the SW1 switch.

5 Use the lit Control knob to choose a MIDI receive channel. In this example, use channel 1.

6 In the Pro Tools Edit window, select MIDI Volume in the Track View menu for the MIDI track you've created. You'll see a line running across the track. This is the MIDI CC envelope.

7 With the Pencil tool, draw a curving line from the beginning of the track to a point around 10 seconds later.

8 Press Play on the Pro Tools transport. You will see the Rig Volume setting on the Eleven Rack Control window move in time to match the curve you've drawn.

This technique can be used for any of the MIDI CC controls Eleven Rack can respond to.

For a full list of MIDI CC data that Eleven Rack can accept, "Eleven Rack MIDI Continuous Controllers" on page 95.

For more information on using MIDI CC data in Pro Tools, see the Pro Tools Reference Guide, which can be accessed from within Pro Tools by selecting Help > Pro Tools Reference Guide.

Part III: Reference

Chapter 10: User Options

This section describes the details of the User Options mode within Eleven Rack. User Options mode lets you access the behind-the-scenes controls in Eleven Rack.

Exploring the User Options

Let's start looking into the changes you can make using User Options.

User Options mode

To explore User Options mode from the front panel of Eleven Rack:

1 Press and hold the Edit/Back button until the User Options screen appears.

2 Turn the Scroll wheel to select the option you want to change.

3 Press the SW1 button to access the controls for that option.

4 Press Edit/Back once to return to the User Options menu, or twice to exit User Options mode and return to the previous screen.

To explore User Options mode when using Eleven Rack with Pro Tools:

1 Show the Eleven Rack Control window, by clicking Window > Eleven Rack.

2 Press the User Options button on the Control window.

User Options

This section lists and defines the available options in the User Options menu.

These descriptions and parameter names match those within the display on Eleven Rack. The Eleven Rack Control window's User Options mode contains most of these controls, but some are named slightly differently.

Rig Input

This setting lets you specify which input on Eleven Rack will be routed through the Rig. This can be set any of the analog or digital inputs on Eleven Rack, or the signal sent to the Re-Amp output in Pro Tools LE.

📖 *For more information on Re-Amping, see "Re-Amping" on page 86*

⚠ *Running the mic input through the Rig with your monitor speakers on can result in severe feedback, due to the amount of gain available in the amp and effects emulations. Be sure to mute or turn down the main outputs before proceeding.*

Outputs To Amp

In this page, you can what signal feeds the Output To Amp outputs. Turn the Scroll wheel to switch between controlling Output 1 or Output 2. If you want to use the Outputs To Amp in stereo, you may want to match the controls for both channels.

Signal

Using the Signal control, you can set what point in the signal path feeds each Output to Amp output:

Rig Input The clean, unprocessed guitar signal, as is present at the input of the Rig.

Amp Input The signal after any processing that occurs before the Amp model in the signal chain.

Amp Output The signal after passing through the amp emulation, but before the cab, mic, and any effects emulations placed after the amp in the signal path.

⚠ *When feeding signal to a external guitar amplifiers, it is generally preferred to apply no cab and mic emulation to the signal. Since the speaker being driven by the amplifier will naturally shape the tone of your signal, using the cab and mic emulations in Eleven Rack will produce compromised results.*

Rig Output The fully processed signal, run through every part of the current Rig (including cab and mic emulation).

Rig Out No Cab The fully processed signal, with the Cab model automatically bypassed.

Digital Clock/Input

When Eleven Rack is being used standalone and is not plugged into a computer, it lets you choose the clock source (internal or external), sample rate (if using internal clock), and digital format you want to work with.

Clock Source Lets you choose between the following clock sources:

- Int 44.1 kHz (Internal clock)
- Int 48 kHz (Internal clock)
- Int 88.2 kHz (Internal clock)
- Int 96 kHz (Internal clock)
- External

Digital Input Lets you choose the digital format you want to use for input, either AES/EBU, or S/PDIF.

When Eleven Rack is plugged into a computer with USB for use with Pro Tools LE or HD, these options must be set in the host software (Pro Tools LE or other). The Digital Clock/Input screen will just show the current settings and whether or not there is a valid clock signal present at the currently chosen digital input.

📖 *For more information on how to access these controls from within Pro Tools LE, see "Pro Tools Hardware Settings" on page 57.*

Digital Output

Adjust the Output control to choose the type of signal being passed to the digital outputs.

DAW The output from the Digital Out L/R output path in Pro Tools LE will be sent to the digital outs.

Mirror Analog The same signal that is being sent to the Main Outputs will be sent to the digital outs.

Rig Outputs The left and right Rig outputs are sent to the left and right digital outputs respectively.

Split In/Out The left and right Rig outputs are summed and sent to the left digital output, and the signal as present at the Rig input (the "dry" signal) is sent to the right digital output.

FX Loop

The FX Loop screen is where you control the mono/stereo behavior of the FX loop. Set the control to Mono if using a mono effect, to Mono to Stereo, if using an effect that takes a mono signal but has a stereo output, or Stereo, if using a true stereo effects unit.

External Pedals

This screen lets you set up an expression pedal or a dual footswitch, plugged into the Exp Pedal/Ext Footswitch jack on the back of Eleven Rack.

Turn the Scroll wheel to select the type of pedal you'll be using. In expression pedal mode, you can press SW1 to enter calibration mode. Follow the on-screen instructions to calibrate your expression pedal. In Dual Footswitches mode, you can use the Tone Control knobs to select a function for each footswitch.

Each footswitch can be set to do one thing, whether it's cycling through Rigs, turning a certain effect on and off or just bringing up the tuner.

MIDI

The MIDI page lets you set up how Eleven Rack responds to MIDI data.

Channel Sets the MIDI receive and send channel, from 1-16.

Thru Toggles MIDI thru on and off.

CC When engaged, front-panel control changes will send corresponding MIDI CC messages to Pro Tools, and be output through the MIDI output jack.

Rig Balancing

This screen lets you adjust the relative signal level of each of the saved Rigs. If you find that a certain Rig is much louder or quieter than the others, you can tweak it here.

Turn the scroll wheel to select a Rig to adjust, and use the lit Tone Control knob to adjust the volume.

When you're done editing these settings and you back out of the Rig Balancing screen, a "Saving" message appears on the display for a few moments as the new settings are saved.

Amp/Cab Linking

This parameter toggles the linking of amplifier and cabinet models that were historically used together. With Amp/Cab Linking on, when you choose certain amps in Rig View, the cabinet that goes with it will also be chosen. You can still change the cabinet you want to use later.

Display Contrast

This control allows you to set the contrast of the LCD display to match your viewing angle or light conditions.

Knob Display/Action

This screen lets you configure the way knob settings are displayed onscreen, and how they act.

Display

This control lets you see the current positions of the control knobs as either graphic knobs or as numeric values. If you choose to display the controls as knobs, keep in mind that you can see the exact numeric value of a control temporarily by turning the knob slightly.

Action

This control lets you choose between the following knob behaviors:

Normal Moving a Control knob will cause the currently assigned setting to immediately follow the knob's position.

Latch When a Control knob is positioned differently than the current value of the assigned control, the control's setting will not update until the knob is swept past the current setting.

Blink

The Tempo button on the front panel of Eleven Rack can be set to blink in time with the current Rig tempo. The Blink control toggles this behavior on and off.

Headphone Volume

This control sets the volume of the Headphone outputs on Eleven Rack, as an offset from the Main output volume.

Reset Memory

In this screen, pressing SW1 will reset the memory of Eleven Rack back to factory specs. All user-created Rigs and settings will be erased.

You can exit this screen without resetting the memory by pressing the Edit/Back button.

Firmware Version

On this screen, you can check to see what firmware version is running on your Eleven Rack.

Chapter 11: Controlling Eleven Rack with MIDI

Many of the parameters in Eleven Rack can be controlled using MIDI. This opens up the possibility of using both external MIDI devices (such as foot controllers) and the MIDI capabilities of Pro Tools to vary Eleven Rack's tonal aspects in real time.

This section lists the available MIDI controls for use with Eleven Rack.

Eleven Rack MIDI CC Controllers

Table 12. Eleven Rack MIDI Continuous Controllers

CC#	Parameter	Notes	Minimum Value	Maximum Value
3	Amp Setting 8		0	127
4	Wah Pedal		0	127
5	FX1 Setting 9		0	127
7	Volume Pedal		0	127
9	FX1 Setting 10		0	127
10	Amp Setting 6		0	127
11	Multi-FX		0	127
12	FX1 Setting 11		0	127
13	Amp Setting 1		0	127
14	Amp Setting 2		0	127
15	Amp Setting 3		0	127
16	Amp Setting 4		0	127
17	Rig Volume		0	127
18	Reverb Setting 1		0	127
19	FX Loop Send		0	127
20	FX1 Setting 1		0	127

21	Amp Setting 5		0	127
22	Amp Setting 12		0	127
23	Amp Setting 11		0	127
24	Amp Setting 10		0	127
25	Distortion On/Off	0~63=Off ; 64~127=On	0	127
26	FX1 Setting 12		0	127
27	Distortion Setting 1		0	127
28	Delay On/Off	0~63=Off ; 64~127=On	0	127
29	FX1 Setting 13		0	127
30	FX1 Setting 14		0	127
31	Delay Setting 14		0	127
32				
33	Delay Setting 2		0	127
34	Delay Setting 6		0	127
35	Delay Setting 3		0	127
36	Reverb On/Off	0~63=Off ; 64~127=On	0	127
37	FX2 Setting 8		0	127
38	Reverb Setting 2		0	127
39	Reverb Setting 4		0	127
40	Reverb Setting 3		0	127
41	Reverb Setting 6		0	127
42	FX1 Setting 2		0	127
43	Wah On/Off	0~63=Off ; 64~127=On	0	127
44	Amp Settings 13		0	127
45	Amp Settings 14		0	127
46	FX2 Setting 9		0	127
47	FX2 Setting 10		0	127
48	Delay Setting 7		0	127
49	Delay Setting 8		0	127
50	Modulation On/Off	0~63=Off ; 64~127=On	0	127
51	Modulation Setting 6		0	127
52	Modulation Setting 2		0	127
53	Modulation Setting 3		0	127
54	Modulation Setting 4		0	127

55	Delay Setting 9		0	127
56	Modulation Setting 7		0	127
57	Modulation Setting 5		0	127
58	FX2 Setting 11		0	127
59	Delay Setting 10		0	127
60	FX1 Setting 3		0	127
61	Modulation Setting 1		0	127
62	Delay Setting 1		0	127
63	FX1 On/Off	0~63=Off ; 64~127=On	0	127
64	Tap Tempo	64-127 = a Tap		
69	Tuner On/Off	0~63=Off ; 64~127=On	0	127
70	FX2 Setting 14		0	127
71	Cab Sim On/Off	0~63=Off ; 64~127=On	0	127
72	Delay Setting 11		0	127
73	Delay Setting 12		0	127
74	Delay Setting 13		0	127
75	Volume Pedal On/Off	0~63=Off ; 64~127=On	0	127
76	Reverb Setting 5		0	127
77	FX1 Setting 4		0	127
78	Distortion Setting 2		0	127
79	Distortion Setting 3		0	127
80	Distortion Setting 4		0	127
81	Distortion Setting 5		0	127
82	Distortion Setting 6		0	127
83	Distortion Setting 7		0	127
84	Amp Setting 9		0	127
85	Delay Setting 4		0	127
86	FX2 On/Off	0~63=Off ; 64~127=On	0	127
87	Delay Setting 5		0	127
88	FX Loop Mix		0	127
96	FX2 Setting 4		0	127
97	FX2 Setting 5		0	127
98	FX2 Setting 6		0	127
99	FX2 Setting 7		0	127

101	Knob 1		0	127
102	Knob 2		0	127
103	Knob 3		0	127
104	Knob 4		0	127
105	Knob 5		0	127
106	Knob 6		0	127
107	FX Loop On/Off	0~63=Off ; 64~127=On	0	127
108	FX Loop Return		0	127
109	FX2 Setting 12		0	127
110	FX2 Setting 13		0	127
111	Amp On/Off	0~63=Off ; 64~127=On	0	127
112	Amp Setting 7		0	127
113	FX2 Setting 1		0	127
114	FX2 Setting 2		0	127
115	FX2 Setting 3		0	127
116	FX1 Setting 5		0	127
117	FX1 Setting 6		0	127
118	FX1 Setting 7		0	127
119	FX1 Setting 9		0	127

All unused continuous controllers have been omitted from this list.

Chapter 12: Hard Drive Configuration and Maintenance

It is recommended that you start with a newly formatted external or secondary internal audio drive. You should also periodically defragment your audio drive to ensure continued system performance.

⚠ *Always back up any important data on your drive before formatting it, as it will erase all data on the drive.*

Avoid Recording to the System Drive

Recording to your system drive is not recommended. Recording and playback on a system drive may result in lower track counts or fewer plug-ins.

Supported Drive Formats and Drive Types

Drive Formats

Mac Mac systems should use drives formatted with HFS+ or HFS file system only.

⚠ *HFS drives are supported as Transfer drives only.*

Windows Windows XP systems should use drives formatted as NTFS only.

▤ *Windows systems can also support Mac drives formatted with HFS+ system (also commonly referred to as Mac OS Extended). Refer to the Pro Tools Reference Guide for more information (Help > Pro Tools Reference Guide).*

Hard drive performance depends on factors including system configuration, number of tracks, session sample rate, density of edits, and the use of crossfades and other processes such as Beat Detective in a session.

For complete hard drive requirements, visit the Digidesign website at:

www.digidesign.com/compatibility

SCSI Hard Drives

Digidesign recommends qualified SCSI hard drives and a qualified SCSI host bus adapter (HBA) card or (on Windows systems) a qualified built-in SCSI HBA connector on the motherboard.

For complete information on track count and the supported number and configuration of SCSI drives, visit the Digidesign website at:

www.digidesign.com/compatibility

FireWire Hard Drives

Digidesign recommends qualified FireWire drives and (on Windows systems) a qualified FireWire host adapter.

For complete information on track count and the supported number and configuration of FireWire drives, visit the Digidesign website at:

www.digidesign.com/compatibility

IDE/ATA/SATA Hard Drives

A qualified internal IDE/ATA/SATA drive may be used as a dedicated audio drive.

For complete information on track count with internal drives, visit the Digidesign website at:

www.digidesign.com/compatibility

Formatting an Audio Drive

Formatting Mac Audio Drives

For optimum performance, audio drives should be formatted as Mac OS Extended (Journaled).

To format an audio drive:

1 Launch the Disk Utility application, located in Macintosh HD/Applications/Utilities.

2 Click the Erase tab.
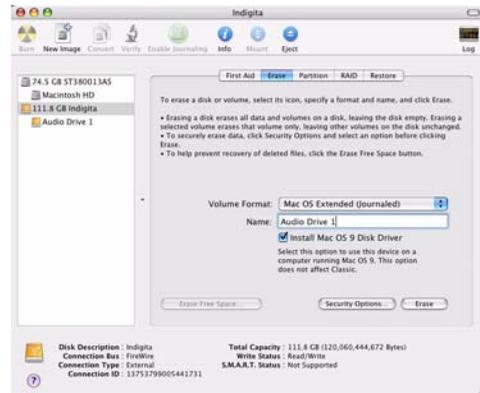
Disk Utility (Mac OS X)

3 Select the drive you want to initialize in the column on the left side of the window.

4 Choose the Mac OS Extended (Journaled) format.

⚠ *Do not choose the "Case-Sensitive" format option. Pro Tools will not operate properly with case-sensitive formatted drives.*

5 Type a name for the new volume.

6 If you plan to connect the drive to a Mac OS 9 computer, select Install Mac OS 9 Drivers.

7 Click Erase.

The drive appears on the Desktop with the new volume name.

Formatting Windows Audio Drives

For optimal performance, audio drives should be formatted as NTFS.

⚠ *Pro Tools only supports Basic drive types. Do not convert the drive to a Dynamic type.*

To format an audio drive:

1 Right-click Computer (Windows Vista) or My Computer (Windows XP) and choose Manage.

2 Under Storage, choose Disk Management.
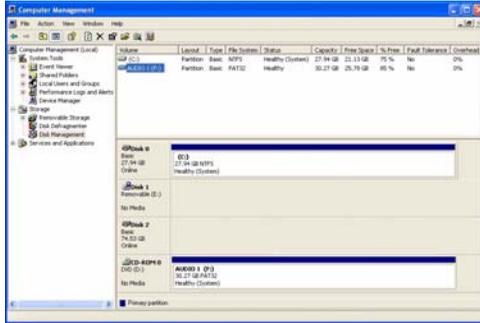
Disk Management window (Windows XP)

3 If the volume is "Healthy," do the following:

💡 *Healthy volumes are volumes that have previously been partitioned and formatted.*

- In the Disk Management window, right-click the hard drive you will use for audio and choose Format.
- In the Format window, name the volume.
- Choose a file system. For optimum performance, audio drives should be formatted as NTFS.
- Select Perform a quick format.
- Make sure Enable file and folder compression is not selected.
- Set the Allocation unit size to Default.
- Click OK.

4 If the volume is "Unallocated," do the following:

- In the Disk Management window, Right-click the hard drive you will use for audio and choose New Partition.
- In the New Partition Wizard window, click Next.
- When prompted, select the partition type.

💡 *Digidesign recommends using Primary partitions, instead of Extended partitions.*

- Follow the on-screen instructions to select a partition size and other partition settings.
- When prompted, choose a file system. For optimum performance, audio drives should be formatted as NTFS.
- Select Perform a quick format.
- Make sure Enable file and folder compression is not selected.
- Set the Allocation unit size to Default.
- Click OK.

Partitioning Drives

Partitioning creates a logical volume or volumes on a physical drive, almost as if you were creating virtual hard drives. Partitions can then be formatted with the appropriate file system (NTFS for Windows, HFS+ for Mac).

⚠ *Mac OS allows drives larger than 4096 MB to be seen as whole volumes. Drives must be initialized with a disk utility that recognizes the 2 terabyte limit. Single Pro Tools audio files cannot exceed 3.4 GB in size.*

⚠ *Windows XP allows drives formatted with the NTFS file system to be seen as whole volumes. Single Pro Tools audio files cannot exceed 3.4 GB in size.*

Seek Times on Partitioned Drives

Seek times are actually faster on partitioned drives (assuming that reads and writes are performed on a single partition), since the heads only have to seek within the partition boundaries, rather than the whole capacity of the drive.

Smaller partitions perform faster than larger partitions, but this comes at the expense of contiguous storage space. When you partition a drive, you will need to find the compromise that best suits your performance and storage requirements.

⚠ *Avoid distributing audio files within a session over different partitions on the same drive since this will adversely affect drive performance.*

Defragmenting an Audio Drive

Mac Systems

When working with larger files (such as video), you can limit fragmentation by backing up your important files to another disk, erasing the files from the original hard disk, then copying the files back, instead of doing a defragmentation.

Window Systems

Periodically *defragment* audio drives to maintain system performance.

For maximum recording and playback efficiency, data should be written to your hard drive in a contiguous fashion—minimizing the seek requirements to play back the data. Unfortunately, your computer can't always store the sound files in this way and must write to disk wherever it can find space.

In multitrack recording, audio tracks are written in discrete files, spaced evenly across the disk. While fragmentation of individual files may be zero, the tracks may be far enough apart that playback will still be very seek-intensive. Also, the remaining free space on the disk will be discontiguous, increasing the likelihood of file fragmentation on subsequent record passes.

Increased fragmentation increases the chance of disk errors, which can interfere with playback of audio, and result in performance errors.

🔆 *On Windows, to avoid fragmentation, format drives with higher cluster sizes (such as 32K).*

Optimizing (Defragmenting) Drives

To prevent fragmentation, you can optimize your drive, which rearranges your files into a contiguous format. Most optimizing software lets you run a check on a drive to find out the percentage of fragmentation. If your drive shows moderate to heavy fragmentation, you should consider optimizing it.

If you use your system for intensive editing, or if you frequently delete audio or fade files from your hard drive, you may need to optimize your drives on a weekly basis, or even every few days, since it doesn't take long for even a large hard drive to become fragmented.

Backing Up Data Before Optimizing

Since your files will be rewritten by the optimization process, always make a backup copy of the data on your hard drive before you optimize it. You should also use a hard drive utility to find and repair any problems before optimizing data or re-initializing your drives. If there is any damage to your hard drive's directories prior to optimizing, serious data loss may result.

Defragmenting Windows Audio Drives

To defragment an audio drive (Windows Vista):

1 Choose Start > Control Panel.

2 Click System and Maintenance.

3 Click Performance Information and Tools.

4 Click Advanced Tools.

5 Click Open Disk Defragmenter.

6 In the Disk Defragmenter window, click the Defragment Now button.

⚠ *The Defragment Now command defragments all your hard drives. This can take a lot of time, especially on systems with multiple drives.*

Advanced users can use the command line tool Defrag.exe to defragment individual drives. See your Windows Vista documentation for more information.

To defragment an audio drive (Windows XP):

1 Right-click My Computer and choose Manage.

2 Under Storage, choose Disk Defragmenter.

3 In the Disk Defragmenter window, choose the drive you want to defragment

4 Click the Defragment button and follow the on-screen instructions.

When defragmenting is complete, close the Computer Management window.

Using Mac Drives on Windows Systems

Pro Tools for Windows lets you record and play back sessions directly from a Mac-formatted (HFS+) drive connected to a Windows system. This functionality requires that all Mac session and audio files be stored on Mac-formatted drives.

During Pro Tools installation, make sure to select the Mac HFS+ Disk Support option. This option lets your Pro Tools system read, write, record, and play back using Mac-formatted HFS+ disks.

📄 *For information on using the Mac HFS+ Disk Support option, see the HFS+ Disk Support Option Guide.*

For information on sharing sessions between Mac and Windows systems, see the Pro Tools Reference Guide (Help > Pro Tools Reference Guide).

Formatting and Maintaining HFS+ Drives

To format and partition any drives as HFS+, connect the drives to a Mac computer and use the Apple OS X Disk Utility.

Hard Disk Storage Space

Mono audio tracks recorded with 16-bit resolution at 44.1 kHz (CD quality) require approximately 5 MB of hard disk space per minute. The same tracks recorded with 24-bit resolution require about 7.5 MB per minute.

Stereo audio tracks recorded with 16-bit resolution at 44.1 kHz (CD quality) require approximately 10 MB of hard disk space per minute. The same tracks recorded with 24-bit resolution require about 15 MB per minute.

Table 13 lists the required disk space for certain track numbers and track lengths, to help you estimate your hard disk usage.

Table 13. Required hard drive space for audio tracks (44.1 kHz and 48 kHz sessions shown)

Number of Tracks and Length	16-bit at 44.1 kHz	16-bit at 48 kHz	24-bit at 44.1 kHz	24-bit at 48 kHz
1 mono track, 1 minute	5 MB	5.5 MB	7.5 MB	8.2 MB
1 stereo track (or two mono tracks), 5 minutes	50 MB	55 MB	75 MB	83 MB
1 stereo track (or two mono tracks), 60 minutes	600 MB	662 MB	900 MB	991 MB
24 mono tracks, 5 minutes	600 MB	662 MB	900 MB	991 MB
24 mono tracks, 60 minutes	7 GB	7.8 GB	10.5 GB	11.6 GB
32 mono tracks, 5 minutes	800 MB	883 MB	1.2 GB	1.3 GB
32 mono tracks, 60 minutes	9.4 GB	10.4 GB	14 GB	15.4 GB
48 mono tracks, 5 minutes	1.2 GB	1.3 GB	1.8 GB	1.9 GB
48 mono tracks, 60 minutes	14 GB	15.6 GB	21 GB	23.2 GB

Double the 44.1 kHz hard drive space requirement when recording at 88.2 kHz, and double the 48 kHz numbers when recording at 96 kHz.

Chapter 13: Troubleshooting

Backing Up Your Work

It is highly recommended that you back up your work on a regular basis, and especially before making changes to your system configuration.

Backing Up Your Session Data

Back up your session and audio data frequently. There are a variety of media that are suited to back up projects of various sizes, from automated tape backup systems to high-capacity optical drives, or to CD burners.

The best way to back up an entire session is to use the Save Copy In command. This command lets you save the session file and all of its associated files to a new location.

☼ *You can also use the Auto Save Backup feature (in the Operation Preferences page) to have Pro Tools automatically save backups of the session file while you work.*

Backing Up Your System Configuration

After configuring your system and Pro Tools, you should save an image of your system drive using a backup utility such as Norton Ghost (Windows) or Bombich Carbon Copy Cloner (Mac). By doing this, you can quickly restore your system configuration and settings if you encounter any problems.

Common Issues

Pro Tools Won't Launch

Problem

When you double-click the Pro Tools application or a Pro Tools session file, Pro Tools doesn't launch, or displays an error message.

Possible Solutions

◆ Check to be sure your computer has the required amount of RAM to launch Pro Tools.

◆ Try a complete restart. Turn off your audio interfaces, computer peripherals and your computer, and then turn them on again in the proper sequence.

◆ If you tried to launch Pro Tools by double-clicking a Pro Tools session file, do the following:

  • Close any error message.

  • Double-click the Pro Tools application.

  • In Pro Tools, choose File > Open Session to open the session.

◆ Reinstall the Pro Tools application, using the Pro Tools Installer disc.

Audio Interface Is Not Recognized

Problem

When you launch Pro Tools it does not recognize an audio interface, or a connected audio interface is not available.

Possible Solutions

◆ Turn off your computer and Eleven Rack (remember to save first!) and check to be sure your cables are properly and securely connected to your computer and to your audio interface.

◆ Verify that your Hardware Setup dialog settings are correct.

Performance Factors

There are several conditions that may adversely affect the performance of Pro Tools. These include:

Network Connections Close any network connections unless you are using them for network interchange of audio data.

Background Applications Any software utilities that run in the background or generate disk activity, such as virus protection, disk optimization, or file savers, should be turned off or removed.

Screen Savers Screen saver software should be completely disabled on your computer before running Pro Tools.

Power Saver Features Some automatic power saver features, such as those that spin down the system hard drive, can affect Pro Tools performance. These features should be turned off.

Before You Call Digidesign Technical Support

Register Your System

Register your purchase immediately after reviewing the Digidesign Registration Information Card included with every Pro Tools system. Registering your purchase is the only way you become eligible to receive complimentary technical support and future upgrade offers. Registering is one of the most important steps to complete as a new user.

Gather Important Information

Digidesign wants to help you resolve problems as quickly and efficiently as possible. If you have the following information handy when you contact Technical Support, it will make the diagnosis of your problem easier. Take a few minutes to collect the following basic information:

System Information

Computer

- Make, model, processor speed
- Amount of system RAM
- Operating system (version of Windows or Mac OS)
- Any Drivers, Disk Utilities, or other system-related applications you may have installed

Digidesign Hardware

- Type of cards, interfaces, or peripherals

Hard Drives

- Make, Model
- Drive size (GB)
- Drive speed (RPM)
- Drive type (SCSI, FireWire, IDE/ATA)
- Utility used to format the drive
- Number and size of partitions on the drive

Digidesign Software

- Pro Tools software version
- Plug-in versions
- Other Digidesign software
- Additional plug-ins from Digidesign Development Partners

Other Hardware

Refer to the manufacturer's documentation for operational details.

The most common hardware additions include:
- 1394 (FireWire) cards for Windows systems (manufacturer, model)
- Video Capture cards (manufacturer, model)

To verify that your hardware is qualified for use with your Pro Tools system, refer to the latest compatibility information on the Digidesign website (www.digidesign.com/compatibility).

If using a Mac, you can get data on your system's configuration with the System Profiler utility included with your computer. If using Windows, the free utility PC Wizard can be helpful in gathering data on the specs of your computer. See www.cpuid.com for details.

Other Software

If you are using other audio or video applications, refer to the manufacturer's documentation for operational details.

Make note of any other software that was running when a problem occurred.

Diagnostic Information

Note any DAE errors or other error codes you encounter. Additionally, note the ability to reproduce the problem under different conditions, for example, with another session, or after changing settings (such as the Hardware Buffer Size).

Chapter 14: Resources

Whether you are new to Pro Tools or just starting out with your new system, we encourage you to read and utilize the many guides that Pro Tools provides. There are also useful online resources available, giving you everything from Pro Tools tips to Pro Tools answers.

About the Pro Tools Guides

In addition to any printed guides included with your system, PDF versions of the printed guides and many additional Pro Tools guides and Read Mes are installed automatically during Pro Tools installation (see "Documentation Installed Automatically with Pro Tools" on page 110).

☿ *Printed copies of the Pro Tools Reference Guide and other guides in the Pro Tools guide set can be purchased separately from the DigiStore (www.digidesign.com).*

Printed Setup Guide

This printed *Setup Guide* for your system gives you detailed instructions for setting up and configuring software and hardware for optimum performance, as well as in-depth instructions on using the guitar processor in Eleven Rack.

Printed Getting Started with Pro Tools Guide

The printed *Eleven Rack & Pro Tools Guide* has tutorials on using Pro Tools (such as recording in a Pro Tools session, importing audio from a CD, and creating an audio CD from a Pro Tools session).

Guides Accessible in Pro Tools

The main Pro Tools guides are accessible from the Pro Tools Help menu. (Choose Help, then select a guide.)

These include:

• *Shortcuts Guide*, which provides a complete list of keyboard and Right-click shortcuts for Pro Tools.

• *DigiRack Plug-ins Guide*, which describes the DigiRack plug-ins included with Pro Tools for both real-time and file-based audio processing.

• *Pro Tools Menus Guide,* which covers all the Pro Tools on-screen menus.

• *Pro Tools Reference Guide*, which explains Pro Tools software in detail.

Documentation Installed Automatically with Pro Tools

When you install Pro Tools, you get useful PDF versions of many Pro Tools guides and Read Mes. This documentation can be found in the following locations:

Mac Applications/Digidesign/Documentation

Windows C:\Program Files\Digidesign\ Documentation

☼ *To view or print PDF guides, you can use Adobe Reader or Apple Preview (Mac only).*

Read Me Files

These contain late-breaking information and known issues pertaining to Pro Tools software and hardware configurations. Read Me files are installed in Documentation folder when you install Pro Tools.

About www.digidesign.com

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

Product Registration Register your purchase online.

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

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

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

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

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

Helpful Online Resources

Once you get going, here are some helpful online resources:

• Get useful information, help, and tips from the worldwide community of Pro Tools users at Digidesign User Conference (DUC). Go to: http://duc.digidesign.com

• For questions about installation, visit Digidesign's online Answerbase. Go to: http://www.digidesign.com/answerbase

• If you can't find your answer on the DUC or Answerbase, contact Digidesign email support. Go to: http://www.digidesign.com/tsr

index

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