

ProControl Guide

Version 5.1.1 for Macintosh and Windows

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Part I: Introduction

Chapter 1: Introduction to ProControl

Welcome to ProControl™, Digidesign's dedicated mixing and editing controller for TDM-equipped Pro Tools systems.

ProControl provides motorized, touch-sensitive faders, knobs, and switches for maximum accessibility to Pro Tools recording, mixing, and editing functions. ProControl also includes an analog Control Room section, for monitoring control and studio communication.

What's Included

Main Unit

- ProControl Main Unit
- Pro Tools software, containing ProControl firmware
- ProControl Users Guide
- ProControl Tutorial CD-ROM
- 15' Ethernet crossover cable
- 15' Standard Ethernet cable
- Ethernet loopback connector (for Ethernet testing)
- AC power cable
- Registration card

Fader Packs

As many as five Fader Packs can be added to expand ProControl. ProControl Fader Pack Expansion Units include:

- ProControl Fader Pack Expansion Unit
- Fader Pack Installation Guide
- 15' Standard Ethernet cable
- Ethernet loopback connector (for Ethernet testing)
- Chassis connection brackets/instructions
- Spare screws for connection brackets
- AC power cable
- Registration card

Edit Pack

ProControl can also be expanded by adding an Edit Pack. Consult the Edit Pack Guide for more information including installation instructions.

System Requirements

The ProControl features described in this guide require the following:

- ◆ Pro Tools 24 Mix-series systems (MIX, MIX-Plus or MIX3) or Pro Tools 24 system, with Pro Tools software version 5.1 or higher.
- ◆ A qualified Macintosh computer and Mac OS.
 - or –
- ◆ A qualified PC running Windows 2000.
- ◆ The ProControl Personality file (a DAE extension), included with Pro Tools.
- ◆ An available Ethernet connection in the host CPU.
- ◆ Optional: audio cables for ProControl monitoring

Ethernet Requirements

- ◆ Core ProControl systems, with only a Main Unit and no Fader Packs or Edit Pack, can be connected directly to the built-in Ethernet port on all qualified Macintosh or Windows NT computers using the (red labelled) crossover cable.
- ◆ Expanded ProControl systems require an Ethernet hub (not included) and an RJ 45 Ethernet cable for each unit (included).

If a ProControl-equipped system is to be connected to an Ethernet network (be it for e-mail or file transferring), optimal performance can be obtained by use of an Ethernet card dedicated to ProControl communications.

Ethernet Cables

Each ProControl Main Unit comes supplied with one Ethernet “crossover” cable, which is a special cable required when connecting a ProControl core system

⚠ *Do not use the included Crossover Cable with expanded systems — this cable (identifiable by its red end labels) is for core systems only).*

Audio Cables for ProControl Monitoring

Three standard DB-25 wiring harnesses are needed if you plan on utilizing ProControl’s analog Control Room monitoring features.

About This Guide

This guide assumes you have already installed Pro Tools, and that you already have an understanding of its features and terminology.

Conventions Used in This Guide




This guide uses the following conventions to indicate Pro Tools on-screen menu choices and key commands:

Convention	Action
File > Save Session	Choose Save Session from the File menu
Control+n	Hold down the Control key and press the <i>n</i> key
Option-click	Hold down the Option key and click the mouse button
Right-click (Windows)	Click with the right mouse button

ProControl features a SHORTCUTS section, which provides the following modifier-key equivalents:

Modifier (Mac/Win)	ProControl SHORTCUT
Shift	SHIFT/ADD
Option (Mac) Alt (Windows)	OPT(ALT)ALL
Command (⌘ Mac) Ctrl (Windows)	⌘(CTL)
Control (Mac) Start (Windows)	CTL/CLUTCH

The following symbols are used to highlight important information:

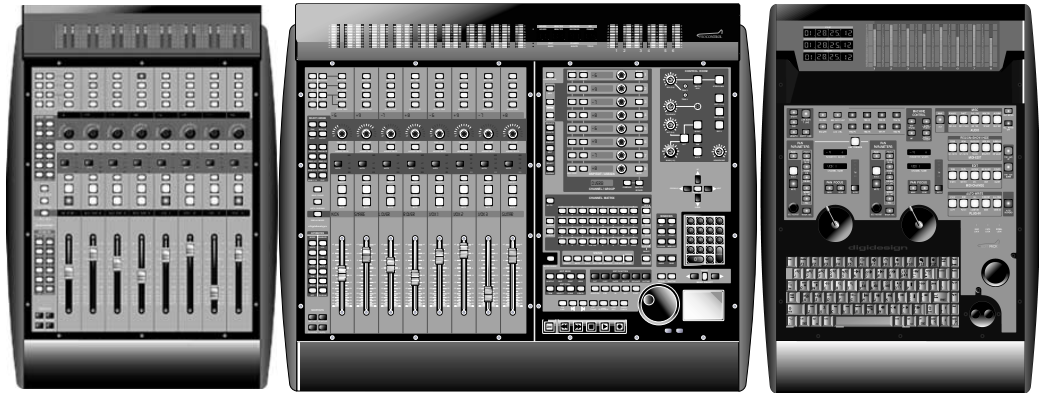
-  *User Tips are helpful hints for getting the most from ProControl.*
-  *Important Notices include information that could affect Pro Tools session data or the performance of Pro Tools.*
-  *Cross References point to related sections in the Pro Tools Guides.*

Expanded ProControl Systems

ProControl can be expanded by adding Fader Packs, and by adding a Digidesign Edit Pack™.

Each Fader Pack provides 8 additional fader strips and controls. Up to five Fader Packs can be used with a Main Unit. Fader Pack installation instructions are included in your ProControl Guide for convenience.

Edit Pack provides a pair of touch-sensitive, motorized joysticks, high-resolution metering, and other features for surround mixing and professional production environments. For Edit Pack instructions, see the Edit Pack Guide.



A Fader Pack Expansion Unit, left, a Main Unit, middle, and Edit Pack, right.

Part II: Installation

Chapter 2: Installing ProControl

This chapter explains how to install software and connect ProControl to Pro Tools and your computer. Also included are instructions for Fader Pack installation. (For Edit Pack installation instructions, see the *Edit Pack Guide*.)

Audio connections for control room monitoring and are explained in Chapter 3, “Audio Connections.”

Installation and Maintenance Guidelines

You can arrange units in any physical order. For example, one Fader Pack at the far left, the Main unit in the middle, and Fader Packs 2 and 3 to the right. Most often, the Main unit should be placed in the primary listening and mix position (the sweet spot).

Dimensions (w x d x h)

ProControl Main Unit with Side Caps:

- 30.71"w x 25.04"d x 7.10"h
- 78cm w x 63.6cm d x 18cm h

ProControl Main Unit without Side Caps:

- 28.16"w x 25.04"d x 7.10"h
- 71.5cm w x 63.6cm d x 18cm h

ProControl Fader Expansion Pack:

- 15.13"w x 25.04"d x 7.10"h
- 38.4cm w x 63.6cm d x 18cm h

Installation Guidelines

ProControl can be mounted in studio furniture or set on a table top.

Wherever you decide to put ProControl, be sure to observe the following guidelines:

- Do not block the front and back vents.
- Do not remove the feet.

Cleaning

If you need to clean the ProControl top surface, apply a non-bleach cleaning solution to a cloth or paper towel, then carefully wipe the surface. *Do not* use abrasives or any cleaning solution that contains bleach.

Moving

To avoid damage, never set a unit on its face or rear panel. When moving expanded systems, never attempt to turn the units upside down as this can put undue stress on the mounting brackets.

Software Installation

Basic Instructions (All systems)

All ProControl software is included when Pro Tools is installed. With each Pro Tools release, any new ProControl firmware is included in the ProControl Controller Personality file.

If you have not yet installed Pro Tools, stop here and follow the instructions in the *Pro Tools System Installation Guide*.

If you have already installed Pro Tools but performed a Custom Install, do the following to make sure the ProControl software is correctly installed:

To install ProControl software:

- 1 Insert the Pro Tools Installer disc into the CD-ROM drive and launch the Pro Tools Installer.
- 2 Choose Custom Install.
- 3 Select ProControl and click Install.

Macintosh

The Installer places the ProControl Personality file in the Controllers folder. The Controllers folder is located in the DAE Folder, which is inside the System Folder.

Windows

To install Digidesign Ethernet support for ProControl

- 1 On the desktop, right-click the My Network Places icon, and then choose Properties.
- 2 Right-click the relevant Local Area Connection icon, and then choose Properties.
- 3 Click on Install, select Protocol and Click on Add button.

- 4 Click on Have Disk.

- 5 Point to DigiNet.inf file in the \Controllers\Procontrol directory on your Pro Tools Installer CD-ROM. (The file OEMSETUP.INF becomes obsolete.)

- 6 Follow the instructions on-screen to complete the installation.

The Installer puts the DigiNet.inf files in the Digidesign\DAE\Controllers\Procontrol directory.

To remove Windows 2000 Digidesign Ethernet Support:

- 1 Right click My Network Place, choose Properties
- 2 Right click on the appropriate Local Area Connection, choose Properties.
- 3 Select Digidesign Ethernet Support, choose Uninstall. click Yes.

To change the Windows NT ethernet port:

- 1 In the Network Control Panel, select Bindings.
- 2 Select and expand DigiNet.
- 3 Select Ethernet port and enable the port to which ProControl is connected.
- 4 Disable other ports.
- 5 Click OK and then click Yes at the prompt to restart.

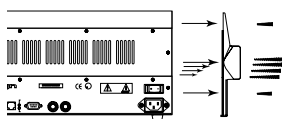
Hardware Assembly

Expanded systems can be bracketed together or left free-standing, depending on your preference. If you decide to leave the units free-standing, you can skip this section and proceed to “ProControl Back Panel” on page 12.

If you want to bracket the units together for greater stability or flush mounting, do the following:

To attach a Fader Pack to a Main Unit using the included mounting brackets:

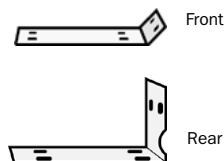
- 1 Locate the two mounting brackets included with the Fader Pack.
- 2 Make sure the units are NOT plugged in or powered on.
- 3 Remove the appropriate side panel from the main unit by removing the six screws (four longer screws, and two shorter ones—extras were included with the unit). Note where the longer screws are used. If you plan to reattach the side panel to your system, set the screws aside.



Removing a side panel

- 4 Place the ProControl Main and Fader Pack units on a table. Position the units so their rear panels hang over the edge of the table, or prop the unit up, to gain access to the brackets.
- 5 Remove the bracket screws from the rear underside and back panels of the Main Unit and Fader Packs.

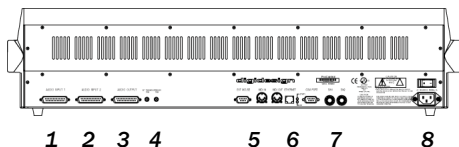
- 6 Align the rear bracket with the holes in either the Main Unit or a Fader pack, and use the same screws to attach the rear bracket to both units.



Front and Rear Brackets

- 7 At the front panel mounting location, remove the six mounting screws (three on the Main Unit, three on the Fader Pack). Be careful if you move the units while only one bracket is attached.
- 8 Align the front bracket with the holes in the Main Unit and Fader Pack, and use the six screws you removed to attach the front bracket to both units.
- 9 After attaching both mounting brackets, be very careful when moving the units. *Do not* carry an expanded ProControl system face down.
- 10 You can reattach the side panel (removed from the main unit) to the outside of the Fader Pack. If you do, be sure to put the long screws and the short screws in their proper locations when reattaching the side panels

ProControl Back Panel



Back panel connectors of a Main Unit

1. Audio Input 1

This DB-25 connector carries the External Listenback Mic, External Talkback Mic, and Aux Left/Right input signals.

2. Audio Input 2

This DB-25 connector receives the mix channels to be monitored. In Stereo mode, these include the main stereo mix and as many as three additional source input pairs. In Surround mode, this DB-25 connector receives the multiple channels of your surround mix.

3. Audio Output

This DB-25 connects to your primary and alternate stereo speakers, or your surround monitoring system.

4. Ext Talkback and Ext Listenback Trim

These two trim pots are used to adjust the input level of the optional External Talkback/Listenback mic inputs.

⚠ *Be very careful when moving ProControl to avoid breaking these knobs—do not stand the unit up on its back panel.*

5. Ext Mouse, MIDI and Com Port

The Ext Mouse connector lets you use a standard Windows-compatible mouse instead of the built-in ProControl Trackpad. Any “Microsoft Mouse” (3-byte)-compatible mouse can be attached to this connector.

The MIDI In/Out and Com ports are for factory diagnostics only. You should not connect anything to these ports.

6. Ethernet

Each ProControl unit contains a single Ethernet port. ProControl communicates with Pro Tools through this standard RJ45, 10Base-T connector.

7. SW 1 and SW 2

These two 1/4” jacks provide footswitch-control for Pro Tools play/stop, record (punch in/out), and remote talkback on/off. Polarity is selectable for these switch ports, allowing you to use virtually any momentary footswitch.

8. Power

This connector accepts a standard AC power cable. ProControl and Fader Packs are auto power-selecting (100V to 240V) and will automatically work with a standard modular cable to connect to AC power receptacles in any country.

Connecting ProControl

ProControl requires power and Ethernet connections for basic communication (the required cables are provided).

For optional monitoring through the ProControl analog Control Room section, audio cables and connections are required. See Chapter 3, “Audio Connections.”

Before connecting ProControl, make sure it and your computer are turned off.

To connect ProControl to your system:

- 1** Connect the included power cable to ProControl and to a power source. The power connector accepts a standard AC power cable, and is auto power-selecting.
- 2** Select the appropriate Ethernet cable for your system:
 - ◆ If you are only installing a Main Unit, use the crossover Ethernet cable. This cable can be identified by its red heat-shrink labels. Only use this cable with single, ProControl systems where there are no Fader or Edit Pack units.
 - ◆ If you are installing one or more Fader Packs, or if you are also installing an Edit Pack, use standard RJ-45 Ethernet cables for all units (including the Main). See “Ethernet Connections for Expanded ProControl Systems” on page 13 for additional information.
- 3** Attach one end of the appropriate Ethernet cable to a port on your CPU or Ethernet hub. (Do not use any hub ports labelled or intended for Uplink functions.)
- 4** Connect the other end to the ETHERNET port on the back of ProControl.

Ethernet Connections for Expanded ProControl Systems

Whenever one or more Fader Packs, or an Edit Pack, are used with ProControl, all units must be connected to an Ethernet hub using standard RJ45 cables.

⚠ *Do not use the crossover cable (it has red heat-shrink at both ends) if using Fader Packs or Edit Pack—this cable will not function in an expanded system.*

To connect an expanded ProControl System:

- 1** Install the Ethernet hub according to its instructions, and verify that it is functioning properly before proceeding.
- 2** Connect one end of a standard RJ45 cable to a port on the Ethernet hub (do not use any ports labelled/intended for Uplink functions).
- 3** Connect the other end of the RJ45 to the ETHERNET port on the back of the Main Unit. (Do not use the red-labelled crossover Ethernet cable for any connections in an expanded ProControl System.)
- 4** For each Fader Pack, use another RJ45 cable to make a connection between another hub port and the Fader Pack’s ETHERNET port. Cabling sequence does not matter, as it can be configured from within Pro Tools.
- 5** If you are also installing Edit Pack, see the *Edit Pack Guide* for additional information.

Always use standard RJ45 cables throughout an expanded ProControl system. The supplied red-wrapped cable will not function (and should not be used) with expanded systems.

ProControl and Ethernet Performance

This section provides general Ethernet information that can help you optimize system performance.

Ethernet Descriptions

ProControl uses Ethernet phase 1, Type 0x885F packets, and can co-exist with TCP/IP (and other) networking protocols used on standard Mac/PC Ethernet networks. The included Cross-over Cable (red heat shrink ends) provides a dedicated “network” for a core system.

ProControl, Ethernet and Network Traffic

If the system is already connected to an Ethernet network, moderate network traffic such as basic e-mail should not impact ProControl communication. To increase performance, create a dedicated Ethernet network for ProControl.

Do not share the same Ethernet port between ProControl and other active network functions such as email and file transfer. Refer to the documentation that came with the CPU or Ethernet hub for more information about Ethernet networks.

ProControl can be used with the built-in Ethernet port in your computer. For better performance, you might want to use an additional Ethernet 10-BaseT card (which takes up an additional slot in the CPU). There are combined 10/100-BaseT hub/bridges readily available that can support ProControl over 10-BaseT, and other network traffic over 100-BaseT, simultaneously.

Remote Control

ProControl can “see” any Ethernet client (card) connected to a network. Because of this Ethernet implementation, you can set up a wide range of creative and practical configurations such as the use of a single ProControl system controlling different Pro Tools systems (though not simultaneously) without reconnecting.

Separate Zone Recommended for Optimal Performance

ProControl and its Ethernet implementation are designed to operate while you are performing general purpose tasks such as email. If you are using additional Ethernet ports for network tasks while using ProControl, performance will be improved by creating a dedicated server zone for ProControl. Refer to the operating system and Ethernet documentation for details.

Headphone

ProControl provides a stereo headphone jack on the front panel. A discrete feed of the main stereo ProControl mix, headphone level is set from the Headphone knob in the Control Room section.

To connect headphones in a fixed installation (custom cabinets), you can use a right-angle stereo phone plug.

Headphone output follows Control Room MONO, but not control room MUTE or DIM functions. This jack is not meant to feed a cue system, but to allow a single pair of headphones to be connected directly to ProControl to monitor in private.

Footswitch

The SW 1 and SW 2 jacks can be assigned to any of three available Footswitch functions:

- Play/Stop
- Record (punch-in/punch out)
- Remote Talkback on/off

Both footswitch inputs' polarity is selectable to support virtually any available momentary footswitch.

The function and polarity of the footswitch jacks SW 1 and SW 2 are configured using the ProControl UTILITY menus. Press UTILITY > Prefs > SWITCH 1 (or SWITCH 2) and configure the polarity and functions. (See Appendix A, "Utility Settings" for more information on UTILITY.)

External Mouse

The EXT MOUSE port can be used to attach a Windows-compatible mouse directly to ProControl. You can then use a mouse instead of the built-in Trackpad (you can not use both an external mouse and the Trackpad simultaneously).

Unused Ports

COM Port

The COM PORT connector on the back of ProControl is used only for factory diagnostics.

MIDI Connections

ProControl uses Ethernet for all communications to and from the host CPU. The MIDI ports are currently not supported.

Fader Pack Connections

Fader Packs only require power and Ethernet connections.

Power Connections

1 Plug one end of a power cord (included) into the Fader Pack AC receptacle.

2 Plug the other end into a power source such as a power strip or wall outlet.

Ethernet Connections

■ With ProControl positioned, use a standard RJ-45 cable and connect the Fader Pack Ethernet port to an available port on your Ethernet hub.

The rest of the ports on Fader Packs are inactive and should be left unused.

Chapter 3: Audio Connections

This chapter shows how to make analog audio connections to ProControl for control room monitoring and studio communication.

Analog audio connections to and from ProControl are not required for ProControl to operate Pro Tools functions. All mixing, recording and digital signal processing always takes place in the Pro Tools mix environment.

Audio Cables for ProControl

Analog audio connections to ProControl are made through three 4-40 American-standard, male panel-mount DB-25 connectors on the rear of the Main Unit (labeled Audio Input 1, Audio Input 2, and Audio Output).

DB-25 cables are available through many vendors (contact your Digidesign dealer for information). Consider which audio interfaces you will be dedicating to ProControl (888-series interfaces have XLR, while the 882-series are hi-z 1/4" inputs and outputs). To bring the signals to a patchbay, have it wired with no connector "pigtails" and terminate the snake to the patchbay.

For wiring pinout diagrams for ProControl AUDIO INPUT 1, AUDIO INPUT 2 and AUDIO OUTPUT ports, see Appendix B, "Audio Connectors and Pinouts."

Overview of Monitoring

Input Two eight-channel input connectors supply ProControl with Pro Tools audio interface output signals, and external signal busses.

Output One eight-channel output connector supplies ProControl monitor outputs for main speakers, alternate speakers, cue mix systems, mastering decks, and other destinations.

Control Room Section The Control Room Monitoring section is the ProControl "center section." This section provides volume control, source and speaker selection, mute, dim, mono, talkback, listenback, and signal routing options. Stereo and surround monitoring are supported.

Stereo and Surround Monitoring

ProControl supports stereo and surround monitoring. (Surround mixing requires Pro Tools MIX, MIXplus or MIX3.) Audio connections will depend on which mode you plan to use. Example set ups and instructions are provided in the following sections.

See "Stereo Monitor Mode Input and Output" on page 18 for Stereo monitoring connections. For Surround mode instructions and examples, see "Surround Monitor Mode Input and Output" on page 22.

Stereo Monitor Mode Input and Output

Stereo mode provides numerous options for source input, alternate mix control, and other mono/stereo bussing features.

Audio Connector	Channels	Signal/bus	Input Source/ Output Destination	Control Room access
Input 1	1	Listenback Mic Input	external Listenback mic	thru TALKBACK
	2	Talkback Mic Input	external Talkback mic	TALKBACK
	3 & 4	n/a		
	5 & 6	n/a		
	7	AUX IN R	cue mix, right	AUX (5-6), and MIX TO AUX
	8	AUX IN L	cue mix, left	
Input 2	1	Source 3 In, Right	Source 3 (CD, DAT, other)	SRC 3
	2	Source 3 In, Left		
	3	Source 2 In, Right	Source 2 (CD, DAT, other)	SRC 2 (5-6)
	4	Source 2 In, Left		
	5	Source 1 In, Right	Source 1 (CD, DAT, other)	SRC 1 (3-4)
	6	Source 1 in, Left		
	7	Main In, Left	Pro Tools main stereo mix	MAIN (1-6); STEREO MIX
	8	Main In, Right		
Output	1	AUX OUT, Right	cue mix (headphones)	AUX (5-6); MIX TO AUX
	2	AUX OUT, Left		
	3	ALT OUT, Right	to control room alternate speakers	ALT (3-4); ALT
	4	ALT OUT, Left		
	5	SLATE OUT, Right	to Pro Tools inputs for slate and rerecord,	TALKBACK
	6	SLATE OUT, Left		
	7	MAIN OUT, Right	to control room main speakers	MAIN (1-6)
	8	MAIN OUT, Left		

Stereo monitoring, input and output connections.

Stereo Input and Output Example

ProControl provides numerous monitoring options when mixing in Stereo mode. The following diagrams provide examples of ProControl stereo monitoring connections.

Input

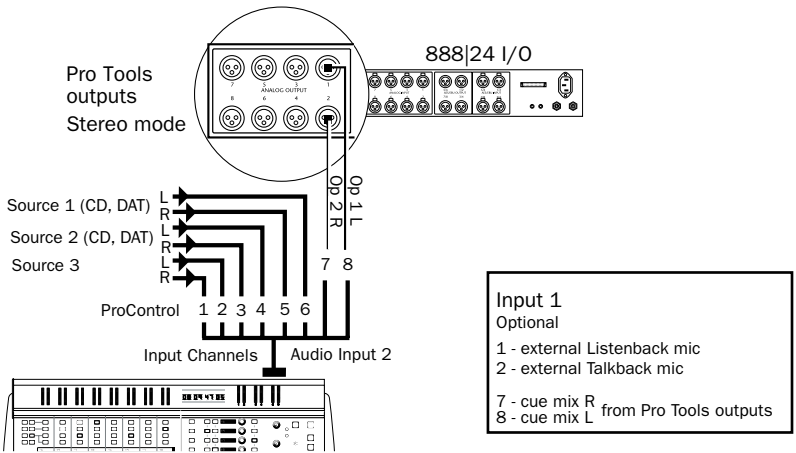


Figure 1. Basic input connections for Stereo monitoring

Output

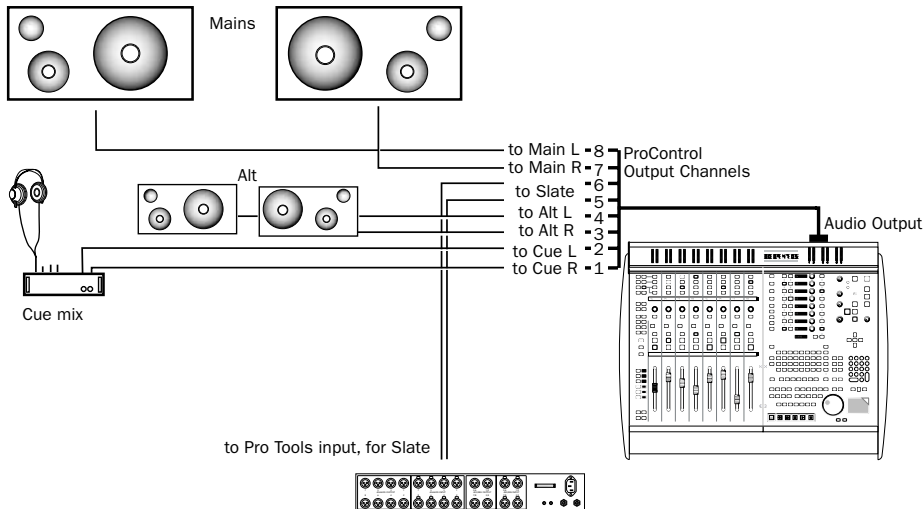


Figure 2. Output connections for stereo monitoring

Basic Stereo Monitoring Connections

This section explains how to make specific connections for ProControl stereo monitoring. Operational instructions. For operational instructions, see Chapter 6, “Control Room Monitoring.”

Stereo Monitoring Input

To connect the Pro Tools main stereo mix:

- Connect your main Pro Tools stereo outputs (usually audio interface Outputs 1 - 2) to the ProControl MAIN IN Left/Right inputs (Audio Input 2, channels 7 & 8).


To connect alternate source inputs:

- Connect alternate source outputs to the ProControl SOURCE 1, 2 or 3 inputs. They can then be selected for monitoring using the ProControl SRC 1, SRC 2 and SRC 3 switches.

Stereo Monitoring Output

Main and Alternate Speaker Connections

- Connect the ProControl CONTROL ROOM OUT outputs (Audio Output, channels 7 & 8) to your main control room monitor system.
- Connect your secondary reference monitors (if any) to the CONTROL ROOM ALT OUT outputs (Audio Output, channels 3 & 4).

 For more information about ProControl stereo monitoring options for Main and Alt, see Chapter 6, “Control Room Monitoring.”

Cue and Headphone Mix Connections

In Stereo Monitoring mode, the ProControl AUX OUT output bus and AUX (5-6) level control are designed for cue mixes (headphone systems or tracking room speakers).

To connect ProControl to your cue mix system:

- Connect the ProControl AUX OUT L/R outputs (Audio Output channels 1 & 2) to your studio headphone system or tracking room monitors. This signal's level can be controlled from the ProControl AUX (5-6) level control.



Use the front panel Headphone jack for control room headphones, only.

For instructions on how to route the Main stereo mix to the Aux Out bus, see “MIX TO AUX and AUX Input” on page 67.

Discrete Cue Mix Connections

The ProControl Aux bus can carry a discrete mono or stereo cue mix from Pro Tools outputs.

To connect a discrete cue mix to ProControl:

- 1 In Pro Tools, create a cue (or, headphone) submix and bus it to an available Output path. See the *Pro Tools Reference Guide* for instructions.
- 2 Connect the Pro Tools outputs you have designated as the cue mix bus to the ProControl AUX IN inputs (Audio Input 1, channels 1 & 2).

Talkback and Listenback

ProControl provides both Talkback and Listenback features for studio communication, slating, and dubbing:

Talkback Lets those in the control room be heard in the cue mix. You can use the internal talkback mic or an external mic for this purpose.

Listenback An additional input channel similar to Talkback, Listenback is useful when overdubbing without any other open mics, such as a synthesizer overdub that is being recorded directly. By setting up a microphone in the tracking room and connecting it to the Listenback input, two-way communication between the control room and the talent can be established.


Slate and Talkback

The Talkback signal can be fed to the ProControl Slate output. This makes it easy to record slates, and to quickly record reference vocals or other spur-of-the-moment ideas without having to first set up a microphone and adjust levels.

Phantom Power

ProControl provides +15V in a standard phantom power arrangement to power condenser mics. While this voltage rating does not match the industry standard of +48V, it is adequate to power most any popular condenser microphone.

In addition, this phantom power is always on (you can't disengage it). This should not be a cause for concern; dynamic microphones will work fine, and will not be damaged by connecting them to the Talkback or Listenback microphone inputs.

 *Do not connect ribbon microphones to any phantom powered source.*

Connecting Talkback or Listenback

To connect external Talkback or Listenback mics:

- For an external Talkback mic, connect it to the ProControl External Talkback Mic In (Audio Input 1, channel 2).
- Connect your external Listenback mic to the ProControl External Listenback Mic In (Audio Input 1, channel 1).

Talkback and Listenback Trim

Use the EXT TALKBACK TRIM and LISTENBACK TRIM knobs on the back panel to trim the levels of external talkback or listenback inputs.

Connecting Slate, Dub (Rerecord)

Slate/Dub (Rerecord) lets you record Talkback audio in Pro Tools (or any recording device). Once you've connected the Slate output to a Pro Tools audio interface input, any ProControl input source (Talkback, Listenback, Main, or Sources) can be routed to Pro Tools for recording slates, production notes, and other information.

To use the Slate bus:

- Connect ProControl Slate Out (Audio Output channels 5 & 6) to an available input pair of a Pro Tools audio interface (or a DAT machine or other recording device).

If you only plan to record mono Talkback Slate audio, you can connect one of the Slate/Dub outputs (this saves one Pro Tools input for other purposes).

Configuring and using Slate are explained in Chapter 6, "Control Room Monitoring."

Surround Monitor Mode Input and Output

ProControl offers a multi-channel surround monitoring mode that supports four- or six-channel monitoring. The following table lists six-channel (5.1 format) connections. For four-channel (LCRS) information, see “LCRS Monitoring Connections” on page 29.

Audio Connector	Channel	Signal bus	Source	Control Room access
Input 1	1	Listenback Mic Input	external Listenback mic	thru TALKBACK
	2	Talkback Mic Input	external Talkback mic	TALKBACK
	3 & 4	n/a		
	5 & 6	n/a		
	7	AUX IN R	cue mix, right	AUX (5-6), and MIX TO AUX
	8	AUX IN L	cue mix, left	
Input 2	1 & 2	n/a		
	3	LFE IN	LFE	SRC 2 (5-6)
	4	CENTER IN	Center	
	5	Rs IN	Right surround	SRC 1 (3-4)
	6	Ls IN	Left surround	
	7	RIGHT IN	Right (front)	MAIN (1-6); STEREO MIX
	8	LEFT IN	Left, (front)	
Output	1	LFE OUT	to LFE	AUX (5-6); MIX TO AUX
	2	CENTER OUT	to Center	
	3	Rs OUT	to Right surround	ALT (3-4); ALT
	4	Ls OUT	to Left surround	
	5	SLATE OUT, Right	to Pro Tools inputs for slate, rerecord	TALKBACK
	6	SLATE OUT, Left		
	7	RIGHT OUT	to Right (front)	MAIN (1-6)
	8	LEFT OUT	to Left (front)	

Surround monitoring, input and output connections.

Introduction to Surround Monitoring

The following sections introduce several concepts of ProControl audio monitoring connections for surround mix setups.

Surround Channels

The following abbreviations indicate the channels that comprise a multi-channel signal.

Surround channel abbreviations

Abbreviation	channel
L	Left, front
R	Right, front
Ls	Left surround (rear)
Rs	Right surround (rear)
C	Center
LFE	Low Frequency Effects

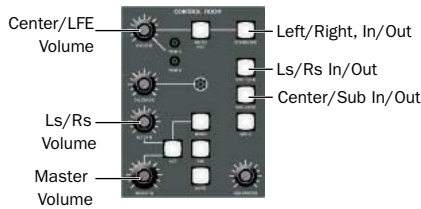
Other multi-channel formats utilize additional channels such as Lc (Left, center) and S (mono surround, used in LCRS). See the *Pro Tools Reference Guide* for more information.

Level and Source Controls

The Control Room section can provide monitoring level and source control over signals and signal pairs within a multi-channel surround mix. Connections from Pro Tools audio interfaces to ProControl Input 2 will vary, depending on how you configure your multi-channel Pro Tools sessions, paths, and track layouts.

Input and output connections required for surround are described in the following pages.

The diagram below shows the location and bus assignment of each level and source control for six-channel, 5.1 mix:



Monitoring level and in/out controls

The diagram below shows the ProControl outputs attenuated by each knob, and ProControl inputs controlled by each Source select switch:



Input and output channels for level and source controls

Surround Monitoring Busses

The table below lists connections for 5.1 format surround monitoring.

ProControl Surround Monitoring Busses

Bus	DB-25 Connectors		Control Room Section	
	Input 2	Output	Level	In/Out
L R	8 7	8 7	MAIN(1-6)	STEREO MIX
C LFE	4 3	2 1	AUX(5-6)	SRC2(5-6)
Ls Rs	6 5	4 3	ALT(3-4)	SRC1(3-4)

5.1 Monitoring Output Connections

The following diagram shows ProControl audio output connections for 5.1 format monitoring.

	DB-25 Connections	Control Room Section
Bus	Audio Output	Level, and In/Out
L R	8 7	MAIN(1-6), STEREO MIX
C LFE	2 1	AUX(5-6), SRC2(5-6)
Ls Rs	4 3	ALT(3-4), SRC1(3-4)

Connect your surround monitoring system to ProControl as shown on this page.

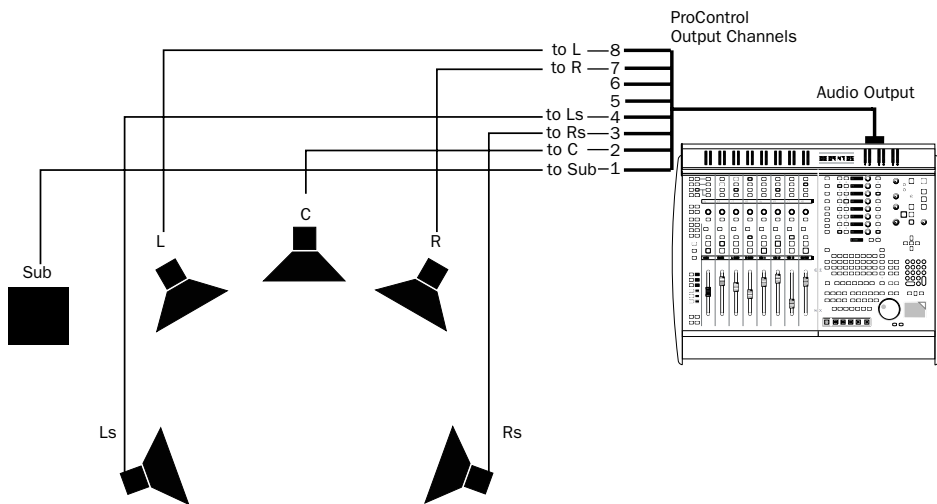


Figure 3. Audio output connections for discrete 5.1 monitoring

⚠ Pro Tools on-screen meters may not match your audio interface and ProControl meters in regards to track layout. See “5.1 Track Layouts, Routing, and Metering” on page 30 for important information.

5.1 Monitoring Input Connections

Use the following table to connect surround mix channels to ProControl Audio Input 2 channels:

ProControl Surround Monitoring Inputs

Mix channels	DB-25 Connector: Audio Input 2 Cable number
L R	8-7
Ls Rs	6-5
C LFE	4-3

Surround Monitoring and I/O Setup in Pro Tools


Pro Tools provides preset I/O Setup settings files for stereo and 5.1 formats. The different 5.1 format presets are:

Film (L C R Ls Rs LFE)

SMPTE/ITU (L R C LFE Ls Rs)

DTS (L R Ls Rs C LFE)

You can choose a 5.1 format when you create a new session. You can reconfigure multi-channel paths in the current session using the I/O Setup dialog in Pro Tools.

 For more information, see the *Pro Tools Reference Guide*.

If you have already been using ProControl for surround monitoring, use the DTS format instructions. (See “DTS (ProControl) 5.1 Monitoring Connections” on page 26.)

If you are installing ProControl for the first time and know which 5.1 format you are going to use in Pro Tools, use the following tables (or the diagrams on the following pages) to determine how you should connect your audio interface outputs to ProControl inputs for surround monitoring.

Pro Tools DTS Track Layout L R Ls Rs C LFE

Input connections for DTS

Pro Tools Outputs	Signal	ProControl INPUT 2
1	L	8
2	R	7
3	Ls	6
4	Rs	5
5	C	4
6	LFE	3

Pro Tools Film Track Layout L C R Ls Rs LFE

Input connections for Film

Pro Tools Outputs	Signal	ProControl INPUT 2
1	L	8
2	C	4
3	R	7
4	Ls	6
5	Rs	5
6	LFE	3

Pro Tools SMPTE/ITU Layout L R C LFE Ls Rs

Input connections for SMPTE/ITU

Pro Tools Outputs	Signal	ProControl INPUT 2
1	L	8
2	R	7
3	C	4
4	LFE	3
5	Ls	6
6	Rs	5

DTS (ProControl) 5.1 Monitoring Connections

When Pro Tools is configured for DTS format 5.1 mixing, the six-channel output path is mapped:

L R Ls Rs C LFE

If Pro Tools output paths are configured for this 5.1 format in the I/O Setup dialog, connect ProControl as shown in the following table. (The following tables assume that audio interface channels 1-6 are used for the 5.1 output.)

Audio Connections for DTS format 5.1

Source Channel	Input 2, DB-25 Channels	Control Room Access	Monitor Output Channels
L	8	MAIN(1-6), STEREO MIX	8, to front Left
R	7	MAIN(1-6), STEREO MIX	7, to front Right
Ls	6	ALT(3-4), SRC 1	4, to Left surround
Rs	5	ALT(3-4), SRC 1	3, to Right surround
C	4	AUX(5-6), SRC 2	2, to Center
LFE	3	AUX(5-6), SRC 2	1, to LFE

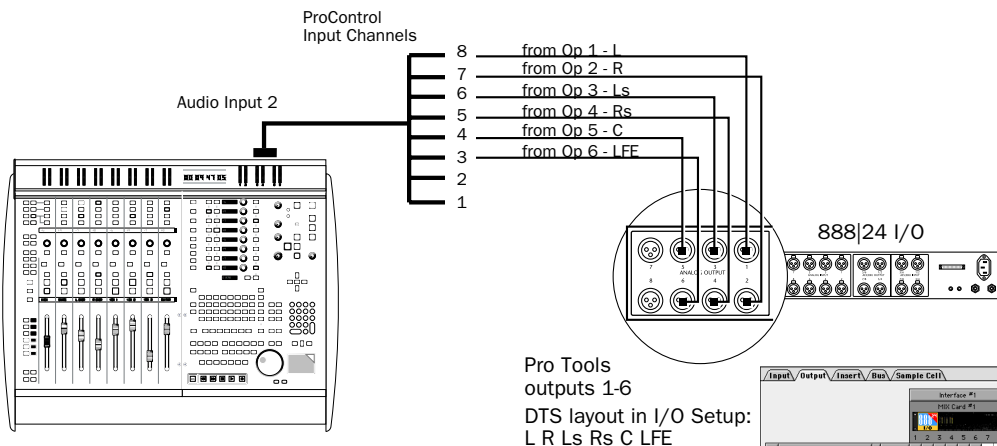


Figure 4. 5.1 monitoring input connections for DTS (best for ProControl)

Film (Pro Tools Default) 5.1 Monitoring Connections

The Film (ITU) standard is the Pro Tools default 5.1 multi-channel format. Track layout for Film standard is:

L C R Ls Rs LFE

If you use this 5.1 format in Pro Tools, the following input and output connections will maintain the level control and assignments in the Control Room Monitoring section described in “Level Controls and Outputs” on page 67.

Audio Connections for Film format 5.1 mix (Pro Tools default 5.1 track layout), L C R Ls Rs LFE

Source Channel	Input 2, DB-25 Channels	Control Room Access	Monitor Output Channels
L	8	MAIN(1-6), STEREO MIX	8, to front Left
C	4	AUX(5-6), SRC 2	2, to Center
R	7	MAIN(1-6), STEREO MIX	7, to front Right
Ls	6	ALT(3-4), SRC 1	4, to Left Surround
Rs	5	ALT(3-4), SRC 1	3, to Right Surround
LFE	3	AUX(5-6), SRC 2	1, to LFE

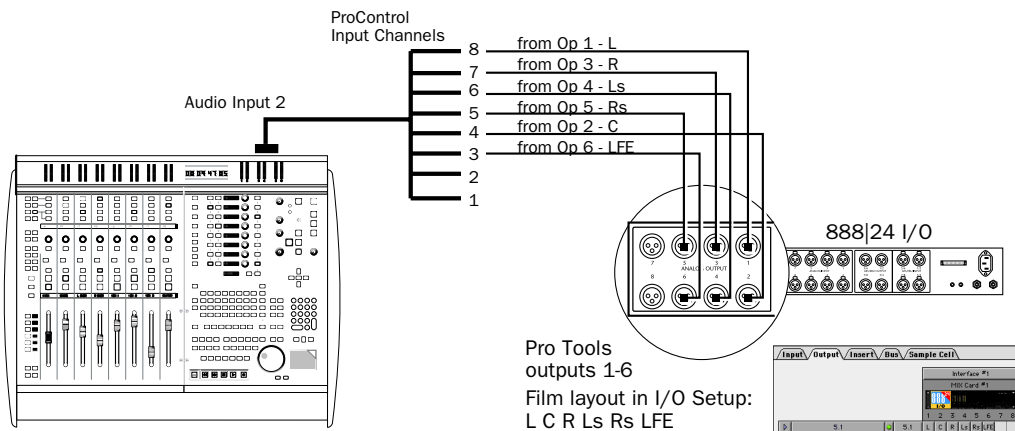


Figure 5. 5.1 monitoring input connections for Film (Pro Tools default)

SMPTE/ITU Layout 5.1 Monitoring Connections

The SMPTE/ITU format supports the following track layout standard:

L R C LFE Ls Rs

If you mix using this 5.1 format, the following input and output connections will maintain the level and source controls in Control Room Monitoring section (see “Level Controls and Outputs” on page 67).

Audio Connections for SMPTE/ITU format 5.1 mix (used in Dolby Digital), L R C LFE Ls Rs

Source Channel	Input 2, DB-25 Channels	Control Room Access	Monitor Output Channels
L	8	MAIN (1-6), STEREO MIX	8-, to front Left
R	7	MAIN (1-6), STEREO MIX	7, to front Right
C	4	AUX (5-6), SRC 2	2, to Center
LFE	3	AUX (5-6), SRC 2	1, to LFE
Ls	6	ALT (3-4), SRC 1	4, to Left surround
Rs	5	ALT (3-4), SRC 1	3, to Right surround

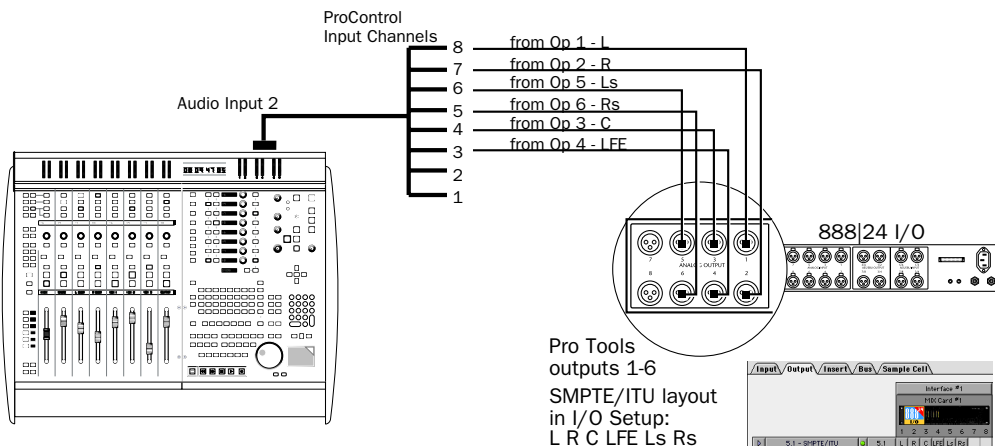


Figure 6. 5.1 monitoring input connections for SMPTE/ITU

LCRS Monitoring Connections

LCRS is the four-channel format used in the widely used Dolby Surround (ProLogic) surround format. Track layout for LCRS is:

L C R S

The following input and output connections will maintain level and source controls over the Main (4-channel) mix, Center, Surround (see “Level Controls and Outputs” on page 67).

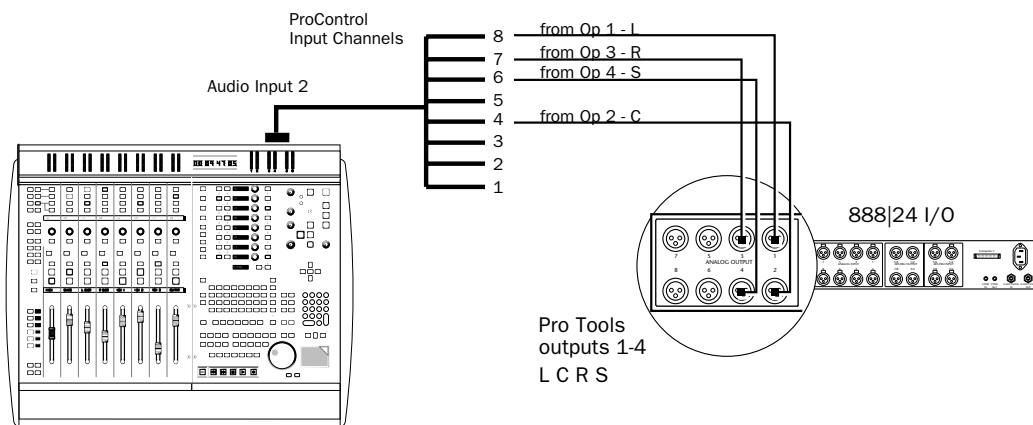


Figure 7. Input connections for LCRS monitoring

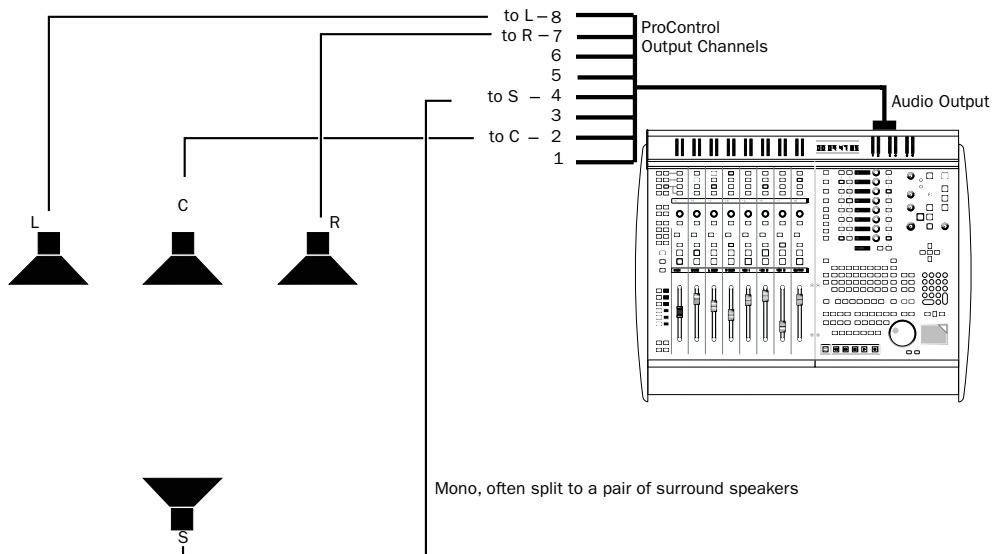
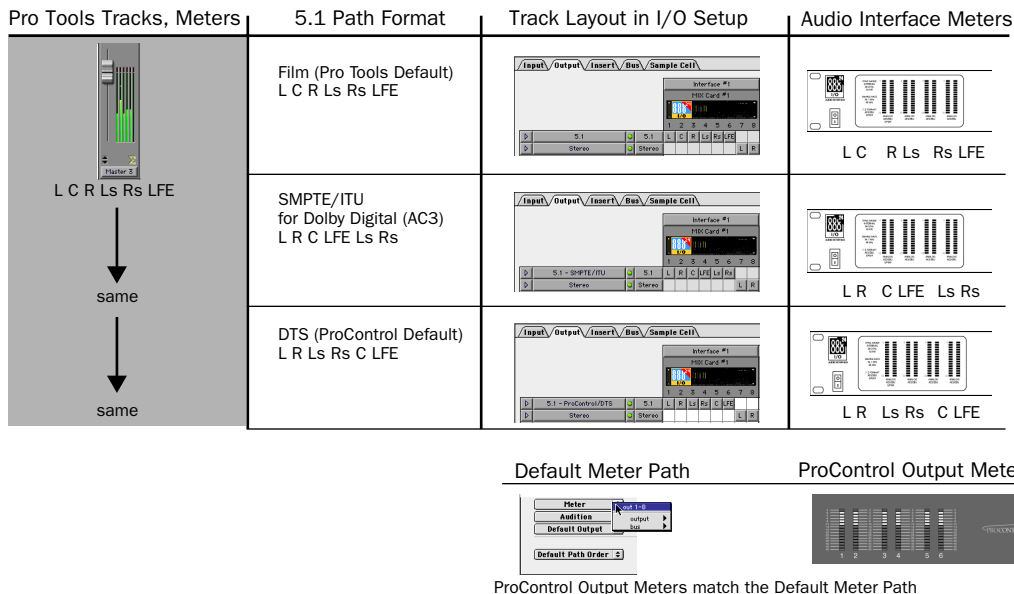


Figure 8. Output connections for LCRS monitoring

5.1 Track Layouts, Routing, and Metering



ProControl Output Meters match the Default Meter Path

Figure 9. Track Layout and metering of different 5.1 formats in Pro Tools

Track Meters

Unlike hardware meters, on-screen meters on 5.1 format audio tracks and channel strips are always arranged according to the Film track layout (L C R Ls Rs LFE).

5.1 Path Formats

The Film, SMPTE/ITU, and DTS 5.1 mixing formats have become standards in professional multi-channel production. One of the primary difference among these standards is their corresponding track layout, or mapping of signals within the six-channel, 5.1 mix.

Track Layout in I/O Setup, and Audio Interface Meters

Pro Tools lets you work in any multi-channel mixing format by providing multi-channel Bus and Output paths. Paths can be mapped in the I/O Setup dialog. (See the *Pro Tools Reference Guide* for more information about the I/O Setup dialog and paths.) Path mapping determines the signal routing to audio interfaces and their meters.

ProControl Output Meters

ProControl meters follow audio interface track layout. ProControl Output meters show the current Default Meter path (selected in the I/O Setup dialog), and map according to its track layout.

Chapter 4: Getting Started

This chapter explains how to begin using ProControl with Pro Tools.

This chapter assumes you have completed the installation instructions contained in the preceding chapters.

Starting Up and Shutting Down a System

Start up and shut down your system in the following order:

Start your Pro Tools System in this order:

- 1 Turn on external hard drives first. Wait 10 to 15 seconds for them to come up to speed.
- 2 Turn on ProControl, then any Fader Packs.
- 3 If you plan to work with MIDI equipment, turn on MIDI interface and other MIDI devices.
- 4 Turn on audio interfaces.
- 5 Turn on computer.
- 6 Turn on monitoring speakers/system.

Shut down Pro Tools in this order:

- 1 Turn off monitoring speakers/system.
- 2 Turn off audio interfaces.
- 3 Shut down computer.
- 4 If using MIDI equipment, turn off MIDI interfaces, controllers, or other.
- 5 Turn off ProControl (its outputs mute during power-up/down).
- 6 Turn off external hard drives.

Software Configuration

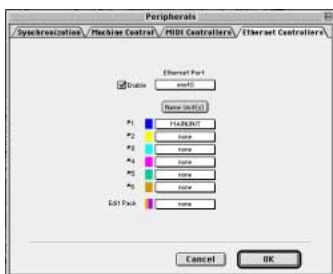
Communication between ProControl (and Fader Packs) and Pro Tools is easily configured from within the ProControl window of the Pro Tools Peripherals dialog.

Double-check that any Ethernet hub or other related devices are installed and verified according to the manufacturer's instructions.

Enabling ProControl in Pro Tools

To enable ProControl units in Pro Tools:

1 Choose Setups > Peripherals, and click Ethernet Controllers.



Ethernet Controllers display in the Peripherals dialog

2 Click Enable. Pro Tools scans the Ethernet connection for any ProControl units connected to the system.

3 If the computer has multiple Ethernet ports, do either of the following:

- Macintosh: Use the Ethernet port menu to select the port connected to ProControl.
- Windows: Refer to your Windows2000 documentation for more instructions.

4 Select units as arranged, left to right, beginning with Unit pop-up #1. If you are using a Main Unit only, select Main Unit for Unit #1. If you have one Fader Pack to the left of a Main Unit, select FADERPK for Unit #1, and MAINUNIT for Unit #2. Up to five Fader Packs can be enabled. If using an Edit Pack, select it from the dedicated Edit Pack menu. (See the *Edit Pack Guide* for more information.)

As units are selected, Pro Tools scans for the unit and, when found, brings each unit online. The current status of each unit is indicated in the Peripherals dialog in the following ways:

- Bold type indicates connected units.
- Italics indicate lost or disconnected units.
- Underlined indicates that the selected units are in use by another Pro Tools system.

5 After enabling all units, click OK to close the Peripherals window.

Firmware If prompted to update firmware, follow the instructions on-screen to load the latest firmware to each ProControl unit.

When communication is established, Pro Tools will display a colored outline colors identifying each bank of Pro Tools tracks. If problems persist after power-cycling and checking connections, see “Troubleshooting” on page 36.

Unit Colors Identify Controller Focus

The colors in each unit row are used to identify controller focus on-screen in Pro Tools. The bank, track, send, or other items currently the focus of ProControl is outlined in the color associated with each unit.


ProControl Firmware

Each release of Pro Tools includes the most current ProControl firmware. After enabling ProControl units in the Peripherals dialog, Pro Tools compares the firmware of all connected units to the version available in the Pro Tools software. If necessary, Pro Tools suggests to download new firmware. Firmware downloading resets all ProControl Utility settings to their factory defaults, listed in “Reset (Factory Default) Page” on page 183.

In networked environments, be careful not to accidentally select remote (other) ProControl units. You can apply custom names to units to avoid confusion (see “Naming ProControl Units” on page 33).

Naming ProControl Units

You can name units, to identify systems and avoid confusion in networked environments with multiple ProControl stations.


 *You can also rename ProControl units using Local Mode. See “Monitor Modes and Settings” on page 179.*

To rename a unit from the Peripherals dialog:

- 1 Choose Setups > Peripherals and click ProControl.
- 2 Click the Name Unit(s) button and enter the unit name in the dialog that appears.
- 3 Click OK.

System Test and Basic Configuration

It is assumed that you have completed the ProControl installation and setup instructions contained in this chapter.

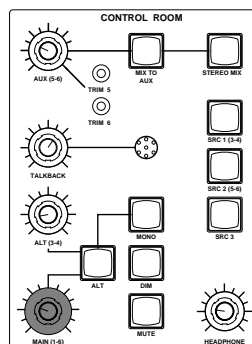
 *For a video guided tour of ProControl, use the ProControl Tutorial CD-ROM (included with your Main Unit).*

To begin:

- Launch Pro Tools and open a session.

To play the Demo Session

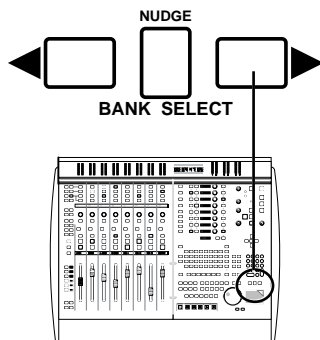
- 1 Adjust the monitor output level from the CONTROL ROOM section using the Main (1-6) pot so that the volume is relatively low to start.
- 2 Press PLAY on the ProControl Transport.
- 3 Adjust the main volume using the MAIN (1-6) knob.



MAIN (1-6) in the Control Room section

- 4 As the demo plays, grab a fader and adjust its level. Or, solo or mute tracks.

5 Bank to access other tracks by pressing the right or left Arrow BANK SELECT switches.



Bank Select and Nudge

6 Press STOP. Or press the Space bar of your computer keyboard—both Pro Tools and ProControl are “live” at all times, so you can work from either environment.

Audio Monitoring Defaults

ProControl defaults to the following Control Room settings:

Stereo, single-source input/monitoring In this mode, only a single stereo input source can be monitored through ProControl at a time (Main In, Source 1, 2 or 3 In). Also known as X-Or selection.


Mute > Control Room Only This mode mutes only the Control Room Main and Alt outputs, but not the Aux Out, from the MUTE switch in the Control Room section.

Internal Talkback (built-in TB mic) In this mode, the built-in Talkback mic supplies input to the ProControl talkback bus.

Operational instructions for these and all Control Room options can be found in Chapter 6, “Control Room Monitoring.”

Basic Configuration Options

ProControl provides numerous Utility settings that lets you configure Control Room monitoring and other options for your projects. The following sections introduce just a few of these options, including Stereo and Surround mode selection, fader setup, and options for expanded systems.

 *Mute, Dim, Talkback, and all other monitoring options are explained Chapter 6, “Control Room Monitoring.” See also Appendix A, “Utility Settings.”*

Stereo or Surround Monitoring

ProControl defaults to stereo, single-source monitoring. You can switch to Surround mode to monitor Pro Tools multichannel mixes.

To monitor in surround mode:

1 Press the UTILITY switch on your Main Unit. The DSP EDIT/ASSIGN section displays Utility choices.

SYSTEM

MONITOR

TEST

RESET

PREFS

<>

<>

ESCAPE

2 Press the switch next to MONITOR. Monitor options are displayed.

3 Press the switch for MODE, which displays choices for Stereo and Surround.

4 To enable surround mode, press the switch next to SURROUND. To switch back to stereo mode, press the STEREO switch.

Fader Resistance

Fader pull back, or resistance, determines the “feel” of fader travel. To optimize fader response/feel, each ProControl unit has adjustable fader resistance to provide looser or tighter fader response.

Fader resistance can be applied globally (to all Main and Fader Pack units) from the Main Unit. Fader Packs can also be adjusted individually.

To adjust Fader Resistance:

Main Unit

- 1 Press UTILITY > PREFS > FADER.
- 2 Use the Scrub/Shuttle wheel to raise/lower fader resistance. You can move any faders on the main unit while adjusting the wheel to feel the change.

Fader Pack:

- 1 Press and hold SHIFT/ADD + OPT(ALT)ALL + F4. The top row of data displays (above the pan knobs) display:

SYSTEM | TEST | PREFS

- 2 Press the flashing red switch to select PREFS. From the next list of choices, select FADER.
- 3 Rotate any data encoder (knob) to raise or lower fader resistance. Check the effect of various settings by moving a fader while turning the encoder to adjust resistance.

Fader Pack Options

In expanded ProControl systems, Fader Packs can be configured to function in global or local SELECT/ASSIGN.

- In global mode, all connected ProControl units respond as one to channel-specific mode selections including pan, input/output assignment, and channel send assignment, send level and so on (referred to as SELECT/ASSIGN settings).
- In local mode, each unit (Main or Fader Pack) functions independently in regards to these channel-specific parameters. For example, local mode lets the Main Unit be displaying and controlling pan of channels 1-8, while a Fader Pack is simultaneously displaying and controlling Send B level on channels 9-16.

By default, ProControl units operate in global SELECT/ASSIGN. You can switch between global and local at any time to match the needs of your project.

To select local or global SELECT/ASSIGN:

- Press and hold the OPT (ALT) ALL switch, then press the FLIP switch.

The displays above the unit’s rotary encoders (pan knobs) will display:

SELECT | ASSIGN | SWITCHES | ARE | Now | In | LOCAL
| Mode | < > |

Repeat the above step to return a unit to global mode (the display will read “...Now In Global Mode”).

Troubleshooting

Communication Problems

If communication is ever lost, Pro Tools posts a dialog explaining that this has occurred and suggests that you check connections or power-cycle the units. ProControl automatically attempts to recover communication until it is re-established or you cancel the warning dialogs.

Pro Tools “Lost Communication” Message

If Pro Tools loses communication with ProControl because power or a cable connection has been cut off, for example, the main unit will display “OFFLINE” in the Time Counter Display. A message will appear on-screen in Pro Tools.

If communication is lost, try the following:

- Power down ProControl, wait several seconds, and then power up ProControl again. If communication problems persist, make sure cable connections are properly configured and secured.
- To make a unit available to other systems on a network, deselect Enable in the Peripherals dialog, to make it available to other networked systems.)
- If communication does not resume, or if error messages continue to appear, deselect Enable in the Peripherals dialog. Check all connections and settings, and try to reestablish communication.

Modal Dialog Messages

Before you begin working with ProControl, you should become familiar with some modal dialog messages which may appear:

Pro Tools On-screen Dialog Warning

If a modal dialog message appears in Pro Tools, ProControl will display the following message in the DSP EDIT/ASSIGN section displays:

```
PRO TOOLS  
HAS A  
DIALOG  
ON  
SCREEN!
```

This message will continue to be displayed until the dialog is closed.

Active in Background Message

If Pro Tools displays the following message:

“ProControl is currently inactive because Active in Background is disabled in Pro Tools”

- Choose Operations > Active in Background to restore communication.

Resetting and Calibrating

ProControl provides numerous self-diagnostic tests, recalibration routines and customizable parameters. These options are in the Utility pages, described in the Appendix of this guide.

Part III: Basics

Chapter 5: Overview and Basics

This chapter takes you on a guided tour through each section of the ProControl surface, and includes sections dedicated to the Transport and Control Room Monitoring features.

Terminology

Bank A group of tracks mapped to the controls available on a control surface.

Fader Banks The Fader sections on each unit focus on eight adjacent tracks at a time. The BANK SELECT and NUDGE switches navigate among banks and tracks in the session. ProControl Main Units consist of banks of eight faders. An expanded system with one Main and one Fader Pack (two total ProControl units) would comprise banks of 16 faders.

Bank Selecting The process of switching from one bank to another. For example, with a Main Unit only, tracks 1-8 will be bank #1, channel strips 9-16 will be bank #2, and so on. Expanded systems bank 16, 24, or as many as 48 channels at a time.) This is also called *bank swapping*.

Controller focus The term “controller focus” refers to the bank, track output, send, plug-in, or insert currently selected for editing by a ProControl unit, or section. On-screen, Pro Tools uses color outlines to indicate controller focus. A different color represents each ProControl unit connected to your system.

DSP Edit/Assign The DSP Edit/Assign section can focus on a plug-in, a send, or a track output. For example, when a plug-in is being edited in the DSP Edit/Assign section, that plug-in is the current *controller focus*. On-screen, Pro Tools indicates controller focus by highlighting the individual send or plug-in (or insert) in the Mix and Edit windows.

Global and Local Controls Controls that affect all Main and Fader Pack Expansion units in a system act globally. Units can also be set to Local mode, in which their controls only affect the unit on which they are invoked.

Data Encoders Rotary data encoders are virtual knobs, with LED ring lights that represent values for pan position and send level.

Dedicated Controls These controls perform single functions that never change. These controls are not “banked” or “paged.” For example, the Transport and Window switches never change their function.

Meter section

- Eight LED meters for Input/Track level indication
- Time Counter Display
- Six LED meters for master output level

The Fader Section

Channel SELECT/ASSIGN section

- Twelve SELECT/ASSIGN switches to select data encoder function
- Pan, send level, input and output, and Flip mode controls

Channel AUTOMATION section

- Eight automation MODE switches
- Eight automation ENABLE switches
- AUTO SUSPEND switch

KEYBOARD SHORTCUTS section

- Computer key command equivalent switches

Faders and channel controls

- Eight 100 mm., touch-sensitive DigiFaders™ for channel volume or send level
- Eight single-row 8-segment LED displays for channel name and headroom display
- DISPLAY MODE switch to toggle name, group, dB values and channel numbers
- Eight data encoders with 15-LED indicator rings for pan, send and I/O control
- Eight single-row 8-segment LED dot-style displays for encoder data display
- Eight SOLO, MUTE and SELECT switches
- Eight ASSIGN/MUTE switches for sends and I/O, and for selecting pre/post for sends
- Eight REC/RDY record-arming switches
- Eight dedicated EQ and DYN IN/EDIT switches
- Eight INS/SEND select switches
- Eight AUTO Mode switches LED labels
- INS/BYP switch for INS/SEND switch row
- AUTO SUSPEND switch to suspend automation playback
- Master SOLO clear and indicator switch
- Four Master Function Switches and four "F-key" function switches

Time Counter Display

- LED time counter display for viewing current session time
- COUNTER MODE switch toggles SMPTE, Min/Sec, Feet/Frames

The Main Section

DSP EDIT/ASSIGN section

- Eight data encoders for plug-in/Insert parameters
- Eight LED displays for plug-in parameters
- 24 insert assignment and editing switches
- INSERTS/PARAM switch for plug-in editing
- MASTER (plug-in) BYPASS switch
- COMPARE switch (plug-ins)
- LED display for CHANNEL/GROUP

CONTROL ROOM analog monitoring section

- Three stereo OUTPUT level controls
- TALKBACK level control
- Built-in TALKBACK microphone
- HEADPHONE level control (for front-panel headphone jack)
- Four MONITOR SELECT switches (input source)
- ALT speaker select switch
- Switches for MUTE, DIM, and MONO monitoring
- Two TRIM pots for use in a surround monitoring configuration
- Slate/Dub capability

Numeric Keypad

Trackpad

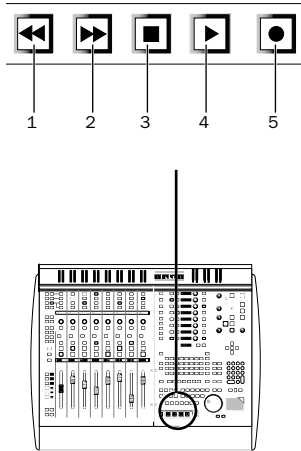
Main Section

- TRANSPORT controls, AUDITION switches
- SCRUB/SHUTTLE wheel with 2 mode switches
- TALKBACK switch
- Fourteen dedicated Pro Tools EDIT switches, SAVE and UNDO switches
- Dedicated WINDOW switches to select active Pro Tools window
- Seven Global STATUS select switches
- Five GROUP switches
- MASTER FADERS switch
- Two BANK SELECT switches, with NUDGE function switch
- ZOOM/SELECT switches, w/ one cursor quadrant-mode switch
- CHANNEL MATRIX for status, navigation, group functions, plug-in paging
- Four BANK switches
- GO TO, VIEW, UTILITY and ALPHA mode switches for the CHANNEL MATRIX
- ESCAPE switch

Transport Switches

Primary Transport Switches

The Transport switches correspond to transport functions in Pro Tools. These switches are:



1 REWIND Rewinds through the session beginning from the current cursor position.

2 FAST FORWARD Fast-forwards through the session beginning from the current cursor position.

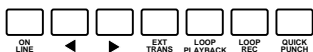
3 STOP Stops playback.

4 PLAY Begins playback from the current Timeline or Edit location.

5 RECORD Arms Pro Tools for recording. Exact function is determined by the current Pro Tools record mode (QuickPunch, Wait for Note, Pause).

In addition to the above, there are several modifier shortcuts for transport functions:

- CTL/CLUTCH + PLAY: engages Pro Tools Pause mode.
- SHIFT/ADD + PLAY: initiates half-speed playback.
- SHIFT/ADD + STOP: cancels the current record pass.
- SHIFT/ADD + FAST FORWARD: Go-To-End.
- SHIFT/ADD + REWIND: returns to zero (RTZ).
- CTL/CLUTCH + RECORD: cycles through the various record modes (normal, QuickPunch, Loop).
- CTL/CLUTCH + EXT TRANS: cycles through available machine master choices, (such as Pro Tools, Serial Machine, and ADAT).
- OPT (ALT) ALL + IN or OUT: centers the left or right side of any current on-screen waveform selection in the Edit Window.



Control Section

Directly above the main transport buttons are seven additional transport function switches:

Online Toggles Pro Tools online/offline (LED is lit when Pro Tools is online).

RTZ (Return-To-Zero) Sets playback cursor to the beginning of the session.

END (Go-To-End) Sets playback cursor to the end of the session.

EXT TRANS (External Transport) Enables machine control of a single external transport.

LOOP PLAYBACK Toggles Loop Playback on/off (LED is lit when Loop Playback is enabled).

LOOP RECORD Toggles Loop Record on/off (LED is lit when Loop Record is enabled).

QUICKPUNCH Toggles QuickPunch recording mode state (LED is lit when QuickPunch is enabled).



AUDITION, PRE, POST, IN, and OUT

Directly above the seven special function Transport switches (ON-LINE, RTZ, etc.) are the ProControl audition controls.

PRE, IN, OUT and POST function in two available modes:

Standard mode Activate pre- or post-roll playback, or define selection in and out points during playback.

Audition mode PRE, POST, IN and OUT each play a unique range of audio in or around the current Edit selection.

Standard Pre and Post-roll

To toggle Pre- or Post-roll on/off:

- 1 Make sure AUDITION is off.
- 2 Press PRE or POST to toggle each on or off.

Setting Pre- and Post-Roll Amounts

To enter a pre- or post-roll value:

- 1 Press ⌘(CTL) + PRE or POST. The appropriate switch LEDs (PRE or POST) will flash, indicating PRE/POST entry mode.
- 2 Enter values using the numeric keypad. Press the ProControl PREVIOUS or NEXT switches to tab through the numeric fields.
- 3 Press ENTER to set the time values. Press ESCAPE to cancel changes.

Defining In and Out

To define selection in and out points during playback:

- 1 Make sure AUDITION is off.
- 2 While Pro Tools is playing, press IN to define selection start, then press OUT at the desired selection end.

Audition Mode and PRE, IN, OUT, POST

Audition mode lets you quickly listen to the either selection start or end, with or without pre- and post-roll using the switches in the Audition section.

To illustrate Audition mode, assume you have a four bar selection spanning bars 5 through 8. There is one bar of pre-roll and one bar of post-roll already defined. The following describe the playback range of each switch in Audition mode.

PRE Plays audio starting at the pre-roll point up to the beginning of the selection. In our 4 bar selection example, this would play from bar 4 to bar 5.

IN Plays audio starting at the selection start through the length of the post-roll amount. In our example, this would play from bar 5 to bar 6.

OUT When in Audition mode the OUT button plays audio back-timed from the selection end by the pre-roll amount. In our example, this would play from bar 7 to bar 8.

POST Plays audio from the end of a selection by the post-roll amount. In our example, this would play from bar 8 to bar 9.

Additional ProControl Transport Shortcuts

To play the selection start point with both pre and post roll:

- Hold down ⌘(CTL) + OPT (ALT) ALL then press PRE or IN.

To play the selection end with pre-and post-roll:

- Hold down ⌘(CTL) + OPT (ALT) ALL, then press OUT or POST.

Transport Mode for Numeric Keypad

The Numeric Keypad can be configured for Transport command.

The following table lists Numeric Keypad functions when Transport mode is enabled:

Task	Numeric Keypad
Play/Stop	0
Rewind	1
Fast Forward	2
Record (Punch In/Out)	3
Loop Play	4
Loop Record	5
QuickPunch	6
Metronome (MIDI) on/off	7
Count on/off (MIDI)	8
Merge Record (MIDI) on/off	9
Enter Main Counter	Asterisk (*)
Enter/Edit Time Fields	Backslash (/)
Capture Time Code	=
Create Memory Location	Enter
Nudge fwd/bwd	+/-

To engage Transport Mode for the Numeric Keypad:

- 1 In Pro Tools, choose Setups > Preferences, and click Operations.
- 2 Enable Transport mode.
- 3 Click OK.

Commands Focus Transport Shortcuts

To engage Commands focus:

- Press ⌘(CTL) + OPT (ALT) ALL + 0 (numeric zero). The Commands toggle lights in Pro Tools Edit window.

Transport Control of External Devices

Using the EXT TRANS switch, ProControl can toggle between Pro Tools or your external device as the transport master or slave.

To toggle/select the Transport Master:

- 1 Press CTL/CLUTCH + EXT TRANS. Repeat to cycle through all currently available transport masters:



Selecting the Transport master

The DSP Edit/Assign section displays “Transport now controls ADAT” or “Transport now controls Serial Machine” as relevant.

- 2 When the desired transport is selected, release CTL/CLUTCH.
- 3 Press EXT TRANS to toggle between the selected device and Pro Tools as the transport master.
- 4 To select a different alternate device, repeat steps 1 and 2, above (CTL/CLUTCH + EXT TRANS).

Display of EXT TRANS modes

Pause mode When Machine (serial) is transport master and the remote system is in PAUSE mode, the ProControl PLAY switch will blink and the STOP switch will light.

Cueing While the remote system is cueing, the ProControl PLAY and SCRUB switches blink, and the STOP switch illuminates. (Scrub/Shuttle remain available for scrubbing, jogging or shuttling the deck. See the sections on SCRUB and SHUTTLE later in this chapter for information.)

Record The ProControl RECORD switch LED always tracks the state of the device under control. Keep in mind, however, that this is distinct from the remote track-arming capabilities provided by the MachineControl option for Pro Tools (available separately from your Digidesign dealer).

Footswitch Control

There are two general-purpose footswitch inputs (for momentary footswitches) on the rear panel (SW1 and SW2) that are used for general transport control. Either footswitch can control Play/Stop, Punch in/out, or Talkback. In addition, the polarity of each switch can be reversed.

To configure the Footswitch (SW1, SW2) parameters:

- On your Main Unit, press UTILITY>PREFS>SWITCH1 or SWITCH2 (the options are the same for both). Now select the Polarity (+ or -) and function for the selected switch (PLAY/STOP, RECORD or TALKBACK).

When either footswitch is employed, the following shortcuts are available:

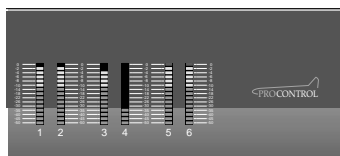
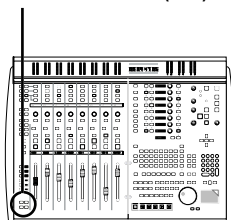
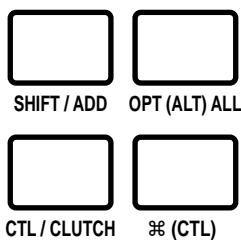
To cancel a record pass:

- Hold down SHIFT/ADD and press Footswitch #1 to cancel the recording without saving the most recent recording.

To initiate half-speed playback:

- Hold down SHIFT/ADD and press Footswitch #1.

SHORTCUTS



KEYBOARD SHORTCUTS Section

There are four switches that correspond to the various modifier keys on Windows and Macintosh systems. These are labeled SHIFT/ADD, OPT (ALT) ALL, CTL/CLUTCH and ⌘ (CTL). Using these modifiers with other switches changes the action of those switches. For example, pressing and holding down the OPT (ALT) ALL switch while pressing the SOLO or MUTE switch will solo or mute all channels.

The Modifier key switches can also be used in any combination with keys on Edit Pack or your computer keyboard. In ALPHA mode, the CHANNEL MATRIX and numeric keypad also support most Commands Focus shortcuts. See Appendix C, “ProControl Shortcuts and Equivalents” for details.

Meters

The Meter section provides eight stereo, 15-segment LED channel meters at the top of the Fader section, and six output meters at the upper right. ProControl meters follow Pro Tools Peak Indication preferences, and all other settings affecting hardware meters (audio interfaces).

Channel Meters Mono tracks meter in the left side of that channel pair. Stereo tracks occupy both channel meters. Multichannel meter in a slightly different manner (see “Multichannel Metering” on page 174 for more information).

Output Meters The six meters to the right of the Time Counter show master output levels. You can specify the Output path for these meters from the I/O Setup dialog. See “Configuring the Output Meters” on page 49 for information.

Clearing Meters

To clear all clipped meters and held peaks:

- Press the CLR/F1 switch in the F-keys (Function keys) section to clear clipped channel and send meters and last held peaks simultaneously, on all ProControl meters (except plug-ins). This also clears all audio interface meters.

Configuring the Output Meters

You can specify the Output path for the ProControl Output meters by selecting a default metering path in the Pro Tools I/O Setup dialog. Default metering paths can be set for each supported mixing format.

To select a default metering path:

- 1 Choose Setups > I/O Setup.
- 2 Select the appropriate path from the Metering selector and sub-menus. Choices include:

Out 1-8 The default setting, Out 1-8 maps your current Outputs 1-8 to ProControl Output meters.

Output and Bus Selects any available output, or Bus, path to display in the ProControl Output meters.

- 3 Click OK to close the I/O Setup dialog.



See the Pro Tools Reference Guide for more information on this and other features of the I/O Setup dialog.

Multichannel Track Meters

By default, the two meters on each ProControl channel show left and center levels on multichannel tracks and sends. This follows the default track layout used within Pro Tools for on-screen metering of multichannel paths (Film standard). The following table shows the two channels that will be metered for each multichannel format track.


Track Format	Channel Meters Show
LCR	L & C
Quad	L & R
LCRS	L & C
5.1/5.0	L & C
6.1/6/0	L & C
7.1/7.0	L & Lc

Multichannel tracks can be metered in an expanded view by soloing them from ProControl, as described below.

To meter a multichannel path:

- 1 Start Pro Tools playback.
- 2 Press SHIFT/ADD+SOLO on the multichannel track.
- 3 Release SHIFT/ADD and SOLO to return to normal metering.

The multichannel track is now metered using multiple, adjacent pairs of channel meters. Track layout is determined by the path definition in the I/O Setup dialog. The first side is displayed in the left meter of the soloed track. Remaining channels are displayed in the adjacent meters to the right, up to a maximum of eight.

 For a diagram of 5.1 format track layouts and metering, see “5.1 Track Layouts, Routing, and Metering” on page 30.

WINDOWS Switches

Six WINDOW switches open or close the corresponding window.

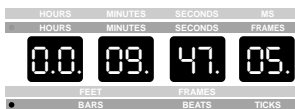
- MIX and EDIT
- STATUS: Session Setup
- TRANS: Transport
- PLUG-IN:
- MEM-LOC: Memory Locations



Pressing a Windows switch brings the selected window to the foreground as the “active” floating window for editing. If a floating window is already in the foreground, then pressing its switch will close the window. The Transport, Memory Location, Session Setup and Inserts/Sends windows are all floating windows.

Visibility of plug-in Windows

The PLUG-IN switch opens, or closes, the Inserts/Sends Editor for the currently selected plug-in. For more information, see Chapter 11, “Plug-Ins.”



Time Counter Display

In the center of the Meter section is an 8-character, 7-segment LED display for showing Main Counter values. Each numeric section of a given time display is separated by LED dots. The labelled LEDs next to each option indicate the current Display mode:

HOURS MINUTES SECONDS MS

HOURS MINUTES SECONDS FRAMES

FEET FRAMES

BARS BEATS TICKS

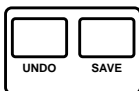
The time display format can be selected from ProControl using the COUNTER MODE switch, located directly below the Time Counter display.

COUNTER MODE Switch

The COUNTER MODE switch is located between the DSP Edit/Assign section and the main Fader section, directly below the Time Counter display. Repeatedly pressing this switch toggles the LED time display through each of the time display modes. A green LED next to the counter display shows which of the following modes is active. (Samples is indicated by all green Time Counter Display LEDs off.)

Some time displays, such as Minutes/Seconds have a least-significant digit display in thousandths of a second (three characters). These values are truncated or rounded to be displayed in the ProControl counter, and appear when playback is stopped (for example, "01:00:02:022" will display as "01.00.02.02").

For information on keyboard entry for the counter, see "The Numeric Keypad" on page 52.



UNDO and SAVE

The UNDO and SAVE switches perform Undo, Redo, and Save functions corresponding to operations on the Macintosh.

The UNDO switch LED will be lit when the Undo function is available, and remain unlit when there is nothing to “undo.” The UNDO switch will flash when the Redo function is available.

To undo an operation:

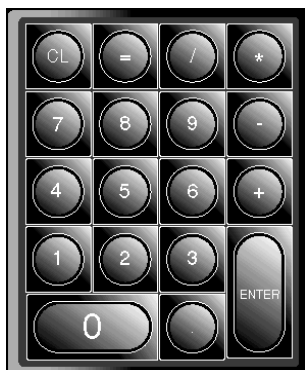
- Press UNDO.

The SAVE switch LED will be highlighted whenever the session has changed from its last saved state.

To save the changes in a session:

- 1 Press SAVE twice. (The SAVE switch LED will flash when first pressed, indicating the Save process has been armed. After a single press, you can still cancel the save by pressing ESCAPE.) SAVE remains lit until the save process is complete.

 See the *Pro Tools Reference Guide* for details on multiple undo.



The Numeric Keypad

The Numeric Keypad, located to the right of the WINDOWS selection switches, mimics keypad operation in Pro Tools and is used for memory location store/recall, data entry of counter values or numerics, for completing an editing operation (using the ENTER key), as well as for Pro Tools Transport and Shuttle modes. The functionality is identical to that of your computer’s keypad, including modifier-key shortcuts. Throughout this guide, there are instructions for using the Numeric Keypad for all of its various functions.




The Trackpad

The Trackpad functions just like the type found on high quality laptop/portable computers, with two switches below it for clicking. You can also click, double-click, triple-click and click/drag from the Trackpad directly, without using the Trackpad “click” switches. Use the Trackpad to perform virtually every Pro Tools command, function or task directly from ProControl.

Configuring Trackpad Response

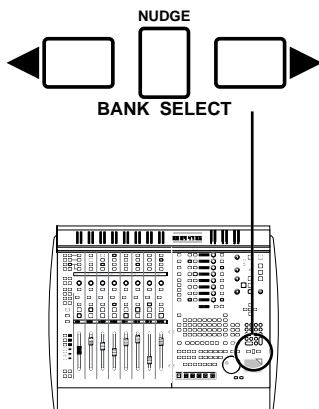
To adjust the Trackpad:

- 1 Press UTILITY > PREFERENCES > MOUSE > MODE > SPEED.
- 2 Select a response speed from Very Fast to Very Slow.
- 3 Press UTILITY to return to the previous ProControl mode.

 *Additional control may be provided by the CPU mouse control panel settings.*

If the trackpad does not seem to be responding, ProControl might be configured for External Mouse input. See Appendix A, “Utility Settings” for instructions.

Bank Switching and Channel Scroll/NUDGE



Beneath the ProControl numeric keypad are the BANK SELECT switches. These include two bank switches with left/right arrow symbols, and the NUDGE switch. Together, these switches allow “bank swapping” or scrolling in single channel increments.

The BANK SELECT arrow keys bank left or right, eight channels or more at a time. For example, a basic system consisting of just a single ProControl Main unit, which contains eight faders, will bank swap in groups of eight channels at a time. A 32-fader setup bank swaps 32 faders at a time.

The NUDGE switch engages channel-scroll mode, in which the BANK SELECT arrows scroll one channel at a time in the appropriate direction.

Mix and Edit Window Follows Bank Selection Preferences

Bank-swapping and channel-scrolling behavior can be mirrored in Pro Tools. By enabling Mix Window Follows Bank Selection or Edit Window Follows Bank Selection (in the Display Preferences dialog), Pro Tools channel strips will be banked into view automatically in response to ProControl bank display. Color outlines appear around the channels under the control of each ProControl unit.



In some cases, leaving these preferences off can improve bank swapping speed (Pro Tools does not have to redraw each bank).

Bank Select Shortcuts

To bank full-right, or full-left:

- Press OPT (ALT) ALL + the appropriate BANK SELECT arrow switch.

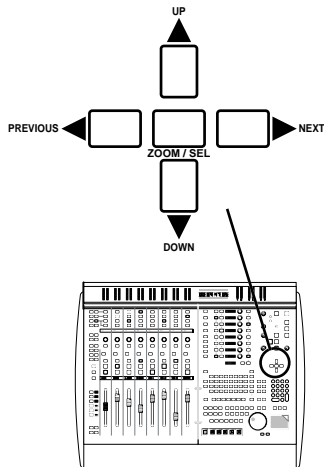
Far-right bank-swapping will not “justify right.” For example, if you have a session that contains 22 channel strips, holding down OPTION/ALL and pressing the right BANK switch swaps to a bank consisting of only the five channel strips #17-22.



The Channel Matrix GO TO and VIEW modes provide additional bank/channel navigation controls. Instructions for these features begin in “GO TO” on page 109.

Groups, Master Faders and BANK SELECT

In addition to bank and channel scrolling, the BANK SELECT switches provide navigation options during Group and Master Fader operations. If there are more than eight group members or master faders available to edit, the Nudge switch will flash. (Groups and Master Faders are described further in Chapter 7, “Working with Tracks.”)



ZOOM/SEL Switches

The ZOOM/SEL switches provide the same functionality as the arrow keys on the computer keyboard (plus some additional features unavailable from the computer keyboard, described soon). The ZOOM/SEL button in the center selects one of three modes for the UP, DOWN, NEXT and PREVIOUS switches:

- Navigation mode.
- Zoom mode.
- Select mode.

In addition, the ZOOM/SEL cursor quadrant can be used to navigate among fields/characters when entering alpha numeric values from the Numeric Keypad.

To select a ZOOM/SEL mode:

- By default, ZOOM/SEL is in Navigation mode, and the ZOOM/SEL switch is unhighlighted.
- To engage Zoom mode, press ZOOM/SEL until it flashes. Use the Arrow keys to zoom in/out.
- To engage Select mode, press ZOOM/SEL until it stays highlighted.

Zooming to Entire Session view and Previous View

You can use the ZOOM/SEL switch to quickly zoom to “Entire Session” and “Previous View.”

To quickly zoom out so that the entire session is in view in Pro Tools Edit Window:

- Hold down OPT (ALT) ALL switch and double-press the ZOOM/SEL switch.

To return to the previous zoom view:

- Hold down OPT (ALT) ALL and press the ZOOM/SEL switch.

Zoom Presets

To recall a Zoom Preset from ProControl:

- While pressing OPT(ALT)ALL, press the Zoom Preset's number on the numeric keypad.

To store a Zoom Preset from ProControl:

While pressing SHIFT/ADD, type the Zoom Preset's number on the numeric keypad.

Tab and Navigation with ZOOM/SEL Switches

The cursor quadrant keys are also used when in ALPHA entry mode to navigate through fields, characters, and parameters. ALPHA mode is explained in Chapter 8, “The Channel Matrix.”

To tab to the next field or character:

- Press NEXT.

To tab to the previous field or character:

- Press PREV.

F-Key Switches

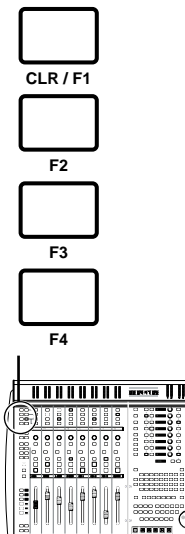
At the top left of the Fader Section are four “F-keys” (Function switches). Current assignments are:

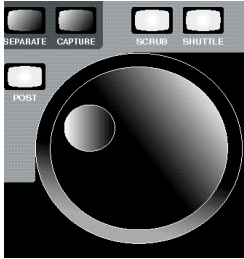
CLR/F1 Clears clips and last peaks held on the meter bridge, on Pro Tools on-screen meters and Audio Interface meters.

F2 Temporarily shows all channels that have plug-ins assigned by lighting the channel INS/SEND switches. Releasing the F2 switch returns to the previous state.

F3 (ProControl main unit only) Toggles between “Fixed” and “Velocity sensitive” modes for the DSP Edit/Assign encoders.

F4 (Selects Surround Pan mode.





SCRUB/SHUTTLE Wheel

The SCRUB/SHUTTLE wheel is used for Scrubbing, Shuttling, making selections/regions, and other edit operations. The two switches directly above the wheel, labeled SCRUB and SHUTTLE, choose the mode of operation. The Scrub/Shuttle wheel can also control external devices such as a serial machine (see the previous section Transport Control of External Devices for basic EXT TRANS set up).

To Scrub:

1 While Pro Tools is stopped, press SCRUB. The SCRUB LED will light and a message is displayed in the DSP Edit/Assign section:

```
SCRUB
MODE
ENABLED
PRESS
SCRUB OR
STOP TO
EXIT
```

2 Aim Scrub at the selection start or end by pressing PREVIOUS (for start) or NEXT (for end).

3 Rotate the SCRUB wheel clockwise to scrub audio forward, or counter-clockwise to scrub backward.

- The scrub start position will be the location of the Edit cursor when a waveform selection exists, or the location of the Playback cursor location if there is no current selection.
- The distance that the Scrub wheel travels determines the length of the audio scrubbed, and wheel speed determines Scrub speed. During Scrub mode, the REW and FFW LEDs illuminate (mirroring Pro Tools on-screen Transport).

To SCRUB starting from the Selection End:

- To begin scrubbing from the selection end position, press and hold down the OPT (ALT) ALL switch before entering SCRUB mode.

To SCRUB with “finer fixed” resolution:

- Press and hold the ⌘(CTL) switch while scrubbing to engage fine-resolution scrubbing.

To exit SCRUB mode:

- To exit scrub completely and return to normal operation, press the SCRUB switch or any of the Transport switches. Alternatively, scrub may be exited by pressing the space bar on the Mac keyboard, typing ⌘(CTL) + “.” (period) on ProControl (or ⌘ + “.” on the Macintosh keyboard), or by pressing the ESCAPE switch. You can also exit SCRUB mode by switching to SHUTTLE mode.

Using SHUTTLE Mode

To shuttle:

- 1 While Pro Tools is in stop mode, press the SHUTTLE button.
- 2 Rotate the SHUTTLE wheel clockwise to shuttle audio forward, or counter-clockwise to shuttle backward. The REW and FFW switch LEDs light (mirroring Pro Tools on-screen Transport switches). The shuttle start position will be the location of the Edit cursor when a waveform selection exists, or the location of the Playback cursor if there is no current selection.

Using the numeric keypad for SHUTTLE “lock” mode:

While in Shuttle Lock mode, you can use the numeric keypad to control shuttle speed (with “0” being off, +9 being the fastest forward shuttle and -9 being the fastest reverse shuttle speed). The +/- keys control shuttle lock direction of play.

To engage Shuttle Mode for the Numeric Keypad:

- 1 Choose Setups > Preferences and click Operations.
- 2 Enable Shuttle mode in the Numeric Keypad options.

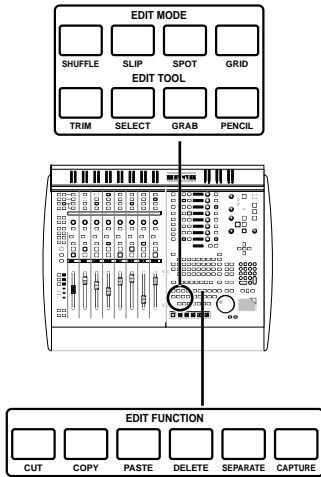
To exit SHUTTLE mode:

- Press the SHUTTLE switch or any of the Transport switches.

You can also exit SHUTTLE mode by pressing the Spacebar on the computer keyboard, pressing ESCAPE on ProControl, or pressing ⌘ (CTL) + “.” (period), Modifier switches, or channel faders; MUTE and SOLO switches

Scrub and Shuttle can be used to create selections/define regions in Pro Tools Edit Window. See Chapter 10, “Editing” for more information. When Shuttle is the selected Numeric Keypad shortcuts mode, the following tasks may be initiated from the keypad on ProControl:

Task	Numeric Keypad
1x Forward	6
1x Reverse	4
4x Forward	9
4x Reverse	7
1/4x Forward	3
1/4 x Reverse	1
1/2 x Forward	5-6
1/2x Reverse	5-4
2x Forward	8-9
2x Backwards	8-7
1/16x Forwards	2-3'
1/16x Backwards	2-1
Loop Play Edit Selection	0
Enter Main Counter	asterisk (*)
Enter/Edit Time Fields	backslash (/)
Capture TimeCode	=
Create Memory Location	ENTER
Nudge later by grid	+
Nudge earlier by grid	-

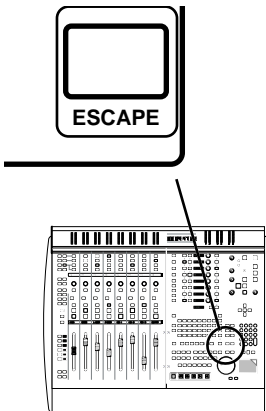


EDIT MODE, EDIT TOOL and EDIT FUNCTION Switches

The EDIT MODE and EDIT TOOL switches access the primary Edit function modes and tools:

- EDIT MODE – SHUFFLE, SLIP, SPOT, GRID. Pressing one of these switches selects one of the four edit modes: Shuffle, Slip, Spot, or Grid mode
- EDIT TOOL– TRIM, SELECT, GRAB, PENCIL. Pressing one of these switches selects one of the main edit tools: Trim, Select, Grabber, and Pencil (available when zoomed in at very close resolutions only).
- To access the Smart Tool, press any two of the following switches: TRIM, SELECT or GRAB simultaneously.
- EDIT FUNCTION–CUT, COPY, PASTE, DELETE, SEPARATE, CAPTURE. Pressing one of these switches selects the corresponding Edit function.

These switches mimic their counterparts in Pro Tools. These editing functions are explained in Chapter 10, “Editing.”



The Escape Switch

The ESCAPE switch (green LED) is located at the bottom right hand corner of the CHANNEL MATRIX area and is used to confirm or cancel operations/settings. When an action has occurred that can be canceled by the ESCAPE switch, the switch LED will flash.

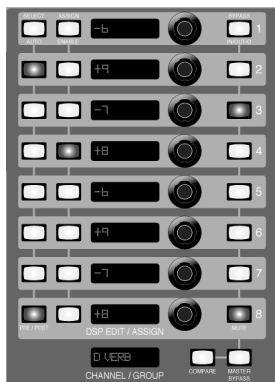
The Master Faders Switch

The MASTER FADERS switch allows mono or stereo Master Faders created in Pro Tools to be immediately displayed on the Fader Section of the ProControl Main unit. Using this switch, all Master Faders in the current session are instantly called up on the ProControl Main Unit. This feature is especially useful in large sessions where it might be time consuming to Bank/Channel swap to the Master Faders.



To access Master Faders from the MASTER FADERS Switch:

- 1** Press MASTER FADERS. Its LED flashes. All Master Faders in the current session are displayed (right justified) in the Fader section of the ProControl Main Unit, only. All Pro Tools Master Faders are displayed regardless of their current Show/Hide status in Pro Tools.
- 2** If there are more than eight Master Faders in the session, pressing the right or left BANK SELECT button brings up the next set of Master Faders and displays them on the ProControl Main Unit.
- 3** To exit, press the MASTER FADERS again. This returns the Main Unit faders to their previous focus.

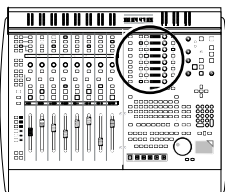


DSP Edit/Assign Section

The DSP Edit/Assign section is at the top left of the Main section.

In the DSP Edit/Assign section, you can assign, view and edit plug-ins, sends, and inserts, or perform surround panning, using the following controls and displays:

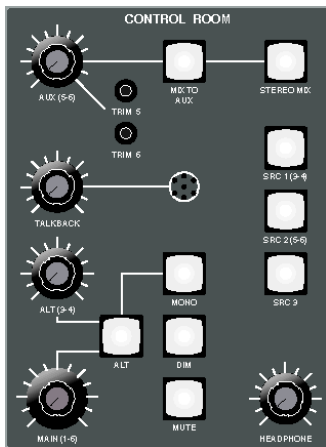
- 1 - Eight rotary data encoders (arranged vertically)
- 2 - Eight 8 segment LED displays for levels, names, etc., to the left of each encoder
- 3 - SELECT/AUTO / PRE/POST switch column
- 4 - ASSIGN/ENABLE switch column
- 5 - BYPASS/IN/OUT/Ø and MUTE switches, to the right of each encoder
- 6 - The INFO, INSERTS/PARAM and SENDS switches
- 7 - The CHANNEL/GROUP LED display, which displays plug-in and Send information, CHANNEL MATRIX data and Group information.



Detailed instructions about the DSP Edit/Assign section can be found in Chapter 11, “Plug-Ins.” Tracks and Groups are explained in Chapter 7, “Working with Tracks.”

Chapter 6: Control Room Monitoring

The Control Room section provides many controls for studio monitoring and communication, similar to the center section found on other consoles.



Control Room section

The analog Control Room section provides:

- Stereo and Surround monitoring.
- Single or multi-source stereo monitoring.
- Three stereo level and source controls.
- Speaker select switches.
- Built-in talkback mic with level control.
- Headphone level control.
- Monitor mute and dim controls.
- Mono switch.

The Control Room section retains all of its settings on power-down and restores them on power-up without any intervention from the host computer, and its circuits automatically mute during power down/up to prevent thumps and other spurious signals that could damage speakers.

Settings are stored in ProControl's EEPROM memory. These functions do not require a CPU to be connected in order to be changed/accessed, nor do they require Pro Tools software to be active.

Monitoring Modes

ProControl supports Stereo and Surround monitoring through its Control Room section.

Stereo Mode Overview

In stereo mode, the Control Room section lets you monitor in stereo, with the following features:

- Source switching of up to four stereo sources.
- Speaker selection (Main or ALT monitors).
- Aux bus control for cue mix monitoring.
- Mute, Dim, and Mono.
- Talkback and Listenback.
- Analog source dubbing through the Slate bus using Talkback.

Single Source and Multiple Source Monitoring

In Stereo mode, you can select Single- or Multi- source operation.

Single-Source (X-OR) The default mode, in which only one input source pair can be monitored at a time. Selecting a new source turns off the current pair.

Multi-Source In this mode, any and all of the four input sources may be monitored at any time. For example, you could monitor the main Pro Tools mix coming in on STEREO MIX simultaneously with a DAT machine tape input coming in on SRC 1 (3-4).

ProControl default monitoring mode is single-source stereo.

Surround Mode Overview

In Surround mode, the Control Room section lets you utilize discrete surround mix sources for monitoring 6-channel (5.1) and 4-channel (LCRS) mixes.

- 4-channel surround comprised of Left, Center, Right, and Surround (mono).
- 6-channel surround (5.1) comprised of s Left, Center, Right, Left Surround, Right Surround, and LFE.

Surround monitor mode also provides source muting (in pairs), level trims, a master level control, Mute, and Dim features. When connected properly and configured for Surround mode, the Source input selectors carry the discrete surround signals in pairs. The output level controls are used to control each surround stem in pairs, with master control from the MAIN (1-6) master level control. Individual level trim is available for the Aux 5 and Aux 6 signal.

- ◆ MAIN(1-6) provides master level control of the surround mix.
- ◆ ALT(3-4) provides level control of the Ls and Rs channels.
- ◆ AUX(5-6) provides level control of the Center and LFE channels.

The STEREO MIX, SOURCE 1 and SOURCE 2 switches mute and unmute signal pairs.

Selecting a Monitor Mode


Control Room modes and options are configured using the Pro-Control Utility mode. Throughout this chapter, instructions are provided for both Stereo and Surround mode operation of the Control Room features. Whenever a Utility option is available for a control, it is also explained as relevant.

To select Stereo or Surround mode:

- Press UTILITY > MODE, then select SURROUND, or STEREO as appropriate.

To select Multi-, or Single-source, stereo monitoring:

- 1 Press UTILITY > MODE > STEREO, then select MULTI, or SINGLE as appropriate.

 For more information, see Appendix , "Utility Settings."

Monitoring Controls

The following sections identify and explain each control in the Control Room section.

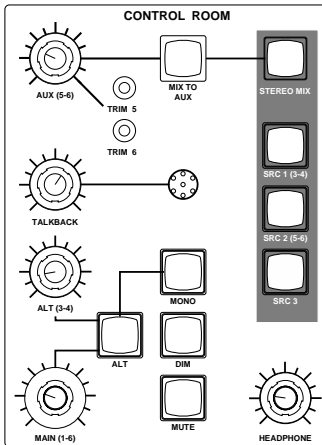
Monitor Input Source Select Switches

These four switches select stereo monitor sources for ProControl (in stereo mode), or as master stem source enables for the matrix inputs (surround mode).

To engage an Input Source:

- Press the SRC switch in the Control Room section that corresponds to the desired input source.

If in Single Source mode, only one input source can be engaged at a time. To be able to monitor more than one SRC Input, ProControl must be in either Multiple Source Stereo mode, or Surround mode.



STEREO MIX Switch

This switch turns the STEREO MIX input pair on or off (Audio Input 2, channels 7 and 8). This input is +4 dBu and active-balanced.

Stereo mode Turns the main Pro Tools stereo mix on or off in the monitors.

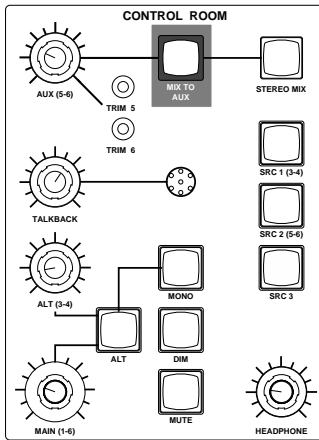
Surround mode Turns the the left/right (front) pair on or off.

SRC 1, 2, 3 Inputs

Three switches labeled SRC 1 (3-4), SRC 2 (5-6) and SRC 3 turn their respective rear-panel input pairs on or off (Audio Input 2, channels 1-6). These inputs are +4 dBu and active-balanced.

Stereo mode These stereo inputs would normally be connected to monitor any alternate 2 track source, such as DAT machines or CD players.

Surround mode SRC 1 (3-4) receives the surround stem mix input source signals (Left/Right Surround, Ls/Rs, or a mono surround channel). SRC 2 (5-6) receive the center and subwoofer stem mix input source signals. SRC 3 is not utilized in Surround mode.



MIX TO AUX and AUX Input

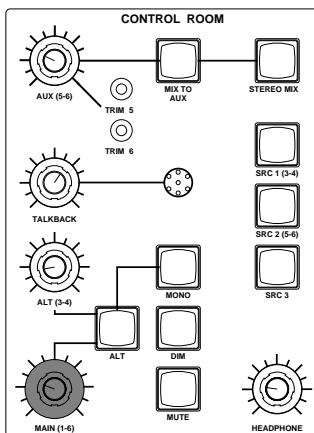
When enabled in stereo monitor mode, the MIX TO AUX switch (green LED) sends the current control room mix to the AUX mix output pair (labeled Aux. Mix Output in the wiring pin-out documentation). This mix could be any combination of individual or mixed combination sources, including STEREO MIX, SRC 1 (3-4), SRC 2 (5-6) or SRC 3. This will depend on whether you are in Single or Multiple Source Stereo mode or Surround mode (see “Single Source and Multiple Source Monitoring” on page 64).

Stereo mode The MIX TO AUX switch routes the current control room mix to the AUX mix output. If MIX TO AUX is enabled (indicated by its green LED lit solid), the talent will hear the same mix as the control room. If MIX TO AUX is disabled (LED off), they will hear their discrete mix (or whatever the source is).

Surround mode The MIX TO AUX switch is inactive. This is because the surround matrix uses the AUX MON level control as the level master for outputs 5 & 6 (the center and sub channels, respectively). Any source connected ProControl’s Aux In bus is routed to to SRC 2 (5-6).

Level Controls and Outputs

The Control Room section’s level controls adjust the volume of outputs and signal pairs.



MAIN (1-6) and Main Monitor Out

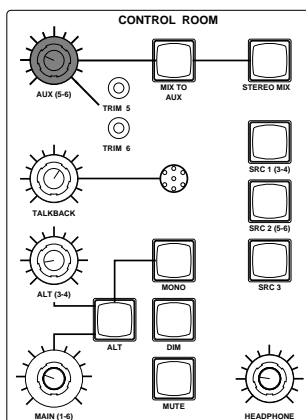
Stereo mode This rotary knob controls the level of the main stereo control room output (Control Room Main Out L/R). These L/R outputs would most likely be connected to the main (stereo) speaker power amplifiers. The control is inactive when in Single-source mode and the ALT monitor switch is enabled (X-OR).

Surround mode The MAIN (1-6) knob acts as a level master for the entire surround matrix (outputs 1 through 6). In this mode, the control is effectively the overall master level control for the surround matrix. All other mix elements are balanced against this “master level.” Other levels within the Surround matrix can be controlled by the other rotary knobs in the Control Room section.

ALT (3-4) and ALT Monitor Out

Stereo mode The ALT (3-4)/ALT MONITOR OUT knob controls the level for the Control Room ALT monitor output. This output pair would most likely be connected to a power amp for smaller reference speakers. (Main and Alt outputs can be latched. See “Multi-Monitor Mode for ALT” on page 69 for more information.)

Surround mode This controls the output level for the surround (Ls/Rs, or “satellite”) channels.

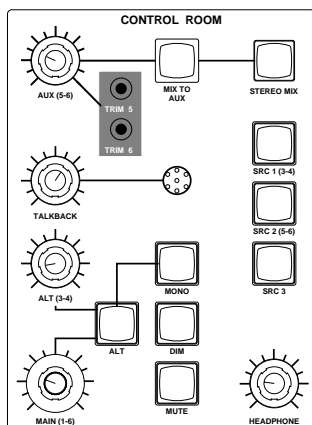


AUX (5-6) and Aux Monitor Out

This control acts as an output level control for the Aux output (in Stereo mode), or output 5-6 master trim (in Surround mode, acting in combination with top panel trims).

Stereo mode This control is a level control for the Aux Output pair. This output pair is intended to be used as a discrete cue mix feed. It would typically be patched to a power amp that would feed the artist cue (headphone) system. The input source could be either the Aux In signals, or the control room source mix (STEREO MIX, SRC 1, etc.) when the MIX TO AUX switch is engaged.

Surround mode AUX (5-6) knob acts as an output level master trim for the center (5) and subwoofer (6) surround bus. For individual balancing of center (5) and subwoofer (6) levels, use the top-panel screwdriver level trims (TRIM 5 and TRIM 6).

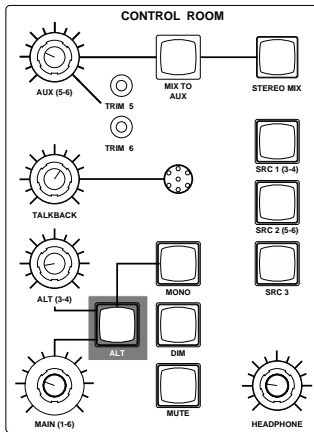


Trim 5 & 6 - Level Trims

These are screwdriver-type top-panel accessible level trims, located below and to the right of the AUX (5-6) level control. They trim the center and subwoofer stem mix output levels individually against the AUX (5-6) control, which acts as a master. They are de-lineators only.

To calibrate the Center and Subwoofer channels (Surround mode only):

- 1 Engage the SRC 2 (5-6) Input Selector switch.
- 2 Set the AUX MON (5/6) control to maximum.
- 3 While listening to surround material, use a screwdriver to attenuate whichever Trim (center (5) or subwoofer (6)) needs adjustment. The trims are set at the factory for maximum output.



Control Room ALT Switch

In stereo mode, the ALT switch (green LED) routes the control room Main mix to ALT Monitor Out (often connected to an alternate set of speakers). Pressing ALT silences the feed to Main Monitor Out. ALT state is remembered when switching between surround and stereo monitor modes, and when powered down. In surround mode, this switch is inactive.

Multi-Monitor Mode for ALT

Multi-monitor mode is an option in Stereo Monitoring mode in which both Main and Alt speaker outputs are live simultaneously. Master level is controlled by the MAIN(1-6) knob.

To enable Multi-monitor mode:

- Choose UTILITIES>MONITOR>MODE>MULTIMON. (Multi-monitor mode is only available in Stereo mode).

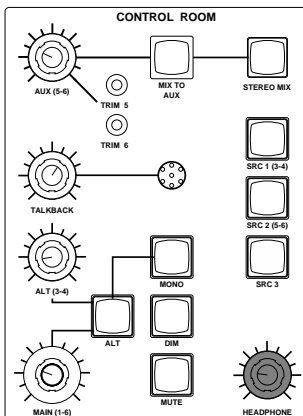
The ALT switch can be configured to mute either the Main or Alt outputs. The MUTE switch in the Control Room Monitoring section always mutes both Main and Alt outputs, in all modes.



For discrete level adjustment of the Main and Alternate Speaker outputs, leave Multi-monitor mode off.

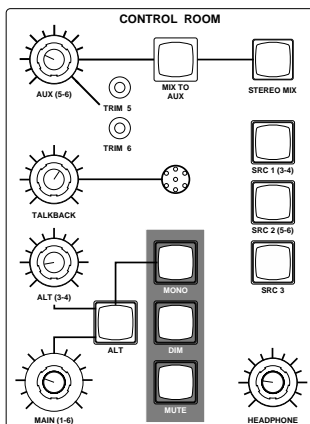
To select which pair of speakers ALT will mute:

- Select either MAINs or ALTs, the press ESCAPE or UTILITY to leave Utility mode.



Headphone

A 1/4" stereo headphone jack is provided on the ProControl front-panel (just below the Trackpad). The Headphone jack monitors the currently active main control room audio at all times. The HEADPHONE level knob in the Control Room monitoring section adjusts the level of the Headphone output. Headphone is not affected by the MUTE and DIM switches, but it is affected by the MONO monitor switch.



Control Room MUTE

The MUTE switch acts as a control room master mute. The MUTE switch does not affect the Headphone signal (front-panel 1/4" connector). The current monitoring mode determines the available MUTE options:

MUTE in Stereo Mode

Two modes of Control Room Mute are available in Stereo mode: MUTE CR (default) and MUTE ALL.

MUTE CR (Control Room) Mutes the MAIN and ALT output pairs only. The AUX Out mix will not be affected. This is useful when you want to have the control room speakers muted, but you do NOT want to mute the talent mix feed (whether it is being derived using MIX TO AUX or AUX IN). Mute CR is the factory default.

MUTE ALL Mutes all of the audio output pairs, including the Aux outputs.

MUTE in Surround Mode

In Surround mode, MUTE silences all outputs at all times (MAIN, ALT, AUX). In other words, all six outputs of a surround matrix are affected.

Configuring MUTE

The MUTE modes can be selected from the ProControl UTILITY page (UTILITY > MONITOR > MUTE/DIM). Refer to Appendix , "Utility Settings" for instructions on configuring ProControl UTILITY parameters.

Control Room MONO

The MONO switch (green LED) mono-sums the control room mix, allowing mono confidence monitoring. Listening to a mix in this manner lets you check phase and balance relationships of a mix in mono.

The switch is active in both Stereo and Surround monitor modes, and affects the headphone output as well. It does not affect Slate/Dub or the Aux output.

Stereo mode Pressing MONO will mono-sum signals to the MAIN output as well as the (front-panel) headphone output.

Surround mode Only the STEREO MIX outs are affected by MONO. To confidence mix surround stems in Mono, simply press the MONO switch and then select each stem, one pair at a time with the STEREO MIX (front left/right), SRC 1 (surround left/right) and SRC 2 (center, sub) switches.

Control Room DIM

The DIM switch (yellow LED) inserts a 15 dB reduction in level to the control room outputs. Depending on the chosen monitoring mode, most or all of the outputs will be affected by DIM as follows:

Stereo mode DIM affects MAIN (1-6) and ALT (3-4) outputs only.

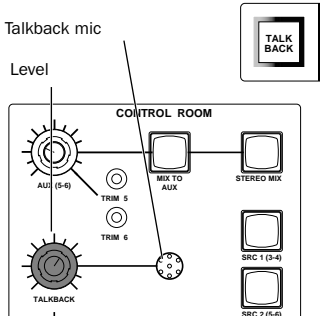
Surround mode DIM affects all outputs at all times (MAIN, ALT, and AUX). All six outputs of a surround matrix are affected.

The DIM switch does not affect the AUX (5-6) output (use the AUX (5-6) rotary knob to lower this output level). It also does not affect the front-panel headphone feed or Slate/Dub feed. Press the DIM switch again to return to normal monitoring levels.

Talkback and Listenback

Talkback and Listenback facilitate control room-to-tracking room communication. Features include:

- ◆ A TALKBACK switch, immediately to the left of REWIND. It works as a momentary-action switch (it is enabled only when depressed).
- ◆ Omnidirectional built-in Talkback mic, located in the Control Room section. The Talkback mic is shock-mounted to avoid oscillation, rumble or feedback from physical interaction with the Control Room surface.
- ◆ TALKBACK level control, located to the left of the mic in the Control Room section.
- ◆ Dedicated Slate/Dub output bus to let you record slates, dubs, and other control room sources through Talkback. Rerecord function for routing the currently selected input source to the Slate/Dub output bus.
- ◆ External Talkback and Listenback input, with trim.



Talkback

Talkback features include the built-in Talkback mic with level control, and the TALKBACK switch in the Transport section. Additional options include external Talkback and Listenback capabilities. For

To use talkback:

- Press the TALKBACK switch. The Talkback signal is now “live” to the AUX Out bus to supply headphone/cue mix systems. Adjust the level using the TALKBACK knob.

If SLATE/DUB or RERECORD are enabled in Stereo monitor mode, the TALKBACK signal is also sent to the Slate/Dub output bus (Audio Output, channels 5 & 6). See “DUB, Slate, and Rerecord” on page 75 for details.

When TALKBACK is engaged, the 2-track monitoring source feeding the MAIN (1-6) and AUX level circuits is dimmed by 15 dB. The TALKBACK switch will illuminate when depressed. The talkback mic signal, amplified to the level set by the TALKBACK level control, is mixed with the selected 2-track source and routed to the AUX output pairs.

To enable Multi-monitor mode:

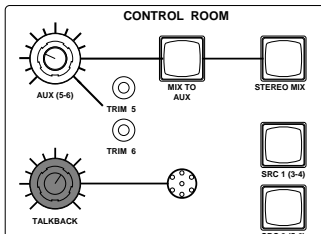
- Choose UTILITIES>MONITOR>MODE>MULTIMON. (Multi-monitor mode is only available in Stereo mode, not in Surround mode).

Talkback Level

As with the built-in talkback mic, the level of the external talkback mic-pre input is also controlled by the TALKBACK level control in the Control Room section. A rear-panel trim pot lets you adjust initial gain, with a range of 30 dB.



As a hands-free alternative to the TALKBACK switch, either footswitch can be configured for remote talkback control.



External Talkback Input

For higher-fidelity or remote Talkback, an external talkback input (with constant +15V phantom power) is provided through the Pro-Control Audio Input 1 connector. This is provided as an alternative to the built-in TALKBACK mic mounted in ProControl's Control Room section. The gain range of the external talkback mic pre-amp is designed to be able to power a low-impedance dynamic microphone suitable for talkback purposes. 15V phantom power is available to power condenser mics for this purpose. For signal connections and wiring instructions for Talkback, see Chapter , "Audio Connections."

Configuring External Talkback

You can configure external Talkback and Listenback options from the Utility menus. Options include INT/EXT mode, in which both the internal and external talkback mics go “live” when TALKBACK is depressed, or EXTERNAL ONLY. In EXTERNAL ONLY mode, the internal talkback mic is disabled.

To configure ProControl for an External Talkback mic:

- 1 Press UTILITY. UTILITY functions are listed in the DSP EDIT/ASSIGN section.
- 2 Using the corresponding ASSIGN/ENABLE switches, select MONITOR > TALKBACK. Talkback options are now listed in the DSP EDIT/ASSIGN section.
- 3 Select EXTERNAL, for external-only talkback, or INT/EXT for built-in and external talkback.
- 4 Press UTILITY to exit UTILITY mode.



The SLATE option lets you route talkback/listenback to the Slate/Dub output bus for recording “slate” to Pro Tools or other devices. See “DUB, Slate, and Rerecord” on page 75.

Listenback

A listenback circuit allows a talent microphone feed that is not part of the recording path to reach the control room, for bi-directional conversation between the control room and the talent. Typical applications might include a direct (DI'd) keyboard overdub, or whenever there are otherwise no open microphones in the studio. By setting up a Listenback mic for the talent, the cue mix (AUX L/R) can include a com line-style signal for song cues, headphone and beverage requests.

ProControl supports this feature using a dedicated Listenback input. The external Listenback input (with +15v mic pre) is accessed using channel #1 on the Audio Input 1 connector. The gain range of the mic pre is adequate for a lo-impedance condenser or dynamic omni mic suitable for listenback purposes, and its +15v phantom power is safe for condenser microphones.

For signal connections and wiring instructions for Talkback, see Chapter , “Audio Connections.”

Enabling Listenback

To enable/disable Listenback:

- Press UTILITY > MONITOR > LISTENBACK, then select the desired setting:
- ON: leaves the Listenback signal in “always-on” mode.
- OFF: shuts the Listenback signal off.
- TALKBACK: links Listenback to Talkback.

Listenback Level

The level of the listenback input is controlled by the TALKBACK level control (it serves both the internal or external source). A rear-panel trimpot controls initial gain (gain range is 30 dB). Only one of the mics can be active at a time (internal or external).

Unlinking Listenback and Talkback

The Listenback signal is, by default, linked to Talkback (on/off). Optionally, the Listenback signal can be left “always on” and not controlled by the Talkback switch. This can be useful when, for example, a songwriter needs to call out chords/cues to a musician or band while tracking.

DUB, Slate, and Rerecord

ProControl provides a pair of Slate/Dub outputs, which can carry combinations of Talkback/Listenback, or any stereo monitoring source.

By engaging Talkback *Slate*, you can use Talkback to record slates and logs, references, dailies, samples, or sound bites. By enabling *Rerecord* you can bus any Control Room input sources (STEREO MIX, or SRC 1(3-4)...) through the Slate/Dub output buss. Rerecord is only available in Stereo/Single Source mode. Talkback/Listenback can also be included with the rerecord signal.



For signal connections and wiring instructions for Slate/Dub and Rerecord, see Chapter , “Audio Connections.”

Listenback can follow Talkback. To avoid interrupting a RE-RECORD signal with Talkback/Listenback, make sure Slate/Dub is not enabled (UTILITY > MONITOR > TALKBACK, Slate on/off). Or, press UTILITY > MONITOR > LISTENBACK) to exclude Listenback sources.

To enable Talkback/Slate:

- Press UTILITY > MONITOR > TALKBACK > SLATE (on/off).

To enable Rerecord:

- Press UTILITY > MONITOR > MODE, then enable RERECORD.



For details on configuring these options from UTILITY, see Appendix , "Utility Settings."

Chapter 7: Working with Tracks

The Fader section includes eight individual channel/fader strips, and the SELECT/ASSIGN, AUTOMATION and other switch sections along the left side of every Main Unit and Fader Pack.

This chapter explains each component of the fader section, and explains their operation for channel-specific tasks.

Channel Fader

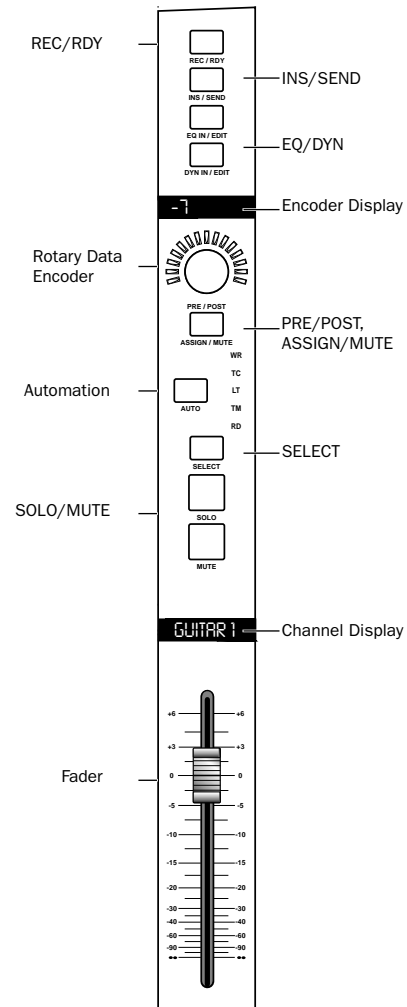
The channel faders are used for level control of audio and MIDI tracks, master faders, and auxiliary inputs, or for send level using FLIP mode.

The Fader Bank

Channels are arranged in sets of eight contiguous strips, referred to as banks.

Pro Tools/ProControl Bank Indicators

Each ProControl unit's active bank of channels is indicated in Pro Tools with a colored outline around the bank's track names in the Mix window. If there are fewer than eight channels or tracks on-screen, they appear as active faders on ProControl from left to right; unused faders remain blank.

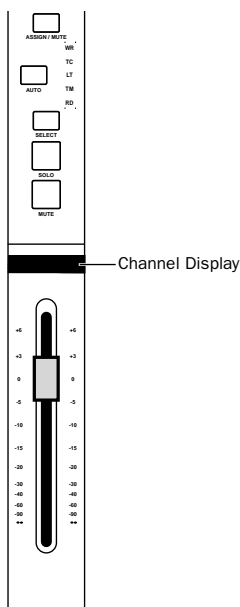


DigiFaders

Each ProControl provides eight touch-sensitive, motorized DigiFaders for level control of audio and MIDI tracks, aux inputs and master faders. In FLIP modes, send level, or plug-ins, can be adjusted and automated with the DigiFaders

DigiFaders (patented by Digidesign) provide 1,024 steps of fader resolution (or, 10 bit), with a unique circuit implementation that is comfortable and responsive in all mixing situations. During automation Touch passes, fader “take-over” is smooth and reliable. Fader response (or “feel”) is adjustable to tighten or loosen fader travel. See “Fader Resistance” on page 183.

Gain calibration ranges from infinity (bottom of fader travel) to +6 dB (top of fader travel), and fader resolution yields 0.1 dB over most of the fader’s travel length for adjustment accuracy. DAE provides 24-bit interpolation of values between the 10-bit “input values.” This provides a very high level of accuracy on playback (very “analog like”), since DAE will create 24-bit interpolated values between every breakpoint entered in the automation graph by a fader on input.



Channel Scribble Strip LED Display

Directly above each fader is an 8-character LED dot-style display. This display is dedicated at any time to one of five functions, selectable with the DISPLAY MODE switch. If a channel is unused or a function does not apply, the channel scribble strip display will remain blank.

NAME mode Displays up to eight characters of the Pro Tools track name (for example, “Guitar 1”). This is the default display mode.

GROUP/NAME mode Displays the track group to which the channel strip is associated, followed by an abbreviated channel name. For example, if a guitar channel is in group A, then engaging GROUP/NAME mode displays “A Gitr 1” (or similar) or, if the track does not belong to a group, “– Gitr 1”. As in Pro Tools, upper- and lower-case text indicates group status.

NAME/LEVEL mode Displays an abbreviated channel name and the current level of the fader. For example, a channel named “Guitar” might display “Gtr-12.2” if its level was at minus 12.2 dB.

#/NAME mode Displays the ProControl Bank letter and number of the channel strip plus an abbreviated channel name.

HEADROOM mode Displays the abbreviation “HR” followed by the remaining headroom level (for example, HR -4.2 dB).

To choose the display mode for the channel scribble strips:

- Press DISPLAY MODE to toggle through the available display modes until the desired mode is displayed.

To toggle through the available display modes in reverse order:

- Press OPT(ALT)ALL + DISPLAY MODE switch.

To display Channel NAME at any time:

- Press ⌘(CTL) + DISPLAY MODE switch. If working in FLIP mode, you only need to press DISPLAY MODE. Releasing these switches reverts the displays to their default display text.

💡 *Pro Tools provides additional displays of channel volume, headroom and (processing) delay in the on-screen track Volume indicator. Refer to the Pro Tools Reference Guide for details.*

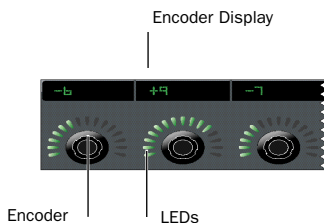
When FLIP mode is enabled, the channel display shows send name and level. See “The FLIP Switch” on page 94 for additional information.

Channel Strip Data Encoders and LED displays

Pan, I/O Routing, Send Level

Each channel has a multi-purpose rotary data encoder with a ring of 15 green LEDs surrounding it. The rotary encoders control channel pan, send level and stereo send pan, as well as input/output and send assignment. Default function is channel pan.

The LED ring displays an approximation of the current data value of the encoder, as determined by the current mode of the data encoders. For example, a single LED indicates pan position, while an expanding series of LEDs show send level).

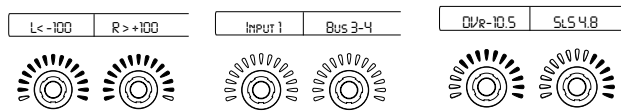


Above each encoder is an 8-character display, and to the left of the encoder row is the SELECT/ASSIGN switch section, which determines the current function of the encoder row.

Encoder Scribble Strip display

This display indicates pan position, I/O routing, or send levels. The encoders also display the current plug-in parameter when Plug-In Flip mode is enabled. Only one display mode can be selected at one time.

Here are examples of what the encoders display for each mode:



Data Encoders showing Pan (left), Input (middle) and Send Level (right).

Channel Input and Output

The most basic track settings are input and output assignment. ProControl lets you display and assign audio and MIDI input and output, make multiple output assignments, and toggle path active and inactive status.

To assign a channel input or output:

- 1 Press the master ASSIGN switch (SELECT/ASSIGN section).
- 2 Press the INPUT switch.
- 3 Rotate an encoder until the desired Input path is displayed.
- 4 Press the channel ASSIGN/MUTE switch to set the selection.
- 5 If necessary, assign other channels by repeating steps 3 and 4.
- 6 To exit Assign mode, press the master ASSIGN switch.

To assign a channel output:

- 1 Press the master ASSIGN switch (SELECT/ASSIGN section).
- 2 Press the OUTPUT switch.
- 3 Rotate an encoder until the desired Output path is displayed.

- 4 Press the channel ASSIGN/MUTE switch to set the selection.
- 5 If necessary, assign other channels by repeating steps 3 and 4.
- 6 To exit Assign mode, press the master ASSIGN switch.


Pro Tools MIX-series systems (MIX, MIXplus, and MIX3) support multi-channel Output and Bus paths for surround mixing. For information on ProControl surround features, see “Surround Mixing” on page 172.

Assigning MIDI Outputs

You can view and assign channel outputs for MIDI tracks on Pro Control. You can also assign multiple MIDI channels to a single track.

To assign MIDI outputs from ProControl:

- 1 Press ASSIGN+OUTPUT.
- 2 Use the Rotary Data Encoder for the track to select the MIDI device and channel.
- 3 Press the selected channel’s PRE/POST/ASSIGN/MUTE switch.

 *If assigning multiple MIDI channels, perform steps 2 and 3 while pressing SHIFT/ADD.*

- 4 When MIDI output assignment is completed, press the Master ASSIGN switch to confirm and exit Assign mode.

Keyboard Shortcuts

To change the assignment of all or all selected channels

- ◆ Hold down OPT(ALT)ALL or SHIFT/ADD + OPT(ALT)ALL while pressing channel ASSIGN/MUTE or the master ASSIGN switch to assign to all or all selected, respectively.

During the assign process, up and until an assignment is committed, other controls on ProControl are active (such as faders).

Assigning Multiple Outputs

ProControl supports the ability to assign multiple outputs to a Pro Tools track.

To assign an additional output to a channel:

- 1** Press the master ASSIGN and OUTPUT switches (in the Select/Assign section).
- 2** On the appropriate channel, rotate the encoder until it displays the additional output you want to assign. The currently assigned output (if any) is indicated with the > symbol (for example, ">Out 1-2").
- 3** Press CTL/CLUTCH+ASSIGN to confirm the additional output assignment. Use the channel Assign/Mute or master Assign switch as needed:
 - The channel Assign/Mute switch confirms the setting and leaves ProControl in Assign mode. Use this to continue assigning other channels.
 - Pressing the master ASSIGN switch confirms and exits Assign mode. Use this when you are through assigning channel outputs.

Display of Multiple Output Status

Multiple output assignments are indicated with "+" in front of the assigned path's names. For example, +Out 1-2.

Other symbols indicate inactive status (see "Inactive Outputs" on page 82).

Inactive Outputs

ProControl lets you toggle inputs, outputs, sends, plug-ins, and tracks between active and inactive. (For more information on active and inactive items, see the *Pro Tools Reference Guide*.)

To toggle an item Active/Inactive:

- CTL/CLUTCH+⌘(CTL)+click the item in the Mix or Edit window, using the Trackpad or mouse.

Display of Inactive Items

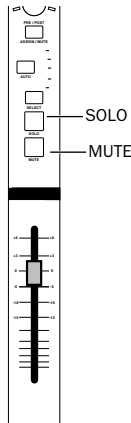
ProControl uses prefix symbols to display the different inactive states possible for outputs.

The @ symbol indicates inactive status for the following items:

- Inputs
- Outputs
- Sends
- Inserts
- Tracks
- Plug-Ins, when unavailable or missing
- Paths that are inactive in the I/O Setup dialog

@ Indicates that only one output is assigned, and it is currently inactive. (For example, @Out 1-2.)

* Indicates more than one output is assigned, at least one of which is inactive. (For example, *Out 1-2.) For more information on multiple outputs, see “Assigning Multiple Outputs” on page 82.



Channel MUTE and SOLO Switches

The channel MUTE and SOLO switches are the same as the Solo and Mute switches in Pro Tools. When the MUTE and SOLO switches are enabled, their LEDs will light (MUTE in red, SOLO in yellow).

Implicit and Explicit Mute and Solo Display

A flashing MUTE LED indicates an implied or implicit mute, meaning that the channel is muted because other channels are soloed.

The MUTE switch LEDs on channels that are explicitly muted are lit continuously (do not flash).

To MUTE or SOLO a channel:

- Press the channel MUTE or SOLO switch.

Keyboard Shortcuts

- ◆ Press OPT (ALT)/ALL switch + MUTE or SOLO to clear or enable Mutes or Solos on *all* channels
- ◆ Press OPT(ALT)ALL+SHIFT/ADD+MUTE or SOLO to clear or enable Mutes or Solos on all selected channels

If there is at least one channel strip being soloed, pressing the OPT(ALT)ALL switch and any SOLO switch will clear all solos, regardless of the solo state of the pressed channel strip. If there are no channel strips being soloed, pressing the OPT(ALT)ALL switch and any SOLO switch will solo all the channel strips.



You can also query and set solo/mute status from the Channel Matrix. See Chapter , “The Channel Matrix.”

SOLO CLEAR

The SOLO CLEAR switch, directly to the left of the row of channel solo switches, clears all channel solo switches. SOLO CLEAR flashes whenever any channel strip in the current session (even those located off-bank) is in solo mode.

To clear all soloed channels (master un-solo):

- Press the SOLO CLEAR switch. The SOLO CLEAR switch LED will stop flashing.



You can also use the Channel Matrix to “clear all” for solo, mute, record-ready, and channel select status. See Chapter , “The Channel Matrix.”

Pro Tools Solo and Mute Preferences

There are several Pro Tools solo and mute preferences that ProControl fully supports:

Solo Safe Prevents channel from implied mute when other channels are soloed. See “Solo and Record Safe Modes” on page 85 for details.

Latch Solo Switches Toggles SOLO latching mode.

Solo, Mute Follow Mix Groups Determines whether soloing or muting individual members of a mix group changes the status of the entire group, or only of the individual member.

Solo and Record Safe Modes

Channel strips can be placed into Solo and Record *Safe* modes. When in safe mode, channels are locked out from implied mute or record states.

If you attempt to arm a Record-Safe channel for recording, the REC/RDY switch LED will not light.

If you attempt to solo a Solo-Safe channel, the SOLO switch will not light, and the channel strip will remain audible in the mix. Solo Safe channels can be *explicitly* muted using the MUTE switches.

To enable Solo or Record Safe status on a channel strip:

- Press ⌘(CTL) + a channel SOLO or REC switch.

To Solo or Record safe from the Channel Matrix:

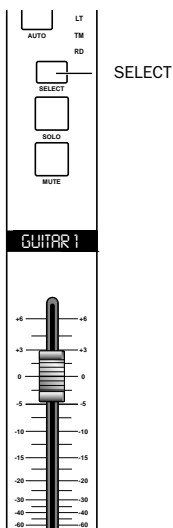
- 1 Press the SOLO switch in the STATUS section.
- 2 Press ⌘(CTL) + an alpha-numeric key 1/A, 2/B, and so on to solo or record safe channels in the current bank (A, B, C or D).

Display of Safe Mode

When first solo- or record-safed, a channel's solo or record switch will flash briefly. There is no other indication on ProControl that shows whether a channel is in Record or Solo Safe mode. Pro Tools always displays the safe status by graying out the Solo or Record switches in the Mix window.

Keyboard Shortcuts

- ◆ OPT(ALT)ALL + ⌘(CTL) + REC/RDY or SOLO switch on any channel: clears/enables Record or Solo Safe status on all channels
- ◆ SHIFT/ADD + OPT(ALT)ALL + ⌘(CTL) + REC/RDY or SOLO switch on any channel: clears/enables Record or Solo Safe status on all selected channels



The CHANNEL SELECT SWITCH

SELECT selects channels for grouping, deletion and other channel functions.

For any function that utilizes a set of controls not found in the channel strip (SOLO, MUTE, or other), or whenever you want to apply a certain function to multiple channels, the SELECT switch *includes* or *excludes* channels from the operation.

To select a single channel:

- Press the channel SELECT switch. Single channels are selected in an either/or manner (they are not latching) and their green LED highlights when active.

To select more than one channel at a time

- Press SHIFT/ADD + other SELECT switches.

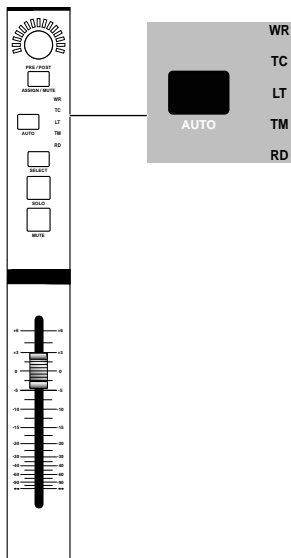
To deselect a channel:

- Press SHIFT/ADD + that SELECT switch.

Shortcuts

- ◆ Press OPT(ALT)ALL + any SELECT switch to select/deselect *all* channels (including off-bank channels).
- ◆ Press ⌘(CTL) + any lit SELECT switch to change the SELECT status of that channel strip, and change all other channel strips to the opposite state.

💡 You can also select channels from the Channel Matrix. Chapter , "The Channel Matrix."



Channel AUTO Switch

The AUTO switch is located above the SELECT switch. Next to the switch are five 2-character LED automation mode indicators, arranged vertically. The AUTO switch sets the channel automation mode, and punches in/out during an automation record pass.

The 2-character LEDs next to the AUTO switch indicate the various automation modes and their present status. The AUTO modes are indicated by the labels as follows:

WR LED (red) Indicates Write mode.

TC LED (red) Indicates Touch mode.

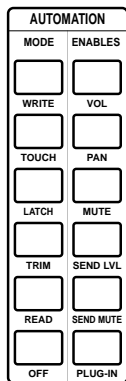
LT LED (red) Indicates Latch mode.

TM LED (yellow) Indicates Trim mode.is enabled (for Write, Touch or Latch).

RD LED (green) Indicates Read mode.

All LEDs Off Indicates that automation is off for the channel.

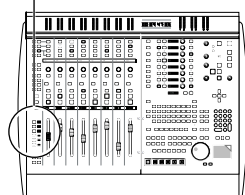
The channel AUTO switch is also used in combination with the master AUTOMATION MODE and ENABLE switches.

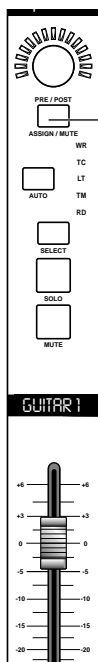


Master AUTOMATION MODE and ENABLE Switches

To the left of the channel faders is the AUTOMATION section, which includes the six master AUTOMATION MODE switches and the six AUTOMATION ENABLE switches.

Instructions for setting, recording and editing automation can be found in Chapter , "Automation."





PRE/POST ASSIGN/MUTE Switch

The PRE/POST ASSIGN/MUTE switch, located underneath each channel strip's data encoder, serves several different functions depending on the current mode set with the Master ASSIGN and SEND switches. This switch only functions when Sends have been assigned for the channel.

PRE/POST Mode

If the SEND MUTE switch is NOT lit in the SELECT/ASSIGN section, the PRE/POST ASSIGN/MUTE switches are used to change send PRE/POST states. (PRE/POST mode is active when ProControl is not in Assign mode.)

Newly created sends default to post-fader routing (except if there was a send previously assigned to that track, in which case the pre/post state will default to that of the previous send). Pressing the channel PRE/POST switch will change the routing to pre-fader for the channel strip, or vice-versa. (The OPT(ALT)ALL and SHIFT/ADD shortcuts allow you to change all pre/post routing status for all or selected channels.)

Display of Pre/Post-fader Send status

The ASSIGN/MUTE|PRE/POST switches will not be lit when the send is POST fader and will light solid when PRE fader is selected. The scribble strips above the encoders will momentarily display "Pre" or "Post" when the change is made. They will then revert to their prior display state.

⚠ *Pre/Post status can not be changed during playback.*

Assigning and editing send parameters is explained in Chapter , "Mixing."

ASSIGN/MUTE Mode

When ProControl is in Assign mode the channel ASSIGN/MUTE switch confirms and "locks in" assignment choices for individual channel I/O and send routing.

When the master SEND MUTE switch is engaged, the PRE/POST ASSIGN/MUTE switches let you mute the channel's selected send.

In addition, this switch can act as a “select” switch when applying the QuickMode key default function (see “DEFAULT QuickMode Switch” on page 96).

For complete instructions on assigning and editing sends, refer to Chapter , “Mixing.”

The SELECT/ASSIGN Section

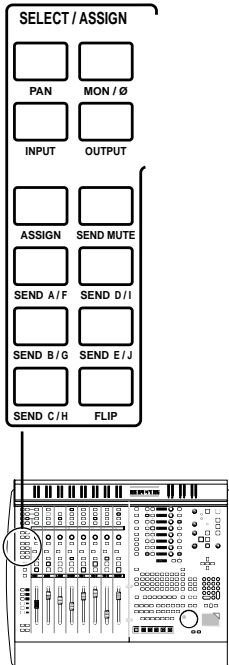
The SELECT/ASSIGN switch section is where you choose the channel data encoders function, or the display contents, for all active channel strips.

The master ASSIGN switch enables input, output or send *assign mode* (with the specific mode determined by the INPUT, OUTPUT and SEND A/F-E/J switches in the SELECT/ASSIGN section).

When the ASSIGN switch is not being used (its LED is off), the SELECT/ASSIGN switches function in Select mode, in which they choose the encoder *display* (PAN displays channel pan values, INPUT displays input assignment).

The switches in the SELECT/ASSIGN section are:

- PAN
- MON/Ø
- INPUT, OUTPUT
- ASSIGN
- SEND MUTE
- Send A/E, B/G, C/H, D/I, E/J, FLIP



Local and Global SELECT/ASSIGN Behavior for Expanded System

When using an expanded ProControl system, SELECT/ASSIGN functions are factory set to operate globally across all units (Main and Fader Packs). Expanded systems can be reconfigured so that SELECT/ASSIGN switches function in local mode.

Example of Local SELECT/ASSIGN Capabilities

In default global SELECT/Assign mode, all channels of ProControl respond as one to SELECT/ASSIGN operation from any unit. For example, if you select SEND A/F to adjust that send level on a channel, all ProControl channel strip encoders will be switched to SEND A/F display. For this and similar circumstances, global (default) SELECT/Assign mode is useful for cue/headphone mixes or other session-wide bussing.

Other tasks, including automation recording and mixing, can benefit from being able to have access to more than one SEND or other parameter at a time. For example, a mildly complex send/return effect might benefit from automating send level to the effect, and automating a fade out of the effect return channel fader. Local SELECT/ASSIGN lets each unit (Main and individual Fader Packs) function independently through their own PAN, INPUT, OUTPUT and SEND A/F-E/J switches, and encoders/displays.

Changing Global/Local Mode

To change this behavior to local mode (or back to global mode):

- Press and hold the OPT(ALT)ALL switch, then press the FLIP switch. The scribble strips above the channel encoders will briefly display either:

```
SELECT |ASSIGN |SWITCHES |ARE |Now In |LOCAL |MODE. |<BLANK>|
```

– or –

```
SELECT |ASSIGN |SWITCHES |ARE |Now In |GLOBAL |MODE. |<BLANK>|
```

In Global mode

- Press PAN, INPUT, OUTPUT or one of the SENDs) in the SELECT/ASSIGN area to make that function available across all ProControl Main and Fader Expansion units.

In Local mode

- Press any switch in the SELECT/ASSIGN area. The selected function is now available solely on the ProControl Main or Fader Expansion unit on which the switch was engaged. Other units remain in their current SELECT/Assign mode.

Fine Adjust mode

To adjust channel pan, send level or (stereo) send pan with Pro Tools fine-adjust mode:

- Press \mathbb{H} (CTL) while adjusting pan or send level.

Velocity Sensitive and Linear Behavior on Encoders

The channel data encoders, when editing pan or send level, exhibit linear response. Only the DSP Edit/Assign data encoders provide velocity-based response.

The data encoders in the DSP Edit/Assign section provide a special velocity algorithm. This lets you can make large changes quickly by turning the encoder quickly, or small, minimal changes by turning the encoder knob slowly. This more closely mimics how you use analog pots to perform adjustments.

Since the encoder has a fixed number of steps, and there are over 200 actual pan values, (-100 to +100), some steps will be skipped. This same behavior, found on many digital consoles, should not be a cause for concern. DAE will provide interpolated steps with 24-bit resolution when your automation moves are played back. (Refer to the *Pro Tools Reference Guide* for details about Automation Smoothing.)

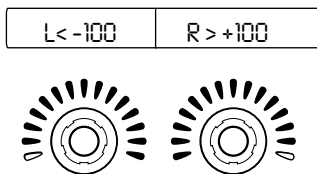
As an alternative to the above behavior, press \mathbb{H} (CTL), and move an encoder for fine resolution. You can then place the control at a specific position.

PAN Switch

Enabling the PAN switch sets the encoder row to display and control track pan.

To adjust mono channel PAN:

- 1 If not already in PAN mode, press the PAN switch in the SELECT/ASSIGN section.
- 2 Turn a data encoder to adjust that channel's pan. The scribble strips will show pan value as described below. A single LED in the LED ring moves either clockwise or counter-clockwise from the center to indicate Pan direction.



To adjust stereo channel PAN:

1 Press the PAN master switch a second time to focus on the right channel of a stereo track. The scribble strips will now show “R<>” in the left side of their display, and the PAN switch LED will flash. Pressing PAN again will toggle back to control of left pan.

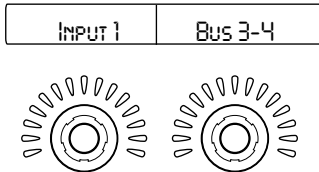
2 Turn the data encoder to adjust pan.

Surround panning can be performed using the DSP Edit/Assign section. See “Surround Mixing” on page 172.

Pan Value display

The LED display above the encoder LED ring provides alpha numeric pan position data similar to Pro Tools. Stereo tracks will show an “L” or “R.” For example, the pan values for a stereo aux track panned full out would be “L< -100” and “R > +100. -100 to -1 is displayed as “<” and +100 to +1 is displayed as “>.” Center (or, 0 pan value) is shown as “<>.”

If automation is globally enabled for pan, data can be recorded to the track’s pan automation playlist. The encoder defaults to mono, or left side of stereo PAN.



INPUT and OUTPUT Switches

The INPUT or OUTPUT switches let you assign channel input and output in combination with the master ASSIGN switch.

MON/Ø (Auto Input and Input Only)

The MON/Ø switch displays and toggles the current input mode (Auto Input or Input Only). Pro Tools version 5.1 and later can toggle between Auto Input and Input Only Monitor modes during playback and recording.


You can use the Channel Matrix Alpha keys, or the MON/PHASE switch, to select the Input Monitor mode.

To toggle Auto Input and Input Only Monitor mode:

- Press the MON/PHASE switch (next to PAN in the Select/Assign section).

– OR –

- Press OPT(ALT)ALL+ALPHA+K (in the Channel Matrix).

 For more information, see “Monitoring Modes” on page 118.

Master ASSIGN Switch

The Master ASSIGN switch is used to assign input, output and send routing. Throughout this guide using instructions using the SELECT/ASSIGN switch section, including the master ASSIGN switch. Whenever an instruction refers to Assign mode, it is referring to the state of this switch.

SEND MUTE Switch

This switch is located directly to the left of the ASSIGN/MUTE switch row. When enabled (red LED is lit), the channel PRE/POST|ASSIGN/MUTE switches act as SEND MUTE switches for the currently active send (set by the master send switches, A/F-E/J). If the master SEND MUTE switch is enabled, the associated send is muted on the selected channel, and can be automated.

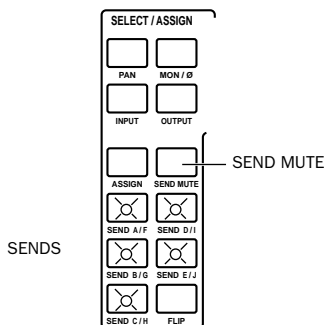
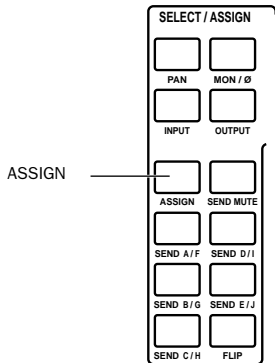
The master SEND MUTE switch retains its current status even if PAN is the current encoder function. The SEND MUTE LED will turn off if, with active sends selected on the current channel, you switch to PRE/POST mode using the SEND MUTE switch. You must first have a send (A-F, E-J) chosen for editing.

In addition to the method described above, you can mute sends (with automation) using FLIP mode.

Sends (and Flip mode) are explained in Chapter , “Mixing.”

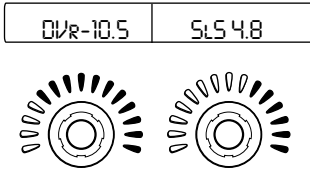
SEND Switches (A/F - E/J)

The 5 master SEND switches (labeled A/F-E/J) place the encoders into either send assign (when in Assign mode) or send level (in SELECT mode).



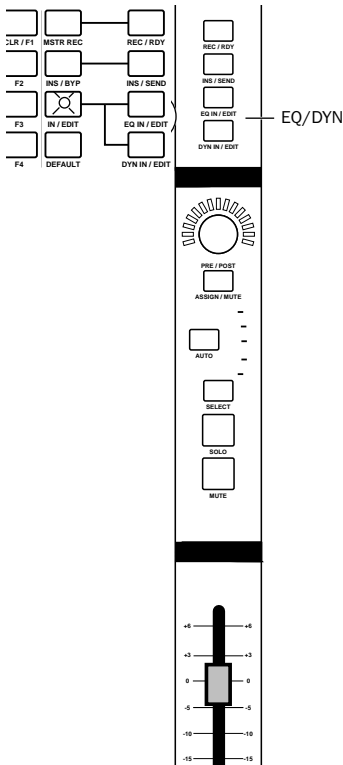
Pressing and holding a SEND switch temporarily displays send destinations on the scribble strips located above the channel encoders. Sends are explained in Chapter , “Mixing.”

The FLIP Switch



The FLIP switch, located directly under the SEND E/J switch, lets you control send level, or plug-in parameters, from the touch-sensitive faders. In addition, you can pan stereo sends using the channel data encoders. When FLIP mode is engaged, the Channel MUTE switch acts as a Send MUTE switch, and the channel PRE/POST/ASSIGN/MUTE switch toggles pre-/post-fader send status. FLIP mode can simplify set up of sends-based cue mixes (as just one example) and also provides a touch-sensitive interface for writing Send level automation data. Send Flip mode is explained in Chapter , “Mixing.”

Plug-In Flip mode is explained in Chapter , “Plug-Ins.”



EQ IN/EDIT DYN IN/EDIT

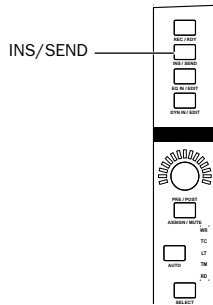
These switches are located above the encoder LED Display. They are arranged in two rows of eight EQ IN/EDIT (green LED) and eight DYN IN/EDIT (green LED) switches.

Master IN/EDIT Switch

The IN/EDIT switch is located immediately to the left of the channel EQ IN/EDIT switch row. It toggles the function of the EQ and DYN switches between their default Edit mode and optional In (bypass) mode.

See Chapter , “Plug-Ins” for more information.

Channel INS/SEND Switch

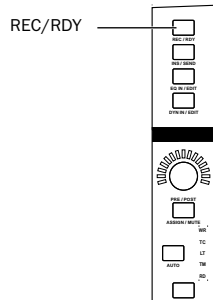


INS/SEND lets you select a channel's plug-ins, sends, or multi-channel output for editing or panning. The INS/SEND switches also let you *bypass* all inserts on the individual channel, when the master INS/BYP switch is enabled.

See Chapter , "Plug-Ins" for more information.

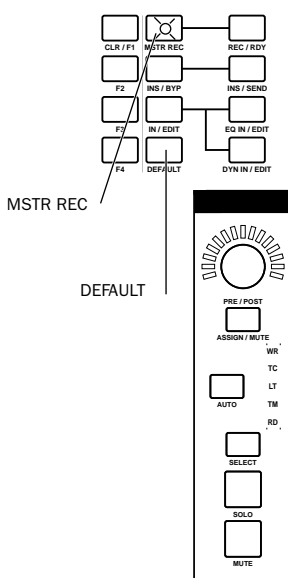
In Surround Pan mode (F4), the INS/SEND switch focuses ProControl DSP Edit/Assign section on that track's multi-channel Output window. See "Surround Mixing" on page 172 for more information.

REC/RDY and MSTR REC Switches



These switches arm disk track channel strips for recording. The channel REC/RDY switch LED will flash when a channel is in record-ready mode and lights solid when Pro Tools enters record (record mode). If any disk track is armed for recording (on- or off-bank), the Master REC/RDY switch will flash. This allows you to easily see if any channels strips that are outside of the current bank (and off-screen in Pro Tools), are armed for recording.

MSTR REC "QuickMode" Switch



This switch, located to the left of the REC/RDY switch row, is a master status indicator for REC/RDY, and lets you toggle all REC/RDY switches on/off.

By default, pressing MSTR REC once will take all channels out of record-ready if any tracks are armed. Pressing MSTR REC a second time will place all channels into record-ready mode. Using the REC/RDY and MSTR REC QuickMode switches is explained in detail in Chapter , "Recording."

DEFAULT QuickMode Switch

This switch reverts a control to its default setting, such as Pan center or fader “0” gain (unity). This switch is equivalent to Option/Alt-clicking an on-screen control in Pro Tools.

To reset a fader to its default setting:

- 1 Press and hold the DEFAULT switch. Its LED lights.
- 2 Press any fader SELECT switch.

To reset a channel encoder to its default setting:

- 1 Press and hold the DEFAULT switch. Its LED lights.
- 2 Press a channel ASSIGN/MUTE switch.

To reset an encoder in the DSP Edit/Assign section:

- 1 Enable SENDS or PARAMs mode.
- 2 Press and hold the DEFAULT switch. Its LED lights.
- 3 Press a SELECT/AUTO switch to reset that encoder to its default.

To reset send level from the DSP Edit/Assign section:

- 1 Enable SENDS view on the DSP Edit/Assign section.
- 2 Press an insert SELECT/AUTO switch.

To reset all faders or encoders to their default state:

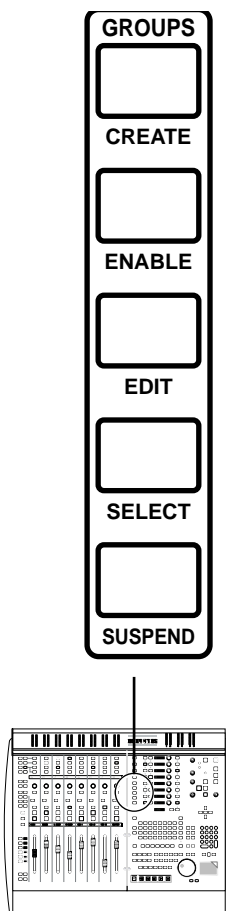
- 1 Hold the OPT(ALT)ALL and DEFAULT switches.
- 2 Press any fader SELECT or ASSIGN/MUTE switch to set all channel faders or encoders to the default value for that control.

To reset all selected faders or encoders to their default state:

- 1 Press OPT(ALT)ALL+SHIFT/ADD.
- 2 Press any fader or ASSIGN/MUTE encoder switch to set all selected channel faders or encoders, respectively, to the default value for that control.

To set a Plug-In back to its default state:

- Press DEFAULT+COMPARE.



Groups

ProControl provides a dedicated GROUPS switch section, located just to the right of the main Fader section.

The GROUPS section contains five switches—CREATE, ENABLE, EDIT, SELECT and SUSPEND. These switches mimic Pro Tools Group menu commands. Below the DSP Edit/Assign section is the CHANNEL/GROUP display, which displays group and channel information. Supported Group features include the following:

- Create new groups, and query current groups to see if the selected channels are resident in any existing groups.
- Enable and disable groups.
- Edit groups by adding or removing channels (in tandem with the Channel Matrix).
- Delete individual or all groups.
- Select all channel strips of the members of a group or groups (the same as clicking to the left of Group ID letter in Pro Tools).
- Suspend all group activity.

Creating New Groups

The GROUPS/CREATE switch is used to create groups in empty group locations, or overwrite existing groups:

To create Groups:

- 1 Make a selection of two or more channels.
- 2 Press CREATE in the GROUPS section. Its LED flashes, and the DSP Edit/Assign section displays the following:

PRESS A

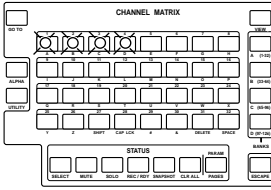
GROUP

SWITCH

TO

CREATE A

GROUP



3 Look at the Channel Matrix to determine whether any of the selected channels are members of an existing group. The Channel Matrix displays group information as described below:

- ◆ Unlit switches in the Channel Matrix indicate available groups.
- ◆ Existing groups are indicated by the corresponding Channel Matrix switch (A-Z) being lit. For example, if there are already four groups set up in the current session then switches 1/A, 2/B, 3/C and 4/D will be lit.
- ◆ If any of the currently selected channels are members of an already existing group, then the corresponding Channel Matrix switch (A-Z) will illuminate.
- ◆ If any of the channels selected for grouping are not members of any existing groups, then the corresponding Channel Matrix switch will flash.

4 Press the Channel Matrix switch corresponding to the group letter (A-Z) you want to create. The CHANNEL/GROUP display shows the group name.

5 If the group is empty:

- The ALPHA switch flashes. The Create Group dialog box appears on-screen, with the default group name shown.
- If the default name is acceptable, press ENTER on the ProControl keypad or your computer keyboard to create the new group. Press ESCAPE to cancel.
- If desired, customize the group name using your computer keyboard or the Channel Matrix.

After you have finished, the CREATE and ALPHA switch LEDs go off, and the Channel Matrix section reverts to its former STATUS function.

6 If the selected group contains existing members, the existing group name will appear in the CHANNEL/GROUP display. The lower three LED displays in the DSP Edit/Assign section will display the following:

```
OVERWRITE
EXISTING
GROUP?
```

7 Press ENTER to confirm that you want to overwrite the existing group. Press ESCAPE to exit the group create process without overwriting. In either case, the DSP Edit/Assign LED displays will return to their former content.

- If you wish to use the default group name, press ENTER without entering new name information.
- Enter a name for the new group using the Channel Matrix or your computer keyboard as described earlier.

8 Press ENTER on the ProControl keypad or your computer keyboard to confirm the name and create the new group, or press ESCAPE to cancel. The CREATE and ALPHA switch LEDs extinguish. The Channel Matrix switches return to the prior STATUS function.

To display any group name in the CHANNEL/GROUP display:

- While in any group mode, press CTL (CLUTCH) and a Group's corresponding alpha-numeric in the Channel Matrix.

Enabling Groups

The ENABLE switch allows groups to be enabled or disabled.

To enable or disable a group or groups:

1 Press the ENABLE switch. Its LED will flash. The Channel Matrix indicates current group status in the following ways:

- The LEDs on any currently enabled group are *lit*.
- The LEDs of any group that is not enabled *flash*.
- The LEDs of any empty group are *off*.

If the switch of an empty group is pressed, the CHANNEL/GROUP display will briefly display "NO GROUP."

2 Press the switch of any group to toggle its enable state. Its corresponding LED in the Channel Matrix will stop flashing and light solid. Additional groups can be enabled by pressing the corresponding switches.

3 To exit, press the ENABLE switch again. The Channel Matrix switches return to the prior STATUS function. Press ESCAPE to cancel without saving your changes.

Editing Groups

The EDIT switch allows viewing and editing of group content.

To view or edit a group or groups:

- 1** Press the EDIT switch in the GROUP section. Its LED flashes. In the Channel Matrix area, the switch LEDs of all existing groups flash.
- 2** Press the switch corresponding to the group of interest. The LED on the EDIT switch continues to flash, and the STATUS area SELECT switch LED now flashes also. This indicates that you can now select and edit group membership:

The CHANNEL/GROUP display shows the name of the selected group. The individual channel members of the group are indicated in the Channel Matrix LEDs. The names of the individual group members are displayed vertically in the DSP Edit/Assign section, which will show (Pro Tools) channel number and abbreviated channel name, separated by a space (for example, “A12 Guit”). If there are more than eight members in the group, the BANK SELECT switch will flash. Use the BANK SELECT left/right cursor arrows to scroll through the member list in banks of eight.

- 3** To add additional tracks to a group, press the corresponding switches in the Channel Matrix. The switch LEDs solid, indicating that the channel strip is now a member of the current group. If a channel strip is outside of the current bank view, press the appropriate BANK switch (A-D) to access it.
- 4** To remove a group member, press its Channel Matrix switch. Its LED goes out, indicating that it is no longer a member of the current group.
- 5** Press the Group EDIT switch again to complete the operation, or press ESCAPE to cancel. The Channel Matrix switches return to the prior STATUS function.

Selecting Groups

The GROUP/SELECT switch allows an existing group or groups to be selected using the Channel Matrix. This is useful to combine groups into a new, larger group containing all members of both groups.



Previous selections are not retained when entering this mode.

To select groups:

- 1 Press SELECT in the GROUP section. The LED flashes. In the Channel Matrix area, the switch (A-Z) LEDs of all existing groups flash.
- 2 Press a Channel Matrix switch (A-Z) to select an existing group. The switch LED lights solid, and the name of the group appears momentarily in the CHANNEL/GROUP scribble strip.
- 3 Select other groups by pressing additional Channel Matrix switches. The switches in the Channel Matrix are latching, meaning that any number of active groups may be selected or deselected at any time without the need to hold down any additional modifier key. The CHANNEL/GROUP scribble strip displays the name of the group last selected.

To deselect a group from the current process:

- 1 Press the Channel Matrix switch corresponding to the (un)desired group. Its LED will begin to flash indicating that the group is no longer selected. The name of the group being deselected will briefly appear in the CHANNEL/GROUP scribble strip.
- 2 Press the flashing SELECT switch or the ESCAPE switch to exit GROUP SELECT mode.

Suspending Groups

The SUSPEND groups switch allows all groups to temporarily be disabled.

To suspend all groups:

- Press the SUSPEND switch. Its LED will flash, indicating that all groups are disabled. To exit Group Suspend mode, press the SUSPEND switch again. All channel strips return to their former group states.

Deleting GROUPS

Groups can be deleted individually, or all at once.

Deleting Groups Individually


Individual groups may be deleted one at a time by using the GROUP EDIT switch in combination with the EDIT FUNCTION area's DELETE switch:

To delete groups individually:

- 1 Press the (GROUP) EDIT switch. Its LED flashes. In the Channel Matrix area, the switch LEDs of all existing groups flash.
- 2 Press and hold the EDIT FUNCTION/DELETE switch (located just below the Channel Matrix).
- 3 Press the Channel Matrix switch that corresponds to an existing group you want to delete. That group's name will appear in the CHANNEL/GROUP display. Once you have selected a group, you are locked in to the DELETE function. The DSP Edit/Assign displays the following message:

```
DELETE
GROUP?
PRESS
ENTER
TO O.K.,
ESCAPE
TO CANCEL
```

- 4 Press ENTER on the Numeric Keypad to delete the selected group. The DSP Edit/Assign LED displays will then revert to their previous state, and the EDIT switch LEDs will extinguish. Press ESCAPE to cancel the operation without deleting any groups.

 *Group delete cannot be undone.*


Deleting All Groups

To delete all groups in a session:

- 1 Press GROUP EDIT switch.
- 2 Press the CLR/ALL switch, (located in the STATUS switch section). The DSP Edit/Assign LED displays the following message:

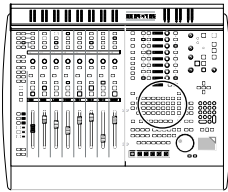
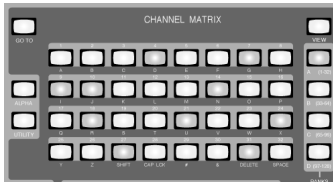
DELETE
ALL
GROUPS?
PRESS
ENTER
TO O.K.,
ESCAPE
TO CANCEL

- 3 Press ENTER to confirm the warning and delete all groups. The message on the DSP Edit/Assign LED display goes away (reverting to its former content), and the EDIT and CLR/ALL switch LEDs go out. Press the ESCAPE switch to cancel without deleting all groups.

 *Group delete cannot be undone.*

Chapter 8: The Channel Matrix

The Channel Matrix is a multi-purpose channel status and navigation control section that adds several unique capabilities to Pro Tools.



Channel Matrix

Overview

The Channel Matrix consists of:

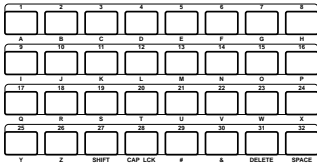
- 32 primary switches (1/A through 32/SPACE),
- Four BANK switches (A1-32, B33-64, C65-96, D97-128)
- Seven STATUS switches (SELECT, MUTE, SOLO, REC/RDY, SNAPSHOT, CLR ALL and PARMS/PAGES).
- VIEW switch
- GO TO switch
- ALPHA switch
- UTILITY switch
- The CHANNEL/GROUP LED display (located below the DSP EDIT/ASSIGN section)

You can use the Channel Matrix for:

- ♦ Bank and channel navigation.
- ♦ Shortcuts, commands, text, and data entry.
- ♦ Channel Solo, Mute, Record, and Select status.
- ♦ Plug-in parameter page selection.
- ♦ Group selection, creation, and editing.
(Groups are explained in Chapter , “Working with Tracks.”)

Primary Channel Matrix Switches

1/A, 2/B...32/SPACE



The Channel Matrix contains 32 switches with LEDs, arranged in four rows of eight. The switches have dual labels: numbers 1-32, and 26 alpha characters (A-Z), with numbers 27-32 providing SHIFT, CAP LCK, #, &, DELETE and SPACE characters.

The function of the primary switches is determined by the BANK, VIEW, GO TO and STATUS switches.

BANK A-D

These switches focus the Channel Matrix primary switches in 32-channel banks, and are labeled BANK A (1-32), BANK B (33-64), BANK C (65-96) and BANK D (97-128).

To display to a different Bank in the Channel Matrix:

- Press one of the four BANK switches.

The corresponding bank of channels will be represented in the Channel Matrix. If a bank does not contain any active channels, pressing its switch will have no effect.

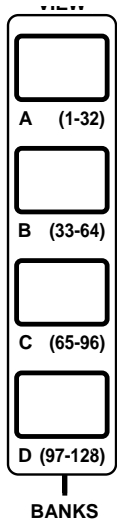
Notice that this focuses the Channel Matrix only, it does not bank the faders. To navigate channels to faders, use GO TO and VIEW (see “Banking with GO TO and VIEW” on page 109).

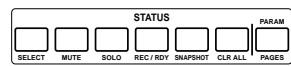
Pro Tools Channel Numbering and Banks

Pro Tools numbers channel strips in the Mix window with an “absolute channel number” that designates channels as a letter-number combination that describes their position left-to-right. Channel numbers are letter/number combinations in increments of 32 (“A1...A32,” “B1....B32” and so on).



The ProControl DISPLAY MODE switch (to the left of the faders) lets you view these absolute channel numbers on the channel displays, along with an abbreviated channel name (press the DISPLAY MODE switch to toggle through all of the available channel display modes to select channel number/name).





STATUS Switches

Below the Channel Matrix area are the seven STATUS switches for SELECT, MUTE, SOLO, REC/RDY, CLR ALL and PARAM/PAGES. (The SNAPSHOT switch is not active.)

To display Select, Mute, Solo or Rec/Rdy status:

- 1 Press one of the BANK switches to focus the Channel Matrix.
- 2 In the STATUS section, press either SELECT, MUTE, SOLO or REC/RDY.

The primary switches highlight to indicate which channels are so-loed, muted and so on, in the currently displayed bank.

If one of the other BANK switches is flashing, it indicates one or more channel strips in banks other than the current bank are active for the chosen function.

Select, Mute, Solo, and Record Status

To change channel Select, Mute, Solo and Record status from the Channel Matrix:

- 1 Bank to the appropriate channels.
- 2 Select the desired mode in the STATUS section.
- 3 Press the appropriate primary switches (1/A, 2/B and so on) to toggle the current STATUS mode for the desired channels. For example, to mute channel 13, press 13/M.

Displaying Track Name from the Channel Matrix

To display a track name:

- Press CTL/CLUTCH + a primary Channel Matrix switch (1/A, 2/B, and so on).

The track name is displayed in the CHANNEL/GROUP scribble strip for as long as you hold down the alpha-numeric switch.

Channel Matrix and SELECT

When SELECT is the active STATUS mode for the Channel Matrix switches, pressing any switch in the matrix selects the channel (its LED lights). A selected channel may be deselected by pressing its channel switch again.

Unlike the fader strip SELECT switches, the Channel Matrix switches are latching. This is a convenient alternative to the two non-latching methods of selecting channels (either pressing and holding SHIFT/ADD, or a channel SELECT switch).

Snapshot Switch

The SNAPSHOT switch is currently not implemented.

CLR ALL (Clear All) Switch

The CLEAR ALL switch (CLR/ALL) allows you to clear all channels of a Status function.

To CLR/ALL on a status parameter type:

- 1 Select the appropriate STATUS mode (SELECT, MUTE, SOLO or REC/RDY).
- 2 Press the CLR/ALL switch.

The PARAM/PAGES Switch

This switch toggles the function of the Channel Matrix between Plug-In parameter paging and the STATUS functions. This feature is covered in Chapter , “Plug-Ins.”

Banking with GO TO and VIEW

The BANK SELECT/Nudge switches are not the only method available for mapping Pro Tools tracks to ProControl channel strips. The Channel Matrix VIEW and GO TO switches provide additional methods for navigating within a session.

When to use GO TO or VIEW If you know exactly what channel you want to go to, use GO TO. If you are not sure which channel you need, VIEW mode saves keystrokes by letting you “go to” numerous times without having to press GO TO each time.

GO TO

The GO TO switch provides a convenient way to bring any eight contiguous channels up on ProControl faders instantly. It is used in combination with the BANK and PRIMARY switches in the Channel Matrix.

Example of GO TO

Assume you had a single ProControl Main Unit and were working on a session with 60 Pro Tools channels. You currently have eight drum tracks “up” on the eight ProControl faders, but you want to quickly call up channels 27-35 to work on the background vocals on those channels.

You could use the NUDGE/BANK SELECT switches, but doing so requires several steps. First, you would have to press the BANK SELECT-Right arrow key three times to display channels 25-32. Then you would switch to NUDGE mode (Channel Select mode) and press the Nudge -Right arrow key twice more so that channels 27-35 occupy the eight channels on the unit.

In cases like the above, a faster alternative is to use the GO TO switch—press GO TO, then press primary matrix switch #27. This instantly places channel 27 at the left-most fader of your ProControl system, with channels 28-35 occupying the next eight faders, and so on.

To go to a specific channel/bank:

- 1** Press the GO TO Switch. Its LED flashes. (Press ESCAPE at any time to cancel the GO TO operation).
- 2** Select a track in the Channel Matrix. The name of the track appears in the CHANNEL/GROUP LED display as long as the switch is held down. ProControl banks the selected track to the left-most fader. All displays and controls (including the Channel Matrix bank view) update accordingly. The Channel Matrix then reverts to its previous state.

VIEW

The VIEW switch places the Channel Matrix in a “latching” mode of GO TO. In other words, VIEW calls channels to the faders just as in GO TO mode. Unlike GO TO mode, however, the Channel Matrix does not revert to its previous state. Instead, the Channel Matrix remains in VIEW mode so other channels can be quickly banked into view.

To engage VIEW mode:

- 1** Press the VIEW switch. Its LED, and all channel displays, flash to indicate VIEW mode.
- 2** Press any primary switch in the Channel Matrix, or press a BANK switch followed by a Channel Matrix switch. The channel chosen in the Channel Matrix is now brought to your left-most ProControl unit, left justified to the left most physical fader location, with the remaining channels out to the right. All fader section controls are updated (fader positions, switch states, encoder values etc.). The CHANNEL/GROUP scribble strip displays the channel name chosen in the Channel Matrix and holds the name until the VIEW mode is exited.
- 3** To exit VIEW mode, press either of the flashing VIEW or ESCAPE switches, or press either the GO TO switch or any BANK switch in the Channel Matrix. To exit the VIEW mode. The switch LED's will extinguish and all scribble strips are returned to their prior state.

ALPHA Mode

This switch locks the primary switches into Alpha mode, for text entry and command selection.

Individual channel names can be named or renamed at any time, in the methods described below. Several Pro Tools tasks automatically place ProControl into Alpha mode, including when naming new regions—even when the Auto-Name Regions Preference is not engaged. In Alpha mode, the PREVIOUS and NEXT switches mimic the behavior of the left/right arrow keys of the computer keyboard.

To enter a channel name using ALPHA mode:

- 1 Double-press the channel's SELECT switch. Both the ALPHA switch and the channel SELECT switch flash. The current channel name is shown in the scribble strip for the selected channel.
- 2 Type a new name using the Channel Matrix switches and the Numeric Keypad, or your computer keyboard.
- 3 Press the PREVIOUS or NEXT switches on the navigation quadrant to move to the next character and edit it.
- 4 When you have finished entering the new name press ENTER on the ProControl Numeric Keypad. To cancel alpha entry without changing anything, press ESCAPE.

The Channel Matrix will return to its previous state. Use these instructions to enter session, region, settings and other file names.

About the SHIFT, CAP LCK, DELETE and SPACE Switches

The bottom row of the Channel Matrix now contains switches labeled SHIFT, CAP LCK, DELETE and SPACE. These mimic the same keys found on the computer keyboard for text entry purposes. These switches are only used in conjunction with the Channel Matrix alpha entry modes.

Part IV: Applications

Chapter 9: Recording

This chapter presents instructions and examples of recording, including:

- ◆ Basics of audio and MIDI recording in Pro Tools with ProControl
- ◆ Setting up cue/monitor mixes
- ◆ Talkback/listenback communication
- ◆ Slate/dub features of the Control Room monitoring section

Basics

Creating New Tracks

- 1 Use the Trackpad to select File > New Track.
- 2 Select a track type, specify how many new tracks to create, and press ENTER. You can scroll the track type pop-up by holding ⌘ (CTL) and pressing the UP or DOWN arrow switches. Use the Numeric Keypad to enter the number of new tracks.

Naming New Tracks

- 1 Double-press the SELECT switch corresponding to the track you want to name or rename. ProControl automatically enters Alpha mode.
- 2 Enter a new track name using your computer keyboard, or the Channel Matrix.

Setting the Session Sample Rate

- 1 Press STATUS (in the WINDOWS section) to display Pro Tools Session Setup window.
- 2 Using the Trackpad, select the desired sample rate from the on-screen Sample Rate pop-up. If desired, you can also choose input format, frame rate, and other parameters using the Trackpad to make your selections. Refer to the *Pro Tools Reference Guide* for details about these parameters.

Other Session Configurations

There are several other session parameters that you may want to set for each new session. These include I/O Setup, Disk Allocation, MIDI tracks and the MIDI Metronome. You can use the Trackpad and your computer keyboard to perform all these tasks. For more detailed instructions on these operations, refer to the *Pro Tools Reference Guide*.

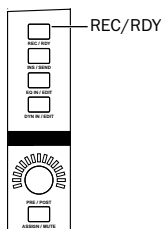
Starting the Recording Process

Before you start your first recording pass with ProControl, make sure you have configured the sample rate and other Session Setup parameters, Disk Allocation, MIDI Metronome/Click, count-off, and other recording options. See the *Pro Tools Reference Guide* for information on these features.

Step 1: Record-enabling Tracks

To place a track in record-ready mode from the Fader section:

- Press the REC/RDY switch at the top of each channel strip to which you want to record.



Both the channel REC/RDY and the MSTR REC switch LEDs flash indicating record-ready mode. This is a useful indicator, as it will flash whenever any channels are in record-ready mode whether they are visible in the currently displayed bank or are off-bank.

To record-ready tracks from the Channel Matrix:

- 1 Press the REC/RDY switch in the STATUS section of the Channel Matrix.
- 2 Press the alpha-numeric switch (1/A, 2/B) corresponding to the channels you want to record-ready.

ProControl recognizes Pro Tools preferences for Latch Record Enables, which can make it faster to record-enable multi-track record passes. As an alternative to using this Preference (see the *Pro Tools Reference Guide*), there are two ways in which ProControl can record-enable all tracks at once.

Shortcuts

To put all tracks in record-ready mode:

- Hold down the OPT(ALT)ALL switch and then press any unlit channel REC/RDY switch (the REC/RDY switch of any channel that is not flashing).

– OR –

- Press the MSTR REC switch. When no tracks are in record-ready mode, pressing the MSTR REC switch will record-enable all tracks.



If record-ready does not enable on any channel, check if it is in record safe mode. See “Record Safe Mode” on page 120 for details.

To put the currently selected tracks into record-ready mode:

- Hold down both the OPT(ALT)ALL and SHIFT/ADD switches, and then press any selected channel’s REC/RDY switch.

There are three ways to take all tracks out of record-ready mode:

To take all tracks out of record-ready mode:

- Hold down the OPT(ALT)ALL switch and then press the flashing REC/RDY switch of any channel (any channel which is already in record-ready mode). All REC/RDY switches will stop flashing, as will the MSTR REC switch.

– or –

- Press the MSTR REC switch. If any tracks are already in record-ready mode (the MSTR REC switch will flash when this is the case) pressing the MSTR REC switch will take all channels out of record-ready mode.

– or –

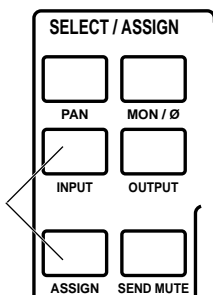
- In the Channel Matrix, press the REC/RDY switch and then press CLR ALL.

Step 2: Assigning Audio Track Input

This section explains how to route the appropriate input to audio tracks. (To assign MIDI routing, use the Device/Channel Selector in Pro Tools on-screen Mix window.)

To assign audio channel input:

- 1 In the SELECT/ASSIGN section, press ASSIGN + INPUT.



- 2 Rotate a channel data encoder (rotary knob) to scroll through the list of available Input and Bus paths. The channel ASSIGN/MUTE switch flashes to indicate that the setting has been changed.

- 3 When the desired path is displayed, confirm the selection:

- ♦ To remain in input assign mode, press the channel's ASSIGN/MUTE switch. This enters your new input assignment and lets you then assign a different channel's input.
- ♦ If you are through assigning channel input, press the master ASSIGN switch.

- 4 Press ESCAPE to cancel.

To make the same assignment to all or all selected channels at the same time:

- Hold down OPT(ALT)ALL or OPT(ALT)ALL+SHIFT/ADD, respectively.

Displaying I/O Assignment:

You can quickly check input or output assignment at any time (in PAN or SEND mode).

To display input or output assignment:

- Hold down the INPUT (or OUTPUT) switches. This temporarily displays the currently assigned input or output settings in the data encoder scribble strip displays.

Step 3: Setting Monitor and Record Modes

Monitoring Modes

Pro Tools TDM systems allow you to globally choose between two input monitoring modes, Auto Input monitoring or Input Only monitoring (refer to your *Pro Tools Reference Guide* for more information).

To toggle Auto Input and Input Only Monitor mode:

- Press the MON/PHASE switch (next to PAN in the Select/Assign section).
 - or –
- Press OPT(ALT)ALL+ALPHA+K (in the Channel Matrix).

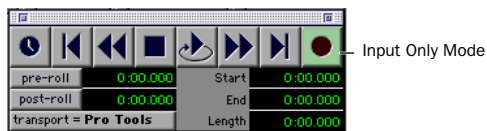
Display of Monitor Mode Status

To check Monitor mode status from ProControl:

- Look at the MON/PHASE switch. Lit indicates Input Only mode, unlit indicates Auto Input mode.
 - or –
- Press ⌘ (CTL)+MON/PHASE. This temporarily displays (but does not change) the current monitor mode.

To check Monitor mode status on-screen:

- Check the Record button in the Transport window. The Record button will have a green background while Input Only mode is enabled, or gray background in Auto Input mode.



Monitor Mode display in the Transport Window

To check input monitor mode status:

Press and hold the MON/Ø switch.

Record Modes

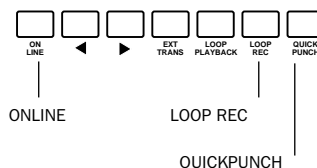
Pro Tools supports several different modes for audio and MIDI recording.

Audio record modes include (default) non-destructive, destructive, Online, Loop Recording and QuickPunch.

MIDI record modes include Merge/Replace and Wait for Note.

Click and *Countoff* options are also available in audio and MIDI recording.

Make sure you understand each of these modes before. For details on these features, see the *Pro Tools Reference Guide*.



Audio Recording Modes

To enable Online recording:

- Press ONLINE.

Refer to the *Pro Tools Reference Guide* for information about online recording and options.

To enable Loop Recording:

- Press LOOP REC (directly above the main TRANSPORT). For additional information, see "Loop Record Mode" on page 120.

To enable QuickPunch:

- Press QUICKPUNCH. For additional information, see “QuickPunch Recording” on page 121.

To configure Destructive or Non-Destructive mode:

- Use the Trackpad to set the desired mode in the Operations menu.

MIDI Recording Modes

To select between MIDI Merge and MIDI Replace record modes:

- Click the on-screen toggle switch (in the MIDI Controls section of the expanded Transport window)

– or –

- Press OPT(ALT)ALL + ALPHA + 13/M (in the Channel Matrix).

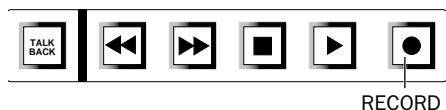
The on-screen switch is lit in MIDI Merge mode, and dark in Replace mode.

Step 4: Arming Pro Tools for Recording

With channels in record-ready mode and their inputs assigned, you are ready to arm Pro Tools for recording.

To arm Pro Tools for recording:

- Press the RECORD button in ProControl’s main TRANSPORT section. It will begin to flash (red) indicating Pro Tools is ready to record to disk.



To enable Record Pause mode:

- Press OPT(ALT)ALL+the master RECORD in the ProControl TRANSPORT section.

To enable (MIDI) Wait for Note:


- Use the Trackpad to enable Wait for Note mode by clicking its icon in the MIDI Controls section of the on-screen Transport window. Or, enable the Use F11 for Wait for Note Preference to be able to toggle Wait for Note on/off using the F11 function key (Setups > Preferences > Operation).

Step 5: Recording

To initiate recording:

- 1 Make sure the appropriate tracks are record-enabled and routed correctly, and that you have armed Pro Tools and selected the desired recording mode.
- 2 To begin recording, press PLAY in ProControl’s main TRANSPORT section, or use the appropriate Footswitch. If in Wait for Note mode, recording will not begin until Pro Tools receives MIDI input.

RECORD and PLAY both stay lit for the duration of the recording pass. You can stop recording at any time by pressing STOP (or by pressing the Space bar on your computer keyboard).

 Refer to the Appendix for instructions on configuring the Footswitch UTILITY options for play/stop, record, or remote Talkback.

To cancel out of a recording and discard the current take:

- Press SHIFT/ADD+STOP in the ProControl Transport section.



In addition to Disk Allocation settings, you might want or need to configure the Record Allocation setting in Pro Tools Preferences. Refer to the Pro Tools Reference Guide for details.

Record Modes

Record Safe Mode

Pro Tools provides a record safe mode to lock out recording on any track in a session.

To enable record safe status on a channel strip:

- Holding down the ⌘(CTL) switch, press the channel REC/RDY switch.
- or –
- Use the Channel Matrix REC/RDY and channel switch(es).

After placing a track in record-safe, its REC/RDY LED will briefly flash. If you attempt to arm a record-safe channel for recording, the REC/RDY switch LED will not light.

Shortcuts

- ◆ OPT(ALT)ALL+⌘(CTL) + REC/RDY switch on any channel: clears/enables record safe status on all channels
- ◆ SHIFT/ADD + OPT(ALT)ALL + ⌘(CTL) + REC/RDY switch on any channel: clears/enables record safe status on all selected channels

To take a track (or tracks) out of record safe mode:

- Hold down the ⌘(CTL) switch and press the REC/RDY switch of any channel in record safe mode.

Loop Record Mode

Pro Tools provides a loop recording mode. Loop recording results in a multi-take file containing new regions for each take.

To enable loop recording:

- 1 Press LOOP REC, just above the primary Transport switches. The Record switch in the Pro Tools Transport window will display “L” when in loop record or loop playback mode.
- 2 In Pro Tools Edit Window, select the desired range on the recording track which will constitute the loop.
- 3 Assign an input path to the recording track.
- 4 Press the track’s REC/RDY switch to place the track in record ready mode.
- 5 Adjust input monitor level and panning using the faders and data encoders.
- 6 Press RECORD on the ProControl Transport. It will turn red and begin to flash. To Loop record MIDI only (no audio), you need only arm the individual MIDI track to be recorded and not the Pro Tools master Record switch.
- 7 Press PLAY to begin recording. If in Wait for Note, recording will not begin until Pro Tools receives MIDI.
- 8 To stop recording, press STOP.

QuickPunch Recording

QuickPunch is essentially “punch-on-the-fly,” or, the ability to punch-in (start recording) on a record-enabled audio track, and punch-out by clicking the Transport Record button. (See the *Pro Tools Reference Guide* for details on using QuickPunch, QuickPunch Preferences, and Mute Frees Voice options.)

To punch-on-the-fly using QuickPunch:

- 1 Press QUICKPUNCH, located directly above the RECORD switch. The QUICKPUNCH red LED illuminates.
- 2 Make sure you have set the QuickPunch Crossfade Length preference in the Editing page of Pro Tools Preferences dialog to the appropriate value.
- 3 Record-enable the tracks you want to punch. The channel REC RDY and MSTR REC switches will flash.
- 4 Cue Pro Tools to the appropriate location.
- 5 Press PLAY.
- 6 At the punch-point, press the RECORD switch in the TRANSPORT section. The REC RDY and MSTR REC switches will stop flashing and stay lit during recording, as will the RECORD switch.
- 7 To punch-out, press RECORD again.
- 8 While playback continues you can perform additional punch-ins by clicking the RECORD button at each punch-in/punch-out point (up to 100 running punches per take).

Setting up Cue Mixes

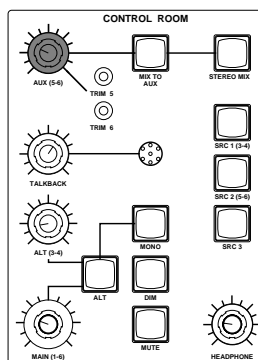
The ProControl AUX (5-6) output bus is designed to be connected to your cue mix system to provide a headphone mix. The Talkback/Listenback signal is always routed to these outputs.

To set up your cue mix, you can either engage the MIX TO AUX switch in the Control Room section to send your main stereo mix to the AUX (5-6) output bus, or use sends to create a discrete cue mix.

Control Room to Cue Mix

To feed the cue mix the main Pro Tools (Control Room) mix:

- 1 Make sure your cue mix system is connected to the ProControl AUX(5-6) output bus (channels 1 and 2 of the Audio Output connector).
- 2 Press MIX TO AUX.
- 3 Use the AUX(5-6) knob to adjust cue mix level.



Discrete Cue Mix

To set up a discrete stereo cue mix using sends:

- 1 Route a pair of Pro Tools outputs to the Pro-Control AUX IN bus (Audio Input 1 channels 7 and 8) and route ProControl AUX OUT L/R to the inputs of your headphone/cue system.
- 2 Assign a pre-fader stereo send on each track, route the sends through a Bus path to an Auxiliary Input, and assign the Auxiliary Input to the appropriate Output path needed for the cue mix. (Using pre-fader sends lets you maintain a cue mix independent of your main monitoring mix.)
- 3 Assign the send outputs to the output pair patched to the ProControl AUX IN bus.
- 4 Balance your cue mix from the faders.
- 5 Once your mix is set up, you can copy your current (main) fader mix to your newly-created, independent, stereo cue mix.

To copy fader/channel levels to send level:

- 1 Select all channel strips by holding OPT(ALT)ALL and pressing any channel SELECT switch. All select switches on all channels light.
- 2 With the Trackpad (or your mouse) choose Copy To Sends from Pro Tools Edit Menu. A dialog will appear asking if you wish to copy all fader data (including automation, mutes, etc.), or just levels.
- 3 Choose level only (the default), and choose your new stereo cue send as the target in the pop-up menu at the bottom of the dialog. Press ENTER on the ProControl numeric keypad to confirm.

- 4 Press PLAY, and adjust the send levels as needed for your cue mix. The AUX (5-6) knob controls overall cue mix volume. Because the cue sends are pre-fader, any soloing or muting tasks that you perform in the control room will not be heard in the cue mix.



See also “Send Flip Mode” on page 170.

DSP Considerations

Creating a discrete, independent stereo cue mix might take a large amount of DSP mixing power (depending on how many channels and sends are involved). If necessary, use the main control room mix for your talent (using the MIX TO AUX switch). If you do use sends for a discrete cue mix, make the cue send assignments inactive after overdubbing.

Talkback/Listenback, and Slate/Dub (Rerecord)

Talkback/Listenback facilitate control room-to-tracking room communication. For information on these features, see Chapter 6, “Control Room Monitoring.”

Chapter 10: Editing

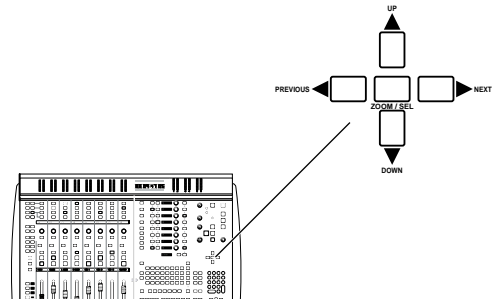
This chapter describes ProControl audio and MIDI editing features.

These include selecting and using Pro Tools Edit tools and modes, defining selections, creating and editing regions, applying fades, and other tasks.

ProControl supports many other related Pro Tools features as well, including session navigation, window zooming and scrolling, memory locations and markers, scrubbing, and region nudging.

Navigating, Zooming and Selecting with ZOOM/SEL

The ZOOM/SEL switches are used for cursor navigation, zooming, and region selection. In addition, the four arrow switches can navigate (Tab) among alpha numeric fields/characters.



Pressing the main ZOOM/SEL switch cycles through the three available modes for the UP, DOWN, NEXT and PREVIOUS switches.

To enable a different ZOOM/SEL mode:

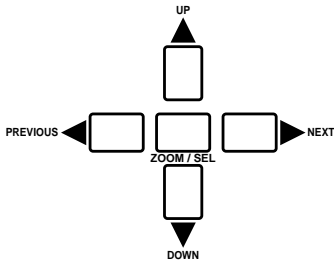
- Press ZOOM/SEL until the desired mode is indicated.

ZOOM/SEL modes and switch display

Mode	ZOOM/SEL switch
Navigation	Off
Zoom	On
Select	Flashing

Navigation Mode

In Navigation mode, the Zoom/Sel arrow keys navigate the cursor among region boundaries and tracks.



Navigation mode (ZOOM/SEL off)

To enable Navigation mode:

- Press ZOOM/SEL to cycle through mode choices until Navigation mode is selected (the ZOOM/SEL switch should be off).

To move the Edit cursor or an Edit selection to the previous or next region boundary:

- Press PREVIOUS to move the cursor to the previous region boundary or sync point.
- Press NEXT to move the cursor to the next region boundary or sync point.

To select the previous or next region:

- Press CTL/CLUTCH + PREVIOUS, or NEXT.

To move the Edit cursor or Edit selection to the previous or next track:

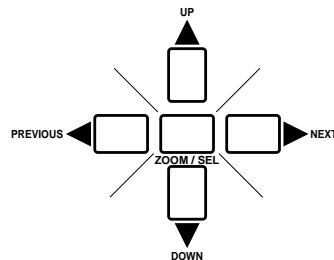
- Press UP to move the cursor or selection to the previous track.
- Press DOWN to move the cursor or selection to the next track.

To extend an Edit selection to the previous or next track:

- 1 Make sure ZOOM/SEL is in Navigation mode.
- 2 Press SHIFT/ADD+UP or DOWN to extend the selection to the previous or next track.

Zoom Mode

When in Zoom mode (ZOOM/SEL remains highlighted) the arrow switches control horizontal and vertical zoom.



Zoom mode (ZOOM/SEL highlighted)

To enable Zoom mode:

- Press the ZOOM/SEL switch to cycle through mode choices until the switch LED highlights (but not flashing).

To zoom using the arrow switches:

- PREVIOUS: decreases horizontal zoom
- NEXT: increases horizontal zoom
- UP: increases vertical zoom
- DOWN: decreases vertical zoom

To zoom out to view the entire session in the Edit Window:

- Press OPT(ALT)ALL+double-press the ZOOM/SEL switch.

To return to the previous zoom view:

- Press OPT(ALT)ALL+ZOOM/SEL.

Using the Zoom Presets

To recall a stored Zoom preset:

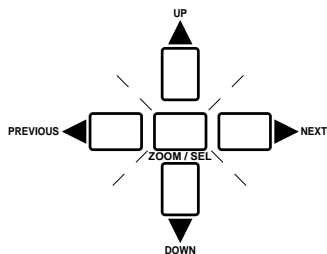
- Press OPT(ALT)ALL + the preset number (1-5) in the numeric keypad.

To store a ZOOM setting (1-5)

- 1 Use the ZOOM/SEL switches or the Magnifying Glass tool to zoom in to the desired level.
- 2 Press SHIFT/ADD + type the preset location (1-5) in the numeric keypad.

Selection Adjust Mode

In Selection Adjust mode, the arrow switches select and edit region boundaries, move selections, and



Selection Adjust mode (ZOOM/SEL flashing)

To enable Selection Adjust mode:

- Press ZOOM/SEL to cycle through available modes until the switch LED flashes, indicating Selection Adjust mode.

To edit In and Out points using ZOOM/SEL and the Scrub wheel:

- Hold down PREVIOUS and move the Scrub wheel.
- Hold down NEXT and move the Scrub wheel.

To move a selection (range) in time while retaining its length:

- Press PREVIOUS and NEXT and move the Scrub wheel.

To clear a selection and go to selection start or end:

- Double-click the PREVIOUS key to place the Edit Cursor at the current selection's start (IN) point.
- Double-click the NEXT key to place the Edit Cursor at the current selection's end (OUT) point.

Window Navigation and Scrolling

In any of the three ZOOM/SEL modes, the following window/display commands are available for Edit window scrolling:

To scroll 1 page left/right:

- ⌘(CTL) + PREVIOUS/NEXT

To scroll 1 page up/down:

- ⌘(CTL) + UP/ DOWN

To scroll to session start/end:)

- ⌘(CTL) + OPT(ALT)ALL + PREVIOUS/NEXT

To scroll to top/bottom of window:

- ⌘(CTL) + OPT(ALT)ALL+ UP/DOWN

ZOOM/SEL and Alpha Numeric Entry

The PREVIOUS and NEXT switches are used in Alpha mode to tab through fields and characters.

While editing text from ProControl:


- Press NEXT to move the text cursor one character to the right.
- Press PREVIOUS to move the the text cursor one character to the left.

Navigating with the Counters

Pro Tools provides edit and play/record counters for navigation, selections, playback, and editing. You can select either counter, as well as link and unlink them, from ProControl.

To link or unlink Edit and Timeline:

- 1 Press SHIFT/ADD+/ (slash) on the numeric keypad.

 See the Pro Tools Reference Guide for more information on Edit and Timeline linking.

To navigate in the Timeline:

- 1 Press the * (asterisk) key in the numeric keypad to highlight the Timeline Start field (in the Transport window if configured to show Counters). The ProControl Time Display will flash.
- 2 Use the numeric keypad to type in the desired time location, or use the UP/DOWN keys: UP increases numerical values, while DOWN decreases numerical values.

- 3 Tab among time fields using PREVIOUS or NEXT. The currently selected field will flashes in the TIME DISPLAY.

- 4 Press ENTER to go to the location, or press ESCAPE to cancel.

To navigate with the Edit cursor:

- 1 Unlink the Edit and Timeline (press SHIFT/ADD+/ to toggle).

- 2 Press “/” (slash key) on the numeric keypad. The Start field of the Event Edit area (Edit window) is highlighted.

- 3 Use the numeric keypad to enter a start time. Use UP and DOWN to increase or decrease values.

- 4 To tab among time values in that row, use PREVIOUS and NEXT.

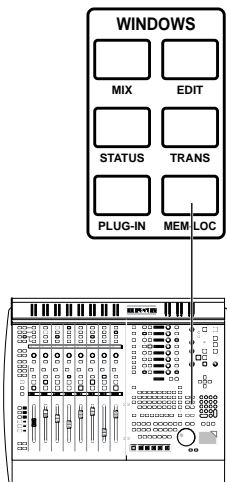
- 5 To edit the End or Length fields, press / to cycle through each row.

Memory Locations and Markers

ProControl supports all Pro Tools Memory Locations and Markers features.

To display the Memory Locations window:

- Press MEM LOC in the WINDOWS section.



Creating and Defining Memory Locations

To define a memory location:

- 1 Press ENTER. The New Memory Location window appears.
- 2 Set properties for your marker or memory location with the Trackpad and keyboard.
- 3 Press ENTER to save the new memory location.

To define a memory location to a specific numerical address:

- Press a number key (or keys) immediately before pressing ENTER. If available, a memory location will be assigned to that number/address.

To recall a memory location:

- Press Decimal + number + Decimal. (Press the Decimal point key in the numeric keypad, then enter the number of the desired memory location, then press Decimal again.)

– OR –

- Click on the desired memory location in the Memory Locations window.

To delete a memory location

- Hold down OPT(ALT)ALL, then click a memory location in the Memory Locations window.

To delete all memory locations:

Hold down OPT(ALT)ALL and SHIFT/ADD and click any memory location in the Memory Locations window. This can be undone with UNDO.

To edit a memory location:

- Double-click the location in the Memory Locations window. This lets you change settings for the memory location as well as “move” the marker/memory location from its original location to the current playback/insertion point.

About Auto-Add and Auto-Name Memory Locations

These and all other memory location preferences and settings (display, sorting, and others) can be configured using the Trackpad. Select the appropriate setting from the Name pop-up in the Memory Locations window. See the *Pro Tools Reference Guide* for details about these features.

Undo, Redo, and Save

While editing, UNDO and SAVE switches to undo, and redo, edits.

To Undo:

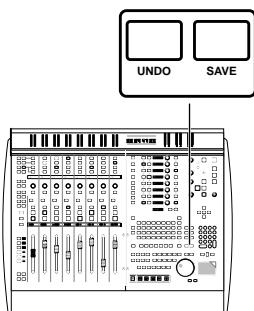
- Press UNDO. (For information on multiple undo, see the *Pro Tools Reference Guide*.)

To Redo:

Press \mathbb{C} (CTL)+SHIFT/ADD+UNDO.

To save:

- Press SAVE twice. (For more information about the Save switch, see “UNDO and SAVE” on page 52.)



Undo and Save

Edit Tools

ProControl provides dedicated switches to select the Trimmer, Selector, Grabber, and Pencil tools.

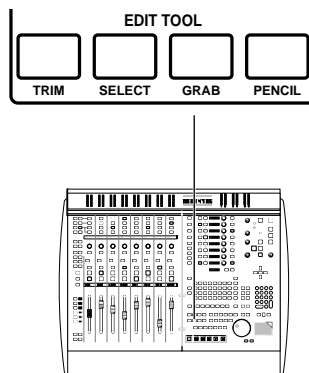
To select an edit tool:

- Press the appropriate EDIT TOOL switch: TRIM, SELECT, GRAB, or PENCIL.

The Trimmer, Grabber, and Pencil each have different tool options available in the Edit window menus in Pro Tools. These options can also be selected from ProControl.

To select an Edit tool option:

- 1 Press the tool switch for the tool you want to use: TRIM, GRAB, or PENCIL.
- 2 Press the switch again to cycle to the next available tool. Check the menu on-screen in the Pro Tools Edit Window for confirmation of the currently selected tool.



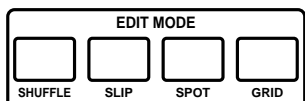
Edit tools

To select the SmartTool:

- Press any two of the following simultaneously: TRIM, SELECT, and/or GRAB.

Edit Modes

ProControl lets you quickly select the desired Edit Mode by selecting the appropriate option from the EDIT MODE section.



Edit modes

To select an Edit Mode:

- Press the appropriate switch in the EDIT MODE section; SHUFFLE, SLIP, SPOT or GRID. The selected mode switch will light when engaged to indicate the current mode.

Creating On-screen Selections

ProControl lets you select audio and MIDI data in several different ways. These include manual selection (drag-select), on-the-fly by dropping in and out points, or with the Scrub wheel.

To manually define an on-screen selection:

- 1 While Pro Tools is stopped press the SELECT switch in the EDIT TOOL section.
- 2 With the Trackpad, double-click (to select an entire region/file) or click and drag left or right.
- 3 When the selection encompasses the desired range, release the Trackpad button.

To make a selection “on the fly” during playback:

- 1 Click within the desired track to select it.
- 2 Press PLAY.
- 3 As your track plays, press the IN switch to set the selection start.
- 4 Press the OUT switch at the point where you want the selection to end.

To scroll to and view selection start or end:

- 1 Place the ZOOM/SEL switches in Navigation mode (press ZOOM/SEL until its switch LED remains off).
- 2 Do one of the following:
 - Press OPT(ALT)ALL+PREVIOUS to scroll to selection start.
– or –
 - Press OPT(ALT)ALL+NEXT to scroll to selection end.

Using the Selection Indicators

The Selection Indicators allow you to make very precise selections based on specific time locations in a session.

Pro Tools provides the Edit and Timeline selectors, which can be linked or unlinked. The Edit selector selects an Edit range. The Timeline selector determines playback. When linked, both Edit and Timeline ranges are selected.

To link or unlink the Edit and Timeline:

- Press SHIFT/ADD+“/” on the numeric keypad. The Edit/Timeline icon indicates the current link status on-screen.

To make an Edit selection:

- 1 Press the “/” (slash) key in the numeric keypad. The ProControl TIME DISPLAY flashes. Each press of the “/” key tabs to the next Selection Indicator row.
- 2 Use the numeric keypad to enter values, or use the PREVIOUS and NEXT switches to select different time fields within each row.
- 3 Press the “/” key to go to the next row (Start, End, Length) in the Selection/Location Indicator window.
- 4 When you are done, press ENTER.

Pro Tools highlights the selected range of audio on the currently selected track.

To make a Timeline selection:

- 1 Press “*” (asterisk) in the numeric keypad.
- 2 Enter time values using the numeric keypad
- 3 To tab to other time values in that row, press PREVIOUS or NEXT.
- 4 Press “*” again to go to the next row of Timeline fields, and enter values.
- 5 Press ENTER when finished.

Pro Tools highlights the selected range in the Timeline.

Creating Selections using Memory Locations

To create a selection using two memory locations or markers as the in and out points:

- 1 Recall the memory location that contains the desired selection start point.
- 2 Hold down SHIFT/ADD.

- 3 Recall a second memory location to set the out point. The range between the two points is selected.

Moving a Highlight (Selection Range Only)

To move the in and out points earlier or later in the track, preserving the selection length:

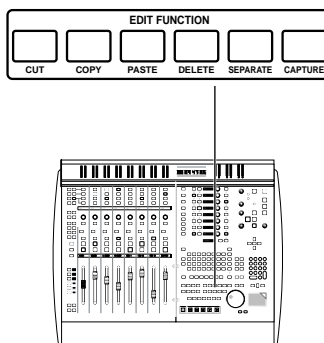
- 1 Place the ZOOM/SEL switches in Selection mode (the ZOOM/SEL switch flashes in this mode).
- 2 Hold down both the PREVIOUS and NEXT keys and rotate the Scrub/Shuttle wheel.



The AUDITION controls offer convenient ways to listen to your selections and edits. See “AUDITION, PRE, POST, IN, and OUT” on page 43 for details.

Capturing, Separating, and Trimming Regions

The ProControl EDIT tools include all the controls found in the EDIT MODE, EDIT TOOL, and EDIT FUNCTION sections. These fourteen switches replicate their similarly named tools in Pro Tools.



Edit functions

Capturing Regions

To create a new region:

- 1 Create a selection of audio or MIDI data.
- 2 Press CAPTURE in the EDIT FUNCTION switch section. Pro Tools will prompt you to name the region. The default region name will be displayed in the CHANNEL/GROUP display (directly below the DSP EDIT/ASSIGN section).
- 3 If Pro Tools prompts you to name the newly-created region (as determined by the Auto-Name Separated Regions preference), use your computer keyboard to enter a name for the new region, or use the alpha numeric keys in the Channel Matrix.
- 4 Press ENTER to confirm the name. Press ESCAPE to cancel.

Separating Region

To separate a new region with the **Separate Region** command:

- 1 Make an Edit selection within an existing region, or place the Edit cursor at the desired split point.
- 2 Press SEPARATE (located in the EDIT FUNCTION switch section). If prompted, enter a name using the Channel Matrix or your computer keyboard.
- 3 Press ENTER to separate and create the new region. Press ESCAPE to cancel.



Refer to the Pro Tools Reference Guide for information about Grab With Separate and other useful region tools available in Pro Tools. You can use the Trackpad to take select these editing features.

Trimming Regions

Regions and other data can be trimmed using the Trackpad and the Trim tool.

To select the **Trim** tool:

- Press TRIM (in the EDIT TOOL section).

To select the **Trim** mode for manual trim functions:

- Select the appropriate Trim tool. Available choices are, Standard, Trim with Scrub, and Trim with Time Stretch. Refer to the *Pro Tools Reference Guide* for details on these different Trim modes.

To trim:

- Use the Trackpad or mouse and their switches to perform manual trimming.

To Trim a region to a current selection within that region:

- 1 Select a range of data within a region.
- 2 Hold ⌘(CTL) and ALPHA, then press 20/T in the Channel Matrix.

To trim the region start up to the current Edit location:

- Hold down OPT(ALT)ALL, then press 7/G (Channel Matrix).

To trim the region end to the current Edit location:

- Hold down OPT(ALT)ALL, then press 8/E (Channel Matrix).

Selecting Regions

To select a region with the Selector tool and Trackpad:

- With the Trackpad or mouse, double-click the region.

To select a region with the Grabber and Trackpad:

- Single-click the region.

To select the next or previous region in a track:

- Place the edit cursor in playlist of the desired track, or select a region in that track.
 - CTL(CLUTCH) + NEXT: selects the next region.
 - CTL(CLUTCH) + PREVIOUS: selects the previous region.

To extend the selection to next/previous regions:

- 1 Place the edit cursor in the playlist of the desired track, or select a region in that track.
- 2 Press ⌘(CTL) + SHIFT/ADD + NEXT. To extend the selection to include whole regions prior to the current selection, press ⌘(CTL) + SHIFT/ADD + PREVIOUS.

Be aware that when multiple tracks are selected, the regions in the *guide-track* are used. The guide-track is the first track containing a selection, which will be the first, or top-most, track in the Edit window.

Grabbing, Placing, and Moving Regions

The Grabber selects, moves, and separates regions. Grab with Separate and the Object Grabber provide additional selection options. Refer to the *Pro Tools Reference Guide* for details.

To select the Grabber:

- 1 Press GRAB.
- 2 To select a Grabber option (Grab with Separate, or the Object Grabber), repeatedly press GRAB to cycle through the tools.

To place a region in a track:

- With the Grabber, drag the name of a region in the Regions List to the desired track/location.

To place stereo or other multiple regions on adjacent tracks:

- Hold down SHIFT/ADD while you click to select multiple regions in the Regions List. Drag the selected regions to the desired tracks.

To place a new or existing region (or regions) at the Edit Cursor location:

- 1 Press and hold down CTL/CLUTCH.
- 2 Drag the desired region into the desired track and release the Trackpad button. The region will appear at the edit cursor's current location.

To align a region on one track with a region on another track:

- 1 Select the region you want to align to.
- 2 Hold down CTL/CLUTCH, then use the Trackpad to click on the region you want to move. If it is not currently placed in a track, drag it into the target track. The region aligns to the start of the reference region.

Snap to Head/Sync/Tail

To align a region to the head (start) of a selection:

- Hold down CTL/CLUTCH and drag the region to a track.

To align a region to the Sync point of a selected region:

- Hold down OPT(ALT)ALL and CTL/CLUTCH and drag the region to a track.

To align a region to the tail (end) of a selection:

- Hold down ⌘(CTL) and CTL/CLUTCH and drag the region to a track.

Cut, Copy, Paste and Delete

Once a region is selected, you can use the CUT, COPY, PASTE and DELETE switches to perform these standard operations with the selected region. These switches are located in the EDIT FUNCTION section.

Nudging Regions

Nudging lets you move regions in precise, user-selectable Grid increments with the plus (+) and minus (-) keys in the numeric keypad.

Before you nudge regions, you want to set the nudge amount.

To change the current Nudge or Grid value:

- Hold down ⌘(CTL) and OPT(ALT)ALL while pressing the “+” key to increase the current nudge (grid) value.
- Hold down ⌘(CTL) and OPT(ALT)ALL while pressing the “-” key to decrease the current nudge (grid) value.

To nudge regions:

- 1 Select a region, or regions using the techniques described earlier. (You can also select partial regions, in which case the selection will be moved by nudging.)
- 2 Press the TIME DISPLAY switch to select the desired Time Display format. You may have to click the button several time to reach the time display of interest.
- 3 Press the “+” key in the numeric keypad to nudge the selection forward (later) from its current position by the selected grid value. Press the “-” key to move the selection backward (earlier) from its position by the selected grid value.

If there is no selection on the screen, the edit cursor will be nudged forward or backward.

Editing with the SCRUB/SHUTTLE Wheel

The primary function of the Scrub wheel is for listening at variable speeds—crawling slowly for precise editing in Scrub mode, or scanning a track in high-speed Shuttle mode, to search for elements or edit points. (For details on ProControl scrub and shuttle features, see “SCRUB/SHUTTLE Wheel” on page 57.)




In addition to these primary features, the SCRUB/SHUTTLE wheel can be used to define selections, adjust in/out points and more.

To create selections using the SCRUB/SHUTTLE wheel:

- 1 Press SHUTTLE to engage shuttle mode.
- 2 Rotate the Scrub/Shuttle wheel to shuttle in the direction required to roughly locate your selection in point. Once this point has been located, press and hold SHIFT/ADD.
- 3 While still holding SHIFT/ADD, shuttle to roughly locate to the desired selection out point.
- 4 Release the SHIFT/ADD switch. The selection has now been made.

To edit a selection using basic Scrub mode:

- 1 Navigate to the beginning of the selection by pressing the PREVIOUS switch, or to the end of the selection by pressing the NEXT switch.
- 2 Press SCRUB to engage scrub mode.
- 3 Hold down SHIFT/ADD and scrub the in or out point with the SCRUB/SHUTTLE wheel, depending on whether you selected PREVIOUS or NEXT. Your selection will expand or contract with the wheel as long as you hold down SHIFT/ADD.

 For similar editing features, see “Selection Adjust Mode” on page 125.

To exit scrub mode:

- Press the SCRUB button again or press any other TRANSPORT switch.

Fades

You can apply fade ins, fade outs, and crossfades directly from ProControl. For a detailed explanation of Fades features in Pro Tools, including Fades preferences, refer to the *Pro Tools Reference Guide*.

Crossfades

To create a crossfade using the SmartTool:

- 1 Select the crossfade range across two adjacent regions with the Trackpad or other selection method.
- 2 Use the Trackpad in SmartTool mode to draw the crossfade. (To select the SmartTool, press any two of the following switches simultaneously: TRIM, SELECT, and/or GRAB).

– or –

- Define a custom crossfade from the Fades dialog.

To display the Fades dialog:

- Hold down ⌘(CTL) and ALPHA, then press 6/F in the Channel Matrix.

Fade from Start, Fade to End

Fade from Start and Fade to End let you quickly fade from a region start point to the current edit cursor location (Fade from Start) or from the current location to the region end point (Fade to End).

To create a fade in from the region start to the current edit location:

- Hold down OPT(ALT)ALL and ALPHA, and then press D/4 in the Channel Matrix.

To create a fade out from the current edit location to the region end:

- Hold down OPT(ALT)ALL and ALPHA, and then press 7/G in the Channel Matrix.

Editing Waveforms, MIDI and Automation with the Pencil Tool

The Pencil tool allows you to destructively “re-draw” audio waveform data, automation and MIDI note and controller data.

To destructively edit an audio waveform with the Pencil tool.

- 1 Locate the area you want to edit.
- 2 Adjust the track height.
- 3 Use the ZOOM/SEL controls to zoom in to the sample level. When you are zoomed in far enough, the waveform will appear as a continuous thin line and the Pencil tool will become available.
- 4 Press PENCIL in the EDIT TOOL section.
- 5 Use the Trackpad (in PENCIL mode) to carefully redraw the desired area. If you make a mistake, press UNDO.

To draw MIDI Controller edits:

- 1 Display the appropriate controller data in the desired MIDI track using the Track Display selector.
- 2 Use the Trackpad to select the appropriate Pencil mode (freestyle, line, triangle, and so on).
- 3 Draw new controller data.

Chapter 11: Plug-Ins

ProControl provides numerous features to assign, select, edit, and automate plug-ins.

Overview of Plug-Ins

The DSP Edit/Assign section is used to assign, select, edit, and automate plug-ins. Plug-In Flip mode lets you edit and automate, but not assign, plug-ins from the faders. See “Plug-In Flip Mode” on page 150 for information.

Plug-In Focus

ProControl allows you to edit (focus) plug-ins with or without opening their windows. Plug-ins are made the focus by selecting them from ProControl, or using their on-screen window and the Trackpad or mouse. On-screen, the current focus plug-in is indicated with a colored outline.

Velocity Sensitive or Fixed Encoders

You can configure the DSP Edit/Assign data encoders for fixed or velocity sensitive response

Fixed One rotation of the encoder covers the entire range of parameters.

Velocity sensitive (Default setting) The faster you rotate the encoder the faster the parameters will change and vice-versa.

To toggle the DSP Edit/Assign knobs between fixed and velocity sensitive modes:

- 1 Press F3 on ProControl.
- 2 Press F3 again to toggle back.

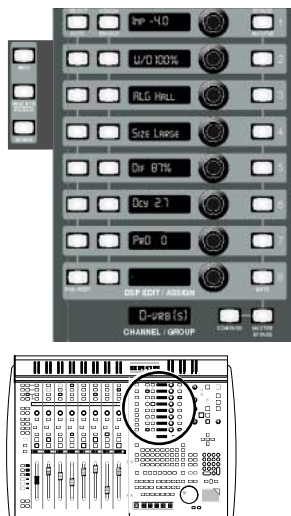
Plug-In Formats

ProControl supports mono, stereo, multichannel, and multi-mono Pro Tools plug-ins, with direct and inverse linking.


Multi-mono plug-ins are comprised of up to eight individual mono plug-ins. With ProControl, you can choose the specific channel of the plug-in from the DSP Edit/Assign section for editing or bypassing. When a multi-mono plug-in is first opened, the left side will be shown in the DSP Edit/Assign section PARAMS view.

The DSP Edit/Assign Section

The DSP Edit/Assign section consists of a bank of eight control rows. Each row provides a rotary encoder, LED display, and three multi-purpose switches. DSP Edit/Assign controls also include the CHANNEL/GROUP display, COMPARE, and MASTER BYPASS switches.



The function of these controls—assigning, viewing, accessing, editing or automating plug-ins (or sends)—is selectable from the INFO, INSERT/PARAM and SENDS mode switches, located to the left of the DSP Edit/Assign encoder bank.

 *The DSP Edit/Assign section can also perform surround panning on supported systems. See “Surround Mixing” on page 172 for more information. For information on sends, see “Sends” on page 165.*

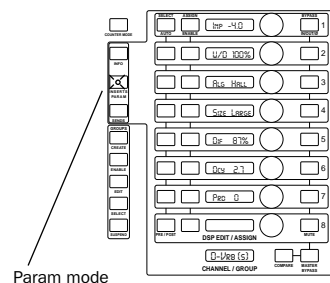
INFO, INSERT/PARAM and SENDS Mode

The INFO, INSERT/PARAM and SENDS switches determine the display or operating mode for the DSP Edit/Assign section:

INFO

The INFO switch (green LED), located at the upper left of the DSP Edit/Assign area, allows momentary display of the current INSERT or sends or inserts, depending on which mode is currently set by the INSERT/PARAM and SENDS switches.

INSERT/PARAM



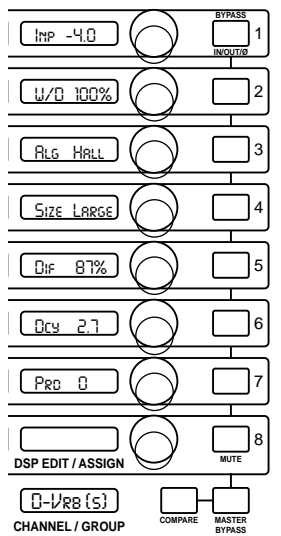
The INSERT/PARAM switch toggles the DSP Edit/Assign section between two view modes:

- INSERT view vertically lists the currently assigned inserts for the selected channel (plug-ins or hardware I/O inserts).
- PARAM view vertically displays plug-in parameters for the currently selected plug-in.


SENDS

The SENDS switch (green LED, located below the INSERTS/PARAM switch) enables Sends mode. See “Sends” on page 165 for information.

Data Encoders and LED Displays



The rotary data encoders in the DSP Edit/Assign section scroll and select parameters shown in the LED displays to their left. The eight LED windows display parameter names and values, send values, and help screens according to the current DSP Edit/Assign mode.

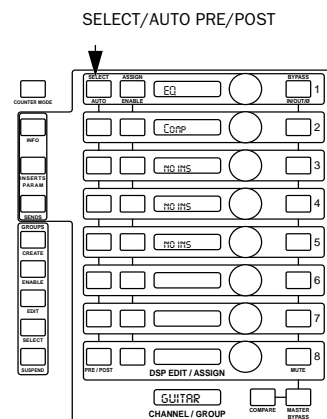
 *The DSP Edit/Assign knobs can operate in fixed or velocity sensitive mode. See “Velocity Sensitive or Fixed Encoders” on page 137 for more information.*

DSP Edit/Assign Switches

The following are descriptions of each of the three columns of switches that immediately surround the encoders and LED displays in the DSP Edit/Assign section.

SELECT/AUTO/PRE/POST

This switch row serves three functions:

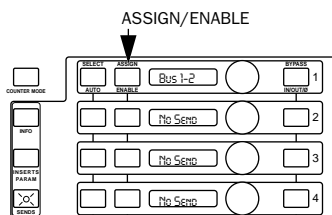


In INSERTS mode Selects which of the currently displayed insert you want to view for editing.

In PARAMs (Plug-In Edit) mode: Punches the current plug-in parameter out of automation write during an automation write pass, and shows automation record status. (Plug-In automation is explained in Chapter 12, “Automation.”)

In SENDS mode Toggles between pre- or post-fader routing for the associated send.

ASSIGN/ENABLE

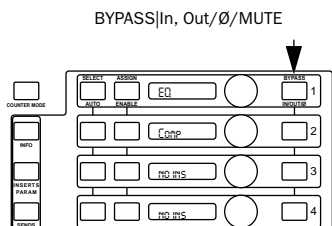


The ASSIGN/ENABLE switches are located immediately to the left of each LED display. For each insert row, this switch will either:

- ◆ Initiate and complete the assignment of a plug-in.
- ◆ Toggle automation enabling on/off. This shortcut is equivalent to choosing a plug-in parameter for automation in the Pro Tools Plug-In automation dialog.

BYPASS|IN/OUT/Ø/MUTE

The BYPASS|IN/OUT/Ø/MUTE switches perform three functions depending on the current DSP Edit/Assign mode.



Bypass | In/Out/Ø/Mute

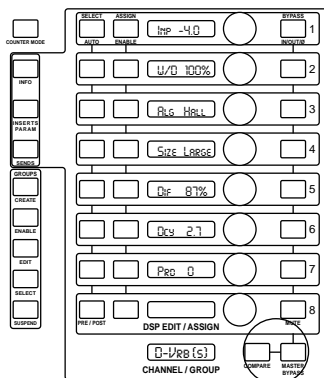
In INSERTS mode Allows BYPASS of plug-in inserts. (Hardware inserts can not be bypassed.)

In PARAMs (Plug- In Edit) mode The function of any switch in the row is determined by the plug-in itself. Any plug-in that has switched parameters where there are two states to the control (such as on/off, in/out) will show up on this row

of switches. Examples of switch functionality in this mode include filter band In/Out (as found in the Focusrite d2 or Digidesign EQs) and plug-in Polarity (phase inverted or normal).

COMPARE and MASTER BYPASS Switches

Below the DSP Edit/Assign section are the CHANNEL/GROUP display, and the MASTER BYPASS and COMPARE switches.



COMPARE/MASTER BYPASS

COMPARE

While editing a plug-in, this switch performs the same function as it does on-screen in Pro Tools. If the plug-in settings have been edited the COMPARE switch acts as a “reset” switch, allowing you to toggle between the newly-edited parameter settings and the previous parameter settings (LED is off).

To reset a plug-in to its factory or user default settings:

- Press and hold down DEFAULT then press COMPARE.

Pro Tools then loads either the Factory or the User Default Setting for the current plug-in, as determined by the current plug-in preferences.

Compare also toggles stereo linking on and off. See “Panner Linking” on page 174 for more information.

MASTER BYPASS

The switch has two functions, determined by the current INSERTS/PARAM mode status:

In INSERTS mode Acts as a master bypass for all plug-ins on the CHANNEL/GROUP. The MASTER BYPASS switch LED will flash if some plug-in Inserts are bypassed, while others are not (a “mixed state”). In this case, pressing once on the MASTER BYPASS switch will un-bypass all plug-in inserts; pressing it a second time will bypass all inserts.

In PARAMs mode Acts as a master bypass for the currently edited plug-in. (This matches the functionality of the TDM bypass control on the plug-in itself.)

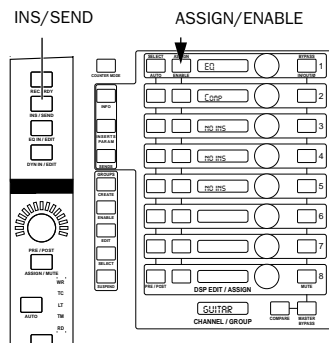
CHANNEL/GROUP Display

The CHANNEL/GROUP Display shows:

- ◆ The current track name when working with inserts and sends.
- ◆ Plug-in name when editing a plug-in.
- ◆ Group Name when working with groups.

Assigning Plug-Ins

Plug-ins can be assigned from the Fader and DSP Edit/Assign sections.



To assign a plug-in:

- 1 While Pro Tools is stopped, press a channel INS/SEND switch. The INS/SEND switch LED illuminates.
- 2 All current channel inserts are listed vertically down the first five DSP Edit/Assign LED displays, and the channel name appears in the CHANNEL/GROUP LED display. Flashing indicates whether an insert was the last (most recent) to be edited, otherwise the first (top most) insert will flash.
- 3 In the DSP Edit/Assign section, press the ASSIGN/ENABLE switch in the appropriate row (the one for the desired insert 1-5). The switch LED will flash red.
- 4 Rotate the corresponding encoder to scroll through and select an available plug-in or hardware I/O insert.

5 To confirm your assignment and exit DSP ASSIGN mode, press the flashing ASSIGN/ENABLE switch in the DSP Edit/Assign section. This allows you to remain in Insert Assign mode to assign another insert right away.

– or –

◆ To confirm your assignment and go directly to edit mode for that insert, double-press the flashing ASSIGN/ENABLE switch.

6 To cancel, press ESCAPE.

Shortcuts

To assign the same plug-in to all or all selected channels:

1 Press and hold the OPT(ALT)ALL switch, or OPT(ALT)ALL and SHIFT/ADD, while confirming the assigned insert to assign to all or all selected, respectively.

2 To confirm the multichannel assignment, press the flashing ASSIGN/ENABLE switch. The plug-in or hardware I/O pair is assigned across all currently selected channels. Press ESCAPE to cancel.

Removing Plug-In Assignments with the Default Switch

As an alternative to using the rotary knobs in the DSP Edit/Assign section to remove a plug-in, the following shortcut can be used.

⚠ *This feature removes plug-ins (and any automation data associated with it) without displaying any warning or option to cancel. Use this feature with caution.*

To remove a plug-in with the DEFAULT switch:

1 Select the channel and display its inserts by doing either of the following:

- From the Fader Section, press a channel INS/SEND switch.
- If in PARAMS view, press the INSERTS switch in the DSP Edit/Assign section to list the currently selected channel's plug-ins.

2 While pressing DEFAULT, press the SELECT/AUTO switch in the DSP Edit/Assign section that corresponds to the plug-in you want to remove.

Selecting Plug-Ins

Once plug-ins are inserted you can use a number of methods to open or display their controls, using the channel INS/SEND, EQ and DYN switches, and PLUG-IN switch.

When selecting plug-ins and inserts, current assignments are listed in the DSP Edit/Assign section. If an insert is not assigned, it will display “No Insr.” The name of the last insert edited during the current session will flash. If no insert on that channel has previously been accessed, insert 1 will flash. Plug-Ins which are “in” (engaged) are shown in lower case; Plug-Ins which are bypassed are shown in upper case.

Selecting Plug-Ins Using INS/SEND

The channel INS/SEND, DYN and EQ switches, with the PLUG-IN switch, can be used to select a plug-in for editing, automating, or viewing.

Selecting an Insert by Double-Pressing

- ◆ Double-press an INS/SEND switch (pressing twice in quick succession). This will directly access a plug-in for editing. The plug-in selected will either be the first in the channel inserts, or the last-edited plug-in.
- ◆ Double-pressing a channel INS/SEND switch multiple times cycles sequentially through the channel's current inserts (1-5).

Watch the CHANNEL/GROUP display to view the name of the plug-in whose parameters are being displayed in the DSP Edit/Assign section. If an insert is unassigned, it will be skipped over. For example, if there is a plug-in assigned to Insert 1 and Insert 3, but none on Insert 2, 4 or 5, double clicking on the INS/SEND switch will cycle between insert 1 and insert 3.

plug-ins which are live are shown in lower case; plug-ins which are bypassed are shown in upper case.

EQ and DYN

For additional plug-in selection features, see "EQ and DYNamics" on page 149.

Switching between Sends and Plug-Ins Views

- You can quickly move to view the current channel's Sends by pressing the master SENDS switch (in DSP Edit/Assign). To return to the current plug-in page, press the INSERTS/PARAMS (or Channel Matrix PARAM/PAGES) switch again, and the previously-displayed plug-in parameters will once again be available in the DSP Edit/Assign section (provided you did not switch modes while in SENDS view).

Display of Multi-Mono Plug-Ins

In the DSP Edit/Assign section, a dot appears next to the insert name to indicate that a plug-in is multi-mono. You can select sides of the plug-in using the technique described in

To select a channel's plug-ins from the Fader section:

- 1 Make sure Surround Pan mode is not enabled (F4 should be off).
- 2 Press a channel INS/SEND switch.
- 3 Press the appropriate SELECT/AUTO switch in the DSP/EDIT ASSIGN section (the one corresponding to the insert you want to edit).

– or –

- Press the DSP Edit/Assign area's INSERTS/PARAM switch — this will open the flashing insert.

– or –

- Press the PARAM/PAGES switch located in the STATUS switches below the Channel Matrix. This also opens the flashing insert.

The first page of parameters for the selected plug-in is displayed for editing, and the INSERTS/PARAM switch lights, indicating that the DSP Edit/Assign section is in PARAM view mode.

Selecting Multi-Mono Plug-Ins

ProControl lets you select individual sides (signals) of a multi-mono plug-in.

To access different sides of multi-mono plug-ins:

- 1 Press the INS/SEND switch of the track containing a multi-mono plug-in. The plug-ins are listed in the DSP Edit/Assign section. Multi-mono plug-ins are indicated with a dot after their name.
- 2 Press INFO+INSERTS/PARAMS (both are in the DSP Edit/Assign section). The sides of the plug-in are listed in the DSP Edit/Assign section,. The plug-in name is shown in the Channel/Group display.
- 3 Press the SELECT switch next to the Left, Right, Center, or other side of the multi-mono plug-in you want to edit.
- 4 To edit a different side, press INSERTS/PARAMS to return to the expanded plug-in view, then choose another side to edit.

To exit expanded multi-mono plug-in view:

- Press the PARAMS switch. ProControl returns to INSERTS view.

Parameter and Value and Value-Only View

The normal display of plug-in parameters on the DSP Edit/Assign scribble strips (when in PARAM mode) is parameter name (three character abbreviation), space, then parameter values (to four characters) such as dB or frequency. You can momentarily change this display mode to instead show value-only (8 characters).

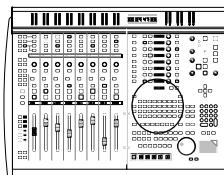
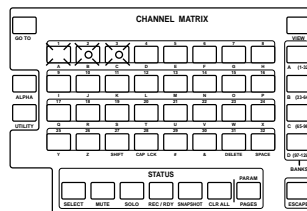
To display parameter-only view in the DSP Edit/Assign section:

- Press OPT(ALT)ALL+rotate the encoder associated with the desired parameter. Once you start rotating the encoder, its current value will be displayed in as many as 8 characters. Releasing the OPT(ALT)ALL switch returns the scribble strips to their previous display mode.

The Channel Matrix switches can be used to access the various plug-in pages (see “Selecting Plug-In Pages” on page 144 for more information).

Selecting Plug-In Pages

When a plug-in is made the focus of the DSP Edit/Assign section, it will have one or more parameter *pages* associated with it. Pages are selected using the Channel Matrix.



Paging in the Channel Matrix

Whenever the DSP Edit/Assign section is focussed on a plug-in, the PARAM|PAGES switch lights in the Channel Matrix STATUS section. While PARAM|PAGES is active, the primary Channel Matrix switches (1-32) indicate and select plug-in pages. Each page will light its associated number in the Matrix, with the current

page switch flashing. For example, if there are four pages for the plug-in, and page 2 is the current active page, then switches 1-4 in the Channel Matrix will be lit, with switch #2 flashing.

To access another plug-in page using the Channel Matrix

- While a plug-in is in edit mode, press any lit switch in the Channel Matrix. Its Matrix switch will flash, showing that it has become the active page choice.

(Check with the developer of your plug-ins to see if they are fully ProControl-aware, especially in regards to paging and the BYPASS/IN/OUT/Ø switch.)

Plug-In Windows

The PLUG-IN switch, in the Windows section, opens and closes the plug-in that is the current controller focus. Selecting a plug-in as the current controller focus does not automatically open that Plug-In window.

You must first select a plug-in as the controller focus, using the methods described below, before the PLUG-INS switch will open it.

To open a Plug-In window when PLUG-IN is lit:

- Select a Plug-In window using the mouse, or using a track INS/SEND switches and the DSP Edit/Assign section.

To open a the currently focussed Plug-In window:

- Press the unlit PLUG-IN switch.

To close the currently focussed window:

- Press the lit PLUG-IN switch.

To close all open Plug-In Windows:

Press OPT(ALT)ALL+PLUG-IN.

To open an additional Plug-In window and make it the target:

1 While pressing SHIFT/ADD, select an additional plug-in using the SELECT switches in the DSP Edit/Assign section:

- ◆ If there is only a single plug-in available on the channel, either it or the first EQ or DYN plug-in will be brought to the DSP Edit/Assign section (or the faders, if plug-in Flip mode is engaged).
- ◆ If there are multiple plug-ins on the channel, press SHIFT/ADD while you select a new plug-in from the DSP Edit/Assign section. This opens the selected plug-in in the DSP Edit/Assign section (or the faders, if plug-in Flip mode is engaged).



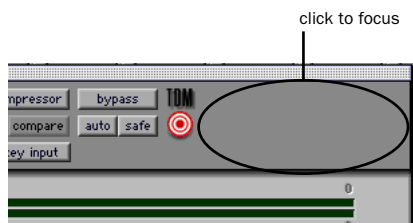
Plug-In Flip mode is explained in “Plug-In Flip Mode” on page 150.

Using Windows for Controller Focus

When one or multiple plug-in windows are open, use the following steps to select a plug-in as the controller focus.

To navigate ProControl to an open plug-in window:

- Press the appropriate INS/SEND switch.
 - Or –
- Click in the gray background at the top of the plug-in window using the mouse or Trackpad.



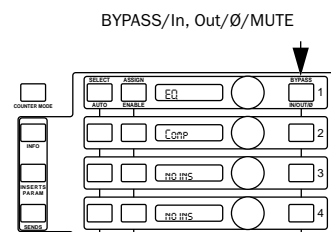
Area to click to select plug-in as controller focus

Bypassing Plug-Ins

With ProControl you can take advantage of many plug-in bypass features. These include the MASTER BYPASS and BYPASS (IN/OUT/Ø) switches, channel INS/BYP, EQ and DYN IN/EDIT switches.

Bypassing One of a Channel's Inserts

This method is useful when you want to bypass a single plug-in from among a channel's inserts (1-5).



Bypassing a plug-in in the DSP Edit/Assign section

To bypass an individual insert:

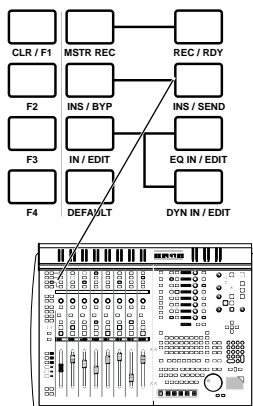
- 1** Make sure the DSP Edit/Assign section is in INSERTS mode.
- 2** Press a channel INS/SEND switch to display its inserts in the DSP Edit/Assign section.
- 3** Press the BYPASS/IN/OUT/Ø switch(es) in the appropriate insert's row. To bypass additional inserts, press additional BYPASS/IN switches. (This bypass technique can be automated. See Chapter 12, "Automation" for more information.)

Plug-In Bypass Using MASTER BYPASS

Whenever plug-in parameters are shown in the DSP Edit/Assign section, the MASTER BYPASS switch remains focussed on the plug-in's main Bypass.

Bypass All Using the Channel INS/BYP Switch

The INS/BYP switch globally changes the channel INS/SEND switches into Insert Bypass switches, providing a way to bypass all plug-in inserts for the selected channel strip in a single operation.



Bypassing all of a track's plug-ins

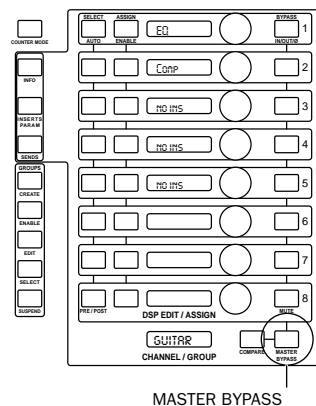
To bypass all plug-in inserts on a channel strip:

- 1 Press the INS/BYP switch, located next to the F3 switch. Its LED lights to indicate insert bypass mode is enabled.
- 2 In this mode, the INS/SEND switches in the current bank displays one of three bypass states:
 - INS/SEND is unlit – None of the plug-in inserts on the channel strip are currently bypassed.
 - INS/SEND is lit – All of the plug-in inserts on the channel strip are bypassed, as a result of pressing the INS/SEND switch.
 - INS/SEND flashes – The channel strip is in a “mixed bypass state,” meaning that some of the plug-ins on the track are bypassed.

- 3 Press any INS/SEND switch to toggle bypass on/off for all plug-in inserts on the corresponding channel strip. When the channel strip is in a mixed bypass state, pressing the INS/SEND switch once will disable bypass mode on all plug-in inserts for the channel; pressing the INS/SEND switch again will bypass all plug-ins.

Bypass All Using MASTER BYPASS

When the DSP Edit/Assign section is in Inserts mode, MASTER BYPASS affects all plug-ins on the current track (shown in the CHANNEL/GROUP display).



Master Bypass

To bypass all of a channel's Plug-Ins with MASTER BYPASS:

- 1 Make sure the DSP Edit/Assign section is in Inserts mode.
- 2 Press MASTER BYPASS. Its switch LED will flash if some plug-ins are bypassed, while others are not (a “mixed state”). In this case, pressing MASTER BYPASS once will un-bypass (enable) all plug-ins; pressing it a second time will bypass all.

Shortcuts

To change the state of all plug-ins on all or all selected channel strips:

- 1 Enable the INS/BYP switch to the left of the INS/SEND switch row in main fader section.
- 2 Press and hold OPT(ALT)ALL or OPT(ALT)ALL and SHIFT/ADD while pressing any INS/SEND switch to affect all or all selected channels, respectively.



Only plug-in inserts and Sends can be bypassed, not hardware I/O inserts. For instructions on send mute (bypass), see “Sends” on page 165.

Bypass and Multi-Mono Plug-Ins

Individual sides of multi-mono plug-ins can be bypassed independently, according to the linked or unlinked state of each side.



See the Pro Tools Reference Guide for more information about linking and unlinking multi-mono plug-ins.

To bypass an individual side of a plug-in (and any linked sides):

- 1 Select and display the parameters of the side you want to bypass (follow the instructions in “Selecting Multi-Mono Plug-Ins” on page 144.)
- 2 Press the MASTER BYPASS switch in the DSP Edit/Assign section. (See also “Display of Multi-Mono Bypass” on page 148.)

To bypass all sides of a multi-mono plug-in:

- 1 Display track inserts in the DSP Edit/Assign section Inserts view (press the track INS/SEND switch, then press INSERTS in the DSP Edit/Assign section to list all the track inserts, not parameters.)

- 2 Press the BYPASS/IN/OUT switch corresponding to the plug-in you want to bypass.

To bypass all inserts on a track:

- 1 Display the track inserts in the DSP Edit/Assign section, in INSERTS view.
- 2 Press MASTER BYPASS.

Display of Multi-Mono Bypass

ProControl indicates bypass states of multi-mono plug-ins in the following ways:

Lit Bypass switch When the BYPASS/IN/OUT, channel EQ or DYN switch are lit (not flashing), it indicates that all sides of the plug-in are bypassed.

Flashing Bypass switch Indicates that some, but not all, sides of the multi-mono plug-in are currently bypassed.

EQ and DYN Bypass

The EQ and DYN Bypass switches are equivalent to MASTER BYPASS, but focused only on their corresponding plug-in type (EQ, or Dynamics).

About BYPASS/IN/OUT/Ø and Plug-In Paging

When in PARAM (plug-in editing) mode, the BYPASS/IN/OUT/Ø switch’s function will vary depending on the contents of the current plug-in control page.

For example, one page of a plug-in might contain the plug-in main phase switch. In this case, ProControl displays a single pixel dot in the upper right hand corner of its DSP Edit/Assign display to indicate that a *switched function* is available for the control. For example, Inpt° 0.0. On

this page, BYPASS/IN/OUT Ø... functions in Ø (phase) mode, and toggle plug-in phase. In an EQ plug-in, the switch would control the current filter in/out status.

Checking Parameter Name and Value

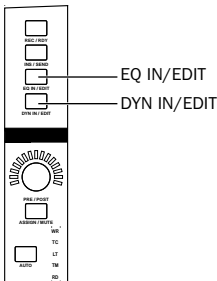
Using the INFO switch, you can view the switch symbol, and the switch parameter value.

To view switch symbol and current state of switches in the BYPASS|IN/OUT/Ø row:

- Press and hold the INFO switch while in PARAMS view.

EQ and DYNamics

The EQ and DYN switches, located near the top of each fader strip, provide dedicated access or bypass for EQ and Dynamics plug-ins. Pro Tools supports these switches by identifying EQ- or DYN- plug-in by *type* and linking them to the EQ and DYN IN/EDIT switches.



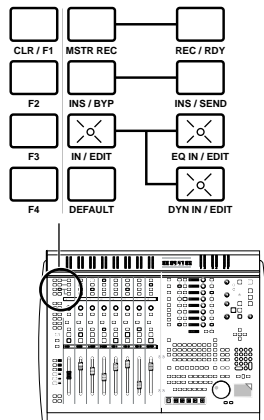
EQ and DYN mode switches

All Digidesign distributed EQ and Dynamics plug-ins, as well as those available from many of our third party developers, support this feature.

There are two rows of EQ/DYN switches in each channel fader strip. Controlling the function of these is the EQ and DYN IN/EDIT mode selector, located to the left of the left-most EQ IN/EDIT switch.

IN/EDIT

The IN/EDIT switch toggles the channel EQ and DYN switches between IN and EDIT modes



In/Edit mode

(EDIT is the default mode).

To set In/Out or Edit EQ/DYN mode:

- Press the IN/EDIT switch, located to the left of the EQ IN/EDIT switch row, until the desired state is shown:

IN/EDIT mode and switch display

Mode	IN/EDIT switch
Edit	On
Bypass	Off

Edit Mode The EQ and/or DYN switches *accesses* the channel’s EQ or dynamics plug-ins This is a keystroke-saving alternative to using the channel INS/SEND and DSP Edit/Assign switches to select and open a plug-in for editing.

IN (Bypass) Mode The channel EQ IN/EDIT and DYN IN/EDIT switches *bypass* all supporting EQ or Dynamics plug-ins in the currently selected channel. This one-press “master EQ/DYN bypass” switch is useful when you want to reference raw, pre-EQ (or pre-dynamics processing) tracks or inputs.

To select the mode for EQ and DYN, use the master IN/EDIT switch as described below.

To open a channel’s first EQ or dynamics plug-in for editing:

- 1 Press the IN/EDIT switch until it is lit, signifying EDIT mode.
- 2 Press a channel EQ IN/EDIT or DYN IN/EDIT switch, as appropriate.

The first page of the first EQ or dynamics plug-in inserted on the selected channel will be displayed in the DSP Edit/Assign section. If more than one EQ or Dynamics plug-in is assigned to the track, additional presses on the EQ/DYN switch will cycle through those additional plug-ins.

To bypass all of a channel’s EQ or DYN plug-ins:

- 1 Make sure the IN/EDIT switch is off, signifying IN (bypass) mode.
- 2 Press a channel EQ IN/EDIT or DYN IN/EDIT switch, as appropriate. (EQ bypasses all EQ plug-ins, DYN bypasses all dynamics plug-ins.). If a channel EQ or DYN switch illuminates when IN mode is enabled, this indicates that an EQ or DYN plug-in on that channel is already bypassed.

Visibility of Pro Tools Inserts/Sends Editor

Plug-ins can still be edited in the DSP Edit/Assign section even if the Inserts/Sends Editor for the currently selected plug-in is closed or hidden on-screen. This “edit focus” mode of opera-

tion allows for maximum editing speed on ProControl, avoiding the need for Pro Tools to continually redraw the plug-in’s interface on-screen. See “Plug-In Windows” on page 145 for more information.

Plug-In Flip Mode

Plug-In Flip mode maps plug-in parameters to the eight Main Unit faders, for hands-on plug-in editing and automation.

To use Plug-In Flip mode:

- 1 Select a plug-in and display its parameters in the DSP Edit/Assign section. Refer to the *ProControl Guide* for instructions on assigning and opening plug-ins with ProControl.
- 2 Press \mathbb{H} (CTL)+FLIP.

The eight faders on the Main Unit now display and control the first page (or, last selected page) of the plug-in. The DSP Edit/Assign section lists the current track name in the 8th row of displays. The CHANNEL/GROUP display shows the name of the currently flipped plug-in.

To select a different plug-in page:

- Press the corresponding Channel Matrix switch.



See the ProControl Guide for more information on accessing plug-in pages.

Plug-In Flip Mode and Fader Packs

Plug-In Flip mode operates on the Main Unit only. Tracks that are displayed on the Main Unit become hidden while in Plug-In Flip mode.

All channel strips on Fader Packs (if any) continue to show their current tracks and controls. This lets you automate a plug-in from the Main Unit while automating channel or send parameters on Fader Packs.

Plug-In Bypass in Flip Mode

While in Plug-In Flip mode, the PRE/POST/AS-SIGN/MUTE switch becomes the equivalent of the BYPASS switches in the DSP Edit/Assign section (or any other switched plug-in controls, not just Bypass). In Flip mode, switch function is displayed in the channel display. For details about multi-mono bypass, see “Plug-In Windows” on page 145.

Plug-In Flip Mode and Automation

To enable plug-in automation in Plug-In Flip mode:

- 1** Make sure the plug-in’s track is in an automation writing mode (Write, Touch, or Latch, or a Trim mode).
- 2** Make sure that plug-in automation recording is enabled in the Automation/Enables section (or in the Pro Tools Automation Enable window).
- 3** Press a channel AUTO switch, corresponding to the plug-in parameter you want to automate. When a parameter is armed for automation, the AUTO LED flashes. When a write pass is underway, the AUTO LED remains lit.
- 4** Begin playback and adjust automated controls. (You can punch out of automation recording at anytime by pressing the channel AUTO switch.



Channel Mutes, Solos, and the channel rotary encoders are disengaged on the Main Unit while in Plug-in Flip mode.

Custom Icons for Encoder Functions

A standard set of icons is used to indicate plug-in parameters and functions. These include EQ type, TDM Key input settings, Automation and phase parameters, and others. In order to show if a switch exists with a control, (in/out or on/off) a single pixel dot is shown in the upper right-hand corner of the 4th scribble strip character.

Parameter name can be temporarily “hidden” in order to display parameter value (such as dBu or Freq) to 8 characters in the LED displays by depressing OPT(ALT)ALL while rotating a DSP Edit/Assign knob.

The following illustration identifies their associated function:

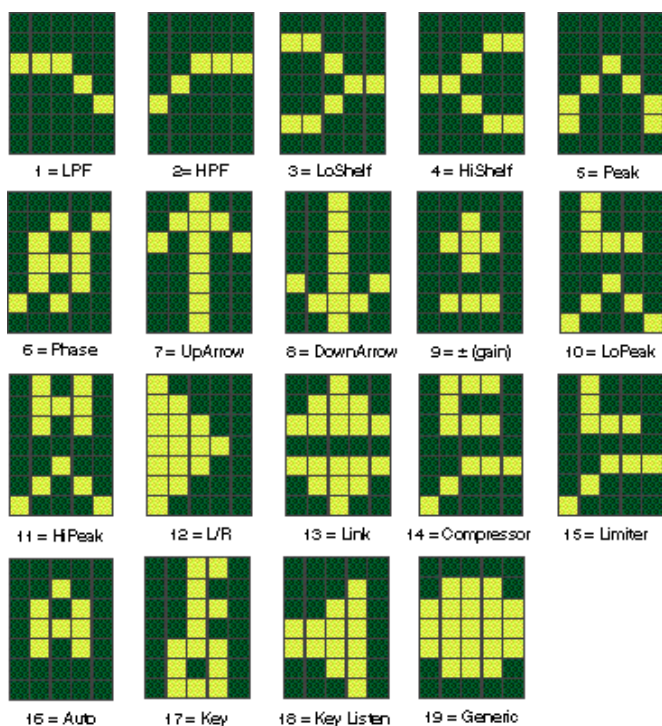


Figure 10. Icons used in DSP Edit/Assign section

Chapter 12: Automation

Pro Tools features dynamic automation of faders, pans, fader mutes, send levels, send mutes and plug-in parameters. With its touch-sensitive DigiFaders, as well as other automatable controls, ProControl is essential to taking full advantage of all Pro Tools automation capabilities.

Automation Controls

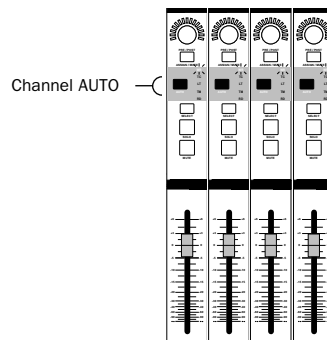
ProControl replicates Pro Tools on-screen automation features. ProControl provides numerous ways to select Automation modes, including the channel AUTO, and AUTOMATION ENABLE controls.

Channel AUTO or AUTOMATION MODE method?

- ◆ The channel AUTO switch is useful to set most automation modes for individual channels within the same bank. It lets you change a channel automation from Read to any write mode when playback is stopped, and lets you punch out of automation recording at any time. AUTO can also be applied to all or all selected channels with the OPT(ALT)ALL and SHIF/ADD modifiers.
- ◆ The SELECT switch method is fastest for setting the automation mode on selections of channel strips, or groups of channels that are on different banks.

Channel AUTO

The AUTO switches found in each ProControl channel strip select the current channel automation mode (Read, Write, Trim, Off, and so on). Current automation state is indicated using the LED labels to the right of each AUTO switch.



Channel AUTO

Automation Mode Indication

The channel AUTO LEDs indicate the current automation mode in the following ways:

- Yellow: Pro Tools is writing TRIM automation.
- Red (flashing): Pro Tools is armed for automation in Write, Touch, or Latch.
- Red (lit continuously): Pro Tools is writing Write, Touch, or Latch automation.
- Green (lit continuously): Auto Read mode is enabled.
- Off: Automation playback is suspended.

To assign an automation mode, do either of the following:

- Press the channel AUTO switch to toggle through the available automation modes on a single channel.
- Hold a MODE switch (WRITE, TOUCH, LATCH, TRIM, READ or OFF), then press a channel AUTO switch.

To set the Automation mode for all tracks from ProControl:

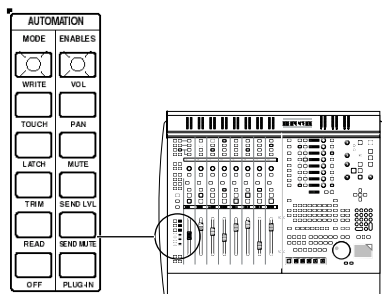
- Press OPT(ALT)ALL + a channel AUTO switch

To set the Automation mode for all selected tracks:

- 1 Select any tracks you want to affect.
- 2 Press OPT(ALT)ALL + SHIFT/ADD + the AUTO switch for any channel.

AUTOMATION MODE and ENABLE

The master AUTOMATION MODE switches augment the channel AUTO switch section, for selecting channel automation mode.



Automation Enable

The AUTOMATION ENABLE switches provide session-wide control of volume, pan, mute, send level and mute, and plug-in automation (see the explanation of Pro Tools Automation Enable

window in the *Pro Tools Reference Guide*). Trim is a special mode for the three write modes (Write, Touch and Latch). See “TRIM Automation Mode” on page 160.

To assign an automation mode: using MODE:

- Hold a MODE switch (WRITE, TOUCH, LATCH, TRIM, READ or OFF), then press the channel AUTO switch.

Shortcuts

- ◆ Press OPT(ALT)ALL, or OPT(ALT)ALL + SHIFT/ADD, then press the master AUTOMATION/MODE switch to assign to all or all selected channels, respectively.

About Groups and Automation Mode Assignment

As in Pro Tools, groups follow automation mode-assignment.

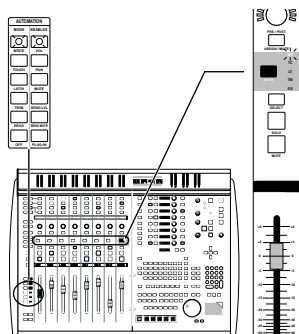
To suppress Group behavior during automation assignment or editing:

- Suspend all groups by pressing the SUSPEND switch (in the GROUPS section).

Automating Track Volume, Pan, and Mute

To record automation on a track:

- 1 Use the AUTOMATION ENABLE switches to record-enable volume, pan, or mute automation.
- 2 Select the track Automation mode (Write, Touch, or Latch) See “Automation Controls” on page 153 for more information.
- 3 Press PLAY to begin automation recording.



Automating track volume

If you want to add additional automation or augment your previous pass, follow the previous procedure but select Auto Touch or Auto Latch modes. For additional automation editing options, see “TRIM Automation Mode” on page 160.

Enabling and Suspending Automation

ProControl AUTOMATION/ENABLE switches, located to the left of the channel faders, record-enable and suspend automation writing and recording on a per-parameter basis. The AUTO SUSPEND switch lets you instantly suspend all

automation recording on all tracks. These features are essential when editing automation, and many find them especially useful when working with the motorized faders.

To enable (or suspend) volume, pan, mute, send level, send mute or Plug-In automation:

- Press the appropriate switch in the Automation/Enable switch section.

Shortcuts

- Hold OPT(ALT)ALL and press an AUTOMATION ENABLE switch to toggle all automation types on/off.

AUTO SUSPEND

This switch is located directly to the left of the MUTE switch row. The AUTO SUSPEND switch globally suspends record and playback of *all* automation parameters on all channel strips. All channels are left in their present mode, but automation operations are temporarily suspended. This lets you experiment or rehearse automation moves with faders or other controls while ignoring existing fader automation data.

To suspend or enable all automation data on all tracks:

- While Pro Tools is stopped, press AUTO SUSPEND (to the left of the channel MUTES). The AUTO SUSPEND switch will flash while automation is suspended. Press AUTO SUSPEND again to re-enable automation.

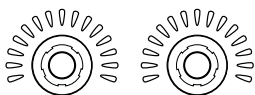
Automating Sends

ProControl lets you dynamically automate send levels, mutes and (stereo) send pan using either the channel data encoders, the DSP Edit/Assign section, or the channel faders (with the Flip switch).

To automate a send level from the Fader or DSP Edit/Assign section:

- 1 Make sure that SEND LVL is engaged in the Automation/Enable switch section.
- 2 Set the automation mode (Touch, Write or Latch) for the channel containing the send you wish to automate.

Bus 1-2	Bus 1-2
---------	---------



- 3 Display the appropriate send using a master SEND switch A/F-E/J and the DSP Edit/Assign section.
- 4 Press PLAY. Automation recording begins.
- 5 Rotate the data encoder (channel or DSP Edit/Assign) or move the appropriate channel fader as desired.



Flip mode provides another way to automate send level. See “Send Flip Mode” on page 170 for more information.

To automate Send Mute:

- 1 Make sure SEND MUTE automation is enabled.

- 2 Select a SEND in Select/Assign, then press the master SEND MUTE switch (this places the channel PRE/POST/ASSIGN/MUTE switch into send Mute mode).

- 3 Arm the channel for automation recording and press PLAY. Automation recording begins.

- 4 Use the channel PRE/POST/ASSIGN/MUTE switch to mute sends.

If you are working in Flip mode, use the channel Mute switch to mute sends.

Automating Plug-Ins

ProControl lets you automate plug-in controls and write automation data, using either the DSP Edit/Assign knobs, or the DigiFaders using plug-in Flip mode.



See the Pro Tools Reference Guide for information on using plug-in Safe mode to exclude plug-ins from track automation writing.

Display of Plug-Ins and Plug-In Pages

Since some of the DSP plug-ins have more controls than ProControl has physical faders and knobs, these plug-ins are controlled through a collection of control “pages.” ProControl first defines a “page size” based on its number of physical controls, and then the DSP plug-in controls are grouped accordingly into pages of this size. ProControl pages through the total number of controls in groups of eight (eight rows of controls in the DSP Edit/Assign section).

For example, if you are controlling a plug-in with 20 controls, then there are three or more pages of controller assignments, depending on how the controls have been arranged on the various plug-in pages. For practicality, there may be plug-in pages that contain “blank” locations where a given control is not active.

To select a different plug-in page:

- 1 Select and display a plug-in in the DSP Edit/Assign section.
- 2 Press a lit switch in the Channel Matrix (one primary switch (1/A, 2/B...) will be lit for each page available with the current plug-in).

On-screen, the plug-in parameters currently under the control of the DSP Edit/Assign controls will be highlighted blue.

To record dynamic automation of a plug-in:

- 1 Make sure that Plug-In automation is enabled in the Automation Enable section.
- 2 Set the appropriate channel to the desired automation mode (Write, Touch, Latch, Trim, etc.)
- 3 Press a channel INS/SEND switch. This displays the current Inserts/Sends for the channel in the DSP Edit/Assign displays.
- 4 Select the plug-in you wish to automate by pressing the corresponding SELECT/AUTO switch. To access another page, press any lit Channel Matrix switch (1-32). To arm or disarm the MASTER BYPASS function for automation, press OPT(ALT)ALL+MASTER BYPASS.

5 Press the corresponding ASSIGN/ENABLE switch. The display temporarily displays AUTO ON and the ASSIGN/ENABLE switch illuminates. If the channel is already armed for automation recording, the SELECT/AUTO switch will flash.

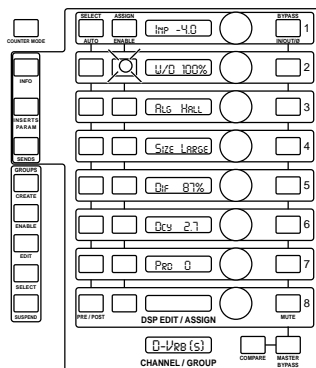
- 6 Press PLAY. Automation recording begins.

7 Rotate the parameter encoder in the DSP Edit/Assign section. The SELECT/AUTO switch indicates that the encoder has been touched and is recording automation. Following all Pro Tools settings for touch time-out and thinning, automation will be recorded to the automation playlist.

8 To punch-out of automation recording at any time, press the appropriate SELECT/AUTO switch. For more information on punching out of automation recording, refer to the next section.

Enabling Plug-In Automation

Plug-in parameters must be individually enabled for automation recording by selecting each from within the Plug-In Automation window. ProControl allows direct and immediate access to Plug-In automation enabling in the DSP Edit/Assign section.



A plug-in in the DSP Edit/Assign section

To enable automation for any parameter:

- 1 Use the channel INS/SEND, EQ/DYN and/or DSP Edit/Assign controls to select a plug-in for automation.
- 2 Page to the desired controls using the Channel Matrix.

3 Press ASSIGN/ENABLE for the desired encoder parameter to enable it for automation. The switch lights, and the LED display to its right briefly reads AUTO ON.

4 Select an automation mode for the appropriate channel (the SELECT/AUTO switch LED will flash to indicate automation arming).

5 To toggle the parameter automation off, press the ASSIGN/ENABLE switch again (the LED briefly confirms automation is off). The ASSIGN/ENABLE and SELECT/AUTO switches turn off.

Check for any on-screen warning when disabling automation. Refer to the *Pro Tools Reference Guide* if you need more information.

Display of Plug-In Automation Status

In addition to ProControl switch LEDs, automation mode and status is indicated on-screen using the following colors

- ◆ If a plug-in control is in a recordable automation mode (Write, Latch, or Touch) it will be highlighted in red, otherwise it will be highlighted on-screen in yellow.
- ◆ If a plug-in control is in automation READ mode, it will be highlighted on-screen in blue.
- ◆ If a plug-in control is in automation OFF mode, it will be highlighted on-screen in blue.

Automation and Switches

Switched controls in the DSP Edit/Assign section can be automated. Discrete controls include any non-fader or rotary control, such as in/out and on/off switches.

To arm or disarm discrete controls:

- Press OPT(ALT)ALL+ASSIGN/ENABLE for the parameter you want to arm. The LED display to its right briefly reads “AUTO ON” or “AUTO OFF” and then times out back to what it was showing previously.

To arm or disarm MASTER BYPASS:

- Hold down OPT(ALT)ALL, then press MASTER BYPASS. The CHANNEL/GROUP display will briefly display MSTR ON or OFF status.



See the Pro Tools Reference Guide for more information on automating switched controls.

Punching out of Automation Recording

You can punch out of automation recording at any time.

To punch out of any automation recording pass:

- Press the channel AUTO switch. Automation recording will be disengaged.

To punch out of automation recording of a Plug-In parameter:

- Press the appropriate SELECT/AUTO switch in the DSP Edit/Assign section.

An Important Note About Third-Party Plug-Ins

Third-party TDM plug-ins from some of Digidesign's Development Partners may need to be updated for compatibility with new dynamic automation capabilities, as well as controller-based plug-in editing and librarian functionality. Contact the manufacturer of your plug-ins for information about the latest versions, and what to expect in terms of ProControl support.

Editing Automation

Almost all types of automation data can be edited in any of several ways. You can:

- Record new automation data to any parameter, into a new automation playlist as a new take, or overwriting the previous take.
- Manually adjust automation breakpoints on-screen in Pro Tools Edit window. You can use the Trackpad to do this. The Grab, Select and Trim tools provide precise and convenient automation editing options.
- Utilize Trim mode to raise or lower the mix level moves made within an existing automation pass.

Write, Touch and Latch, and manual/breakpoint editing with ProControl is explained in "Automating Track Volume, Pan, and Mute" on page 155.

Track View of Automation Breakpoints

Pro Tools creates a separate Playlist for each type of automation you record (volume, pan, mutes and so on). This data can be viewed and edited using the Track View selector.

You can toggle between waveform and volume view with numeric keypad and Modifier keys, or select a view manually using the Track View selector.

To select a parameter and show its automation data manually:

- Press ⌘(CTL)+CTL/CLUTCH while you click any automatable channel parameter with the Trackpad, or mouse. The Edit window track displays the automation data for the parameter you clicked.

– or –

To toggle Track View:

- 1 Click in the track you want to toggle.
- 2 Press CTL/CLUTCH+Minus (in the numeric keypad).

Audio tracks toggle between Waveform and Volume view. MIDI Tracks are toggled between Notes and Regions view.

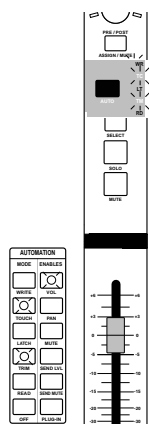
To show automation data using the Track View selector:

- Use the Trackpad to select a format from the Track View selector (in the track controls of the Edit window).

The channel data display changes to the format you have chosen.

TRIM Automation Mode

TRIM is a special automation mode that allows previous automation moves to be retained in a track volume or send level playlist while increasing or decreasing overall level changes to the playlist. Refer to the *Pro Tools Reference Guide* for more information.



Enabling Trim automation

To enable Trim mode:

- 1 Hold down TRIM in AUTOMATION/ENABLE, then press a channel AUTO switch. This enables Trim mode on that channel.
- 2 Select a specific Trim mode (Write, Touch or Latch). You can hold down both TRIM and either WRITE, TOUCH or LATCH in the automation mode section, then press a channel AUTO switch to enable the corresponding Trim mode on the channel.

Pro Tools allows you to change from any write mode to read mode during playback, but not from read to write.

For additional information on using Trim with ProControl, see “TRIM Automation Mode” on page 160. Refer to the *Pro Tools Reference Guide* for information about TRIM/WRITE, TRIM TOUCH and TRIM LATCH modes.

To enter Trim mode from ProControl:

- 1 While the transport is stopped, press and hold the TRIM switch located in the AUTOMATION Mode/Enable section on the ProControl Main unit
- 2 Press the AUTO switch for each automation-enabled channel to edit in Trim mode. This is the only way you can engage Trim mode (you can't enable it using the channel AUTO switch alone, as with Write, Touch, Latch and Read modes). When TRIM automation is enable, the channel fader and send view fader caps turn yellow on-screen in Pro Tools Mix window.
- 3 Set the desired Automation mode.
- 4 Set the Display mode on the channel scribble strips to view channel name/level. In this mode, whenever Trim mode is invoked, the Δ symbol is displayed on the channel scribble strips as soon as you touch the fader in Touch, Latch, or Read Trim mode. In Write Trim mode, the delta symbol is always on, since the fader is assumed to be touched at start (pre-set to zero level). This symbol is always visible in Pro Tools during TRIM states in the volume numerical display.

- 5 Press PLAY. Automation writing begins.

- 6 To trim channel volume, adjust the channel fader. To trim send level, adjust the data encoder. If in Flip mode, trim the send level values (only) with the faders.

- 7 When finished with an automation Trim pass, either press STOP or punch out of record with the AUTO switches (See “Punching out of Automation Recording” on page 158.) To exit Trim mode entirely, press and hold the TRIM switch, then press the appropriate channel AUTO switches.

⚠ Trim automation is available only on fader and send level automation. It is not available for channel or send mutes, or plug-ins.

About WRITE/TRIM Automation

In Write/Trim mode, Pro Tools will snap the faders to the unity (zero) position on the fader scale before the automation record pass begins. Move the fader above unity to add level or below the mark to decrease delta trim values in a Write/Trim pass. This acts as a “motor-off” trim in which the fader does not follow existing automation data, and does not write trim values, until you physically adjust the fader.

Write to Start/End/All

Write to Start/End/All are available in all automation recording modes including Write, Touch and Latch, as well as Trim mode. These let you write your current setting to an entire selection or track. ProControl lets you do this with any automation setting or Trim value.

When using Write to Start/End/All function, keep in mind that every enabled automation parameter will be affected, not just fader level. For this reason, use these functions with caution. Be sure to disable the master automation mode switches that do not apply to the task at hand. Also, see the *Pro Tools Reference Guide* for information about Plug-In Safe mode.

Write to Start

You can write any current automation value or trim value back to the beginning of a selected region or to the beginning of the track during an automation record or Trim pass.

To write a new or trim value to the start of a track or selection.

- 1 Enable a Trim mode using the method explained in the previous section “TRIM Automation Mode” on page 160.

- 2 Be sure the channel is in the desired automation mode, and that the desired automation parameters are enabled in the AUTOMATION/ENABLES section.

- 3 Begin automation recording and adjust parameters as needed.

- 4 While still playing back during or immediately after making your adjustments, press and hold the CTL/CLUTCH switch and then press the RTZ switch. This switch is located immediately to the right of the ON-LINE switch in the transport section.

The transport will automatically be stopped and the last level value recorded in this automation mode will be the new (or Trim) value written back to the beginning of the selected region or track. A dialog will be posted in Pro Tools warning you that this operation has taken place, and give you the option to cancel this process. You can suppress the appearance of this warning dialog by pressing and holding the OPT(ALT)ALL switch prior to engaging the Write to Start feature.

Write to End

You can write a current absolute or trim value to the end of a selected region or to the beginning of the track during an automation record and Trim pass.

To write a new or Trim value to End:

- 1 Enable a Trim mode using the method explained in the previous section “TRIM Automation Mode” on page 160.

- 2 Be sure the channel is in the desired automation mode, and that the desired automation parameters are enabled in the AUTOMATION/ENABLES section.

3 Begin automation recording and adjust parameters as needed.

4 While still playing back during or immediately after making your adjustments, press and hold CTL/CLUTCH and then press the “go to end” switch.

The transport will stop and the last value recorded in this automation mode will be written to the end of the selected region or track. A dialog appears warning you that this operation has taken place and lets you abort the process.

To suppress the warning dialogs:

1 Press OPT(ALT)ALL while applying WRITE TO.

Write to All

You can write a current absolute or trim value across an entire selection/region/track.

To write a new or Trim value to ALL:

1 Enable a Trim mode using the method explained in the previous section “TRIM Automation Mode” on page 160.

2 Be sure the channel is in the desired automation mode, and that the desired automation parameters are enabled in the AUTOMATION/ENABLES section.

3 Begin automation recording and adjust parameters as needed.

4 Press CTL/CLUTCH+SHIFT/ADD+ either the “go to end” or RTZ switch. Playback stops and the last level value recorded in this automation mode will be the TRIM delta value written to the entire selected region or track.

About other Mixing Functions: “Snapshot” Automation, Erasing/Thinning Automation, Bounce to Disk, etc.

Using the Trackpad, you can apply any and all of Pro Tools mix features directly from ProControl. All the same conventions, rules and limits apply whether applying snapshot automation from Pro Tools or with ProControl.

Like snapshot automation, you can erase and thin automation data using the Trackpad. Refer to the *Pro Tools Reference Guide* for details.

Chapter 13: Mixing

Pro Tools is a powerful mix environment that offers many options for I/O, inserts, sends, Auxiliary Inputs, Master Faders and mix automation. ProControl provides extensive support for these and other mix-related tasks:

Signal Routing Setup and management is simplified through direct control of send parameters, internal/external busses, Auxiliary Inputs and Master Faders. Basic mixing information begins in “Signal Routing” on page 163.

Mix Automation Mixing capability is maximized with the touch-sensitive DigiFaders and other ProControl automation features available to tracks, plug-ins, and sends. See Chapter , “Automation” for more information.

Surround Panning and Mixing Multichannel panning, signal routing, and mixing can all be performed from ProControl. See “Surround Mixing” on page 172. (Surround panning requires Pro Tools MIX, MIXplus, or MIX3.)

Before mixing with ProControl, it is important that you already understand these Pro Tools features and conventions. See the *Pro Tools Reference Guide* for details.

Signal Routing

ProControl signal routing features let you handle most all mixing tasks from the control surface. This chapter explains the following signal routing applications using ProControl:

- Track input and output.
- Auxiliary Inputs.
- Master Faders.
- Sends

Input and Output

Track input and output settings are the basic signal routing steps for audio and MIDI recording, internal bussing, submixing, and output.


To assign channel input or output:

- 1 Press the master ASSIGN switch (Select/Assign section).
- 2 Press either the INPUT or OUTPUT switch, depending on which you wish to assign.
- 3 Rotate an encoder until the desired input or output path is displayed.
- 4 Press the channel ASSIGN/MUTE switch to set the selection.
- 5 If necessary, assign other channels by repeating steps 3 and 4.
- 6 To exit Assign mode, press the master ASSIGN switch.

Shortcuts

To change the assignment of all or all selected channels

- ◆ Press OPT(ALT)ALL or SHIFT/ADD + OPT(ALT)ALL while pressing the channel ASSIGN/MUTE or master ASSIGN switch to assign to all or all selected, respectively.


 For more information on basic I/O assignment, see “Channel Input and Output” on page 80. For information on multichannel input and output, see “Surround Mixing” on page 172.

Auxiliary Inputs

Pro Tools Auxiliary Inputs are used as bus and effects returns for both internally bussed signals and external sources.

To create an Aux Input:

- 1 Use the Trackpad to select File > New Track (in Pro Tools).
- 2 Use the New Track dialog to select Auxiliary Inputs and specify the number and type (Aux (stereo)) of tracks you want to create.

 For more detailed instructions on creating tracks, see Chapter , “Working with Tracks.”

Bussing Channels to an Aux Input

For internally bussed signals, assign mono or stereo sends on each channel and assign the sends to the the same path chosen as the input for the Auxiliary Input). See “Sends” on page 165 for send assignment instructions.

To view input and output assignments

- Press and hold the INPUT or OUTPUT switch in the Select/Assign section.

Refer to the *Pro Tools Reference Guide* for additional information on Auxiliary Inputs and other mixing basics.

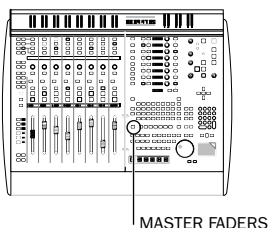
Master Faders

Master Faders control the master output levels of output and bus paths. They are used for post-fader effects processing and master level control for a main output mix, headphone or cue mixes, stems, and effects sends.

ProControl features a dedicated MASTER FADERS switch, for greater control and access to the Master Faders in your Pro Tools sessions.

Using the MASTER FADERS Switch to “Go To” All Master Faders

It is common for a Pro Tools session to utilize multiple Master Faders, each controlling a different element of the mix.



Master Faders

To make it as easy as possible to work with multiple Master Faders, the MASTER FADERS switch instantly brings all mono and stereo Master Faders to the fader bank with a single button.

To call up all Master Faders with the MASTER FADERS switch:

- Press the MASTER FADERS switch, located below and to the left of the CHANNEL MATRIX.

All Master Faders in the current Pro Tools session (regardless of Show/Hide status) are displayed on the ProControl Main unit. Master Faders fill the Main Unit fader bank beginning from the right-most fader (closest to the Transport section).

Displaying and Navigating Master Faders

Stereo Master Fader level controls will be under a single ProControl fader.

The NUDGE switch will flash if there are more than eight Master Faders in the session. If necessary, press the right or left BANK SELECT buttons to bring up the next set of Master Faders.

To exit MASTER FADERS mode:

- Press the MASTER FADERS switch again. The faders will return to whatever state/display they were in prior to engaging MASTER FADERS mode.

Sends


The ProControl Fader and DSP Edit/Assign sections provide two main views for assigning, editing, and automating sends.

Assigning and Viewing A Send Across the Faders

From the Fader section, you can assign sends on a channel-by-channel basis using the SELECT/ASSIGN switches and channel rotary encoders. With this method, the focus is on a single send (A-E) in one of the five available channel sends (1-5). This is useful when, for example, you want make the same send assignment across multiple drum tracks for submixing and stereo processing.

Assigning and Viewing Sends in the DSP Edit/Assign Section

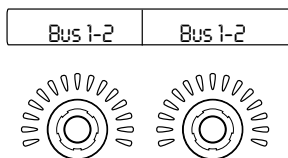
When you want to assign or edit more than one send (1-5) at a time on any single channel, use the DSP Edit/Assign section. In this mode, you can see all five sends on that channel, and adjust the send level, pre/post status, or mute for one, two, three, four or all five of that track's sends.

 *Send Flip mode provides another way to edit and automate, but not assign, sends. See “Send Flip Mode” on page 170 for more information.*

Viewing Sends

Display of Send Parameters

While working with sends, both the channel and DSP Edit/Assign LED displays indicate send information as follows:



Sends in the Fader section

Send Name The left side of the display indicates the send name with a 3 character, abbreviated path name.

Send Level The right side of the 8-character display shows send level numerically with values ranging from OFF to +6. Negative values are indicated with a “-” sign, up to 5 characters (for example, “-10.5”).

If the send on a channel is unassigned (not routed to anything, and is inactive), the display will be blank, and no ring LEDs will be lit. If an encoder is turned, the display will briefly read “No Send.”

To display current send assignments for all currently banked channels:


- Hold down any SEND switch (A/F, E/J). The encoders display the current path assigned to that send on any banked channels.

To display all sends (1-5) of any track in the DSP Edit/Assign section:

- Press SENDS in the DSP Edit/Assign section. This lists the five sends on the current or last selected track. (See “Muting Sends” on page 168 for more information.

Assigning Sends

There are two methods you can use to assign and view sends with ProControl. You can use either method as the flow of your project demands. For access to a single send on any (or across all) channels, use the Fader section. For access to *all* sends on a *single* channel, use DSP EDIT/ASSIGN.

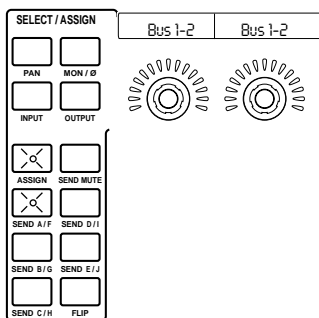
 *See also the explanation of Flip features in “Send Flip Mode” on page 170.*

Assigning Sends from the Fader Section

The SELECT/ASSIGN switches assign sends to the currently selected channels.

To assign mono or stereo sends to a channel or channels:

- 1 Press the master ASSIGN switch in the SELECT/ASSIGN switch section. It flashes to indicate ASSIGN mode.
- 2 Press the appropriate master SEND switch in the Select/Assign section (SEND A/F-E/J) to select a send.



Assigning sends

- 3 Rotate a channel data encoder to scroll through the available path choices until the desired path is displayed. The channel's ASSIGN/MUTE switch will flash as soon as you rotate the encoder. If you wish to cancel at this point, press the ESCAPE switch.
- 4 With the desired send choice displayed, press the flashing ASSIGN/MUTE switch to confirm that send assignment for that channel (or channels), and remain in Send Assign mode to assign other sends.
- 5 When finished, press the master ASSIGN switch to confirm all assignments and return to mixing.

Shortcuts

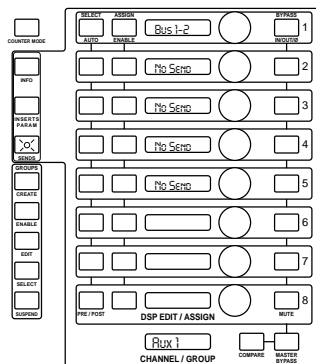
- To apply a send assignment to all or all selected channels, hold down OPT(ALT)ALL, or OPT(ALT)ALL + SHIFT/ADD, while confirming Send assignments

Assigning Sends in the DSP Edit/Assign Section

With the DSP Edit/Assign section you can view, assign and edit all five sends on any channel strip at one time.

To display sends in the DSP Edit/Assign section:

- Press the SENDS switch.



Sends in the DSP Edit/Assign section

To assign a mono or stereo send via the DSP Edit/Assign section:

- 1 Press a channel INS/SEND switch. Channel name is displayed in the CHANNEL/GROUP display of the DSP Edit/Assign section.
- 2 Make sure SENDS mode is enabled in DSP EDIT/ASSIGN, if needed — channel sends are shown vertically (1-5).
- 3 Press the ASSIGN/ENABLE switch next to the send of interest. It flashes, indicating that assign mode is enabled.

- 4 Rotate the data encoder to scroll through the available send destination choices, which will be displayed in the display next to the encoder.
- 5 When the desired send choice is displayed, press the ASSIGN/ENABLE switch to confirm.

Send Level

You can adjust mono or stereo send level from either the channel data encoders or from the DSP Edit/Assign section.

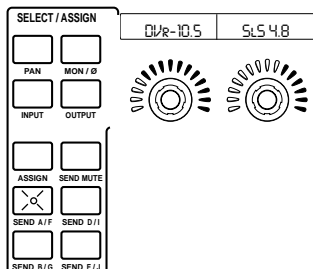
- ◆ Channel-based send editing lets you view and adjust *one send* (A/F or D/I, or B/G, and so on) at a time across *all channels*.
- ◆ Using the DSP Edit/Assign encoders lets you instead view and adjust *all the sends* (A/F and D/I and B/G and so on) on any *one channel* at once.

Flip mode provides additional ways to control sends and their parameters. (See also “Send Flip Mode” on page 170.)

To adjust send level from the Fader section:

- 1 Press a master SEND switch (A/F-E/J) in the Select/Assign section. The data encoders display send name and level.

- 2 Rotate a data encoder to adjust send level.



To adjust send level from the DSP Edit/Assign section:

- 1 Select a channel for editing by pressing the channel INS/SEND switch.
- 2 Press SENDS in the DSP Edit/Assign section to place the DSP Edit/Assign section in SENDS view. The LEDs will list all five sends for the current channel.
- 3 Rotate a DSP EDIT/ASSIGN encoder to adjust the corresponding send level.
- 4 To switch to another channel for additional send editing, press the corresponding channel INS/SEND switch.

Muting Sends

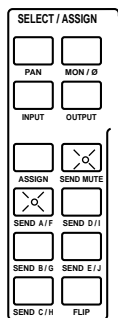
You can mute sends from the Fader or DSP Edit/Assign sections.

To mute a send in the Fader section:

- 1 Make sure the appropriate channels are banked into view on your ProControl Main or Fader Pack unit.
- 2 Select the send to-be-muted by pressing the corresponding master SEND switch (A/F-E/J) in the Select/Assign section.

3 Press the SEND MUTE switch, located directly above the master SEND switches in the Select/Assign section so that it lights solid. This puts the channel PRE/POST/ASSIGN/MUTE switch into SEND MUTE mode.

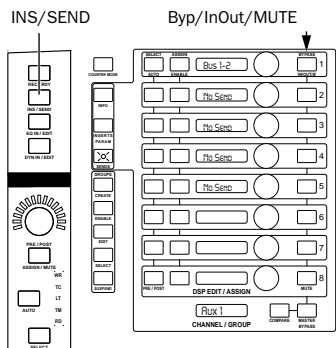
4 Press the channel ASSIGN/MUTE switch(es) to mute the selected send.



Enabling Send Mute

To mute a send in the DSP Edit/Assign section:

- 1 Press SENDS to enable sends mode.
- 2 Press a channel INS/SEND switch to display that channel's sends in the DSP Edit/Assign section.
- 3 Press the BYPASS/IN/OUT/Ø/MUTE switch corresponding to the send you want to mute.



Send mute in the DSP Edit/Assign section

Pre/Post Fader Send Status


To set pre/post send status from the Fader section:

- 1 Make sure playback is stopped.
- 2 Make sure ASSIGN and SEND MUTE are off.
- 3 Select a send by pressing a master SEND switch (A/F-E/J).
- 4 Press a channel PRE/POST|ASSIGN/MUTE switch to change a post-fader send to pre-, and vice versa. When a send is set to pre-fader, PRE/POST/ASSIGN/MUTE switch lights (red).

Shortcuts

To change the pre-/post-fader status of a send on all or all selected channels:

- Hold down OPT(ALT)ALL, or OPT(ALT)ALL + SHIFT/ADD while pressing the channel ASSIGN/MUTE switch for all or all selected, respectively.

 See "Send Flip Mode" on page 170 for another technique for pre/post fader control.

To set pre/post send status from the DSP Edit/Assign section:

- 1 Place the DSP Edit/Assign section into SENDS mode.
- 2 Select the channel for send editing by pressing its INS/SEND switch in the upper part of the Fader section.
- 3 Press the SELECT/AUTO/PRE/POST switch in the send switch row in the DSP Edit/Assign section. The display will temporarily display the currently selected pre/post status. This switch indicates pre/post send status by being unlit for (default) post-fader sends, and lit (red) for pre-fader sends.

Viewing Send Parameters and Status

To view full send routing information on all sends for a channel:

- Press and hold the INFO switch while in SENDS view.

The current routing of all currently active sends is displayed in their corresponding space in the DSP EDIT/ASSIGN LED displays (similar to the procedure of holding down master SEND switch in the fader section to view routing for a single send). If a send is inactive, the display will show “no send.” Release the INFO switch to return you to SENDS view.

To view SEND PRE/POST status on all active sends:

- Press and hold the INFO switch while in SENDS view, and then additionally press and hold any (SELECT/AUTO) PRE/POST switch.

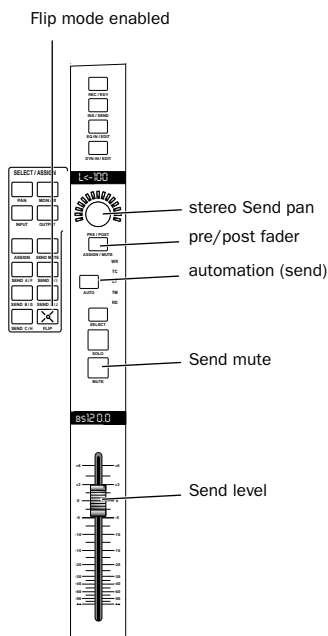
The current pre/post status of all of active sends for the current channels are shown in their corresponding space in the LED displays. If a send is inactive, the display will be blank. Release the INFO switch to return to SENDS view.

To view a channel's Sends while editing a Plug-In:

- In INSERTS|PARAMS mode, press the SENDS switch in the DSP Edit/Assign section.

Send Flip Mode

The FLIP switch, located directly under the SEND E/J switch, remaps Send controls to the Fader strips.



When Flip mode is enabled for sends:

- ◆ The touch-sensitive faders control send level.
- ◆ Channel rotary encoders control stereo send pan.
- ◆ Channel MUTE toggles send mute.
- ◆ Channel PRE/POST can toggle send pre-/post-fader.

Send Flip mode simplifies setting up submixes, and lets you record send level automation data with the touch-sensitive DigiFaders.



Flip mode follows local/global configuration, letting expanded systems have sends on one unit and channels on another. See Appendix , “Utility Settings” for instructions on configuring Local and Global mode.

Display of Send Parameters in FLIP Mode

In Flip mode, the channel data encoders display pan position for stereo sends. The scribble strip above the encoder will show “L<>” followed by the absolute pan position value, indicating that the pan position can be adjusted with the encoder.

Pre/Post Fader Status in Flip Mode

When the PRE/POST|ASSIGN/MUTE switch LED is off on a given channel, the send is Post fader and when the switch is pressed, (LED lit solid) the send is routed Pre fader. The labels “Pre” or “Post” will momentarily be displayed in the scribble strips above the channel faders when a PRE/POST state is altered.

SEND/MUTE Display in Flip mode

The SEND/MUTE switch is off. This is because send mute control and display is through the channel MUTE switch while in Flip mode, regardless of the pre-FLIP state.

To enable Flip mode:

- 1 Press the FLIP switch in the Select/Assign section. The switch LED (green) flashes, indicating that Flip mode has been engaged. Both the PAN switch and the last active SEND switch (active prior to engaging FLIP) light solid.
- 2 Adjust send level with the faders

3 Use the channel rotary encoders to adjust send pan.

4 Use the channel MUTE switch to adjust send pan.

To select another SEND to work on in Flip mode:

Press the appropriate master SEND switch in the Select/Assign section. If there are no active (selected) sends, FLIP defaults to Send A.

To check track name:

- Hold down the DISPLAY MODE switch. Release the switch to revert the scribble strip displays to the send name/send level view.

To mute a send in Flip mode:

- Press the channel MUTE switch. (See “Muting Sends” on page 168 for additional information.)

To adjust (stereo) send pan while in Flip mode:


- Press the PAN switch to toggle the encoder to control left or right pan of stereo sends. The channel encoder LED ring defaults to left side PAN when FLIP is first entered. The encoder scribble strip displays “L <>” followed by the absolute pan position value (+100/-100).

To change Pre/Post status in Flip mode:

- While in Flip mode and Pro Tools is stopped, press PRE/POST|ASSIGN/MUTE. This toggles the current send pre- or post-fader.

To exit Flip mode:

- Press either the FLIP or the ESCAPE switch. Both return ProControl to the state it was in prior to entering Flip mode.

 *Expanded ProControl systems can take advantage of Flip mode in Global and Local mode. See “Local and Global SELECT/AS-SIGN Behavior for Expanded System” on page 89.*

Surround Mixing

ProControl supports all Pro Tools multichannel surround mixing features. Multichannel mixing is available on Pro Tools MIX-series systems (MIX, MIXplus, and MIX3) only.

Audio Connections

For audio connection diagrams for multichannel mixing, see Chapter , “Audio Connections.”

Surround Pan Mode

When selecting tracks and sends for multichannel panning, the main Track output will be selected first, by default. If there is no multichannel track output assignment, a multichannel send on that track, if any, will be selected. If there are no multichannel output assignments, select another track.


To enter Surround Pan mode:

- Press F4.

(See “Selecting Tracks and Sends” on page 173 for more information.)

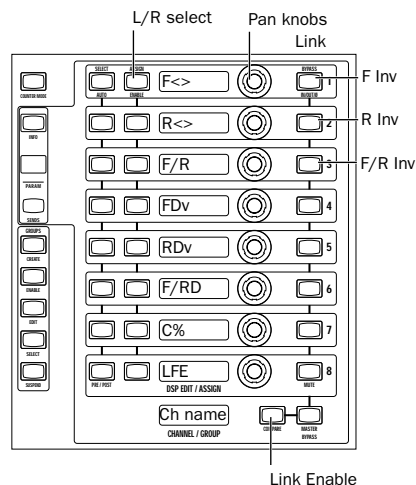
To pan:

- Use the appropriate rotary knob in the DSP Edit/Assign section, or use the Trackpad and pan cursor for X/Y panning.

 *For more information about surround panning parameters, see the Pro Tools Reference Guide.*

Pan Controls in the DSP EDIT/ASSIGN Section

When a multichannel panner is the focus of the DSP Edit/Assign section, the LEDs show an abbreviated pan parameter name, and its value. The current track name is displayed in the CHANNEL/GROUP display.



In the DSP Edit/Assign section, pan parameters are abbreviated as shown in the following table:

Surround Panner Controls in DSP Edit/Assign

Abbreviation	Parameter
F<>	Front
R<>	Rear
F/R	Front/Rear
FDV	Front Divergence
RDV	Rear Divergence
F/RD	Front/Rear Divergence
C%	Center percentage
LFE	LFE, in dB

Selecting Tracks and Sends

Use the following instructions to focus ProControl on multichannel Track and Send outputs for surround panning.

To select a track output for surround panning:

- 1 Press an INS/SEND switch to focus on any track containing a multichannel output assignment. Controller focus is indicated on-screen with a colored outline around the track, track output, or send.
- 2 Press F4.

To select a multichannel send for surround panning:

- 1 Press INS/SEND on the track containing the multichannel send you want to pan.
- 2 Press F4.
- 3 If necessary, press the appropriate SEND (A-E) switch to make it the controller focus.

To select a multichannel output on a different track:

- Press INS/SEND to select the track.

To select track or send outputs on the same channel:

- Press PAN to focus on the current track outputs.
- Press the appropriate SEND (A-E) switch to focus on that send on the current track.

To check the currently selected send output assignment:


- Press the INFO switch in the DSP Edit/Assign section. The output assignment is shown in the CHANNEL/GROUP display. (See also “Assigning Multiple Outputs” on page 82 for more information.)

To switch to track (main) output from a send:

- Press the PAN switch in the Select/Assign section.

To open or close the selected Output window:

- Press PLUG IN to toggle the current Output window open and closed. Press SHIFT/ADD+PLUG IN to open it as a new window.

 See “Using Windows for Controller Focus” on page 146 for more information about windows and controller focus.

To exit surround Pan mode, do any of the following:

- Press the flashing F4 switch.
- Press a track EQ or DYN IN/EDIT switch.
- Double-press a track INS/SEND switch.
- Press INSERTS/PARAMS or SENDS in the DSP Edit/Assign section.


Panning Stereo Tracks

When the channel of focus is a stereo track, the left side is displayed first, by default. The top-most LED display in the DSP Edit/Assign section will display an L after the parameter name, and its ASSIGN/ENABLE switch is lit.

To select the right side pan controls:

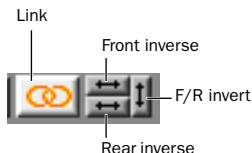
- Press the PAN switch in the Select/Assign section.

Channel displays indicate right pan targeting with “R <>” next to the pan values.

 See the Pro Tools Reference Guide for information about linked and inverse panning.

Panner Linking

Multichannel Output windows provide standard and inverse linking options for stereo track panning.



Link, enabled, and Inverse selectors

To enable linking:

- 1 Select a track or send output as the ProControl focus (see “Selecting Tracks and Sends” on page 173).
- 2 Press COMPARE (next to the Channel/Group display in the DSP Edit/Assign section). The on-screen link icon is highlighted.

To enable an Inverse Link mode:

- 1 Press the BYPASS/IN/OUT switch in the DSP Edit/Assign section for the appropriate mode:

- For Front Inverse, use row 1.
- For Rear Inverse, use row 2.
- For Front/Rear Inverse, use row 3.

Multichannel Metering


By default, the two meters on each ProControl channel show left and center levels on multichannel tracks and sends. The following table shows the two channels that will be metered for each multichannel format.

Track Type	Meters Reflect
LCR	L & C
Quad	L & R
LCRS	L & C
5.1/5.0	L & C
6.1/6/0	L & C
7.1/7.0	L & Lc

Multichannel Solo


To meter a multichannel path:

- 1 Start Pro Tools playback.
- 2 Press SHIFT/ADD+SOLO on the multichannel track you want to meter. The first (left) side is displayed in the left side of the first pair of meters. Remaining channels are displayed in the adjacent meters to the right, up to a maximum of eight. When SHIFT/ADD and SOLO are released, normal metering resumes.

 *For a diagram of 5.1 format track layouts and metering, see “5.1 Track Layouts, Routing, and Metering” on page 30.*

Default Metering Path in I/O Setup

The Pro Tools I/O Setup dialog provides a default metering path option, to specify the function of the six main output meters. For instructions, see “Configuring the Output Meters” on page 49.

 *See the Pro Tools Reference Guide for more information on this and other features of the I/O Setup dialog.*

Appendix A: Utility Settings

The UTILITY switch access ProControl Utility mode. This mode lets you customize ProControl options and preference settings, perform diagnostic tests on components, and recalibrate various features.

Each ProControl unit (Main or Fader Pack) provides its own remote Utility mode for further customization and diagnostics. All Utility menus are editable regardless if Pro Tools is currently running or not.

Utility Mode Basics

Utility mode is designed as a series of menu choices, and sub-menus, selectable from the DSP Edit/Assign section.

To access Utility mode on a Main Unit:

- Press the UTILITY switch (to the left of the Channel Matrix). The DSP Edit/Assign area displays the following:

SYSTEM
MONITOR
TEST
RESET
PREFS
<BLANK>
ESCAPE

To access remote Utility mode from a Fader Pack:

- 1 Press and hold SHIFT/ADD + OPT (ALT) ALL, then press the F4 switch.
- 2 The scribble strips in the Fader section will display the following choices:

SYSTEM |NAME |TEST |RESET |PREFS ||ESCAPE|

To exit Utility mode:

- Press UTILITY (Main Unit), or choose ESCAPE (Fader Pack).

To select or edit a Utility parameter on a Main unit:

- Press the flashing ASSIGN/ENABLE switch in the DSP Edit/Assign section associated with the parameter you want to edit. If an ASSIGN/ENABLE switch is lit solid, then the default choice is enabled.

To select or edit a Utility parameter on a Fader Pack:

- Press the channel ASSIGN/MUTE switch below the parameter.

The above basic steps are used to edit and select all Utility modes and parameters on a Main Unit or Fader Pack.

Display of Utility status

Utility mode choices and settings are displayed in the DSP Edit/Assign and Channel scribble strip displays.

When editing choices on the Utility pages, menu choices which are currently enabled, or active, are indicated by a lit switch LED. Other available choices are shown with a flashing ASSIGN/ENABLE switch LED.

Example of Utility Selection

Throughout the remainder of this Appendix, Utility instructions are listed in abbreviated form. For example:

To access the Vegas Test Mode Utility page:

- In Utility mode, choose TEST > LED > VEGAS.

The above is presented instead of the full steps, which would be as follows:

- 1 Press UTILITY.
- 2 Choose TEST from the UTILITY menu, then
- 3 Choose LED from the TEST menu that appears, then
- 4 Choose VEGAS from the LED menu.

Using ESCAPE or UTILITY

Both the ESCAPE and UTILITY switches can be used to complete a Utility mode operation.

To go back one Utility page:

- Press ESCAPE.

To exit Utility mode entirely:

- Press the flashing UTILITY switch.

Reset and UNDO

Changes to Utility parameters are applied as you make them. In other words, you cannot ESCAPE out of Utility mode without having already made any recent changes. They are saved as soon as each new parameter is selected. To reset a Utility parameter you must manually access and reset the option.

Monitor Modes and Settings

The Monitor pages contain items which are specific to the main unit analog monitoring section.

To access the Monitor pages:

■ Press UTILITY > MONITOR. The following choices appear:

- MODE
- MUTE/DIM
- TALKBACK
- LISTENBACK
- <BLANK>
- <BLANK>
- <ESCAPE>

Mode

Stereo, Multi, Surround and Rerecord

Mode Page lets you change the monitoring scheme of the ProControl analog monitoring section.

Stereo, Multi -Source, Multi-Monitor, and Surround modes These modes determine how the Source selectors, I/O busses and switches function.

Rerecord lets you use the Control Room section to send Sources, Talkback and Listenback signals to Pro Tools or another recording device. See the section “DUB, Slate, and Rerecord” on page 75 for details.

To select Stereo, Multi, Multi-Monitor, Surround or Rerecord mode:

- 1 From UTILITY>MONITOR>MODE, press the appropriate SELECT/ASSIGN switch.
- 2 Press ESCAPE to exit.

Mute and Dim

The MUTE/DIM Mode page lets you configure the Control Room Mute and Dim switches.

To access the MUTE/DIM page:

- Press UTILITY > MONITOR > MUTE/DIM.

To select ALL MUTE/DIM mode;

- Select ALL. This means depressing the MUTE switch will affect all outputs (main and aux/cue).

To select control room-only MUTE/DIM:

- Select CTRL ROOM. In this mode, MUTE only mutes/dims the control room (main and alt) signals.

Talkback

To access Talkback Utility settings:

- 1 Press UTILITY > MONITOR > TALKBACK. Available choices include:

INT/EXT Routes both the built-in (internal) and external Talkback inputs to the Talkback bus.

EXTERNAL Routes only the external Talkback signal to the Talkback bus.

SLATE Routes and mixes the Talkback signal (whichever) to the Slate/dub bus.

To reconfigure Talkback settings:

- 1 Using the ASSIGN/ENABLE switches, change the state of the desired Talkback parameter
- 2 Press “ESCAPE” to exit the menu and return one level up. Or, press the UTILITY switch to exit the Utility mode entirely.

Listenback Settings

A listenback microphone is used in a studio to allow the talent to communicate with the control room. ProControl provides a Listenback input, and the UTILITY > LISTENBACK page is used to turn this off or on.

To turn the Listenback input on/off:

- 1 Press UTILITY > MONITOR > LISTENBACK.
- 2 Use the ASSIGN/ENABLE switches to turn Listenback On or Off.
- 3 To have the Listenback signal “follow” the Talkback switch (including mixing with Slate/Dub output), press TALKBACK.
- 4 To exit, press ESCAPE. Or, press the UTILITY switch to exit the Utility mode entirely.

Utility Test Pages

The Test pages include menu items for testing various components and sections on ProControl Main and Fader Expansion units.

To access the Test pages:

- Press UTILITY > TEST. The Test menu items are displayed:

<LED>
<DISPLAY>
<FADER>
<ROTARY>
<MOUSE>
<BLANK>
<BLANK>
<ESCAPE>

The following sections describe each of the Test pages.

LED Tests

This test mode provides color-specific test routines for your units’ LEDs. Press UTILITY > TEST > LED, then select a test. (VEGAS mode provides the best value for your entertainment dollar.)

Vegas Mode

Vegas mode randomly turns on/off every switch LED, meter segment, display LED. The faders are also run in sine wave mode.

Rotate the scrub/shuttle wheel on the ProControl main unit to increase or decrease the rate at which the LEDs update. Press any switch on the ProControl Main unit to exit VEGAS mode.

Switch Test Mode

- 1 Press UTILITY>TEST > LEDs > SWITCH.
- 2 Press any switch on a ProControl Main or Fader Pack Expansion unit. When pressed, the switch LED will light as long as it’s held and the lower channel scribble strip on a Fader section will show the location information for the switch.
- 3 Press the ASSIGN/ENABLE switch for ESCAPE to exit the test mode. This action will return you to the LED Page display of test choices.

Before exiting, the lower Fader section scribble strip will briefly display the switch location information for the ESCAPE ASSIGN/ENABLE switch.

LED Tests

Red LED mode checks all red LED's on the control surface.

Red LED Test Mode

1 Press UTILITY > TEST > LED > RED.

2 Press the ASSIGN/ENABLE switch located to the left of the DSP Edit/Assign scribble strip showing another test mode to simultaneously disengage the red LED test mode and enter the newly selected mode. The ASSIGN/ENABLE switch LED for the new choice will light solid while the other choices flash.

3 Press the flashing ASSIGN/ENABLE switch for ESCAPE to exit the LED test page menu. Or, press UTILITY to exit Utility mode.

Yellow LED Test Mode

■ Press UTILITY > TEST > LEDs > YELLOW to engage Yellow LED mode.

Green LED Test Mode

■ Press UTILITY > TEST > LEDs > GREEN. All Green LEDs illuminate.

All LED Test Mode

■ Press UTILITY > TEST > LEDs > ALL.

1 Press the flashing ASSIGN/ENABLE switch located to the left of the DSP Edit/Assign scribble strip showing another test mode to simultaneously disengage the ALL LED test mode and enter the newly selected mode.

2 Press the ASSIGN/ENABLE switch for "ESCAPE" to exit the LED test page menu and return one level up. Or, press the flashing UTILITY switch to exit the Utility mode entirely and revert to the previous ProControl state.

Display Page

■ Press UTILITY > TEST > DISPLAY. The following Display test choices appear vertically on the DSP Edit/Assign displays:

<METER>

<TIMECODE>

<SCRIBBLE>

<ESCAPE>

Meter Test Mode

■ Press UTILITY > TEST > DISPLAY > METERS.

Meter test mode will continually cycle through a series of automated tests which checks the LED's on each meter on the meter bridge of the control surface(s).

Time code Display Test Mode

■ Press UTILITY > TEST > DISPLAY > TIME-CODE.

Time code test mode will continually cycle through a series of automated tests which checks the LED's and LED segments on the time display.

Scribble Test Mode

■ Press UTILITY > TEST > DISPLAY > SCRIBBLE.

Scribble test mode will continually cycle through a series of scribble strip tests.

Fader Test Page

Press UTILITY > TEST > FADER to access the Fader page. The following Fader test choices appear vertically on the DSP Edit/Assign displays:

<STEP>
<CYCLE>
<SINE>
<GROUP>
<TOUCH>
<RECAL>
<ESCAPE>

- Press any of the flashing ASSIGN/ENABLE switches corresponding to the desired Fader test to enter the test mode.

Step Test Mode

Step test mode places the faders in a test mode where the faders follow the scrub/shuttle wheel. When this mode is first engaged, the faders will jump to mid position (approximately 512 steps).

Cycle Test Mode

Cycle test mode cycles the faders together, from the bottom of the fader throw to the top in a continuous cycle. Cycle speed is set with the scrub wheel.

The fader position values are shown in the scribble strips and are updated in real-time as the group of faders is moved. Values will range from off (value of “0”) to full-on (value of “1023”).

Sine Test Mode

Sine test mode cycle the faders in a sine wave shape. Cycle speed is set with the scrub wheel.

The fader position values are shown in the scribble strips and will be updated in real-time as the group of faders is moved. Values will range from off (value of “0”) to full-on (value of “1023”).

Group Test Mode

Group test mode test group response. It also displays which fader(s) is currently being touched by showing the letter “T” in its fader display.

Touch Test Mode

Touch test mode places tests when a fader has been touched and at what frequency the fader is currently recognizing. The fader frequency value will be shown in the scribble strips and will be updated in real-time as a fader (s) is touched. The fader(s) currently touched will additionally show the letter “T” in its corresponding scribble strip.

Recal Mode

Recal recalibrates the faders to factory specifications. This is identical to the calibration which occurs at power-on of ProControl Main and Fader Expansion units. All faders will move from their current position to the top of the fader path and then to the bottom. Once the recal has been completed, the faders will return to the position prior to entering the Recal test mode and the lower Fader Section scribble strips will display the fader calibration value.

Rotary Page

To test the knobs.

- 1 Press UTILITY > TEST > ROTARY.
- 2 Rotate the desired channel encoder(s) to test the knob. The 3-digit encoder value is displayed and updated in real-time in the scribble strips.
- 3 Rotate a DSP encoder to test the knobs in the DSP Edit/Assign section. The values for the (8) DSP Edit/Assign encoders are displayed vertically.

To test the scrub wheel:

- 1 Rotate the wheel. Test values of the scrub/shuttle wheel will be displayed on the Channel/Group scribble strip.

Mouse Page

- 1 Press UTILITY>TEST > MOUSE.
- 2 To test Trackpad response, click around in the Trackpad and watch the X/Y coordinates displayed in scribble strips 2 and 3. This is a test-only mode.

To change Mouse settings:

- Press UTILITY > SYSTEM > Prefs > MOUSE.

Reset (Factory Default) Page

The Reset page allows you to reset the ProControl Main and Fader Expansion units to the factory default settings.

To reset ProControl units:

- 1 Press UTILITY > RESET. Select CANCEL to cancel the reset operation, exit the reset menu and return to the main Utility page.

- 2 Press OK to reset the unit. A confirmation message will appear down the DSP Edit/Assign scribble strips which you will need to OK or Cancel.

The default values which will be reinstated are:

Unit Name: MAINUNIT or FADERPK

Contrast:8

Sleep mode: Never

SW 1 & SW 2 = play/stop, 1 = talkback

Monitor mode: Stereo/Single source

Listenback: Off

Talkback: INT/EXT

Mute/Dim: ALL

Mouse speed: Medium

Preferences

The Utility Prefs pages provide control of LED contrast, sleep mode, fader resistance, trackpad/mouse, and footswitch options.

To access the Prefs pages:

- Press UTILITY > Prefs.

Fader Resistance

Fader pull back, or resistance, determines the “feel” of fader travel. To optimize fader response/feel, each ProControl unit has adjustable fader resistance to provide looser or tighter fader response.

Fader resistance must be set individually on each ProControl unit, using the instructions below for a Main Unit and Fader Pack(s), if any.

To adjust Fader Resistance:

Main Unit

- 1 Press UTILITY > PREFS > FADER.
- 2 Use the Scrub/Shuttle wheel to raise/lower fader resistance. You can move any faders on the main unit while adjusting the wheel to feel the change.

Fader Pack(s):

- 1 Press and hold SHIFT/ADD + OPT(ALT)ALL + F4. The top row of data displays (above the pan knobs) display:

SYSTEM | TEST | PREFS

- 2 Press the flashing red switch to select PREFS. From the next list of choices, select FADER.
- 3 Rotate any data encoder (knob) to raise or lower fader resistance. Check the effect of various settings by moving a fader while turning the encoder to adjust resistance.

Brightness (Contrast) Page

This page lets you adjust LED brightness. Brightness/contrast modes are adjusted on a unit by unit basis (non-global adjustment). Rotate any rotary encoder (including the scrub/shuttle wheel) to the left to decrease the contrast levels of the scribble strip displays. The numeric value of the contrast level will be displayed on the CHANNEL/GROUP scribble strip.

To adjust contrast:

- 1 Press UTILITY > PREFS > CONTRAST.
- 2 Use any rotary encoder or the wheel to increase/decrease LED contrast. The numeric value of the contrast level will be displayed on the CHANNEL/GROUP scribble strip.

- 3 Press “OK” to accept the new contrast value. Following this action, the scribble strips will be lit with the new contrast value and the menu will be returned one level up.

Sleep Mode Page

Sleep mode is an energy-saving feature which places the LEDs in a power-conserving state.

- 1 Press UTILITY > PREFS > SLEEP.
- 2 Rotate the DIM LED encoder to scroll through options. Values, listed in terms of “sleep after,” reduce in 1-hour increments counting down from 12 to 1, then single minute increments from 59 to 1.

Mouse Mode Page

To select between the internal Trackpad or an external Mouse:

- 1 Make sure your external mouse is connected to ProControl (see Chapter 2 for details).
- 2 Choose UTILITY > PREFS > MOUSE.
- 3 Select INT (for Trackpad) or EXT (for an external mouse). Only one may be enabled at a time.

To adjust Trackpad/mouse response:

- Press UTILITY > PREFS > MOUSE > SPEED. Choose between Very Fast, Fast, Medium Fast, Medium, Slow or Very Slow. Medium is the default.

Footswitch Settings

The SWITCH 1 and SWITCH 2 Prefs choices let you configure the polarity and function of both footswitch inputs. Press UTILITY > Prefs > SWITCH 1 or SWITCH 2 to access their respective settings pages. Configure the Polarity for your switch(es), then choose a function: Play/Stop, Record, or Talkback.

Remote (Local) Utility Mode

There are a number of Utility items which are adjustable on individual Fader Pack units.

To access remote Utility operation:

- 1 On a Fader Pack, press SHIFT/ADD+OPT (ALT) ALL+F4.
- 2 The scribble strips in the Fader Section (located above the channel encoders) will display the parameters available.
- 3 Select a parameter as described in the previous section.
- 4 To exit these Utility menus, press ESCAPE.

Local Utility Name Page

The local mode Name page lets you specify a unique name for each ProControl Main and Fader Expansion unit.

To access the Local Name page:

- 1 Press SHIFT/ADD + OPT (ALT) ALL + F4 switch on any ProControl Main or Fader Pack unit. The local mode Utility pages are displayed horizontally on the upper fader section LED displays.
- 2 Press the flashing ASSIGN/MUTE switch for NAME. The Name menu information is displayed horizontally across the upper fader section scribble strips.

- The current unit name appears in display #4 with its first character flashing indicating that text entry is now possible.
- The ASSIGN/MUTE switch LED's corresponding to the "<," "Name," ">," "OK" and "CANCEL" scribble strip fields flash.

3 Press the flashing "<" ASSIGN/MUTE switch to move from right to left through the Name field. The character currently active will flash. Press the flashing ">" field ASSIGN/MUTE switch to move from left to right through the Name field. The current character will flash.

4 Use the rotary encoder to scroll through and select an alpha-numeric character.

5 To clear the Name field at any time press the flashing CLEAR>ASSIGN/MUTE switch.

6 Press the flashing ASSIGN/MUTE switch for OK to confirm the new name.

7 To cancel the name change, select CANCEL to return to the main "local mode" Utility page. Or, select ESCAPE on the main Utility page to exit and return to normal ProControl operation.

Local Test Page

The local mode Test pages include menu items for testing various components and sections on individual ProControl units.

To access the Test pages:

- 1 Access local mode as described in the previous sections (SHIFT/ADD + OPT (ALT) ALL + F4).

Press the flashing ASSIGN/MUTE switch for TEST.

To exit Utility System mode:

- Press the flashing ASSIGN/ENABLE switch to the left of the LED display showing ESCAPE, or press the UTILITY switch.

Ethernet Test Mode

The Ethernet test page lets you analyze Ethernet communication. All of these tests display statistics relating to Ethernet performance: “packets” sent/received, errors, retries, etc. These tests can assist Digidesign technical support should you ever experience difficulty with your Ethernet communication between Pro Tools and ProControl.

To run an Ethernet test:

- 1 Press and hold SHIFT/ADD + OPT (ALT) ALL + F4 switch on a Fader Expansion unit or Fader section of a ProControl Main unit to enter local utility mode.
- 2 Select TEST > ETHERNET on the desired unit. The Ethernet test choices appear horizontally in the data encoder displays. The fader displays below show the statistical data for each Ethernet test:

To perform Ethernet Loopback Internal or MENDEC test:

- Press the appropriate ASSIGN/MUTE switch. The fader scribble strip displays will begin to show Ethernet test statistics. During these tests, the transmit and receive statistics should increase at the same rate, and you should not see many “bad” packets reported.

To perform Ethernet Loopback EXTERNAL:

- 1 Disconnect the unit’s Ethernet connection.
- 2 Take the special Ethernet Loopback Connector (included with your ProControl Main Unit) and plug it into your unit’s Ethernet port.
- 3 In Local Utility mode, press TEST > ETHERNET > EXTERNAL.

During the test, watch the fader displays to make sure the transmit and receive values are increasing at the same rate (not the same numbers, but the same rate of change).

- Press F1 at any time to clear and reset the test.

Utility System Display

The System page displays firmware revision and other unit-specific data.

To access the System page:

- 1 Press and hold the ASSIGN/ENABLE switch flashing SYSTEM. The firmware, hardware and Ethernet ID system information specific to the ProControl unit is displayed horizontally across all attached Fader Section scribble strips (upper and lower).

This temporary display will revert to its previous mode when the SYSTEM switch is released.

Appendix B: Audio Connectors and Pinouts

The tables on the following pages list the Pro-Control input and output channels and their intended use in stereo and surround mode, with pinouts for each of the DB-25 connectors.

The information provided in the tables on the following pages corrects and replaces similar information available previously in the *ProControl Guide* and other publications from Digidesign.

Output Connector Rev C and Rev D

There are two versions of the Control Room section analog board currently in the field (both are listed in the following pages).

Rev C This board was included in original Pro-Control Main Units. These units have a serial number beginning with the prefix KH.

Rev D This board is in every new Main Unit, which have serial numbers beginning with the prefix NX. This board offers improved performance from the Control Room monitoring features, and is available through Digidesign or your authorized Digidesign dealer.

Audio Input 1 Connector

Signal Name Stereo Mode	Signal Name Surround Mode		DB-25 pin #	DA-99 Cable Jack #
Aux. Input Left	N/C	Hot	1	8
		Cold	14	
		Gnd	2	
Aux. Input Right	N/C	Hot	15	7
		Cold	3	
		Gnd	16	
Solo not used	N/C	Hot	4	6
		Cold	17	
		Gnd	5	
Solo not used	N/C	Hot	18	5
		Cold	6	
		Gnd	19	
N/C	N/C	N/C	7	4
		N/C	20	
		N/C	8	
N/C	N/C	N/C	21	3
		N/C	9	
		N/C	22	
Talkback Mic Input	Talkback Mic Input	Hot	10	2
		Cold	23	
		Gnd	11	
Listen- back Mic Input	Listen- back Mic Input	Hot	24	1
		Cold	12	
		Gnd	25	
N/C	N/C	N/C	13	N/C

Audio Input 2 Connector

Signal Name Stereo Mode	Signal Name Surround Mode		DB-25 pin #	DA-88 Cable Jack #
Stereo Main Input Left	L	Hot	1	8
		Cold	14	
		Gnd	2	
Stereo Main Input Right	R	Hot	15	7
		Cold	3	
		Gnd	16	
Source #1 Input Left	Ls	Hot	4	6
		Cold	17	
		Gnd	5	
Source #1 Input Right	Rs	Hot	18	5
		Cold	6	
		Gnd	19	
Source #2 Input Left	C	Hot	7	4
		Cold	20	
		Gnd	8	
Source #2 Input Right	LFE	Hot	21	3
		Cold	9	
		Gnd	22	
Source #3 Input Left	not used	Hot	10	2
		Cold	23	
		Gnd	11	
Source #3 Input Right	not used	Hot	24	1
		Cold	12	
		Gnd	25	
N/C	N/C	N/C	13	N/C

Audio Output Connector, REV D

Signal Name Stereo Mode	Signal Name Surround Mode		DB-25 pin #	DA-88 Cable Jack #
Control Room Main Out- put Left	L	Hot	1	8
		Cold	14	
		Gnd	2	
Control Room Main Out- put Right	R	Hot	15	7
		Cold	3	
		Gnd	16	
Slate Out- put Left	Slate Out- put Left	Hot	4	6
		Cold	17	
		Gnd	5	
Slate Out- put Right	Slate Out- put Right	Hot	18	5
		Cold	6	
		Gnd	19	
Control Room Alt. Output Left	Ls	Hot	7	4
		Cold	20	
		Gnd	8	
Control Room Alt. Output Right	Rs	Hot	21	3
		Cold	9	
		Gnd	22	
Aux. Out- put Left	C	Hot	10	2
		Cold	23	
		Gnd	11	
Aux. Out- put Right	LFE	Hot	24	1
		Cold	12	
		Gnd	25	
N/C	N/C	N/C	13	N/C

Audio Output Connector, REV C

Signal Name Stereo Mode	Signal Name Surround Mode		DB-25 pin #	DA-88 Cable Jack #
Control Room Main Out- put Left	L	Hot	14	8
		Cold	1	
		Gnd	2	
Control Room Main Out- put Right	R	Hot	3	7
		Cold	15	
		Gnd	16	
Slate Out- put Left	Slate Out- put Left	Hot	17	6
		Cold	4	
		Gnd	5	
Slate Out- put Right	Slate Out- put Right	Hot	6	5
		Cold	18	
		Gnd	19	
Control Room Alt. Output Left	Ls	Hot	20	4
		Cold	7	
		Gnd	8	
Control Room Alt. Output Right	Rs	Hot	21	3
		Cold	9	
		Gnd	22	
Aux. Out- put Left	C	Hot	10	2
		Cold	23	
		Gnd	11	
Aux. Out- put Right	LFE	Hot	24	1
		Cold	12	
		Gnd	25	
N/C	N/C	N/C	13	N/C

Appendix C: ProControl Shortcuts and Equivalents

Numeric Keypad Transport Mode

Task		Computer Key	ProControl NUMKPD
Metronome/Click on/off	(MIDI)	7	7
Count on/off	(MIDI)	8	8
Merge Record on/off (MIDI)		9	9
Loop Play		4	4 (or LOOP PLAYBACK)
Loop Record		5	5 (or LOOP RECORD)
Quickpunch		6	6 (or QUICKPUNCH)
Rewind		1	1 (or REW)
Fast Forward		2	2 (or FFW)
Record (Punch In/Punch Out)		3	3
Play/Stop		0	0, or PLAY/STOP
Enter “Main” Counter			* (Numeric KPD)
Enter Edit Time Fields	(in main Toolbar)		/ (NKpd)
Enter Timeline Time Fields	(in Transport)	Opt/Alt - /	OPT(ALT)ALL+ / (NKpd)
Capture Timecode		= (Mac kpd only)	=
Create memory location		enter	ENTER
Nudge forward by grid value			+
Nudge backward by grid value			–

Numeric Keypad Shuttle Mode

Task	Computer Alpha Key	ProControl NUMKPD
1 X Forward	6	6
1 X Rewind	4	4
4 X Forward	9	9
4 X Rewind	7	7
1/4 X Forwards	3	3
1/4 X Rewind	1	1
1/2 X Forward	5-6	5-6
1/2 X Rewind	5-4	5-4
2 X Forward	8-9	8-9
2 X Backwards	8-7	8-7
1/16 X Forwards	2-3	2-3
1/16 X Backwards	2-1	2-1
Loop Play of Edit Selection	0	0
Enter "Main" Counter	* or = (on Mac numeric keypad only)	* or = (on Mac numeric keypad only)
Enter Edit Time Fields (Main Toolbar area)	/	/
Enter Timeline Time Fields (Transport)	*	*
Capture Timecode	= (on Mac numeric keypad only)	= (on Mac numeric keypad only)
Create memory location	Enter	ENTER
Nudge forward by grid value	+	+
Nudge backwards by grid value	–	–

Memory Locations

Task	Key	ProControl NUMKPD
Recall memory location	decimal - number - decimal	Decimal (.)
Create memory location	enter	ENTER
Overwrite memory location	Control (Mac) or Start (Win) + click	CTL/CLUTCH + click
Delete memory location	Option/Alt click on button	OPT(ALT)ALL + click

F Keys

Mode or Tool	Mac	ProControl
Shuffle Edit Mode	F1	SHUFFLE
Slip Edit Mode	F2	SLIP
Spot Edit Mode	F3	SPOT
Grid Edit Mode	F4	GRID
Zoomer	F5	ZOOM/SEL
Scrubber	F6	SCRUB/SHUTTLE
Trimmer	F7	TRIM
Selector	F8	SELECT
Grabber	F9	GRAB
Smart Tool		Simultaneously press any two: TRIM, SELECT or GRAB
Pencil	F10	PENCIL
Wait for Note (MIDI) On/Off	F11 (Preferences)	
Record Key	F12	

Commands Focus

The following shortcuts select the Focus mode.

Mode	While holding down ⌘(CTL) and OPT(ALT)ALL:
Commands (Edit)	1 (Numeric Keypad)
Audio (Regions List)	2
MIDI (Regions List)	3
Groups (List)	4

When Commands Focus is enabled, the following shortcuts become available:

Task	Focus Key	ProControl (ALPHA +...)
View/Zoom Tasks		
Zoom Level 1	alpha 1	N/A
Zoom Level 2	alpha 2	"
Zoom Level 3	alpha 3	"
Zoom Level 4	alpha 4	"
Center Timeline Start	Q	17/Q
Center Timeline End	W	23/W
Fill Window	E	5/E
Zoom Out Horizontally	R	18/R (or ZOOM/SEL)
Zoom In Horizontally	T	20/T

Task	Focus Key	ProControl (ALPHA +...)
Audition Tasks		
Start/In with Pre	alpha 6	PRE
Start/In with Post	alpha 7	IN
End/Out by Pre	alpha 8	OUT
End/Out by Post	alpha 9	POST
Play Timeline Selection]	N/A (use computer keyboard)
Play Edit Selection	[N/A (use AUDITION mode)
Selection and Navigation Tasks		
Copy Edit Selection to Timeline Selection	alpha 0	SHIFT/ADD+OPT(ALT)ALL+5
Copy Timeline Selection to Edit Selection	O	SHIFT/ADD+OPT(ALT)ALL+6
Timeline Insertion follows Playback (toggle)	N	N/A
Insertion Follows Playback		14/N
Move Edit Selection up	P	Must use ZOOM/SEL
Move Edit Selection down	; (semicolon)	Must use ZOOM/SEL
Tab back	L	PREVIOUS
Tab forward	' (apostrophe)	NEXT
Capture Timecode	=	=
Editing Tasks		
Snap Region Start to timecode	Y	25/Y
Snap Region Sync point to timecode	U	21/U
Snap Region End to timecode	I	9/I
Snap Region Start to playhead	H	8/H
Snap Region Sync point to playhead	J	10/J
Snap Region End to playhead	K	11/K
Trim Start to Insertion	A	1/A
Trim End to Insertion	S	S
Fade to Start / Fade to End	D (to Start) / G (to end)	D / G
Fade (without showing Fades dialog)	F	F

Task	Focus Key	ProControl (ALPHA +...)
Undo	Z	Z
Cut	X	X
Copy	C	C
Paste	V	V
Separate	B	B
Nudge back by next Grid Value	M	M
Nudge back by Grid Value	<	– (NUMERIC KEYPAD)
Nudge forward by Grid Value	>	+ (NUMERIC KEYPAD)
Nudge forward by next Grid Value	/	

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