

Surround Panner Guide

for Pro Tools D-Control Systems on Windows or Macintosh

Digidesign

2001 Junipero Serra Boulevard
Daly City, CA 94014-3886 USA
tel: 650-731-6300
fax: 650-731-6399

Technical Support (USA)

tel: 650-731-6100
fax: 650-731-6384

Product Information (USA)

tel: 650-731-6102
tel: 800-333-2137

International Offices

Visit the Digidesign Web site
for contact information

Web Site

www.digidesign.com



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PN 9321-14504-00 REV A 07/05

Communications & Safety Regulation Information

Compliance Statement

The model Surround Panner complies with the following standards regulating interference and EMC:

- FCC Part 15 Class A
- EN55103 – 1, environment E4
- EN55103 – 2, environment E4
- AS/NZS 3548 Class A
- CISPR 22 Class A
- ICES-003 Class A

Canadian Compliance Statement:

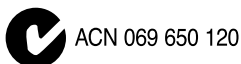
This Class A digital apparatus complies with Canadian ICES-003
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE Compliance Statement:



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

Australian Compliance:



Radio and Television Interference

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

Communications Statement

This equipment has been tested to comply with the limits for a Class A digital device. Changes or modifications to this product not authorized by Digidesign, Inc., could void the Certification and negate your authority to operate the product. This product was tested for CISPR compliance under conditions that included the use of peripheral devices and shielded cables and connectors between system components. Digidesign recommends the use of shielded cables and connectors between system components to reduce the possibility of causing interference to radios, television sets, and other electronic devices.

Safety Statement

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

Warning



Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 13) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC
SHOCK DO NOT EXPOSE THIS EQUIPMENT
TO RAIN OR MOISTURE.

Do not attempt to service the equipment. There are no user-serviceable parts inside. Please refer all servicing to authorized Digidesign personnel.

Any attempt to service the equipment will expose you to a risk of shock and will void the manufacturer's warranty.

SPECIAL WARNING REGARDING AMBIENT TEMPERATURE:

Before powering on the Surround Panner, be sure to allow it to reach room temperature. The unit includes some components that are sensitive to cold temperatures, so it is recommended that you unpack the unit and allow it to acclimate before turning it on for the first time.

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chapter 1

Introduction

The Digidesign Surround Panner is a control surface option for installation in D-Control systems.

The Surround Panner option provides tactile control for many mixing and panning features to enhance multi-channel mixing for surround sound.

What's Included

Your Surround Panner package includes:

- Surround Panner
- Surround Panner Guide
- 5/64-inch Allen wrench

Features

The Surround Panner provides the following main features:

Touchscreen

- ◆ Two touch-sensitive LCD grids for display and fingertip control of X/Y location for panning and assignable controls.
- ◆ Virtual touch-screen buttons for changing panning modes.
- ◆ Alpha-Numeric display of X/Y panning position and track information.

Joysticks

- ◆ Two individually touch-sensitive joysticks, one for each panner section.

Encoders

- ◆ Two individually touch-sensitive multi-purpose rotary encoders, one for each panner section.

Buttons

- ◆ Six Panner Control switches per panner section.
- ◆ Two *Punch* buttons per panner section.

System Requirements and Compatibility

To use the Surround Panner, you need:

- A D-Control console system, running Pro Tools version 6.9.3 or later.

 *The Surround Panner requires a D-Control Main Unit.*

- The D-Control Personality file (included with Pro Tools) must be installed.

Compatibility Information

Digidesign can only assure compatibility and provide support for hardware and software it has tested and approved. For a list of Digidesign-qualified computers, operating systems, and third-party devices, refer to the latest compatibility information on the Digidesign Web site:

www.digidesign.com/compato/

About This Guide


This guide assumes you have already installed Pro Tools and configured D-Control, and that you already understand their features and operating conventions. See the *Pro Tools Reference Guide*, and the *D-Control User Guide* for more information.


Conventions Used in This Guide

This guide uses the following conventions to indicate Pro Tools 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
Control-click	Hold down the Control key and click the mouse button
Right-click (Windows)	Click with the right mouse button

The following symbols are used to highlight important information:

 *User Tips are helpful hints for getting the most from the Surround Panner.*

 *Important Notices include information that could affect the Surround Panner, Pro Tools session data, or the performance of Pro Tools.*

 *Shortcuts provide keyboard shortcuts for tasks.*

 *Cross References point to related sections in the Surround Panner, D-Control, or Pro Tools Guides.*

About www.digidesign.com

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

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

Training and Education Become a certified Pro Tools Operator or Expert; study on your own using courses available online, or find out how you can learn in a classroom setting at a certified Pro Tools Training Center.

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

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

To learn more about these and other resources available from Digidesign, visit our Web site (www.digidesign.com).

chapter 2

Installing and Testing Surround Panner

This chapter provides software and hardware installation instructions, utility tests, and calibration instructions for Surround Panner.

Hardware Installation

⚠ CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

The Surround Panner option installs directly into the D-Control console. When installing the Surround Panner on the Main Unit, you will need to remove the spacer plate from above the Soft Key section of the Main Unit. Beneath the spacer plate are two cable connections that provide power and communication with the Pro Tools D-Control system.

⚠ *Make sure power is off, and the power cable is disconnected before installing the Surround Panner.*

To install the Surround Panner:

- 1 Shut down your D-Control system, and disconnect the power cable. (See “Starting Up and Shutting Down a System” on page 4.)
- 2 Using the included 5/64-inch Allen wrench, remove the six screws holding the spacer plate in place. Place them aside carefully.

⚠ *Do not use a power screwdriver or similar high-torque device to remove and replace the screws for the spacer plate, as it might strip the threads in the screw housing.*

- 3 Remove the spacer plate from the Main Unit.



Figure 1. Removing the spacer plate from the D-Control Main Unit

- 4 Locate the accessory power and communications cables in D-Control.

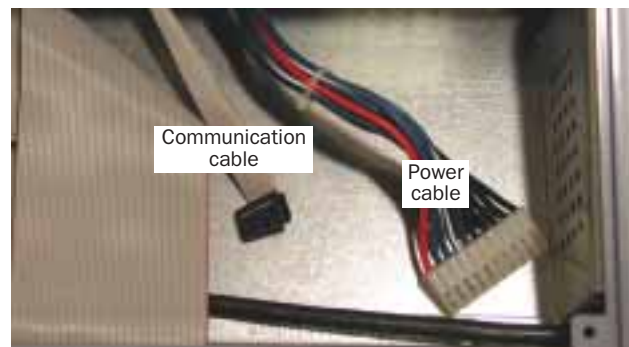


Figure 2. Power and communications cables in D-Control

5 Gently place the Surround Panner face down on the D-Control Soft Key section, with the joysticks near to the keyboard, and the cable connectors adjacent to the opening on the D-Control.



Figure 3. Surround Panner in place for connecting to D-Control

6 Plug the cables into their corresponding connectors on the Surround Panner. You may need to tilt the Surround Panner forward to give the cables enough slack to reach the Surround Panner connectors.

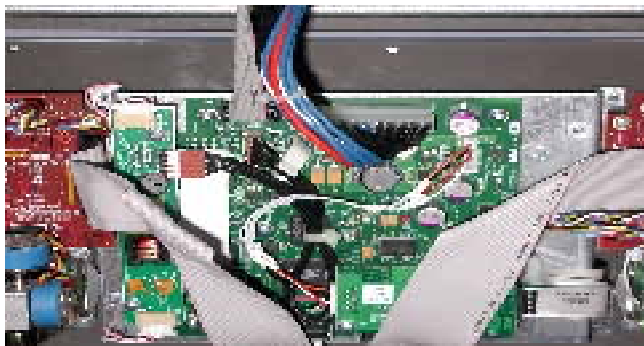



Figure 4. D-Control cables attached to the Surround Panner


7 Gently tilt the Surround Panner into D-Control, making sure to minimize contact between the rear of the panner and the cables inside D-Control.

8 Carefully align the screw holes in the Surround Panner with the screw holes in the D-Control housing.


9 Using the 5/64-inch Allen wrench, attach the Surround Panner in the D-Control with five of the screws you set aside when removing the spacer plate.

 *The Surround panner option attaches to only five of the six screw holes that were used by the spacer plate.*

10 Reconnect power cables, and turn on your D-Control system. The Surround Panner will display a dialog indicating that you need to connect to Pro Tools to download firmware. If no dialog appears, the power cable may not be fully connected.

 *If you have not yet installed (or updated) Pro Tools, stop here and refer to the Getting Started guide that came with your system for complete software installation instructions.*

11 Launch Pro Tools, and update the system firmware as described in the *D-Control Guide*.

 *The firmware update for the Surround Panner takes between 10 and 15 minutes to complete.*

Starting Up and Shutting Down a System

A D-Control system consists of several components that must be turned on and off individually: external hard drives, D-Control, Fader Modules, computer and audio interfaces. In order for all of these devices to communicate properly it is important that you start up and shut down your system in the following order:

Start your D-Control system in this order:

- 1** Turn on external hard drives. Wait 10 to 15 seconds for them to come up to speed.
- 2** Turn on D-Control, then any Fader Modules.
- 3** If you plan to work with MIDI equipment, turn on MIDI interfaces and other MIDI devices.
- 4** Turn on any Pro Tools audio interfaces.
- 5** Turn on your computer.
- 6** Turn on the power to your monitor speakers.

Shut down your D-Control system in this order:

- 1** Turn off the power to your monitor speakers.
- 2** Turn off any Pro Tools audio interfaces.
- 3** Shut down your computer.
- 4** If using MIDI equipment, turn off MIDI interfaces, controllers, or other devices.
- 5** Turn off D-Control, and any Fader Modules.
- 6** Turn off external hard drives.


Utility Modes

You can use the Surround Panner utilities to run diagnostic tests and calibration routines for the joystick and touchscreen.

D-Command Utilities

The Surround Panner responds to the following D-Control test modes and preferences:

- Rotary Test Mode
- Switch Test Mode
- LED Test Modes
- Vegas Mode
- Display Brightness Preference

 For more information about D-Control utilities, see the *D-Control Guide*.

Surround Panner Utilities

Testing and Calibrating the Joystick

The Joystick test shows whether the joystick has sufficient room at the margins of the X/Y grid.

To test the joystick:

- 1 On D-Control, press the Utility switch in the Session Management section.
- 2 Press the Soft Key that corresponds to Test to bring up the Test page.
- 3 On the Test page, press the “Display” Soft Key.
- 4 On the Display page, press the “Panner” Soft Key.
- 5 On the Panner page, press the “Joystk” Soft Key.
- 6 Move the joystick around its perimeter. The center of the green test cursor should always be slightly outside the test grid, and the cursor should not be visible in any of the corners.

To calibrate the joystick:

- 1 On D-Control, press the Utility switch in the Session Management section.
- 2 Press the Soft Key that corresponds to Test to bring up the Test page.
- 3 On the Test page, press the “Display” Soft Key.
- 4 On the Display page, press the “Panner” Soft Key.
- 5 On the Panner page, press the “Joycal” Soft Key.
- 6 Follow the onscreen instructions.

Testing and Calibrating the Touchscreen

To test the touchscreen:

- 1 On D-Control, press the Utility switch in the Session Management section.
- 2 Press the Soft Key that corresponds to Test to bring up the Test page.
- 3 On the Test page, press the “Display” Soft Key.
- 4 On the Display page, press the “Panner” Soft Key.
- 5 On the Panner page, press the “Tchscr” Soft Key.
- 6 Drag your finger on the touchscreen. The center of the green test cursor should accurately indicate the location of your touch.

To calibrate the touchscreen:

- 1 On D-Control, press the Utility switch in the Session Management section.
- 2 Press the Soft Key that corresponds to Test to bring up the Test page.
- 3 On the Test page, press the “Display” Soft Key.
- 4 On the Display page, press the “Panner” Soft Key.
- 5 On the Panner page, press the “Tchscr” Soft Key.
- 6 Follow the onscreen instructions.

Exiting Utility Modes

To exit a Utility mode:

- Press the flashing Utility switch (Main Unit).
– or –
- Press the Soft Key (Main Unit) or encoder Select switch (Fader Module) that corresponds to “Escape.”

chapter 3

Surround Panner Overview

This chapter provides an overview of the Surround Panner option for D-Control, and introduces its major sections and controls.

Figure 5 on page 8 shows where each major section is located.

Surround Panner Option for D-Control

The Surround Panner provides two discrete and functionally identical panner sections. This lets you control up to two mono tracks or sends, or both sides of a stereo track or send. The panner contains a touchscreen display with two sets of on-screen buttons, and two touch-sensitive panner grids. The panner also includes two identical hardware sections, each with joystick, rotary, and switched controls.



Figure 5. Surround Panner

Touchscreen Display

The touchscreen display shows current pan and joystick location, panning controls, and Software buttons. You can change pan position by dragging the pan cursor on the screen with your fingertip. Touchscreen buttons toggle which parameters are controlled by the encoder.

Joysticks

The Surround Panner uses touch-sensitive joystick panners for 360° panning of Pro Tools audio. Joystick pan location is shown on the touchscreen as a ring-shaped *Joystick Cursor*.

Punch Switches

The Punch switches let you perform punch-ins and punch-outs when writing automation using the joystick. In addition, the Punch switches light whenever Pan location is being controlled by the corresponding Joystick.

Panner Encoders

The touch-sensitive Panner Encoders let you control Position and Divergence elements that are selected with the Panner Mode switches and touchscreen buttons, as well as any control assigned to a panner X- or Y-axis in Custom mode.

When you touch the encoder, the track information display temporarily switches from the parameter name to the parameter value.

Panner Control Switches

The Panner Control Switches provide access to Position and Divergence controls, pan modes, automation commands, and Pro Tools windows management controls.

Position The Position switch lets you control pan position one axis at a time with the encoder. When the Position switch is lit, touchscreen buttons let you choose which axis to control.

Div (Divergence) When the Divergence switch is lit, touchscreen buttons assign front, rear, and front/rear divergence controls to the corresponding encoder.

Target The Target switch lets you choose which outputs or automatable parameters of the focused track will be controlled by the Surround Panner.

Pan Mode The Pan Mode switch lets you select which one of the four panning modes is under fingertip control: X/Y mode, Divergence Editing, 3-Knob mode, or AutoGlide mode.

Window The Window switch lets you open and close the Panning output windows in Pro Tools.

Lock The Lock switch locks the currently displayed channel in the panner so that the Panner does not change focus when you focus a different channel in the Focus Channel strip. The Lock switch lights when the corresponding channel is locked.

When a stereo track is focused in the Surround Panner, pressing either Lock button locks the stereo track in both panner sections.

Touchscreen Section

The Touchscreen section of the panner contains touch-sensitive panner grids, pan location cursors, contextual touchscreen buttons, and track information displays.

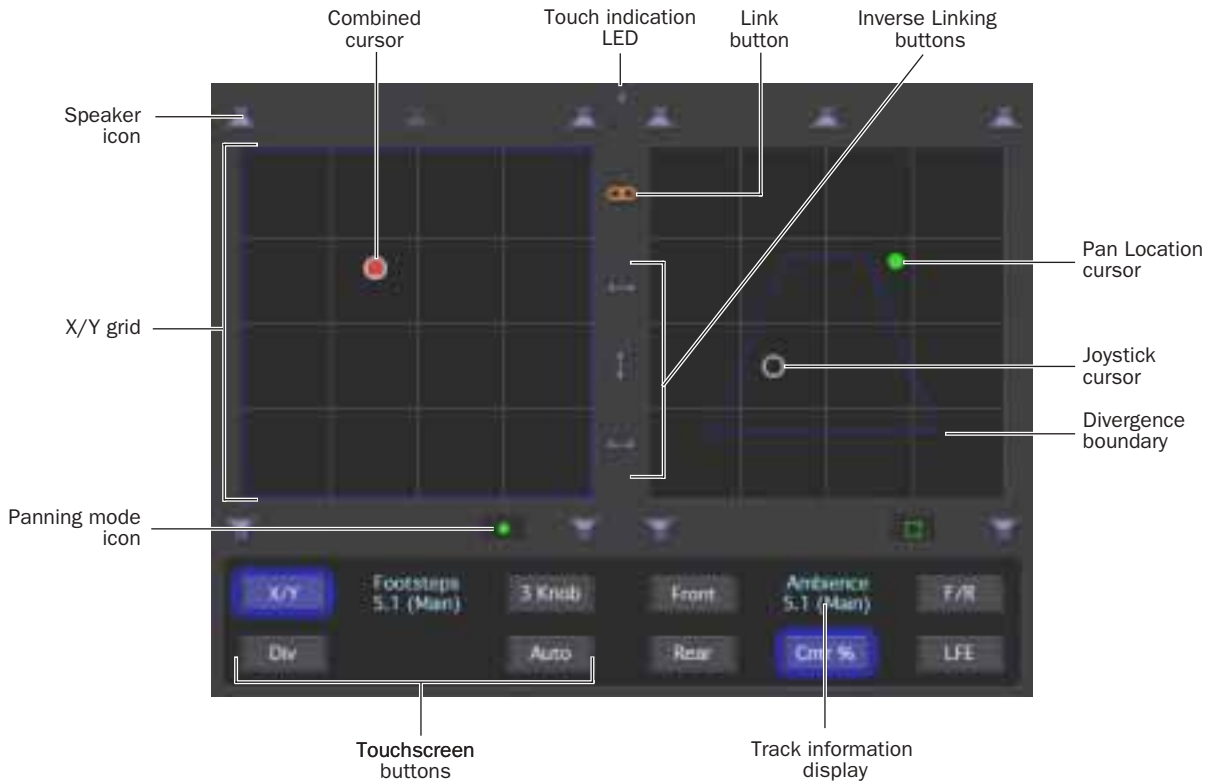


Figure 6. Touchscreen

Speaker Icons

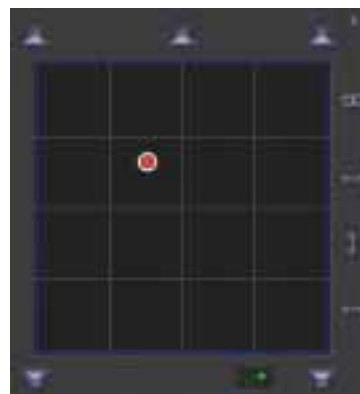
On-screen speaker icons represent, in number and placement, the multi-channel format of the focused track. Touching a speaker icon snaps the Pan Location cursor to that speaker location.

Touch Indication LED

The Touch Indication LED image lights whenever your touch is registered by the touch-sensitive screen. This is particularly helpful when your fingertip completely covers an active on-screen element.

X/Y Grid

The X/Y grid is where multichannel panning information is input and displayed. You can input pan information using your fingertip, the joystick, or the encoder.



X/Y grid and combined cursor


Pan Location Cursor

The pan position for the focused track is represented on the X/Y grid as a dot. This dot is the *Pan Location cursor*, and its color indicates track automation status using standard Pro Tools colors:

Green The track is in automation Read mode.

Red The track is in automation Write, Touch or Latch mode.

Yellow The track is in automation Off mode.

 *The Pan Location cursor only appears when pan controls are available for the focused track.*

Joystick Cursor

The position of the joystick is represented on the X/Y grid as a gray hollow ring, called the *Joystick cursor*.

When the corresponding joystick is touched, the Joystick cursor appears white.

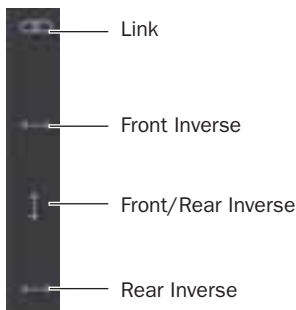
Combined Cursor

When you are using the joystick to control panning, the joystick cursor locks in place around the Pan Location cursor, creating a combined cursor. In addition, the corresponding Punch switches will light as long as the joystick is controlling panning.

Link and Inverse Linking Buttons

The Link buttons let you link or unlink panner sections for synchronized panning of stereo, linked panning of separate mono tracks, and mirrored automation moves in Custom mode.

In the default state of the Linked mode, each panner side matches the other panner's X/Y coordinates.



Link and Inverse Linking buttons

When linked and set to *Inverse* mode, panning moves on one panner section are inverted or reversed in the other panner section.

To enable linking:

- Touch the Link icon. It lights orange to indicate that the panner sections are linked.

To unlink the panner sections:

- Touch the lit Link icon.

To enable inverse linking:

- 1 Touch the Link icon.
- 2 Touch one or more Inverse mode icons.

Panning Mode Icon

The Panning Mode icon, located below the X/Y Grid, lets you select which one of the four panning modes is under fingertip control: X/Y mode, Divergence Editing, 3-Knob mode, or AutoGlide mode.

To enable fingertip control of a Panning Mode with the Panning Mode icon:

- Press the Panning Mode icon repeatedly until the desired mode icon is displayed.



X/Y Mode, Divergence Editing, 3-Knob Mode, and AutoGlide buttons

Touchscreen Buttons

The touchscreen buttons change depending on the current panner mode. Touchscreen buttons include controls for pan-ner control, divergence, pan and automation.

Track Information Display

The track information display shows the name of the focused track and the output destination. When the corresponding encoder knob is touched or moved, the display shows parameter values.

Panner Hardware Switches

The Panner hardware switches determine which touchscreen buttons are showing. The touchscreen buttons determine the function of the encoders and X/Y grid.

Position

The Position switch displays a set of touchscreen buttons which let you set which parameter is controlled by the encoder. There are five Position touchscreen buttons.

A touchscreen button is visible only when the parameter it controls is present in the channel.



Position buttons on the touchscreen

Front

The encoder controls the front position of the 3-Knob mode trajectory line.

Rear

The encoder controls the current rear position of the 3-Knob mode trajectory line.

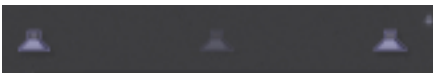
F/R (Front/Rear)

The encoder controls the current Y-axis position of the Pan Location cursor on the 3-Knob mode trajectory line.

Ctr % (Center %)

The encoder controls the percentage of the signal that is routed to the center speaker. This lets you determine whether there is a *discrete* center image (100% Center value), a completely *phantom* center image (0% Center value), or a variable amount in between.

As you reduce the Center Percentage value, the center speaker icon at the top of the Grid becomes less visible. At a 0% Center Percentage value, the center speaker icon is completely invisible, reflecting the setting for fully phantom center.



Center channel with a 40% Center percentage value

LFE

The encoder controls the LFE (Low Frequency Effects) level.

Divergence (Div)

The Divergence switch displays a set of touchscreen buttons which let you set the width of the panned signal with respect to neighboring speakers. Higher divergence settings produce a narrower sound source, and lower divergence settings result in a wider source signal. There are three Divergence touchscreen buttons.



Divergence buttons on the touchscreen

Front, Rear, and F/R (Front/Rear) Divergence

The Front, Rear, and F/R Divergence touchscreen buttons provide encoder control over front speakers, rear speakers, and between front/rear, respectively.

With Full (100%) divergence, tracks are panned exclusively, or *discretely*, to a single speaker, and are audible only in that speaker. When divergence is less than 100%, tracks are audible in neighboring speakers even when panned directly to a single speaker in the grid.

Target

The Target switch displays a set of touchscreen buttons which let you choose to control track panning, send panning, or a set of custom parameters mapped to the X/Y grid.



Target buttons on the touchscreen

Main

Sets the panner to control panning on the main track output.

Send

Sets the panner to control send panning for sends. Pressing the Send touchscreen button will step sequentially through the available sends.

Custom

Sets the panner to a custom assignment mode where any two automatable parameters from the currently focused channel can be individually assigned to the X and Y axes of the panner grid.

Pressing the Custom touchscreen button changes the touchscreen to display a set of custom assignment touchscreen buttons.



Custom assignment buttons on the touchscreen

Assign X Lets you set an automatable parameter to be controlled by X-axis movement on the panner.

Assign Y Lets you set an automatable parameter to be controlled by Y-axis movement on the panner.

Back Returns the Target mode touchscreen buttons to the display.

Rotary X and Rotary Y Lets you set the encoder to adjust the parameter assigned to either the X or Y axis for finer control.

To assign a plug-in parameter to a panner axis:

- 1 On D-Control, focus the track that contains the plug-in parameter that you wish to control on the Focus Channel Strip by pressing the track's Select switch.
- 2 Press the Target switch on the surround panner.
- 3 Press the Custom touchscreen button.
- 4 Press the Assign X or Assign Y touchscreen button.
- 5 On D-Control, touch the encoder or fader for the parameter that you wish to assign. The assign button will light, and the Track Information display will show the name of the assigned control when a parameter has been assigned.

Pan Mode

The Pan Mode switch displays a set of touchscreen buttons which let you select one of the four panning modes is under fingertip control: X/Y mode, Divergence Editing, 3-Knob mode, or AutoGlide mode.

The touchscreen buttons duplicate the functionality of the Panning Mode button located below the X/Y Grid.



Pan Mode buttons on the touchscreen

X/Y Mode

Lets you pan by dragging the Pan Location cursor within the X/Y Grid.

3-Knob Mode

Lets you constrain panning to a straight line.

Divergence Editing

Lets you resize the divergence boundaries with fingertip control.

AutoGlide Mode

Lets you perform point-to-point panning from the current Pan Location cursor to a new destination over a specified AutoGlide Time.

Window

The Window switch lets you open and close the on-screen output or send window for the track that is currently focused in the Panner. This switch lights when a track's output window is open.

Lock

The Lock switch lets you lock the focus of the Panner on the current track. When the focus is locked, the current track remains in the panner, even when a different track is focused on D-Control. This switch lights when the track focus is locked.

chapter 4

Using the Surround Panner

The Surround Panner provides two complete Panner sections, each with joystick, encoder, and switched controls. The two Panner sections can be focused independently to pan any track or send output in a session.

When stereo tracks are focused in the Surround Panner, the two sides of the stereo path are mapped to both left and right Panner sections, replacing any previous focused tracks.

Focusing Track and Send Outputs in the Panners

You can focus Pro Tools track and send outputs in the Surround Panner both onscreen and from D-Control.

There are several ways to focus Pro Tools outputs in the Surround Panner. These include:

- Focusing a track in the D-Control Focus Channel Strip.
- Selecting a track or send from Pro Tools with the mouse.

Display of Surround Panner Focus

In the Mix and Edit windows, Pro Tools outlines track or send outputs that are focused in the Surround Panner with the D-Control main unit color, which is set in the Ethernet Controllers page of the Peripherals dialog.

To focus a track's Main output in the Surround Panner from D-Control:

- 1 Make sure the Select/Focus switch mode is set to Focus.
- 2 Press the channel Select switch for the track you want to focus.

The track's Main output is focused in the left-hand panner section by default. If the selected output is assigned to a stereo track, the track will be focused in both panner sections.


To focus sends in the Surround Panner:

- 1 Make sure the Select/Focus switch mode is set to Focus.
- 2 Press the channel Select switch for the track you want to focus.
- 3 Press the Target switch on the Surround Panner.

- 4 Press the Send touchscreen button repeatedly to choose the send that you want to focus.

To focus a track or send in the Surround Panner from Pro Tools:

- 1 Make sure the Target Track from Application Soft Keys preference is set to Yes.
- 2 On-screen in Pro Tools, do one of the following:
 - Click the Output icon or send to focus it.
 - Click the header of an open send window or Output window to focus it.

 *Press Start (Windows) or Control (Macintosh) while focusing a track or send on-screen in Pro Tools to focus the track or send to the right-hand panner section.*

Locking a Track or Send Outputs in a Panner Section

You can lock a focused send or output into a panner section using the Lock switch. When one panner is locked, focusing a track will put the focused track into the other, unlocked panner.

To lock a track in the left-hand panner section:

- 1 Focus a track. It will focus in the left-hand panner section.
- 2 Press the Lock switch for the left-hand panner section.

Opening Send or Output Windows On-Screen

There are several ways to open send and output windows on-screen from D-Control.

To open a send or output window on a focused track:

- 1 Press the channel Select switch for the track you want to focus.
- 2 Press the Window switch on the Surround Panner.

To close all open output windows:

- Hold Alt (Windows) or Option (Macintosh) and press the Pan Window switch in the Window Management section.

Panning

The Surround Panner provides access to all pan controls in Pro Tools, allowing you to control mode selection, perform joystick and knob-based panning, and perform divergence, center percentage and LFE parameter editing.

To select a panning mode:

- Do one of the following:
 - Repeatedly press the touchscreen Panning Mode icon until the desired mode icon is displayed.
 - Repeatedly press the Pan Mode hardware switch until the desired mode icon is displayed.
 - Press the appropriate Pan Mode touchscreen button.

Fingertip Panning

You can pan by dragging the Pan Location cursor on the touchscreen. Only one panner at a time can be panned with the fingertip.

Joystick Panning

You can pan by dragging the Pan Location cursor with the joystick. Both joysticks can be used simultaneously.

Proximity Takeover

To avoid unintentionally abrupt panning, the Joystick cursor uses a *proximity takeover* to capture the Pan Location cursor. This means that the Joystick cursor only captures the Pan Location cursor when you move it close enough for the two cursors to intersect.

X/Y Mode

In X/Y mode you can change the Pan location by moving the Pan Location cursor on the X/Y grid with either the fingertip or joystick. The location of the Pan Location cursor determines the pan position of the signal. For example, moving the Pan Location cursor to the lower-left corner of the Grid pans the track to the left rear speaker.

To pan from the current Pan location using the touchscreen:

- Touch and drag the Pan Location cursor in the X/Y Grid.

To snap the Pan Location cursor to a location in the Grid using the touchscreen:

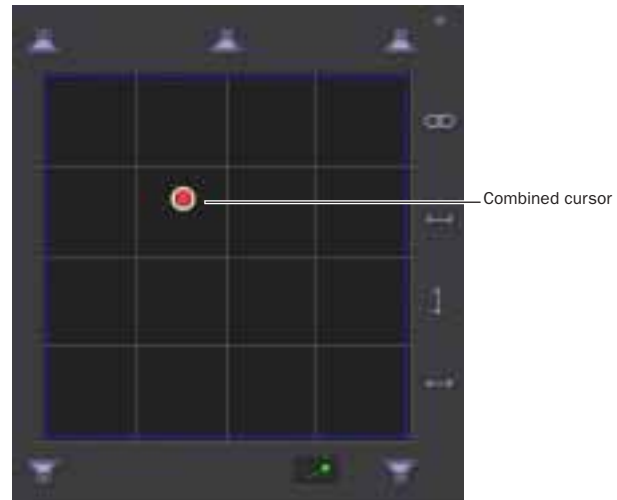
- Touch anywhere in the X/Y Grid. The Pan Location cursor will snap to that location.

To pan discretely to one speaker:

- Touch a speaker icon. The Pan Location cursor will snap to that location. If full divergence is in effect, the signal will be present only in that speaker.

To pan from the current Pan location with the joystick:

- 1 Move the Joystick cursor to the take over the Pan Location cursor, creating a Combined cursor.



Combined cursor

- 2 Move the Combined cursor in the X/Y Grid.

To release the Pan Location cursor:

- Release the joystick.
 - or –


Press a lit Punch switch

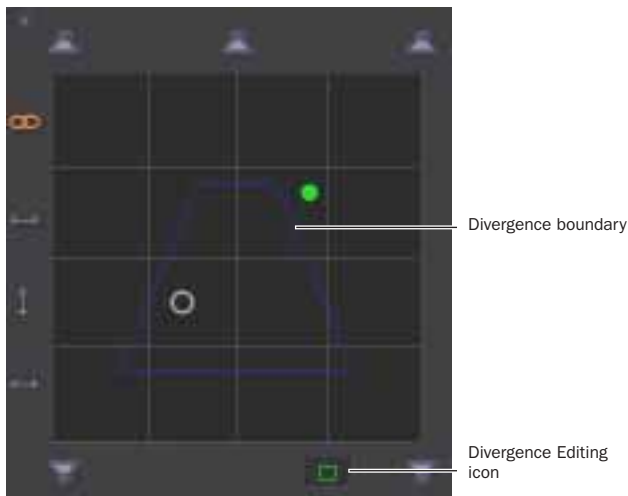
To snap the Pan Location cursor to the Joystick cursor position:

Move the Joystick cursor to any location in the X/Y Grid and press one of the corresponding Punch switches. The Pan Location cursor will snap to the Joystick cursor location.

Divergence Editing

In the X/Y Grid, the current divergence values are displayed using a blue Divergence boundary. The Divergence boundary can be adjusted by touch or by encoder.

 When the panner is in Divergence editing mode, panning moves can still be made using the joystick.



Divergence display and controls

When a track is panned to a single speaker with 100% divergence, the track is panned exclusively, or *discretely*, to that speaker, and is audible only in that speaker. When divergence is less than 100%, tracks are audible in neighboring speakers even when panned directly to a single speaker in the grid.

To adjust divergence using the encoder:

- 1 Press the Divergence (Div) switch.
- 2 Press the Front, Rear, or F/R touchscreen button to assign that control to the encoder.
- 3 Turn the encoder to adjust the Divergence control as necessary.

To adjust divergence using the touchscreen:

- 1 Press the Panning Mode button until the Divergence Editing icon is displayed.



Panning Mode button set to Divergence Editing

- 2 Touch and drag the Divergence boundaries in the X/Y Grid.

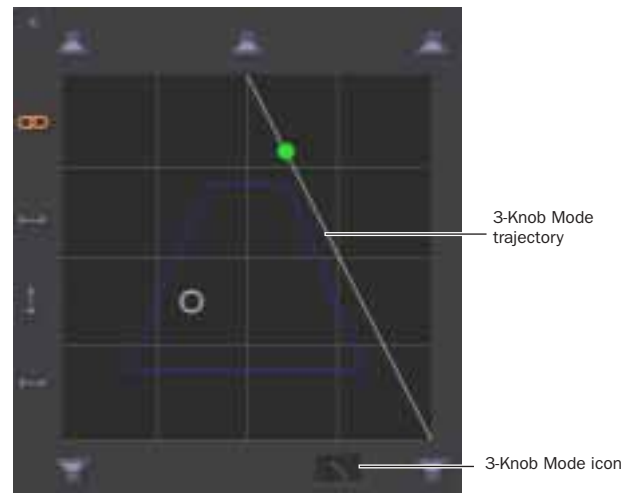
3-Knob Mode

3-Knob mode lets you:

- Pan in a straight line between the front and rear position of the panning trajectory, using the encoder or touchscreen to adjust the front and rear endpoints of the trajectory line.
 - and –
- Pan discretely between pairs of speakers.

When panning between a front speaker and a back speaker in 3-Knob mode, audio will be heard only from those two speakers if full divergence is in effect.

By comparison, in X/Y mode a similar pan may result in audio being heard in some or all channels.



3-Knob display

To change the 3-Knob trajectory angles using the encoder:

- 1 Press the Position switch.
- 2 Press either the Front or Rear touchscreen button.
- 3 Turn the encoder to adjust the panning trajectory.

To pan in 3-Knob mode using the encoder:

- 1 Press the Position switch.
- 2 Press the F/R touchscreen button.
- 3 Turn the encoder to pan along the trajectory line. The Pan Location cursor is constrained to the white trajectory line.

To change the 3-Knob trajectory angles using the touchscreen:

1 Press the Panning Mode button until the 3-Knob mode icon is displayed. The panner trajectory line appears across the Grid, extending from the front speakers to the rear speakers.



Panning Mode button set to 3-Knob mode

2 Drag either endpoint (Front or Rear) of the trajectory line.

To move the 3-Knob trajectory using the touchscreen:

1 Press the Panning Mode button until the 3-Knob mode icon is displayed.

2 Touch and drag the interior of the trajectory line.

To pan in 3-Knob mode using the touchscreen:

1 Press the Panning Mode button until the 3-Knob mode icon is displayed.

2 Touch and drag the Pan Location cursor. The cursor's movement will be constrained to the trajectory line.

AutoGlide Mode

AutoGlide mode lets you quickly write Surround panning automation by establishing destination points and pan movement times, instead of manually moving the Pan Location cursor.

! When writing automation in AutoGlide mode, the Pan Location cursor cannot be dragged from its location.

The time it takes to glide from point to point (from the Pan Location cursor to the new destination) is called the AutoGlide Time and has a range of 1 msec to 10000 msec (10 seconds).

To set the AutoGlide Time from D-Control:

- 1 Press the Prefs switch in the Soft Keys section.
- 2 Press the Glide Time Soft Key switch.
- 3 Adjust the AutoGlide time with the Scrub/Shuttle wheel.

💡 AutoGlide time can be adjusted on-the-fly with the Scrub/Shuttle wheel as automation is being written.

To set the AutoGlide Time from Pro Tools:

- 1 Choose Setups > Preferences and click the Automation tab.
- 2 Set the AutoGlide time.

To perform an AutoGlide automation pass:

1 Click the Panning Mode button until the AutoGlide mode icon is displayed.



Panner Mode button set to AutoGlide mode

2 Select an Automation mode for the track you want to automate.

3 Press Play to begin playback.

4 Set a new destination for the cursor by doing one of the following:

- Press a speaker icon to glide to that speaker location.
- or –
- Touch a point on the X/Y Grid to glide to that panning location.
- or –
- Move the Joystick cursor to a point on the X/Y grid and press the Punch switch to glide to the Joystick location.

The Pan Location cursor will begin to move towards the new destination at the rate specified in the AutoGlide Time. When the new destination point is reached, a new breakpoint will be written at the new location.

5 Repeat the previous step if you want to write additional panning moves.

💡 AutoGlide panning moves may be queued up by specifying each sequential panning location during an automation pass. When the Pan Location cursor reaches each destination it will immediately start to glide to the next destination in the queue.

6 Stop the transport when finished.

Custom Mode

In addition to controlling panning, you can use the panner to control *any* automatable parameter in Pro Tools. Two automatable parameters can be controlled on each panner grid, with one mapped to the X axis, and the other mapped to the Y axis. The encoder can be assigned to control movement on either axis.

To assign an automatable parameter to panner axis control:

- 1 Press the Target switch.
- 2 Press the Custom touchscreen button.
- 3 Press the Assign X or the Assign Y touchscreen button. The button will flash.

4 On D-Control, touch the control, on the currently focused channel strip, for the parameter on the that you wish to assign. The flashing Assign X or the Assign Y touchscreen button will light steadily, indicating that a parameter has been assigned to the associated panner axis.

To remove a parameter assignment:

- 1 Press the Target switch.
- 2 Press the Custom touchscreen button.
- 3 Press a lit Assign X or Assign Y touchscreen button twice. The button will go dark, indicating that no parameter is assigned to the associated panner axis.

To assign an encoder to control a panner axis:

- 1 Make certain an automatable parameter is assigned to the axis you wish to control.
- 2 Press the Target switch.
- 3 Press the Custom touchscreen button.
- 4 Press the Rotary X or Rotary Y touchscreen button. The button will light steadily, indicating that a panner axis has been assigned to the associated encoder.

 *Only one encoder assignment can be in effect at one time.*

To remove an encoder assignment:

- 1 Press the Target switch.
- 2 Press the Custom touchscreen button.
- 3 Press the lit Rotary X or Rotary Y touchscreen button. The button will go dark, indicating that no encoder is assigned to the associated panner axis.

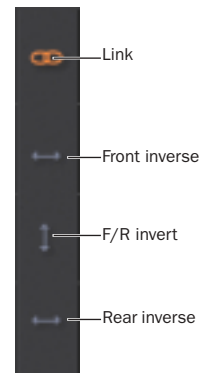
Linking Panners

You can link panners to mirror the cursor movement of one X/Y grid to the other X/Y grid. When linked, automation is written to both the directly controlled track and the linked track. Linking can be enabled or deselected at any time.

Pro Tools lets you link the two sides of any stereo track for linked, and inverse linked panning. Using the Surround Panner, you can also link and inverse link mono tracks or custom X/Y grid layouts.

Link Icons

You control linking and inverse linking between the panner sections with the Link icons between the X/Y grids.



Link controls with the Link icon selected

To link the Panners:

- 1 Focus the Panners as described in “Focusing Track and Send Outputs in the Panners” on page 15.
- 2 Press the Link icon on the touchscreen.

Inverse Linking

The Surround Panner supports Pro Tools inverse linking, where panning moves made in one X/Y grid are inverted from side to the other. When the Link icon is selected, the three inverse modes become available: Front, Rear, and Front/Rear. The inverse modes can be used individually or in combination with one another.

To enable inverse linking:

- Press any combination of Inverse Linking icons on the touchscreen.

