




Logic 7
Dedicated Control
Surface Support

 Apple Computer, Inc.
© 2004 Apple Computer, Inc. All rights reserved.

Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of Apple. Your rights to the software are governed by the accompanying software licence agreement.

The Apple logo is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. Use of the “keyboard” Apple logo (Option-Shift-K) for commercial purposes without the prior written consent of Apple may constitute trademark infringement and unfair competition in violation of federal and state laws.

Every effort has been made to ensure that the information in this manual is accurate. Apple Computer, Inc. is not responsible for printing or clerical errors.

Apple Computer, Inc.
1 Infinite Loop
Cupertino, CA 95014-2084
408-996-1010
www.apple.com

Apple, the Apple logo, Aqua, Final Cut, Final Cut Pro, FireWire, iBook, iMac, iPod, iTunes, Logic, Mac, Macintosh, Mac OS, PowerBook, Power Mac, Power Macintosh, and QuickTime are trademarks of Apple Computer, Inc., registered in the U.S. and other countries.

Finder and GarageBand are trademarks of Apple Computer, Inc.

AppleCare is a service mark of Apple Computer, Inc.

Helvetica is a registered trademark of Heidelberger Druckmaschinen AG, available from Linotype Library GmbH.

Other company and product names mentioned herein are trademarks of their respective companies. Mention of third-party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. Apple assumes no responsibility with regard to the performance or use of these products.

Contents

Preface	7 What Is Covered
	7 CM Automation Motormix
	7 CM Labs Motormix
	7 Emagic Logic Control
	8 Emagic Logic Control XT
	8 Mackie Baby HUI
	8 Mackie C4
	8 Mackie Control
	8 Mackie Control Extender
	9 Mackie Control Universal
	9 Mackie HUI
	9 Radikal Technologies SAC-2.2
	9 Radikal Technologies SAC-2k
	9 Roland SI-24
	9 Tascam FE-8
	9 Tascam FW-1884
	10 Tascam US-224
	10 Tascam US-428
	10 Yamaha 01V96
	10 Yamaha 02R96
	10 Yamaha 01X
	10 Yamaha DM1000
	11 Yamaha DM2000
Chapter 1	13 Logic Control—Basics
	13 Introduction
	14 Getting Started
	17 View Modes
	21 The Displays
	23 About Alert Messages
	24 Tips

Chapter 2	27	Logic Control—Details
	28	The Channel Strip(s)
	31	The Assignment Zone
	46	Fader Bank Zone
	48	Master Fader
	49	Display Zone
	51	The Function Key Zone
	52	The Global View Zone
	52	Function Button Zone
	56	The Transport Zone
	64	The Cursor/Zoom Key Zone
	65	The Jog/Scrub Wheel Zone
	65	Functions and Menus
Chapter 3	75	Mackie C4
	75	V-POTs, V-SELECTs
	78	Buttons at Bottom
	80	Marker Overlay
	80	Track Overlay
	80	Channel Strip Overlay
	81	Function Overlay
	83	Assignment Overview
Chapter 4	85	Tascam FW-1884
	85	Introduction
	85	Requirements
	85	Set Up
	85	Operation
	86	Assignment Overview
Chapter 5	91	Mackie HUI
	91	Requirements
	91	Set Up
	91	Other HUI-compatible Devices
	92	Assignment Overview
Chapter 6	103	Mackie Baby HUI
	103	Requirements
	103	Assignment Overview
Chapter 7	107	Yamaha DM2000
	107	Requirements
	107	Set Up
	108	Assignment Overview

Chapter 8	117	Yamaha DM1000
	117	Requirements
	117	Set Up
	118	Assignment Overview
Chapter 9	125	Yamaha 02R96
	125	Requirements
	125	Set Up
	126	Assignment Overview
Chapter 10	131	Yamaha 01V96
	131	Requirements
	131	Set Up
	132	Assignment Overview
	135	Selected Channel
	135	Data Entry Section
	135	Channel Strips
	135	Stereo Channel Strip
	136	USER DEFINED KEYS Section
Chapter 11	139	CM Labs Motormix
	139	Requirements
	139	Set Up
	139	Assignment Overview
Chapter 12	147	Radikal Technologies SAC-2K
	147	Requirements
	147	Set Up
	147	Assignment Overview
	153	Troubleshooting
Chapter 13	155	Roland SI-24
	155	Requirements
	155	Set Up
	155	Assignment Overview
Chapter 14	161	Tascam US-428
	161	Requirements
	161	Assignment Overview
Appendix A	165	Logic Control—Specifications
	165	Logic Control (Base Unit)
	167	Logic Control XT (Extension Unit)

Appendix B	169	Logic Control—MIDI Implementation
	169	SysEx Message Header
	170	Global Control Messages
	172	Common Control Messages
Appendix C	181	Logic Control—Control Surface Layout and IDs
Appendix D	185	Logic Control—MIDI Implementation Chart
Index	187	

What Is Covered

This manual covers Logic’s dedicated control surface support. Please read it thoroughly to make the most of your new controller(s).

Logic comes with dedicated support for certain control surface models. There are several plug-ins which are a part of Logic. Some plug-ins support multiple similar control surface models.

You can use any combination of control surfaces with Logic. However you get the most out of them when using them in a Control Surface Group if they are all supported by the same plug-in.

Here you find an alphabetic list of the supported control surfaces, how they differ from similar devices and a cross reference to the relevant sections.

CM Automation Motormix

Only available in Logic Pro, not in Logic Express.

See section “CM Labs Motormix” on page 133.

CM Labs Motormix

Only available in Logic Pro, not in Logic Express.

See section “CM Labs Motormix” on page 133.

Emagic Logic Control

If you have installed Mackie’s firmware version 1.0.2 or higher, make sure that the Logic Control runs in Logic Control mode. See sections “Logic Control—Basics” on page 13 and “Logic Control—Details” on page 26.

Also see the Appendix for more details.

Emagic Logic Control XT

This is the extension unit for the Logic Control. It has only the channel strip section; therefore it is not useful without a Logic Control.

If you have installed Mackie's firmware version 1.0.2 or higher, make sure that the Logic Control XT runs in Logic Control mode.

See sections "Logic Control—Basics" on page 13 and "Logic Control—Details" on page 26.

Also see the Appendix for more details.

Mackie Baby HUI

Only available in Logic Pro, not in Logic Express.

The Baby HUI is a stripped-down version of the HUI. For easier navigation, we have documented it in a separate section.

See section "Mackie Baby HUI" on page 98.

Mackie C4

The Logic Control plug-in has been extended for dedicated support for the Mackie C4. Please see section "Mackie C4" on page 73.

Mackie Control

The original Mackie Control is similar to the Logic Control in hardware, however the silk screening is different. You should request a Logic Control Lexan Overlay from Mackie to get the correct silk screening. See

http://www.mackie.com/products/mackiecontrol/mackiecontrol_overlay.html

Firmware version 1.0.2 or higher is required, and it must be switched to Logic Control mode.

See sections "Logic Control—Basics" on page 13 and "Logic Control—Details" on page 26.

Mackie Control Extender

Firmware version 1.0.2 or higher is required, and it must be switched to Logic Control mode. See the documentation from Mackie on how to switch to Logic Control mode.

See sections "Logic Control—Basics" on page 13 and "Logic Control—Details" on page 26.

Mackie Control Universal

The Mackie Control Universal must be switched to Logic Control mode. See the documentation from Mackie on how to switch to Logic Control mode.

See sections “Logic Control—Basics” on page 13 and “Logic Control—Details” on page 26.

Mackie HUI

Only available in Logic Pro, not in Logic Express.

The HUI plug-in has been tested with the original Mackie HUI. There are other control surfaces not mentioned here which can emulate the HUI, however we haven't tested this and don't support them.

See section “Mackie HUI” on page 87.

Radikal Technologies SAC-2.2

Only available in Logic Pro, not in Logic Express.

There is a dedicated plug-in for the SAC-2.2/2k's native mode.

The Logic Control plug-in detects an SAC-2.2 reacting in Logic Control emulation and ignores it, to avoid that the SAC-2.2 is installed twice.

See section “Radikal Technologies SAC-2K” on page 140.

Radikal Technologies SAC-2k

See section “Radikal Technologies SAC-2K” on page 140.

Roland SI-24

See section “Roland SI-24” on page 146.

Tascam FE-8

Extension unit for FW-1884.

See section “Tascam FW-1884” on page 82.

Tascam FW-1884

See section “Tascam FW-1884” on page 82.

Tascam US-224

A stripped-down version of the US-428, with dedicated support in the US-428 plug-in.

See section “Tascam US-428” on page 151.

Tascam US-428

See section “Tascam US-428” on page 151.

Yamaha 01V96

Only available in Logic Pro, not in Logic Express.

The Yamaha 01V96 emulates two HUI units, using two virtual MIDI In and Out connections over its USB cable.

See section “Yamaha 01V96” on page 125.

Yamaha 02R96

Only available in Logic Pro, not in Logic Express.

The Yamaha 02R96 emulates three HUI units, using three virtual MIDI In and Out connections over its USB cable.

See section “Yamaha 02R96” on page 119.

Yamaha 01X

The Yamaha 01X emulates a Logic Control, however it does not have all of its controls. Please refer to the 01X documentation for details.

Logic recognizes the 01X as such and shows a custom icon, however the remaining communication is as with a Logic Control.

See sections “Logic Control—Basics” on page 13 and “Logic Control—Details” on page 26.

Yamaha DM1000

Only available in Logic Pro, not in Logic Express.

The Yamaha DM1000 emulates two HUI units, using two virtual MIDI In and Out connections over its USB cable.

See section “Yamaha DM1000” on page 111.

Yamaha DM2000

Only available in Logic Pro, not in Logic Express.

The Yamaha DM2000 emulates three HUI units, using three virtual MIDI In and Out connections over its USB cable.

See section “Yamaha DM2000” on page 101.

Introduction

Using a mouse and computer keyboard to do things normally done on an analog mixer can be disconcerting. Clicking an onscreen fader or knob, and dragging the mouse to achieve a silky smooth fade or pan move is difficult, if not impossible, for many users.

Logic Control provides you with hands-on control of virtually all of Logic's real-time parameters. Move a fader and Logic's on-screen fader will move with it. Similarly, when you make a fader move on-screen, the Logic Control fader moves. Adjust EQ by turning one of Logic Control's V-POT knobs and Logic will update instantly. In fact, what used to take multiple mouse-clicks and/or key presses can now be achieved with the push of a button, the turn of a knob or a quick fader movement.

You can use Logic Control to:

- control all transport functions
- adjust MIDI, audio instrument, bus, master and audio channel volume and pan levels
- control channel EQ parameters
- select and control all effect and audio instrument parameters
- select, solo, mute and arm tracks
- set and adjust send parameters
- remotely switch between screensets
- scrub MIDI and audio
- zoom in on individual tracks
- create, delete and move between markers, and much more.

The Logic Control XT expands on the number of tracks, parameters etc. that can be controlled with individual faders, knobs and switches. The XT units are basically identical to the channel strip section (fader, V-POT, and LCD) of the Logic Control unit. You may add as many XT units as you wish to your Logic system, provided enough MIDI in and out ports are available.

All of your fader and V-POT moves can be recorded and will faithfully play back in real-time. As the Logic Control units are equipped with motorized faders, remote controlled buttons, knobs and LEDs, your automation data will be reflected on the Logic Control's surface instantly. This keeps you completely informed about all levels—for tracks, pan, parameters, EQs etc.

The feedback you receive on the 2 row, by 55 character LCD is so good, in fact, that you may find you rarely look at your computer monitor. This facility may also be particularly useful in situations where computer fan noise is an issue; a common problem for project studios not equipped with a vocal booth. This allows you to isolate, and remotely control, your Logic system while singing or performing acoustically in another room.

For live use, the Logic Control units are ideal. The performing musician now need only take a laptop, equipped with suitable audio and MIDI interfaces (Emagic EMI 2|6 and MT4, for example), a keyboard and a Logic Control to a live event. The backlit LCD is ideal for darkened stage use. The largely metal construction, Penny and Giles™ faders and solid buttons and switches are built to withstand the rigors of touring.

Given that Logic's Track Automation facilities can be active, even when not in record mode, you can capture your "live" realtime changes for later recall. This ensures that you'll never again lose that "once-in-a-lifetime" performance—on stage or in the studio.

We have every confidence that the Logic Control system will provide you with many years of inspiration, fun, reliability and productivity.

Your Logic media production environment will never be the same!

Getting Started

To make use of the Logic Control unit, you will require:

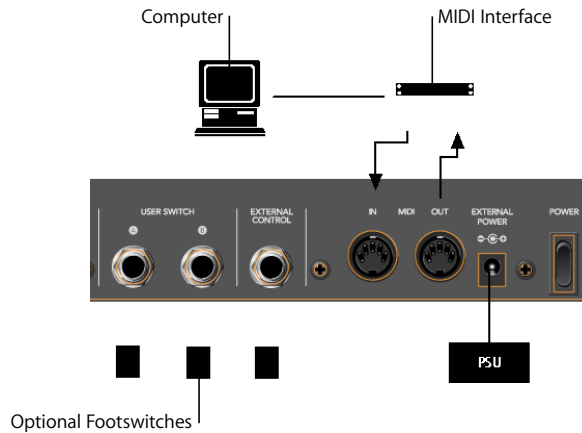
- an installed copy of Logic Pro7 or Logic Express 7
- a free MIDI in *and* out port for *each* Logic Control or Logic Control XT unit, on any suitable MIDI interface, e.g. if using a Unitor 8 or AMT 8, which feature 8 MIDI in and 8 MIDI out ports, with one Logic Control and one Logic Control XT, you will need to use 2 of the Unitor8/AMT8's MIDI ins and 2 of its MIDI outs.

A "suitable" MIDI interface features drivers which support SysEx communication. Please consult the documentation that shipped with your MIDI interface.

The number of units which can be run simultaneously is dependent on the availability of free MIDI in and out ports in your MIDI system. In a "standard" setup, a single Logic Control unit will be used alone, or accompanied by one or more Logic Control XT units. It is also possible to make use of several Logic Control and several XT units to create *Control Surface Groups*, as discussed in the Logic Reference Manual.

Connecting the Unit(s)

Connect your Logic Control and/or Logic Control XT units as shown in the diagram below.



As mentioned above, *each* Logic Control or Logic Control XT unit must have a discrete MIDI in *and* MIDI out connection. Do *not* “daisy-chain” other MIDI devices via MIDI THRU to the MIDI in or out ports used by the Logic Control units as this may result in data errors.

About the Power Supply Unit (PSU)

The PSU which came with your Logic Control unit is rated at 7.5V, 4.0 Amps, with a positive tip. Do not use any other power supply with the Logic Control units as this may result in permanent damage. Any attempt to use another power supply with either unit will automatically void your warranty.

Should you have a problem with the power supply unit, immediately disconnect it from the Logic Control and wall socket to avoid damage or electrical shock. There are no user-serviceable parts in the power supply unit (or the Logic Control units). If you have a problem with your Logic Control or power supply unit, please contact the local Emagic distributor in your region or territory.

Optional Footswitches and pedals

You may use optional foot switches to remotely control the start/stop and other functions of the Logic Control. This may be useful for guitarists or other two-handed playing. The foot switch sockets can use momentary foot pedals with either a positive or negative polarity. By default:

- USER SWITCH A is assigned to *Start/Stop*.
- USER SWITCH B is assigned to *Record* (note that a track must be selected and armed for recording to take place),

- EXTERNAL CONTROL is assigned to the MASTER fader level. Only use an expression pedal with this socket.

The polarity of the foot switches is determined by the Logic Control when powered up. Therefore it is useful to first connect the foot switches, then power up.

Power Up

Once everything is connected, press the power switch found to the rear left of your Logic Control and Logic Control XT units. Once powered, the displays will illuminate and the LCD will display a welcome message. Of note is the firmware version number found in the bottom right hand corner of the display. Each fader will slide to the top, and back to the bottom, of its travel. This self-diagnostic power-on procedure indicates that your Logic Control units are functioning correctly.

Your computer and MIDI interface can be powered up before or after the Logic Control units. Logic can be launched either before or after the units have completed initialization.

About Software and Firmware

The Logic Control and Logic Control XT units have no “intelligence” of their own. Their functionality is host software-based, making them *completely* reliant on Logic to tell them what to do/how to behave. What this means is that the Logic Control cannot perform any function that Logic itself cannot do. It also means that if Logic is not booted, the Logic Control units will do nothing at all.

The plus side of this approach is that the units represent the ultimate in upgradable hardware. As new functions are added to Logic, Logic Control will also be able to access and control them.

The Logic Control units do, however, have a form of software called “firmware.” This firmware is much like the BIOS found in your computer. New “behaviors”—at a hardware level—such as an improved control of the fader servo motors and changes to the display can be made via firmware updates.

The firmware is stored on an EEPROM (Electrically Erasable Programmable Read Only Memory) chip. It can be updated via a simple MIDI dump procedure, in the form of a MIDI file.

Should new firmware become available, you can simply download the appropriate MIDI file and play it to your Logic Control unit(s), which will be updated accordingly. The steps required to perform a firmware update will be outlined in the readme file which accompanies the file. Please read this *before* attempting any update.

Quick Start

Once Logic is launched, any connected (and powered) Logic Control units will automatically be detected. The LCD above the V-POTs will indicate the tracks (shown from left to right) as they appear—from top to bottom—in the Arrange window Track List of your Autoload song. The two character *Mode Display* will display P_{11} , the *Position/Time Display* will display 1 1 1 1, assuming that your Autoload song starts at this position.

Please note that if running multiple units, the order of channels/tracks (from left to right) needs to be defined. The easiest way to do this is to launch Logic, and then switch on the units from left to right, with a delay of about 5 seconds between powering up each unit. This only needs to be done once—and the setup will automatically be created in the right order. Once the setup is defined, the order in which you power up Logic or the Logic Control units doesn't matter.

Should your Autoload song have the *Cycle* mode enabled or *muted* objects etc., the corresponding LEDs on the Logic Control will be illuminated to reflect each track's current status.

It should be noted that the default settings and displays indicated above may be slightly different on your unit. The reasons for any such differences include: Firmware changes, software changes and user changes.

If the auto-detection phase completed correctly, you're ready to go! If not, see the Logic user manual for setup information.

Although the Logic Control is intuitive to use, the following sections will provide you with information on accessing parameters and functions that may not be apparent at first glance. Feel free to use them as a reference manual while experimenting.

View Modes

Before taking a look at the front panel of the Logic Control, we'd like to cover a simple—but very important—concept.

Logic Control works in three discrete *View* modes.

- *Mixer View*—layout like in the Track Mixer window (*Global* switch off).
- *Global View*—layout like in the Track Mixer window (*Global* switch on).
- *Arrange View*—layout like in the Arrangement window.

These modes are mutually exclusive, so if you're in one *View* mode, you cannot be in the other.

It is important to note that the *Mixer* vs. *Global View* modes is a property of the *Control Surface Group*, not a global setting. So one group can display the busses, while the other shows tracks, for example.

Switching View Modes

To toggle between *Mixer* and *Global View* modes, repeatedly press the GLOBAL VIEW button, located directly above the MASTER fader on the Logic Control.



Global View mode is indicated by the green LED to the right of the button. When deactivated, the Logic Control will instantly switch to *Mixer View* mode.

All faders, V-POTs, switches, LEDs and LCDs will update to reflect the current *View* mode. All settings of the *Track* and *Global View* modes are retained, so you can freely toggle between the two modes, and pick up from where you left off.

However if one of the *Channel Strip View* modes was active, the Logic Control switches back to the corresponding *Multi Channel View* mode, as you most probably first want to select a different track.

Mixer View

Mixer View is the default mode of the Logic Control.

Mixer View is simply the view of all tracks, as they appear in the Arrange window's Track List, e.g.—Track 1 = Channel 1 on the Logic Control, Track 2 = Channel 2, a.s.o.

It should be noted that if multiple tracks “point” to the same underlying object, then only the first track will be displayed. If you want to see all of them, select *Arrange View*.

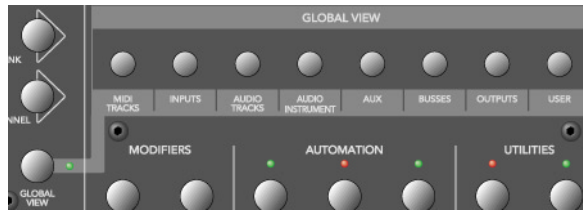
It does not matter if the tracks point to MIDI, Audio (this includes Buses etc.) or Audio Instrument objects, which exist in the Environment of the song. This allows you to make use of the Logic Control faders and V-POTs for *any* control task in Logic. This also extends to *Volume, Pan, Mute* and *Solo* control of external MIDI devices, as well as the parameters of the internal audio engine.

Global View

Global View limits the display to *all* Environment objects of a particular “*class*”; even if no corresponding tracks exist in the Arrange window. As an example, in an Environment that contains:

- 5 multi-timbral (16-channel) MIDI devices (i.e. 5 multi instrument objects)
- 64 Audio Tracks
- 16 Audio Instrument tracks
- 8 Buses
- 8 Inputs
- 8 Outputs

Global View gives you direct access to the *Volume, Pan, Mute* and *Solo* parameters of all 80 MIDI channels, 64 audio tracks etc. as outlined above.



Note the light gray legend which links the GLOBAL VIEW button to the eight buttons in the “Global View” zone of the Logic Control front panel.

Simply press the button which corresponds to the object “class” that you wish to view.

You can select multiple classes by clicking on multiple buttons simultaneously.

The OUTPUTS button activates both output and master objects.

The USER button is reserved for future Logic features.

The Track Mixer window’s contents automatically follows the GLOBAL VIEW button’s state and also sets the object filters according to the object classes activated in *Global View*. You can disable this behavior with menu item View > Follow Control Surface.

Arrange View

Arrange View is similar to *Mixer View*, with one exception: Namely, if multiple tracks play back via the same environment object, all of them will be displayed on separate channel strips. This is helpful when used in conjunction with the nudge commands, for example.

Arrange View is engaged by pressing the SHIFT and GLOBAL VIEW buttons simultaneously. It is active as long as the GLOBAL VIEW button’s LED is blinking.

Folders

In *Mixer View* and *Arrange View*, Logic Control always displays the track of a certain folder—by default those of the “root” folder, i.e. the top level folder.

Folder tracks use the instrument “Folder” which has no parameters at all. Therefore the V-SELECT is available for other purposes than setting track parameters. Pressing the V-SELECT of a folder track enters the folder.

Alternatively you can select the folder track with SELECT and enter the folder with the ENTER button.

You can leave a folder and return to the folder level above with the CANCEL button.

The following topics cover a couple of “viewing” options that work in all *View* modes.

Channel Views

The channels section (i.e. the channel strips) can be in two fundamental view “modes”—*Multi Channel* and *Channel Strip View*. Normally, switching between these modes only affects the V-POTs, with the other channel controls always remaining in *Multi Channel View*.

Please note that there are some exceptions to this: in special view modes, the faders and SOLO and MUTE buttons have alternate uses/meanings.

- *Multi Channel View*—shows one parameter for eight tracks (normally a section of the Track Mixer window). If your *Control Surface Group* consists of a Logic Control and additional Logic Control XTs, you will see more than eight tracks. The section can be shifted to the next/previous group of channels with the FADER BANK buttons.

Please note that when in *Multi Channel view*: the display will automatically update when another FADER BANK is selected. Please read the *Fader Bank Zone* section on page 46.

- *Channel Strip View*—shows eight (or more) parameters of the selected track. The display will automatically update when another track is selected.

Switching between *Multi Channel* and *Channel Strip* views is achieved by pressing the ASSIGNMENT button whose LED flashes.

When pressing an ASSIGNMENT button which is not currently selected, the assignment mode changes, and the according *Multi Channel View* is activated. Exception: switching between *Instrument Edit View* and *Plug-in Edit View*.

Pages

Logic features the Channel EQ with 8 (Logic Pro) or 4 (Logic Express) bands per audio channel. Each EQ has four (4) parameters. It also offers (up to) 16 Buses. Many of Logic’s plug-ins—effects and Audio Instruments—plus those of third-party manufacturers, feature dozens of parameters.

Every one of these parameters can be accessed by the Logic Control.

To give you an example of how this works, imagine a plug-in that contains, say, 16 parameters and you are using a single Logic Control.

Once you’ve switched to the appropriate “Channel Strip Edit View” of the plug-in you wish to adjust, you can directly affect parameters 1 to 8 by using V-POTs 1 to 8. You can then switch by a “page” to access parameters 9 to 16.

Simply press the LEFT/RIGHT CURSOR keys to step up/down to the next “page” of parameters.



The current/total number of pages (e.g. “Page 1/3”) is displayed in the top right-hand corner of the LCD whenever multiple “pages” are available—i.e. when parameter names are shown in the lower row.

To get to the first or last page, hold down OPTION while pressing the LEFT/RIGHT CURSOR key.

Switching by page is just the default. To switch by a single parameter, hold down **⌘**/ALT while pressing the appropriate cursor key.

Viewing by Name or Value

As a personal preference, or for practical reasons, you may wish to view parameters by their name, or by value. To toggle between the two *Display* formats—*Name* or *Value*—repeatedly press the NAME/VALUE button in the *Display* section of the Logic Control—just below the SMPTE/BEATS LEDs.



It should be noted that the NAME/VALUE button has a significant impact on the Multi Channel and Channel Strip views of the various *Assignment* modes. The use of the NAME/VALUE button in these view modes is covered throughout *The Assignment Zone* section, from page 31 onwards.

The Displays

Liquid Crystal Display (LCD)

The LCD is a 2 row × 55 character backlit display.

Below the display, you will see eight (8) “notched” areas which act as visual cues, making the separation of channels/parameters easier. These are numbered 1—8.

Short names

Each channel/parameter can be indicated by a name or value, up to 6 characters long, dependent on the currently selected *Display* mode. In general, the upper row of each channel/parameter will display the track name, and the lower row will display the parameter name and/or value.

Note: 8-bit ASCII characters such as curly quotes and umlaut characters are replaced by the best-possible 7-bit ASCII equivalent, e.g. ä = ae, ö=oe, ü=ue, á = a, ø = oe, œ = oe, ß = ss, å = a.

In case you don't like the way a track or instrument name is abbreviated, you can provide your own version, simply by appending it with a backslash (\). To get the track "My very long track name" displayed as "long" instead of "TrckNm", the track name must be "My very long track name\long".

Long names

In some modes, a long (i. e. full) parameter or other name will be displayed briefly on-screen, when adjusted. The display of long names, and the duration of this display, is set in the *Preferences*. These settings are discussed in the Logic user manual.

Name vs. Value

To toggle between the two *Display* formats—Name or Value—repeatedly press the NAME/VALUE button in the *Display* section of the Logic Control—just below the SMPTE/BEATS LEDs.



The following is a brief overview of the effect the NAME/VALUE button has on the various display modes.

- *Multi Channel view*, display mode *Names*: upper line shows *track names*, lower line shows *parameter names*
- *Multi Channel view*, display mode *Values*: upper line shows *track names*, lower line shows *parameter values*
- *Channel Strip view*, display mode *Names*: upper line shows *view info*, lower line shows *parameter names*
- *Channel Strip view*, display mode *Values*: upper line shows *parameter names*, lower line shows *parameter values*

Assignment LED (Mode Display)

To the right of the LCD, you will find the two digit, seven-segment LED display which indicates the current *Assignment* status of the Logic Control. Throughout the manual we refer to this LED as the *Mode Display*.

The Assignment status is determined by the 6 buttons found in the light gray *Assignment* area directly below the *Mode Display*. We will discuss the use of these buttons, and the abbreviations shown in the LED, in *The Assignment Zone* section, from page 31 onwards.

Basically the display ends with a period whenever a *Channel Strip View* is active.

Song Position/SMPTÉ Time Display

The right-most display is a multi-digit, seven-segment LED. It is accompanied by two small LEDs to its immediate left, which provide a quick visual indication of the currently active display format: *SMPTÉ* or *BEATS*.

To toggle between the two *Time* formats, repeatedly press the *SMPTÉ/BEATS* button in the *Display* section at the top of the Logic Control—just below the *SMPTÉ/BEATS* LEDs.



When *BEATS* mode is selected, the *Position/Time Display* is divided into 4 segments, separated as follows:

Bars/Beats/Sub Divisions/Ticks

When *SMPTÉ* mode is selected, the *Position/Time Display* is divided into 4 segments, separated as follows:

Hours/Minutes/Seconds/Frames

The display format can be viewed in a number of ways. This can be altered in Logic's *Display Preferences*.

Rude Solo LED

This LED indicates that either: an audio track is set to solo, or the track solo mode is enabled. It is a helpful visual aid in situations where a track has been soloed and the fader bank has been shifted—i.e. the soloed track's *Solo* LED is no longer visible.

About Alert Messages

Alert messages are simply dialog or message boxes in Logic. As examples, file save dialogs, authorization warnings, edit confirmations or error messages.

When these windows “pop up” on-screen, the Logic Control will respond in the following way:

- all LEDs are deactivated,
- the upper LCD row shows the beginning of the alert text

Note: 8-bit ASCII characters such as curly quotes and umlaut characters are replaced by the best-possible 7-bit ASCII equivalent, e.g. ä = ae, ö=oe, ü=ue, á = a, ø = oe, œ = oe, ß = ss, å = a.

- the first eight buttons (usually 1 or 2) of the alert are displayed in the lower LCD line, aligned to the right

- the *Position/Time Display* shows *Message, Alert, Attention* or *Caution*, depending on the icon in the alert
- if the alert text does not fit in the LCD's upper row, it will start scrolling after 3 seconds. When the text has scrolled to the end, it will remain onscreen for 3 seconds and will then recommence.

You can scroll the alert text manually with the jog wheel. Once you start doing so, automatic scrolling is disabled

In addition to the Jog Wheel, all V-POTs can be used to scroll the alert text. They also show the current scroll position.

- By pressing one of the V-SELECTs, you trigger the appropriate button/function in the alert—if applicable.
- The ENTER button triggers the default button in the alert, where applicable.
- The CANCEL button triggers the button labelled “Cancel” or “Abort” in the alert, where applicable.

After the alert has disappeared, all controls and displays will return to their previous state.

For other modal dialogs, only the text *There is a modal dialog on the screen* appears. The ENTER and CANCEL buttons don't work in this case; you have to end the dialog with the mouse or computer keyboard.

For file select boxes, only the text *There is a file select dialog on the screen* appears. The ENTER and CANCEL buttons don't work in this case; you have to end the dialog with the mouse or computer keyboard.

Tips

Way back at the beginning of this manual we said “Your Logic media production environment will never be the same!”

This, as we're sure you're starting to realize, was not an unrealistic claim.

Logic Control changes the way you work, and is most effective if you make a few small changes to your working methods. The following is a small collection of good working practices which will help you to work more smoothly and efficiently with the Logic Control system.

Customize your Autoload Song

- Set up *Screensets 1—7* to your liking. These can be accessed directly via the *Function Keys—F1 to F7*. *Function Key 8 (F8)* will close the top-most window.
- We suggest that a full-screen *Arrange* window, with *Track Automation View* set to on, is among your *Screensets*.
- A full-screen *Track Mixer* window is also recommended.

Get Into the Habit of Using Markers

Not much more can be said. *Markers* allow you to quickly “jump” from location to location in a “project”. The Logic Control features a number of shortcuts which allow you to rapidly switch between *Markers*.

Markers are very useful for the creation/selection of *Cycle* regions and a number of other tasks, such as *Drop In* and *Replace*.

If you tend to follow a particular song structure, or like to work in “chunks” of bars (4, 8, 16 bars etc.), then set up a number of *Markers* at suitable locations in your Autoload song.

Set a Default Song File Name and Path

The SAVE button on the Logic Control will automatically launch the File Save dialog. Once the song has been saved once, pressing the SAVE button will incrementally save the song without launching the File Save dialog window.

As soon Logic boots, and the Autoload song is loaded, you should make it a routine to:

- create a new “project” folder, and name it
- save the autoload song—with the same or a similar name to the folder—into the “project” folder via the Save As menu option.

Set a Default Audio File Name and Path

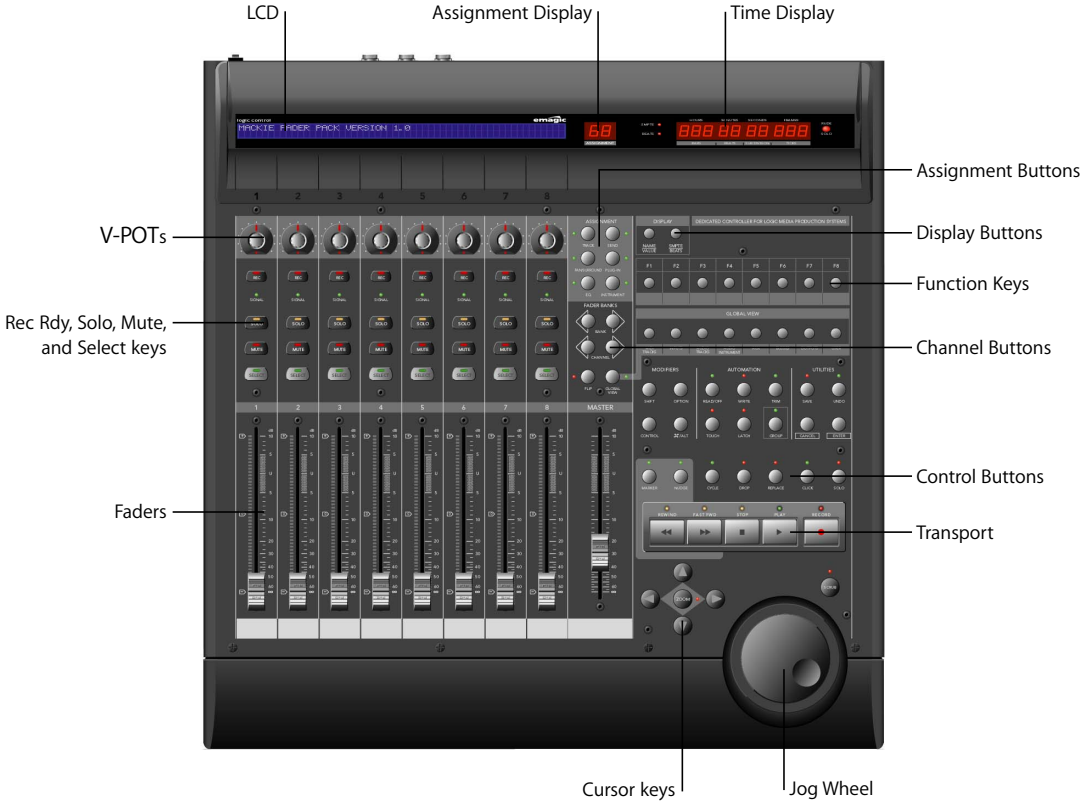
When an audio track is armed, Logic will ask you to specify a default file name and path. If this is done at the start of your sessions, it won’t interrupt your creative flow while recording.

After saving the Autoload—under its new name—into the “project” folder, you should make it a routine to:

- press the “A” key on your computer keyboard
- set a default audio file name—ideally of the same or a similar name to that of the project/song
- set the path for the audio files to the “project” folder

Once you’ve completed the Song and File Save steps, press the SAVE button on the Logic Control, and start recording.

This chapter will introduce you to the front panel of the Logic Control. It is assumed that you are familiar with the basic use and terminology of Logic. As such, we will *not* cover the functionality and uses of the individual Logic parameters themselves. Please consult your Logic reference manual or online help files, if you require further information.



We strongly encourage you to press the buttons, turn the V-POT knobs etc. as you're reading through this chapter (not that you probably need much encouragement). This will help you to get a "feel" for how the Logic Control works, and how the various parts of the control surface interact with one another.

Topics in this chapter are broken down into "Zones" of the Logic Control surface.

The Channel Strip(s)

As each channel strip is identical, the information discussed in this section applies equally to all eight channel strips on the Logic Control and Logic Control XT units.

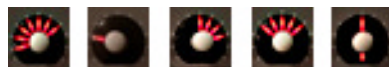
V-POT/V-SELECT

This "soft" potentiometer can be used to adjust the send level and pan, plus any other parameter for EQ, instruments, effects etc. The V-POT can also be used to choose items—such as plug-ins, Audio Instruments and more—from scrollable lists, and to determine destinations for sends.



The V-POT also contains an integrated V-SELECT push button. This button generally sets a "default" parameter value (where a parameter has more than two possible values), or toggles between two parameter values (e.g. on/off). The V-SELECT can also be used to activate a function, selected through use of the V-POT. As an example, the V-POT can be rotated in order to select an effect plug-in for a particular channel Insert slot. Once the desired effect is displayed in the LCD, a simple press downwards on the top of the V-POT will activate the V-SELECT switch. In the example given, this would select, and insert, the effect and launch the plug-in window. On occasion, the V-SELECT is used to switch to a special *Assignment* mode.

The current value of any parameter being adjusted by the V-POT is displayed on the LCD (dependent on the NAME/VALUE setting), and is also indicated by the ring of LEDs which surround it. The various LED "ring" displays are shown here:



This will vary as follows, dependent on the selected parameter:

- Connected series of LED segments from left to right (e.g. send level)
- Single segment (e.g. panorama, frequency)
- Connected series of LED segments, starting in the center position and fanning to the left OR right (e.g. EQ gain)

- Series of connected LED segments, starting in the center position and fanning to the left AND right (e.g. Q-Factor)
- An LED dot *below* the V-POT indicates when the parameter value is in the centered/default position

Holding down the **⌘/ALT** button sets the V-POTS to high resolution parameter adjustment mode, where applicable.



Holding down the **OPTION** button toggles the V-POT between the minimum/maximum parameter value.



Rec/Rdy (Record/Ready) Switch

This switch arms or disables the channel for recording. Each channel features an independent *Rec/Rdy* LED which illuminates when a track is “armed” for recording.



Holding down the **OPTION** button, while pressing any **REC/RDY** button will disarm *all* tracks.

In *Global View*, if you arm an audio channel which is currently not used by any track in the song, and then start recording, you will be asked if you want to create a new track with this audio channel in the current recording folder.

Signal LED

Indicates the presence of any outgoing MIDI or audio signal. When recording, the presence of an incoming signal will be indicated.

Solo Switch

For isolating a channel’s signal. Each channel features an independent *Solo* LED which illuminates when a track is soloed. The *Rude Solo* LED—just to the right of the *Position/Time Display* LED—also illuminates whenever any track is soloed.

Holding down the OPTION button, while pressing any SOLO button will disable solo for *all* tracks.



In the “Send Destination/Level” views (see the *Send Assignment Modes* section, from page 39 onwards), the SOLO button controls the Pre/Post mode selection—in both Multi Channel and Channel Strip views.

Mute Switch

Used to defeat the track’s signal. Each channel features an independent *Mute* LED which illuminates when a track is muted.

Holding down the OPTION button, while pressing any MUTE button will unmute *all* tracks.



In the “EQ Frequency/Gain” and “Send Destination/Level” views, the MUTE button controls the EQ bypass or Send mute function. This affects both Multi Channel and Channel Strip views.

Select Switch

This switch is used to select a channel for channel-based editing or assignment commands. Each channel features an independent SELECT LED which illuminates when a track is selected.

When holding down the SHIFT button, pressing any channel SELECT button will set the track’s volume to unity level (0 dB).

While holding down SHIFT, a SELECT button’s LED indicates if the track’s volume is set to 0 dB.

When holding down the OPTION button, pressing any channel SELECT button will create a new track with the same instrument of the selected track and switch to Arrange View.

When holding down the SHIFT and OPTION buttons, pressing any channel SELECT button will create a new track with the next instrument of the selected track and switch to Arrange View.

Touch-Sensitive Motor Fader

These 100mm faders are for controlling the channel's levels. They transmit 1,024 discrete “steps” as a 10 Bit value, making their use very smooth. When FLIP is activated, the parameter currently assigned to the V-POT can be controlled with the fader. This allows you to more easily control pans, aux returns, MIDI track parameters, EQs, Plug-in, Audio Instrument or other channel parameter levels/values. Please see the Logic Reference Manual for further information. The eight faders move relative to the activity of the currently chosen *Bank* of on-screen faders. The *Fader Bank* is shifted when one of the FADER BANK buttons is pressed.



Fader Behavior in Other Modes

- In Flip mode: duplicates or swaps with V-POT of same channel.
- In *Surround Angle/Diversity View*: adjust surround diversity
- In *EQ Frequency/Gain View*: adjust gain of selected EQ band
- In *Send Destination/Level Multi Channel View*: adjust send level of selected send
- In *Send Destination/Level Channel Strip View*: adjust send level of send on selected track

The Assignment Zone

The small light gray area just below the *Mode Display* contains six buttons.



These ASSIGNMENT buttons work in both *Track* and *Global View* modes. View modes are discussed in *View Modes* section, from page 17 onwards.

When these buttons are pressed, the *Mode Display*, plus the LED associated with each button, will update to reflect the currently selected assignment “mode”. The LCD will also update to display the parameters relevant to the selected *Assignment*. These parameters, are, of course assigned to the corresponding V-POTs.

All ASSIGNMENT buttons work as toggle switches, which means that if you click them repeatedly, they will switch between the *Multi Channel* and *Channel Strip View* modes.

- *Multi Channel View*—you see the same parameter for multiple channels. In *Multi Channel View*, the *Mode Display* does not show a period—e.g. P1
- *Channel Strip View*—you see multiple parameters for a single channel. In *Channel Strip View*, the *Mode Display* shows a period to the right—e.g. P1 .

Switching between Multi Channel and Channel Strip views is achieved by pressing the *selected* ASSIGNMENT button multiple times.

When pressing an ASSIGNMENT button which is not currently selected, the *Assignment* mode changes, and the view switches to *Multi Channel View*. Exception: switching between *Instrument Edit View* and *Plug-in Edit View* retains *Channel Strip View*.

The NAME/VALUE button also has an effect on what is shown on the LCD when in the Multi Channel and Channel Strip views. More information can be found in *Display Zone* section, from page 49 onwards.

Changing Parameters and Values

Individual parameters can be adjusted via the associated V-POT (or fader, if the FLIP button is active), located directly below the parameter entry in the LCD.

To do so, simply grab and turn the desired V-POT. Once the required parameter value is visible in the LCD, simply release the knob.

Press the V-SELECT button to set the default value (for parameters which have more than 2 values), or to toggle between two values for parameters with only two possibilities (e.g on/off).

Some parameters require that a “confirmation” be made, such as Plug-ins, Audio Instruments, Sends, Inputs and Outputs etc. For these types of parameters, press the V-SELECT switch (press down on the top of the V-POT) to activate/select the desired value. In the case of a plug-in or Audio Instrument, this will automatically launch the *Plug-In window* in Logic. For a Send, the confirmed channel *Send destination* will be activated in Logic’s Mixer(s).

When a value has been pre-selected, but not confirmed/instantiated (such as Send Destination, Plug-In insertion etc.) the value will flash until the V-SELECT switch is pressed.

An exponential increase in value changes will occur as a V-POT is rotated faster.

Track Assignment Modes

The TRACK button selects *Assignment* modes which allow the editing of a number of global track parameters. It toggles between all displayed channels and the individual parameters of the selected channel (*Track Multi Channel View* or *Track Channel Strip View*). The parameters in *Track Multi Channel View* include: *Volume, Pan, Track Mode, Track Input, Track Output* and *Automation*. In *Track Channel Strip View* however you get an overview of the most important track parameters: *Volume, Pan, Instrument, Insert 1, Insert 2, Send 1 Level, Send 2 Level* and *Send 3 Level*.

Multi Channel View

Track Multi Channel View allows you to edit a single “global” track parameter for all tracks: *Volume, Pan, Track Mode, Input, Output* or *Automation*. The parameter being edited will be displayed briefly when switching to this mode.

- The *Mode Display* will show t_r (for “Track”).
The upper LCD row shows track names.

```
Audio1 Audio2 Audio3 Audio4 Audio5 Audio6 Audio7 Audio8
Volume Volume Volume Volume Volume Volume Volume Volume
```

By pressing NAME/VALUE, you can toggle the display mode and instead see the parameter values in the lower row:

```
Audio1 Audio2 Audio3 Audio4 Audio5 Audio6 Audio7 Audio8
+0.1dB -1.8dB +01.dB -30.0 +0.0dB -50.2 -24.7 -1.2dB
```

As these display variants can be toggled in all *Multi Channel Strip Views* similarly, the following will only show displays in *Value* mode.

- Turning the V-POTs change the associated track parameter
- Pressing a V-SELECT sets the parameter to its default value
- CURSOR LEFT/RIGHT buttons switch to the next or previous track parameter. The selected parameter will be displayed briefly in the upper LCD row.



Channel Strip View

Track Channel Strip view allows you to edit all parameters listed above, for the selected track.

- The *Mode Display* will show t_r . (for “track channel strip”).
- The upper LCD row shows the name of the track and “Track parameters”.

```
Track 1 "Audio 1"                               Track parameters
Volume Pan   Inst   Ins.1  Ins.2  Send 1 Send 2 Send 3
```

By pressing NAME/VALUE, you can toggle the display mode and instead see the parameter names in the upper row and parameter values in the lower row:

Volume Pan	Inst	Ins.1	Ins.2	Send 1	Send 2	Send 3
+0.5dB 0	ES2	Dstrtn	AutFlt	-54.0	-27.0	-∞ dB

As these display variants can be toggled in all *Channel Strip Views* similarly, the following will only show displays in *Value* mode.

- V-POT/V-SELECT 1—edits *Volume*. The lower LCD row shows the current track volumes, either in dB or numeric format, depending on the settings of the Environment objects.
- V-POT/V-SELECT 2—edits *Pan* position. The lower LCD row shows the current track pan value ranging from -64 to +63. A value of 0 is the centered position. If *Surround* is selected as the *Output* value, this controls the *Surround Angle*.
- V-POT 3—selects the *Instrument* of Audio Instrument tracks. Confirm with V-SELECT 3.
- V-POT/V-SELECT 4 and 5—select the *Plug-in* of inserts 1 and 2 of Audio and Audio Instrument tracks. Confirm with V-SELECT.
- V-POT/V-SELECT 6 to 8—edit *Send Level* of Sends 1 to 3.

While the SHIFT button is held down, pressing one of the MUTE button or V-SELECTs toggles mute or bypass:

- 1 and 2—toggles the Track's Mute
- 3—toggles Mute of the *Instrument* of Audio Instrument tracks.
- 4 and 5—toggle Bypass of the *Plug-in* of inserts 1 and 2 of Audio and Audio Instrument tracks.
- 6 to 8—toggle *Mute* of Sends 1 to 3.

Shortcuts Menu

Holding down the TRACK button accesses a further sub-menu in the LCD.

Volume Pan	TrkMod	Input	Output	Auto	Setup
------------	--------	-------	--------	------	-------

- The Mode Display will show \bar{t} (for "Track_")
- V-SELECT 1 or F1—switches to *Track Multi Channel View* and selects *Volume*.
 - The LCD's lower line shows the current volume of the tracks, in dB or numerically, depending on the Environment Objects' setting in Logic.
 - Turning a V-POT changes the *volume*;
 - pressing a V-SELECT sets the *volume* to *Unity* (val 90/0.0dB)
- V-SELECT 2 or F2—switches to *Track Multi Channel View* and selects *Pan*.
- V-SELECT 3 or F3—switches to *Track Multi Channel View* and selects *Track Mode*
- V-SELECT 4 or F4—switches to *Track Multi Channel View* and selects *Input*
- V-SELECT 5 or F5—switches to *Track Multi Channel View* and selects *Output*
- V-SELECT 6 or F6 —switches to *Track Multi Channel View* and selects *Automation Mode*

- V-SELECT 7 or F7—switches to Track Multi Channel View and displays the automation parameter selected for display in the Arrange window. Also switches to Arrange View.
- V-SELECT 8 or F8—switches to *Track Setup Channel Strip View* (see below).

Track Setup Channel Strip View

In this mode rarely used parameters can be edited for the selected track.

- V-POT/V-SELECT 1—edits *Track Mode* (mono, stereo, left, right).
- V-POT/V-SELECT 2—selects the *Surround Mode*. Confirm with V-SELECT 2.
- V-POT/V-SELECT 3—selects the *Track Input*. Confirm with V-SELECT 6.
- V-POT/V-SELECT 4—selects the *Track Output*. Confirm with V-SELECT 7.
- V-POT/V-SELECT 5—edits *Automation Mode*.
- V-POT/V-SELECT 6—edits *Track Group Membership*. You can choose only one group or “Off”. To make a track a member of multiple groups, use Group Edit Mode (see below).

Pan/Surround Assignment Modes

Briefly pressing the PAN/SURROUND button toggles between *Pan/Surround Multi Channel* and *Pan/Surround Channel Strip View*.

Multi Channel View

Pan/Surround Multi Channel view allows you to edit one pan/surround parameter on all tracks: *Angle* or *pan* (on non-surround tracks), *Radius* (diversity), *LFE*, *surround mode* (on surround tracks). The parameter being edited will be displayed briefly when switching to this mode. Regardless of which surround parameter is selected and active, *non-surround* tracks always display the standard *Pan* editing control.

In a song that has both surround and non-surround tracks, you can edit a specified surround parameter for surround tracks, while the V-POT of non-surround tracks will edit Panning, as usual.

- The *Mode Display* will show P_n (for “Pan”).
- The upper LCD row shows track names
- Turning the V-POTs changes the pan/surround parameter
- The *Surround Angle* parameter rotates between 0 and 359 degrees, avoiding any angle limit.
- Pressing a V-SELECT sets the parameter to its default value
- CURSOR LEFT/RIGHT switches to the next or previous surround parameter. The selected parameter will be displayed briefly in the upper LCD row.



Channel Strip View

Pan/Surround Channel Strip View allows you to edit all surround parameters for the selected track.

- The *Mode Display* will show $Pn.$ (for “Pan/Surround channel strip”).
- The upper LCD row shows the name of the track and “Pan/Surround”:

```
Track 1 "Audio 1"                               Pan/Surround
SrrAng SrrDvr SrrLFE Mode
```

- V-POT/V-SELECT 1—edits *angle* (or *pan* on non-surround tracks)
- V-POT/V-SELECT 2—edits *diversity*
- V-POT/V-SELECT 3—edits *LFE level*
- V-POT 4—selects the *surround mode*. Confirm with V-SELECT 4.
- V-POT/V-SELECT 5—edits *Surround X*
- V-POT/V-SELECT 6—edits *Surround Y*

The Angle/Diversity and X/Y pairs influence each other. Only the Angle/Diversity parameters are automated and recorded.

Alternate Mode Options

Holding down the PAN/SURROUND button accesses a further sub-menu in the LCD:

```
Angle  Radius LFE  Mode           CStrip      Ang/Dv
```

- V-SELECT 1 or F1—switches to *Pan/Surround Multi Channel View* and selects *angle*
- V-SELECT 2 or F2—switches to *Pan/Surround Multi Channel View* and selects *diversity*
- V-SELECT 3 or F3—switches to *Pan/Surround Multi Channel View* and selects *LFE level*
- V-SELECT 4 or F4—switches to *Pan/Surround Multi Channel View* and selects *surround mode*
- V-SELECT 6 or F5—switches to *Pan/Surround Channel Strip View*
- V-SELECT 7 or F6—switches to *Surround Angle/Diversity Multi Channel View*:
 - the *Mode Display* will show Ad (for “Angle/Diversity”)
 - the upper LCD row shows track names
 - the lower LCD row shows the surround angle currently assigned to each track
 - turning a V-POT changes the *surround angle* (or adjusts *pan position* on non-surround tracks)
 - pressing a V-SELECT sets the *surround angle* to its default
 - the faders edit surround *diversity*
- V-SELECT 8 or F7—switches to *Surround X/Y Multi Channel View*:
 - the *Mode Display* will show Xy (for “X/Y”—the X character is not available on a 7 segment display)
 - the upper LCD row shows track names
 - the lower LCD row shows the surround X value currently assigned to each track

- turning a V-POT changes the *surround X* value (or adjusts *pan position* on non-surround tracks)
- pressing a V-SELECT sets *surround X* to its default
- the faders edit surround *surround Y*

Notes on Surround X/Y editing

X and Y have the value range -1000 to $+1000$, however the resolution is not that high, as surround positions are currently recorded in 7 bit only.

Note that X and Y act in a rectangular coordinate system. So value pairs outside the surround circle are not possible.

When trying to set a value which would lead to an invalid position, the other coordinate is automatically adjusted to a valid position, e.g. moving Y to $+1000$ will lead X to become 0.

When editing only one coordinate, the other coordinate of the most recently track is memorized. This helps getting straight movement lines.

EQ Assignment Modes

Briefly pressing the EQ button toggles between *EQ Multi Channel View* or *EQ Channel Strip View*.

Multi Channel View

EQ Multi Channel View allows you to edit one equalizer parameter for all tracks: *Frequency*, *Gain*, *Q* or *EQ bypass*. The EQ “band” number, and parameter being edited will be displayed for one second when switching to this mode.

- The *Mode Display* will show E1 to E8, dependent on the selected EQ band number.
- The upper LCD row shows track names
- Turning the V-POTs changes the EQ parameter
- Pressing a V-SELECT sets the parameter to its default value
- CURSOR UP/DOWN switches to the next or previous EQ *band*.
- CURSOR LEFT/RIGHT switches to the next or previous EQ *parameter*. The selected parameter will be displayed briefly in the upper LCD row.



- Pressing a MUTE button while the SHIFT button is held down toggles the current EQ band’s Bypass status.
- When Flip Mode is enabled, the MUTE buttons display and edit the current EQ band’s *Bypass* status.

Channel Strip View

EQ Channel Strip view allows you to edit all EQ parameters—in all bands—for the selected track.

- The *Mode Display* will show EQ. (for “EQ channel strip”).
- The upper LCD row shows the name of the track, “EQs”, the page number and total number of pages—e.g. “Page 1/2”.
- V-POT/V-SELECT 1—edits the *Frequency* of odd-numbered EQs
- V-POT/V-SELECT 2—edits *Gain* of odd-numbered EQs
- V-POT/V-SELECT 3—edits *Q* of odd-numbered EQs
- V-POT/V-SELECT 4—edits *Bypass* of odd-numbered EQs
- V-POT/V-SELECT 5—edits the *Frequency* of equally-numbered EQs
- V-POT/V-SELECT 6—edits *Gain* of equally-numbered EQs
- V-POT/V-SELECT 7—edits *Q* of equally-numbered EQs
- V-POT/V-SELECT 8—edits *Bypass* of equally-numbered EQs
- CURSOR LEFT/RIGHT switches to the next or previous EQ band. The number of EQ bands displayed on the LCD depends on the number of Logic Control (XT) units (two EQ “bands” per unit) available.



Alternate Mode Options

Holding down the EQ button accesses a further sub-menu in the LCD:

- The *Mode Display* shows E or E., dependent on whether you were in EQ Multi Channel or EQ Channel Strip view
- V-SELECT 1 or F1—switches to *EQ Multi Channel View* and selects *Frequency*
- V-SELECT 2 or F2—switches to *EQ Multi Channel View* and selects *Gain*
- V-SELECT 3 or F3—switches to *EQ Multi Channel View* and selects *Q*
- V-SELECT 4 or F4—switches to *EQ Multi Channel View* and selects *Bypass*
- V-SELECT 6 or F6—switches to *EQ Channel Strip View*
- V-SELECT 7 or F7—switches to *Frequency/Gain Multi Channel View*. In this mode you can edit the *Frequency* and *Gain* parameters of a specific EQ band (1 to 8) for *all tracks*.
 - the *Mode Display* will show F1 to F8, depending on the selected EQ band
 - the upper LCD row shows track names
 - the lower LCD row shows the *Frequency* of the selected EQ
 - turning a V-POT changes *EQ Frequency*
 - pressing a V-SELECT sets the *EQ Frequency* to its default value
 - use the MUTE buttons to *Bypass* the EQ
 - use the faders adjust the *EQ Gain*
- V-SELECT 8 or F8—switches to *Frequency/Gain Channel Strip View*. In this mode you can edit the *Frequency* and *Gain* parameters for all EQ bands of the *selected track*. Each pair of channel strips corresponds to one of the EQ bands.

- the *Mode Display* will show **FG**.
- V-POTs 1 to 8 control EQ band 1 to 8 *Frequency*
- MUTE buttons 1 to 8 control EQ band 1 to 8 *Bypass*
- FADERS 1 to 8 control EQ band 1 to 8 *Gain*

Note that in this mode, the faders form a frequency response curve, if the EQ bands have ascending frequency values.

You can edit another track's EQs by simply selecting the track, without leaving this view mode.

Send Assignment Modes

Briefly pressing the SEND button toggles between *Send Multi Channel* or *Send Channel Strip View*.

Multi Channel View

Send Multi Channel view allows you to edit one *Send* parameter for all tracks: *Destination*, *Level*, *Position* and *Mute*. The *Send* "slot" number, and parameter being edited will be displayed for one second when switching to this mode.

- The *Mode Display* will show **S1** to **S8**, depending on the selected *Send* "slot".
- The upper LCD row shows track names
- Turning the V-POTs changes the *Send* parameter
- Pressing a V-SELECT confirms the pre-selected *Send Destination* and set the other send parameters to their default.
- CURSOR UP/DOWN switches to the next or previous *Send* "slot".
- CURSOR LEFT/RIGHT switches to the next or previous *Send* parameter. The selected parameter will be displayed briefly in the upper LCD row.



- Pressing a MUTE button while the SHIFT button is held down toggles the current Send's Mute status.
- When Flip Mode is enabled, the MUTE buttons display and edit the current Send's *Mute* status.

Tip: Ensure that the ZOOM button isn't active when using the CURSOR keys.

Channel Strip View

Send Channel Strip view allows you to edit all *Send* parameters for the selected track.

- The *Mode Display* will show `SE.` (for “Send channel strip”).
- The upper LCD row shows the name of the track, “Sends;” the page number and total number of pages—e.g. “Page 1/4”

```
Track 1 "Audio 1"           Sends           Page 1/2
Snd3Ds Send 3  Snd3Ps Snd3Mt Snd4Ds Send 4  Snd4Ps Snd4Mt
```

- V-POT/V-SELECT 1—edits *Destination* of odd-numbered *Sends*
- V-POT/V-SELECT 2—edits *Level* of odd-numbered *Sends*
- V-POT/V-SELECT 3—edits *Position (pre/post)* of odd-numbered *Sends*
- V-POT/V-SELECT 4—edits *Mute* of odd-numbered *Sends*
- V-POT/V-SELECT 5—edits *Destination* of even-numbered *Sends*
- V-POT/V-SELECT 6—edits *Level* of even-numbered *Sends*
- V-POT/V-SELECT 7—edits *Position (pre/post)* of even-numbered *Sends*
- V-POT/V-SELECT 8—edits *Mute* of even-numbered *Sends*
- With the horizontal Cursor buttons you shift pages. The number of *Sends* which are displayed simultaneously depends on the number of Logic Control XTs you have.



Alternate Edit Mode Options

Holding down the SEND button accesses a further sub-menu in the LCD:

- The *Mode Display* shows `S_` or `S_.`, depending on whether you were in *Send Multi Channel* or *Send Channel Strip View*

```
Dest   Pos   Level  Mute   CStrip CSt2   Ds/LvM Ds/LvC
```

- V-SELECT 1 or F1—switches to *Send Multi Channel View* and selects *Destination*
- V-SELECT 2 or F2—switches to *Send Multi Channel View* and selects *Send Level*
- V-SELECT 3 or F3—switches to *Send Multi Channel View* and selects *Position*
- V-SELECT 4 or F4—switches to *Send Multi Channel View* and selects *Mute*
- V-SELECT 5 or F5—switches to *Send Channel Strip View*
- V-SELECT 6 or F6—switches to *Send Channel Strip 2 View*:
This mode is similar to *Send Channel Strip View*, however the parameters are arranged in a different way. You can control one parameter of all *Send* “slots” for the selected track.
 - The *Mode Display* will show `SE.` (for “Send channel strip”).

- The upper LCD row shows the name of the track, “Sends”, the page number and total number of pages—e.g. “Page 1/4”

Track 1 "Audio 1" Sends Page 1/2
Snd1Ds Snd2Ds Snd3Ds Snd4Ds Snd5Ds Snd6Ds Snd7Ds Snd7Ds

- V-POT/V-SELECT 1 to 8—edits the displayed parameter
- With the horizontal Cursor buttons you shift pages. The number of parameters which are displayed simultaneously depends on the number of Logic Control XTs you have.



- V-SELECT 7 or F7—switches to *Destination/Level Multi Channel View*:
In this mode you can control one *Send* “slot” for all tracks. Each channel strip corresponds to the track shown in the upper LCD row.
 - the *Mode Display* will show d_1 to d_8 , depending on the selected *Send*
 - the upper LCD row shows track names
 - the lower LCD row shows the destination of the selected *Send*
 - turning a V-POT pre-selects the *Send Destination*
 - pressing a V-SELECT confirms the pre-selected *Send Destination*
 - the SOLO buttons edit *Send Position*—SOLO LED on means “Pre Fader”
 - the MUTE buttons edit *Send Mute*
 - the faders edit *Send Level*
- V-SELECT 8 or F8—switches to *Destination/Level Channel Strip View*:
In this mode you can control all *Send* slots for the selected track. Each channel strip corresponds to the *Send* number embossed below the LCD.
 - the *Mode Display* will show d_L .
 - turning a V-POT pre-selects the corresponding *Send Destination*
 - pressing a V-SELECT confirms a preselected *Send Destination*
 - the SOLO buttons edit *Send Position*—SOLO LED on means “Pre Fader”
 - the MUTE buttons edit *Send Mute*
 - the faders edit *Send Gain*

If one or more *Sends* are activated on multiple channels, you can switch between them in the *Channel Strip Views* by simply pressing the SELECT button for the desired channel.



Plug-In Assignment Modes

Pressing PLUG-IN toggles between *Plug-in Multi Channel* or *Plug-in Channel Strip View*.

Please note that there is one exception to this behavior: if you are in *Instrument Edit View*, pressing this button switches to *Plug-in Edit View*.

Multi Channel View

This mode shows the plug-ins associated with a particular *Insert* “slot” for all channels.

- The *Mode Display* will show P1 to P9, or simply 10 to 16, dependent upon the selected Plug-In *Insert* “slot” number. Note that if an Audio Instrument channel is selected, the display will show P1 to P9 and 10 to 15.
- The upper LCD row shows track names.
- The lower LCD row shows the currently selected plug-in for this insert slot. Muted plug-ins are shown with an asterisk * which precedes the plug-in name.
- Turning the V-POTs pre-selects a new plug-in. Until confirmed with the V-SELECT, the plug-in name flashes.
- Turning another V-POT will cancel any previous pre-selection and will start pre-selection on the newly selected track.
- Pressing a V-SELECT:
 - confirms/activates the pre-selected plug-in (assuming that you’ve made your pre-selection by turning the V-POT)
 - opens a plug-in editor window, if none are opened. If a plug in window *is* opened, and link mode is enabled, the selection of another plug-in will replace the existing plug-in shown.
 - switches to *Plug-in Edit View*

To remove a plug-in, pre-select the value of “--” (by turning the V-POT all the way counterclockwise), and press the V-SELECT linked to the appropriate Insert slot. Logic Control will not switch to *Plug-In Edit view*, and no Plug-In window will be launched. If one was previously opened, it will be closed (if the “chain” icon is inactive).

- The CURSOR UP/DOWN buttons change the currently displayed Plug-in *Insert* slot (1 to 8).
- Pressing a V-SELECT while the SHIFT button is held down will mute/unmute the plug-in.



- Pressing a MUTE button while the SHIFT button is held down toggles the will mute/unmute the plug-in.

Channel Strip View

This mode shows the plug-ins associated with all *Insert* “slots” for the selected channel.

- The *Mode Display* will show P_L .
- The upper LCD row shows $INS1P1$ through $INS8P1$
- The lower LCD row shows the plug-in which is currently selected for this insert slot. Muted plug-ins are indicated by an asterisk *, which precedes the plug-in name.
- Turning the V-POTs pre-selects a new plug-in. Until activated, the plug-in name flashes.
- Turning another V-POT will cancel any previous pre-selection and will start pre-selection on the newly selected track.
- Pressing a V-SELECT:
 - activates the pre-selected plug-in (assuming that you’ve made your pre-selection by turning the V-POT)
 - opens a plug-in editor window if none are opened (if a plug in window *is* opened, and link mode is enabled, the selection of another plug-in will replace the existing plug-in)
 - switches to *Plug-in Edit View*

To remove a plug-in, pre-select the value of “--” (by turning the V-POT all the way counterclockwise), and press the V-SELECT linked to the appropriate Insert slot. Logic Control will not switch to *Plug-In Edit view*, and no Plug-In window will be launched. If one was previously opened, it will be closed (if the “chain” icon is inactive).

- Pressing a V-SELECT while the OPTION button is held down will mute/unmute the plug-in



Plug-in Edit View

- The *Mode Display* will show $P1.$ to $P8.$, depending on the number of the selected Plug-In *Insert* “slot”.
- Dependent on the NAME/VALUE button, the LCD display will change in the following ways between the two modes:
 - *Name* The upper LCD row shows the track’s name, insert number, plug-in name, current parameter page and total number of parameter pages. The lower LCD row shows the name of the parameter which is edited via the V-POT below.
 - *Value* The upper LCD row shows the name of the parameter which is edited via the V-POT below. The lower LCD row shows the current value of the parameter edited with the V-POT. If there is sufficient onscreen space, the unit type will be added—e.g. Hz.
- Turning the V-POTs changes the parameter

- Pressing a V-SELECT sets the parameter to its default value, except where the parameter only has two values (on/off, for example). In this case, pressing the V-SELECT toggles between these values.
- The CURSOR LEFT/RIGHT buttons switch to the next or previous parameter page.



Note that when shifting by a “page,” this always “quantizes” to integer pages. As an example:

- the plug-in has 19 parameters
- Logic Control shows parameters 1 to 8
- CURSOR RIGHT shifts to 9 to 16
- CURSOR RIGHT shifts to 12 to 19
- CURSOR LEFT shifts back to 9 to 16, not to 4 to 11

This way, you always revert to the page positions you expect to find, and are comfortable with.

- To switch by a single parameter, rather than by “page,” hold down the **⌘**/ALT key while pressing the CURSOR LEFT/RIGHT button.
- The CURSOR UP/DOWN buttons change the currently displayed Plug-in insert slot (1 to 8)



N.B. If you have a Control Surface Group consisting of several physical units, the parameters are distributed across their displays. The number of parameters shown is dependent on the settings in the *Preferences*, as discussed in the Logic Reference Manual.

When exiting *Plug-In Edit View*, the Plug-In window will be closed (if the “chain” icon is inactive).

Compatibility

Logic Control can edit all plug-ins which have automatable parameters. The plug-in type (built-in, TDM, VST, DirectX) is irrelevant.

DirectX supports automatable parameters since version 8. However it is not sufficient to install this version—the DirectX plug-ins must also support the new functions.

Some plug-ins however don't provide parameter names and/or values as text. In this case the parameters are enumerated as "Control #1", "Control #2" etc., and the values are displayed as numbers between 0 and 1000.

Some VST plug-ins don't allow to retrieve the value range; in this case the range 0 to 1000 is assumed. This is disturbing with switches, as they can't be toggled with V-POTS nor with V-SELECTs. In this case hold down OPTION and turn the V-POT.

Please contact the plug-in's manufacturer in order to get a version which supports the mentioned features.

Instrument Assignment Modes

Pressing the INSTRUMENT button switches to "Instrument Multi Channel" view.

Please note that when in *Plug-In Edit view*, pressing the INSTRUMENT button will switch to *Instrument Edit View*.

If you can't see the Audio Instrument channels, use the BANK or CHANNEL buttons in the FADER BANKS zone, or switch to *Global View* by pressing the AUDIO INSTRUMENT button. (This assumes that you have created at least one or more Audio Instrument channels in the Environment Audio layer).

Multi Channel View

This mode shows the *Instrument Insert "slot"* (slot 1) for all channels.

- The *Mode Display* will show In
- The upper LCD row shows track names
- The lower LCD row shows the currently selected Instrument. Muted Instrument names are preceded by an asterisk *
- Turning the V-POTS pre-selects a new Instrument. Until activated, the pre-selected Instrument name flashes.
- Turning another V-POT will cancel any previous pre-selection and will start pre-selection on the newly selected track.
- Pressing a V-SELECT:
 - activates the pre-selected Instrument plug-in (assuming that you've made your pre-selection by turning the V-POT)
 - opens a plug-in editor window, if none are opened. If a plug in window *is* opened, and link mode is enabled, the selection of another Instrument plug-in will replace the existing one.
 - switches to *Instrument Edit View*

To remove an instrument plug-in, pre-select the value of "--" (by turning the V-POT all the way counterclockwise), and press the V-SELECT. Logic Control will not switch to *Instrument Edit view*, and no Plug-In window will be launched. If one was previously opened, it will be closed (if the "chain" icon is inactive).

- Pressing a V-SELECT while the SHIFT button is held down mute/unmutes the Instrument
- Pressing a MUTE button while the SHIFT button is held down mute/unmutes the Instrument

Instrument Edit View

- The *Mode Display* will show I_n .
- Dependent on the NAME/VALUE button, the LCD changes in the following ways:
 - *Name*—The upper LCD row shows the track's name, instrument name, current parameter page and total number of parameter pages. The lower LCD row shows the name of the parameter edited with the V-POT below it.
 - *Value*—The upper LCD row shows the name of the parameter edited with the V-POT below it. The lower LCD row shows the current value of the parameter edited with the V-POT. If there is sufficient space left, the unit is appended.
- Turning the V-POTs changes the corresponding parameter
- Pressing a V-SELECT sets the parameter to its default value, except where the parameter only has two values (on/off, for example). In this case, pressing the V-SELECT toggles between these values.

Compatibility

The comments in section *Compatibility* section on page 44 also apply to software instruments.

Fader Bank Zone

This area of the Logic Control surface contains six buttons.



Bank Left/Right

Moves up or down by “banks” of channels/tracks. To quickly explain, a single Logic Control is only capable of viewing 8 tracks at a time in either *Global* or *Mixer View*. To see, and edit or mix more tracks, simply press the RIGHT/LEFT BANK buttons to switch between tracks 1—8, 9—16, 17—24 a. s. o.

The BANK button pair shifts the view section by the number of channels in the *Control Surface Group*. E.g. if you have a Logic Control and two Logic Control XT units, the view shifts by 24 channels.

Note that when shifting by bank, this always “quantizes” to integer banks. As an example:

- your song has 19 tracks.
- Logic Control shows tracks 1 to 8
- BANK Right shifts to 9 to 16
- BANK Right shifts to 12 to 19
- BANK Left shifts back to 9 to 16, not to 4 to 11

This way, you always revert to the bank positions you expect, and are used to.

Channel Left/Right

As per the BANK buttons, but moves up or down in increments of a single channel.

Notes on Fader Bank Editing

When holding down the OPTION button, pressing the BANK LEFT or CHANNEL LEFT button jumps to the first tracks, and pressing the BANK RIGHT or CHANNEL RIGHT button jumps to the last tracks in the song—as an example in a 64 track song, tracks 1 to 8 or tracks 57—64.



The Fader bank offset is memorized separately for Global views where one track type is displayed (MIDI, Inputs, Audio Tracks, Instruments, Aux, Busses, Outputs+Master), and there is also a separate fader bank offset for combination of multiple track types. This feature allows you e.g. to scroll to audio tracks 2 to 9 in Global Audio Track view and to scroll to instruments 5 to 12 in Global Instruments view. You can switch between the views without losing the fader bank offset.

Flip

The FLIP button enables/disables the following “flip,” “swap” or “zero” modes:

- If the LED beside the FLIP button is off, flip/swap mode is off. The faders control volume.
- Pressing the FLIP button enables “flip mode” (the LED goes on): in this mode, the current assignment of the eight V-POTs are mirrored on the eight channel faders. Pressing the FLIP button again disables flip mode.

Turning a V-POT in this mode will also move the corresponding fader.

- Pressing the FLIP button while the SHIFT button is held down enables “swap mode” (the LED will flash): in this mode, the encoder assignments are *swapped* with the fader assignments. Pressing SHIFT + FLIP again disables swap mode. As the LCD’s lower row shows the current value of the encoders, it will show volumes in this mode.
- Pressing FLIP without SHIFT held reverts to flip mode.

- Pressing CONTROL + FLIP switches to zero mode. Pressing CONTROL + FLIP again disables zero mode. In this mode the faders are set to zero and don't move. Useful for acoustic/microphone recordings if Logic Control is located in the recording booth, and you don't want to hear/capture any motor noise.

Both flip and swap mode work in all view modes.

Flip mode has the following advantages:

- you can edit any type of parameter with a fader, rather than a V-POT, which allows more accurate edits
- you can edit with touch-sensitive faders. The V-POTs are not touch-sensitive, and thus don't allow existing (controller automation) movements to be overwritten by a constant value.

Global View

This button is discussed in *Global View* section, from page 18 onwards.

Master Fader

Controls the level of the *Master* fader in Logic's Mixer. This reduces the level of all tracks, but does not affect their relative positions.

When there is no Master Volume object in the song (or in Logic Express where this object is not supported), Logic Control's Master fader maps to Output 1-2.

To set the automation mode of the Master output, you need to select this object. To do so, press the OUTPUTS button and select the master output with the corresponding SELECT button.

If you use multiple audio systems simultaneously, the MASTER fader controls only the first audio system's Master Volume (in the order as seen in the Audio Preferences window).

Display Zone

These buttons affect what you see in the LCD and *Position/Time Display*.

Name/Value

To toggle between the two *Display* formats—*Name* or *Value*—repeatedly press the NAME/VALUE button in the *Display* section of the Logic Control—just below the SMPTE/BEATS LEDs. For more information, see the *Liquid Crystal Display (LCD)* section, from page 21 onwards.



Pressing the NAME/VALUE button, while holding the SHIFT button, cycles through these three level meter modes:

- *Vertical*—In this mode, the sixth (last) character of each channel in both LCD rows is overlaid by a vertical level meter bar. When the level meter is not visible, the text character reappears. We chose the last, rather than the first, character for the level meter, as this character is blank in many cases, so no valuable information is “blocked out” by the level meter.

Tip: if it disturbs you that the **D** letter of the dB unit flickers when levels are displayed, you should switch off display if units. See the Logic Reference Manual.

- *Horizontal*—with Peak Hold. In this mode, the second row is replaced by horizontal level meter bars. Peak Hold is shown as a hollow box which disappears after 3 seconds. Overload (clipping) is displayed as an asterisk. It remains on the LCD until cleared (see below).
- *Off*—In this mode, no level meters are displayed in the LCD.

In all three modes, the SIGNAL LEDs function as per usual, indicating the presence of a signal.

N.B. The MIDI bandwidth required for the display of level meters is the same in all three modes—and is very low. The *Position/Time Display* updates require much more MIDI bandwidth than the level meters.

Pressing the NAME/VALUE button, while holding the CONTROL button, clears Overload (clipping) in both Logic’s Environment/Track Mixer, and the horizontal level meters on the Logic Control.

Pressing the NAME/VALUE button, while holding the CMD/ALT button, enters “Control Surface Group Settings Mode”. Here you can edit several control surface group settings, some of which are not accessible with a single button:

- V-POT/V-SELECT 5 (label “TrkNam”)—sets track name display format
 “Name”—track name only
 “#:Name”—track number and name
 This parameter can also be toggled with OPTION+NAME/VALUE
- V-POT/V-SELECT 6 (label “Lock”)—toggles Channel Strip View track lock
 “Off”—as you are used to: selecting a track also switches the currently edited Channel Strip track
 “On”—the currently edited Channel Strip Track is not affected by selecting a track.

When you switch from On to Off, this also updates the Channel Strip track

To edit another track in Locked mode, first disable Lock, then select the desired track, then re-enable Lock

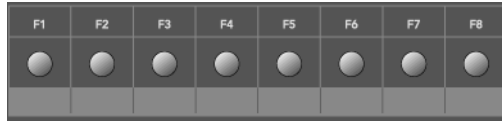
- V-POT/V-SELECT 7 (label “Disply”)—toggles LCD display format
 “Name”—upper line displays global info, lower line displays parameter names
 “Value”—upper line displays parameter names, lower line displays parameter values
 This parameter can also be toggled with NAME/VALUE.
- V-POT/V-SELECT 8 (label “Clock”)—toggles Clock display format
 “Beats”—clock is displayed in format bars/measures/beats/ticks
 “SMPTE”—clock is displayed in SMPTE format
 This parameter can also be toggled with SMPTE/BEATS.

Control Surface Group Settings Mode can be left by pressing NAME/VALUE, or by entering one of the Marker or Nudge modes.

SMPTE/Beats

To toggle between the two *Time* formats, repeatedly press the SMPTE/BEATS button in the *Display* section at the top of the Logic Control—just below the SMPTE/BEATS LEDs. For more information, see the *Song Position/SMPTE Time Display* section on page 23.

The Function Key Zone



The eight Function Keys—F1 to F8—are assigned as follows:

- F1 to F7 recalls screensets 1 to 7
- F8 closes the top-most window, with “floating” windows closed first.

With the SHIFT key held down, the *Function* keys toggle particular windows:

- F1—Arrangement
- F2—Track Mixer
- F3—Event Editor
- F4—Score
- F5—Hyper Editor
- F6—Matrix Editor
- F7—Transport
- F8—Audio

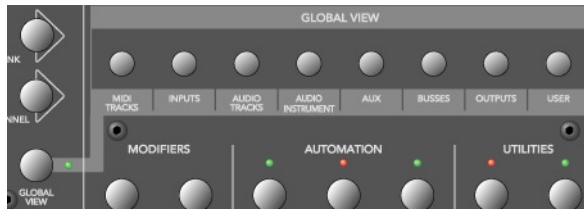
With the CMD/ALT key held down, the *Function* keys trigger common key commands:

- F1—Cut
- F2—Copy
- F3—Paste
- F4—Clear
- F5—Select All
- F6—Select All Following
- F7—Select Similar Objects
- F8—Select Inside Locators

In some other “modes”, the *Function* keys perform other duties, such as shortcuts to *Markers*. Please see the *Marker* section on page 56. Also see the table towards the back of this manual.

The Global View Zone

The *Global View* mode is activated by pressing any of the GLOBAL VIEW buttons. When any is activated, the green LED to the right of the GLOBAL VIEW button will illuminate.



Pressing multiple GLOBAL VIEW buttons simultaneously will display the objects of the selected types. To do so:

Hold down any GLOBAL VIEW button, and add or remove other object types by repeatedly pressing the other desired GLOBAL VIEW buttons. The display order of the objects matches the order of these buttons on the front panel of the Logic Control.

As an example: to see the busses and the outputs, hold down BUSSES, and then press OUTPUTS.

Further information on *Global View* is found in the *Global View* section on page 18.

Function Button Zone

There are three areas in this zone—*Modifiers*, *Automation* and *Utilities*.



Modifier Buttons

The four buttons in this area are similar to those found on your Mac OS or Windows computer keyboard (however independent from them). Many of Logic's functions behave differently when one or more "modifier" key(s) is pressed, in conjunction with another key or mouse click. This also applies to the Logic Control. All "modified" Logic Control commands are covered in each function's description.

A generic, and brief, description of each button follows:

- SHIFT—an alternate function/meaning for a button
- OPTION—the function applies to all objects. For relative value changes: the value is set to the minimum or maximum, depending on whether you increase/decrease it.

- CONTROL—while held down, the Group Clutch is engaged, i.e. Track Groups are temporarily disabled.
- ⌘/ALT—fine tuning variation of the function.

Automation Buttons



The five buttons in this area activate/deactivate the various automation modes of Logic. These work in conjunction with the channel SELECT switches. Simply choose the channel you wish to automate, select the *Automation* mode via one of these six buttons, and move the corresponding fader. The modes are outlined below:



- READ/OFF—Pressing this button repeatedly toggles between the “Read” and “Off” automation modes.
 - *Off*—Automation is off. The fader will neither send nor receive automation data. Existing automation data remains untouched. It will still behave as a fader, however, and will adjust the volume or pan position etc. as usual.
 - *Read*—The fader will read (follow) any existing automation data, but will not write data, regardless of any movements you make with the mouse or external control device.
- TOUCH—Writes new parameter changes when the fader is “touched” or V-POT turned during playback. Any existing track automation data (of the current fader type) will be replaced by new movements as long as the control is active—i.e. the fader is being touched or V-POT is being turned.
- LATCH—Similar to Touch mode, but the control remains activated, even when the fader is no longer being “touched” or V-POT being turned. In other words, following the release of the fader, the current fader value will replace the existing automation data for as long as the sequencer is in playback mode. Press STOP to finish.
- WRITE—Overwrites *all* existing automation data, or creates new automation data. Only use it if you wish to destroy all existing automation data.
- TRIM—Not enabled in the release version of Logic 5.
Please consult the readme files of updated versions.

When the OPTION key is held down, pressing one of the *Automation* buttons chooses the selected automation mode for *all* tracks. When an automation mode has been selected for all tracks, the button's LED will illuminate whenever the OPTION key is held.



N.B.—This is slightly different for the “*Off*” automation mode, when holding down the OPTION button. While doing so, all automation “writing” buttons will be turned off, but this does not necessarily mean that all tracks are actually in *Off* mode—they could also be in different modes. To ensure that you have set all tracks to *Off* mode, press READ/OFF twice (its LED goes on, then off), while holding down the OPTION key.

Group



Pressing the GROUP button enters Group Edit Mode:

- GROUP button's LED is on
- The Assignment display shows the currently displayed group, e.g. “G1”
- The Time display shows the group name (10 last characters if name is longer than 10 characters)
- The upper LCD line displays track names
- The lower LCD line displays group parameters
- Group parameters can be toggled with V-SELECTs
- CURSOR UP/DOWN selects previous/next group
- CURSOR LEFT/RIGHT shifts group parameter display
- SELECT buttons display if a track is a member of the group. Pressing a SELECT button toggles track membership of the group

With Group Edit Mode off, holding down GROUP and pressing one or more SELECT buttons allows you to create a new group.

Pressing the GROUP button, while the SHIFT button is held down, creates a new group, opens the Group window and enters Group Edit mode.

Pressing the GROUP button, while the TRACK button is held down, switches to Track Multi Channel View, displaying the Track Group parameter. It displays which group the instrument is a member of. Multiple group membership is displayed like in the Track Mixer window. Turning a V-POT changes group membership. Note that you can only select one group (or “*Off*”) here.

Utilities Buttons

Save

Saves the current Song file. When pressed, a file save dialog will open on your computer screen, waiting for you to enter a filename as per usual.

The Logic Control LCD will display `There is a file select dialog on the screen` and the *Position/Time Display* will show `ALERT`. All LEDs will go off.

Once the file save has been confirmed—in *Logic*—the Logic Control will return all controls to their status prior to invoking the *Save* command.

Once the song has been saved and given a name, you may freely use the *SAVE* button to save any subsequent changes. This will happen without the alert messages and file save dialog appearing onscreen.

As a general working tip, you should always save your autoload song under a different name as the first step in any project. If this practice is adhered to, you will be able to simply press the *SAVE* button on the Logic Control to incrementally save your work.

The *SAVE* LED illuminates as soon as any save-able change has been made in *Logic*.

Holding down the *OPTION* button while pressing *SAVE* opens the “Save As.” file select box.



Undo

Pressing the *UNDO* button undoes the last undoable editing step. As *Logic 5.1* supports virtually unlimited multiple undo/redo, The green *UNDO* LED does not illuminate to indicate an undo-able step, but to indicate that Redo is available. This warns you that performing an undoable editing step would render all Redo steps unavailable.

Holding down the *SHIFT* button while pressing *UNDO* performs a “Redo”.

Holding down the *OPTION* button while pressing *UNDO* opens the Undo History window.

Cancel

If an alert is open on-screen, it triggers the *Cancel* (or *Abort*) button. More information on alerts is found in *About Alert Messages* section on page 23. Pressing the *CANCEL* button when no alert is opened will launch the *Toolbox* at the current on-screen position of the mouse cursor. Alternately, it will perform any function currently assigned to the computer keyboard *Esc* key.

If no alert is open, and *Logic Control* currently displays the contents of a folder track, the *CANCEL* button lets you leave the folder.

With CANCEL you can also cancel a blinking pre-selection of a parameter value.

Enter

If an alert is open, the ENTER button triggers the default button. See *About Alert Messages* section on page 23 for more information.

If no alert is open, and the selected track is a folder track, the ENTER button enters this folder.

The Transport Zone

This section of the Logic Control features twelve (12) buttons. All are equipped with a dedicated LED to indicate their current status.



It should be noted that these buttons can be used independently, or in conjunction with one another, to navigate and edit your songs.

The functionality of these buttons is as follows:

Marker

With the help of the MARKER button you can jump to, create and delete markers.

Marker and Nudge Mode are mutually exclusive; activating one deactivates the other.

Small Marker Mode

Hitting the MARKER button reassigns the behavior of the FAST FWD and REWIND buttons. They let you jump to the next or previous marker.



Pressing the MARKER button again returns to the default behavior of the FAST FWD and REWIND (see *Rewind* section on page 62 and *Fast Fwd* section on page 62).

Small Marker Mode is useful if you want to jump to markers, but still use the V-POTS for other purposes.

Large Marker Mode

When pressing the MARKER button while holding down SHIFT, the LCD will update to display three options, assigned to the first three V-SELECTs.



- V-SELECT 1 to 5—display the first 5 Markers by name. Pressing a V-SELECT sets the current song position to this Marker. When the current song position is inside a marker, the lower line displays INSIDE, and the V-POT LED ring is on.
- V-SELECT 6—Cr w/o—Creates a marker without rounding to the nearest bar.
- V-SELECT 7—Create—Creates a marker rounded to the nearest bar.
- V-SELECT 8—Delete—Deletes the marker above the current SPL location.

To create or delete a marker at the current song position, simply press the appropriate V-SELECT switch.

The creation or deletion of markers is best used in conjunction with the JOG/SCRUB WHEEL. Simply move to the desired song position by dialing with the wheel, and then press the appropriate V-POT.

- For coarse placement, simply use the wheel to move the SPL.
- For fine placement, press the SCRUB button, and then use the wheel to place the SPL. (Only appropriate if creating or deleting an un-rounded marker).

More information on the JOG/SCRUB WHEEL is found in *The Jog/Scrub Wheel Zone* section on page 65.

Large Marker Mode is terminated by pressing MARKER.

Temporary Marker Mode

If you want to enter *Marker Mode* temporarily (to quickly perform a few marker functions), hold down the MARKER button and press one or more of the above V-SELECTs: this will execute the marker function and leave marker mode as soon as you release the MARKER button.

- When in this mode—with the MARKER button held—pressing the Function keys F1—F8 “jumps” to the first 8 markers. As an example, to go to marker 3, press-hold MARKER and press F3.
- To jump between markers, with (or without) the MARKER button held, simply press the REWIND or FAST FWD buttons.

Nudge

With the help of the NUDGE button, you can nudge selected regions, sequences and events.

Marker and Nudge Mode are mutually exclusive; activating one deactivates the other.

Small Nudge Mode

Hitting the NUDGE button reassigns the behavior of the FAST FWD and REWIND buttons. They nudge the selected regions, sequences or events by the value defined in the *Large Nudge Mode* (see below).



Pressing the NUDGE button again returns to the default behavior of the FAST FWD and REWIND (see *Rewind* section on page 62 and *Fast Fwd* section on page 62).

Small Nudge Mode is useful if you want to nudge objects, but still use the V-POTs for other purposes.

Large Nudge Mode

When pressing the NUDGE button while holding down SHIFT, the LCD will update to display eight options, assigned to the V-POTs and V-SELECTs. All these functions allow you to *move* the selected objects (audio region, MIDI sequence or events).



As an indicator, the position of the first selected region, sequence or event is displayed above V-POTs 3 and 4. If nothing is displayed, either a window is active which does not allow to select regions, sequences or events, or none are selected.

The functions are as per the following:

- V-POT 1—*Nudge*—selects the nudge value used by the REWIND and F.FWD buttons. These buttons move the selected object(s) backwards/forwards by the defined value.
- V-SELECT 2—*Pickup*—moves to the current song position line location.
- V-POT 3—*Bar*— moves by 1 bar.
- V-POT 4—*Beat*—moves by the current song denominator value (beats).
- V-POT 5—*Format*—moves by the current song format value (sub-divisions—1/16th etc.).
- V-POT 6—*Ticks*—moves by single ticks.
- V-POT 7—*Frames*—moves by one SMPTE frame.
- V-POT 8—*Fram/2*—moves by a half SMPTE frame.

- The cursor buttons always emulate the computer keyboard's cursor keys. This allows you to easily select an object.

Large Nudge Mode is terminated by pressing NUDGE.

Temporary Nudge Mode

If you want to use NUDGE temporarily (for one or two “nudges”), hold down the NUDGE key, and use one or more of the above V-POTs: this will execute the nudge function and leave “nudge” mode as soon as you release the NUDGE button.

In *Temporary Nudge Mode*, the cursor buttons always emulate the computer keyboard's cursor keys. This allows you to easily select an object.

The Nudge value for the REWIND and F.FWD buttons can also be defined with the function buttons:

- F1—sets *Ticks*
- F2—sets *Format*
- F3—sets *Beat*
- F4—sets *Bar*
- F5—sets *Frames*
- F6—sets *Frames/2*

Cycle

Activates/deactivates *Cycle* mode. By default, the cycle region will fall between the first two *Markers*.



Subsequent *Markers* can act as left/right boundaries for further cycle regions.

To “jump” between cycle regions—defined by the *Markers*:

- Press the MARKER button, to activate it.
- Press the CYCLE button, and when active, press the REWIND or FAST FWD buttons.

Quickly Define a Cycle Locator

To set the left or right locator to the current song position, hold down CYCLE and press REWIND or FAST FWD. This also enables *Cycle*.

So the fastest way to define a new cycle region is:

- 1 navigate to the left locator with the JOG/SCRUB WHEEL
- 2 press CYCLE + REWIND
- 3 navigate to the right locator with the JOG/SCRUB WHEEL
- 4 press CYCLE + FAST FWD

Cycle View

Pressing the SHIFT + CYCLE buttons activates *Cycle View* mode:

- The *Mode Display* displays *CY*
- V-POT/V-SELECT 1—shows and edits the current Cycle status (*off* or *on*); you can also use the CYCLE button
- V-SELECT 2—*BySel*— sets the current Cycle region by the selection made in the Arrange window—i. e. the selected regions or sequences
- V-POT 3—*Move*— moves the current Cycle region by a bar with each “click” when turning the V-POT
- The display shows the left and right locators above V-POTs 5 and 7
- Pressing V-SELECT 5 picks up the current song position for the left locator
- Turning V-POT 5 changes the left locator in bars
- Turning V-POT 6 changes the left locator in beats (denominator steps).
- Pressing V-SELECT 7 picks up the current song position for the right locator
- Turning V-POT 7 changes the right locator in bars
- Turning V-POT 8 changes the right locator in beats (denominator steps)

To return to a regular *Assignment* mode, press one of the ASSIGNMENT buttons.

Drop

Activates/deactivates *Drop-In* mode.



To “jump” between drop-in regions:

- 1 Press the MARKER button, to activate it.
- 2 Press the DROP button, and when active, press the REWIND or FAST FWD buttons.

Quickly Define a Drop Locator

To set the Drop In or Drop Out locator to the current song position, hold down DROP and press REWIND or FAST FWD. This also enables *Drop*.

So the fastest way to define a new Drop region is:

- 1 navigate to the Drop In locator with the JOG/SCRUB WHEEL
- 2 press DROP + REWIND
- 3 navigate to the Drop Out locator with the JOG/SCRUB WHEEL
- 4 press DROP + FAST FWD

Drop View

Pressing SHIFT + DROP buttons activates *Drop View*:

- The *Mode Display* shows *dr*
- V-POT/V-SELECT 1 shows and edits the current Drop status (*off* or *on*); you can also use the DROP button
- V-POT 3 —*Move*— moves the current Drop region by a bar with each “click” when turning the V-POT
- The display shows the Drop In and Drop Out locators above V-POTs 5 and 7
- Pressing V-SELECT 5 picks up the current song position for the Drop In locator
- Turning V-POT 5 changes the Drop In locator in bars
- Turning V-POT 6 changes the left locator in beats (denominator steps)
- Pressing V-SELECT 7 picks up the current song position for the Drop Out locator
- Turning V-POT 7 changes the Drop Out locator in bars
- Turning V-POT 8 changes the right locator in beats (denominator steps)

Changing a drop locator with Logic Control enables *Drop* mode.

To return to a regular *Assignment* mode, press one of the ASSIGNMENT buttons.

Replace

Activates/deactivates *Replace* mode.



Click

Enables/Disables MIDI (or computer) metronome click. There are independent click settings for play and record. The click settings are enabled or disabled, dependent on the current Record state (see the “MIDI/Monitor Metronome Click” key command)



Pressing SHIFT + CLICK buttons toggles both *External Sync Mode* and *Transmit MMC*.

Solo

The SOLO button behaves as per the *Solo* key command. Individual channels can be soloed via the channel SOLO switches on each channel strip. Subsequent objects (sequences or audio regions) can be selected and solo-ed along with the selected channels. Each channel features an independent SOLO LED which illuminates when a track is soloed. The RUDE SOLO LED—just to the right of the *Position/Time Display*—also illuminates whenever any track is soloed.

Pressing SHIFT + SOLO buttons enables the *Solo Lock* mode.

Rewind

Rewinds/shuttles through the song. If pressed repeatedly while rewinding, the rewind speed will be accelerated with each button push. If the FAST FWD button is pressed while REWIND is engaged, the fast rewind will be slowed. Repeated presses of the FAST FWD button will slow down, stop, and eventually reverse the shuttle direction. Pressing the STOP button will halt the rewind. Using the JOG/SCRUB WHEEL will also exit shuttle mode.



When one of the *Marker Modes* is activated, repeated presses of the REWIND button will move the *Song Position Line (SPL)* to the previous marker.

When one of the *Nudge Modes* is activated, the REWIND button will move the selected object(s) backward by the value defined in *Large Nudge Mode*.

Fast Fwd

Fast forwards/shuttles through the song. If pressed repeatedly while fast forwarding, the shuttle speed will be accelerated with each button push. If the REWIND button is pressed while FAST FWD is engaged, the fast forward will be slowed. Repeated presses of the REWIND button will slow down, stop, and eventually reverse the shuttle direction. Pressing the STOP button will halt the fast forward. Using the JOG/SCRUB WHEEL will also exit shuttle mode.



When one of the *Marker Modes* is activated, repeated presses of the FAST FWD button will move the *Song Position Line* to the next marker.

When one of the *Nudge Modes* is activated, the FAST FWD button will move the selected object(s) forward by the value defined in *Large Nudge Mode*.

As a tip, you can combine Markers with Cycle regions by pressing the respective buttons on the Logic Control. This, in conjunction with the “stepping” between markers mentioned above (using the REWIND and FAST FWD buttons) will move the SPL, and will automatically set a cycle region between adjacent markers. Try this, and other options, with various button combinations.

Stop

Stops all other Transport functions. Pressing the STOP button a second time will return to the song start point, or the beginning of the nearest cycle region, if *Cycle* is active. Repeated presses will toggle between the two.



Play

Plays from the current song position. If pressed repeatedly, it will jump to the beginning of the nearest cycle region, if *Cycle* is active.



SHIFT + PLAY works as a *Pause* command.

Record

Activates recording on the selected MIDI, Audio or Audio Instrument track.



A special note for Audio tracks: When the *first* Audio track is armed by pressing the REC/RDY switch on the desired channel, a file save dialog will open on your computer screen, waiting for you to enter a filename as per usual. The Logic Control LCD will display `There is a file select dialog on the screen` and the *Position/Time Display* will show `ALERT`. All LEDs will go off.

Once the file name has been entered—in *Logic*—the Logic Control will return all controls to their status prior to invoking the REC/RDY command.

Once the “default” audio file name has been entered, you may freely select and “arm” any Audio track, and then press the RECORD button. This will happen without the alert messages and file save dialog appearing onscreen.

As a general working tip, you should also define a “default” audio file name, *after* saving your autoload song under a different name. These should be the first steps when creating any project.

The Cursor/Zoom Key Zone

This collection of five buttons serves a number of purposes.

Normal operation

When the ZOOM button's LED is off, these buttons select the current parameter, shift the current parameter page or Send/EQ/Insert slot, depending on the current V-POT assignment.



When holding down the OPTION button, the CURSOR LEFT/RIGHT buttons scroll to the first/last page, and the CURSOR UP/DOWN buttons scroll to the first/last slot.

When holding down the ⌘ /ALT button, the CURSOR LEFT/RIGHT buttons shift the parameter display by only one parameter instead of by one page.

In *View* modes which don't need the cursor keys to shift pages or slots, they emulate the computer keyboard's cursor keys. Example: *Track Multi Channel View*.

In *Large Nudge Mode* and *Temporary Nudge Mode*, the cursor buttons always emulate the computer keyboard's cursor keys. This allows you to easily select an object.

Zoom mode

Pressing the ZOOM button enables Zoom mode. The CURSOR buttons can then be used to change the vertical or horizontal zoom factor of the active window.

In the Arrange window:



- OPTION and CURSOR UP/DOWN changes the zoom factor of the selected track.
- OPTION and CURSOR LEFT resets the zoom factor of the selected track
- OPTION and CURSOR RIGHT resets the zoom factor of all tracks which are of the same class (audio, MIDI etc.) as the selected track.

Computer Cursor Key Emulation

To use the cursor buttons as a replacement for the computer keyboard cursor keys, hold down the SHIFT key.

By pressing SHIFT and ZOOM, the cursor keys go to *Permanent Cursor Key Mode*, i.e. they mimic the computer cursor keys without the need to hold down SHIFT. In this mode, the Zoom button LED flashes.

The Jog/Scrub Wheel Zone

The JOG/SCRUB WHEEL and SCRUB button can be used to navigate through the song, which is useful for a number of *Transport* tasks. Simply turn the dial to use it. The following *Scrub* modes change the behavior of the JOG/SCRUB WHEEL.

- SCRUB mode *off*: the JOG/SCRUB WHEEL moves the SPL
- SCRUB mode *on*: the JOG/SCRUB WHEEL performs scrubbing. “Scrubbing” allows you to hear the data of the selected track while scrolling/moving through the song.

Audio tracks are normally played back with 100% original speed. If you prefer 200%, choose menu item Audio > Audio Hardware & Drivers, open the DAE section and set *Max. Scrub Speed to Double*.

Note: You can also use the SCRUB button for *Pause* functionality.

- SHUTTLE mode (SCRUB button LED flashing): the JOG/SCRUB WHEEL shuttles the SPL, i.e. turning it increases or decreases the speed the SPL moves.

Functions and Menus Channel Strip (x8)

Logic Control	Modifier	Function/Comments
V-POT	—	Modify parameter displayed in LCD.
	OPTION	Set parameter to minimum or maximum value.
	⌘/ALT	Modify parameter at high resolution.
V-SELECT	—	Set parameter displayed on LCD to default value, or: Switch between two possible values.
		flashing pre-selection:
	—	Enter the pre-selected value.
		menu options:
	—	Enter whatever option is visible in display.
		If track is folder:
	—	Enter folder.
REC/RDY	—	Toggle Record Enable of track.
	OPTION	Disable Record Enable for all tracks.
SOLO	—	Toggle Solo of track.
	OPTION	Disable Solo for all tracks.
		In Send Destination/Level Multi Channel View:
	—	Toggle pre/post status of selected send.
		In Send Destination/Level Channel Strip View:
—	Toggle pre/post of send on selected track.	

Logic Control	Modifier	Function/Comments
MUTE	—	Toggle Mute of track.
	OPTION	Disable Mute for all tracks.
	In Track Multi Channel View:	
	SHIFT	Toggle Mute/Bypass of the shown parameter
	In EQ Multi Channel View:	
	SHIFT	Toggle Bypass of the current EQ band
	In EQ Frequency/Gain View:	
	—	Toggle bypass of selected EQ band.
	In Send Multi Channel View:	
	SHIFT	Toggle bypass of selected send.
	In Send Destination/Level Multi Channel View:	
	—	Toggle bypass of selected send.
	In Send Destination/Level Channel Strip View:	
	—	Toggle mute of send on selected track.
	In Plug-in Multi Channel View:	
SHIFT	Toggle bypass of plug-in.	
In Instrument Multi Channel View:		
SHIFT	Toggle bypass of instrument.	
SELECT	—	Select track.
	SHIFT	Set track volume to unity level (0 dB).
	OPTION	create a new track with the same instrument of the selected track and switches to Arrange View
	SHIFT+ OPTION	create a new track with the next instrument of the selected track and switches to Arrange View

Logic Control	Modifier	Function/Comments
FADER	—	Adjust volume.
		In Flip Mode “Duplicate”:
	—	Same function as V-POT of same channel.
		In Flip Mode “Swap”:
	—	Swap function with V-POT of same channel.
		In Surround Angle/Diversity View:
	—	Adjust surround diversity.
		In EQ Frequency/Gain View:
	—	Adjust gain of selected EQ band.
		In Send Destination/Level Multi Channel View:
—	Adjust send level of selected send.	
	In Send Destination/Level Channel Strip View:	
—	Adjust send level of send on selected track.	

ASSIGNMENT Section

Hold down to show soft-button menu; release to switch V-POTs to Multi Channel or Channel Strip views for:

Logic Control	Modifier	Function/Comments
TRACK	—	Track parameters
PAN/SURROUND	—	Pan/Surround parameters
EQ	—	EQ parameters
SEND	—	Send parameters
PLUG-IN	—	Plug-in selection or Plug-in editor
INSTRUMENT	—	Instrument selection or Instrument editor
BANK ◀ ▶	—	Shift fader bank left/right by number of channel strips.
	OPTION	Shift fader bank to beginning or end.
CHANNEL ◀ ▶	—	Shift fader bank left/right by one channel.
	OPTION	Shift fader bank to beginning or end.
FLIP	—	Toggle flip mode between “off” and “duplicate”.
	SHIFT	Toggle flip mode between “off” and “swap”.
	CONTROL	Toggle flip mode between “off” and “zero” (i.e. motors off).
GLOBAL VIEW	—	Toggle between Mixer View and Global View.
	SHIFT	Toggle between Mixer View and Arrange View.

DISPLAY Parameters

Logic Control	Modifier	Function/Comments
NAME/VALUE	—	Toggle between parameter name and parameter value display.
	SHIFT	Cycle through level meter displays: vertical, horizontal and off.
	OPTION	Toggle between track name and track number:name display.
	CONTROL	Clear clip/overload flags.
	CMD/ALT	Enter “Control Surface Group Settings Mode”
SMPTE/BEATS	—	Toggle between SMPTE and Beat format in clock display.

Function Buttons

Logic Control	Modifier	Function/Comments
F1	—	Recall screen set 1.
	SHIFT	Toggle Arrange window.
	CMD/ALT	Cut
	TRACK	Switch to Multi Channel View—Volume.
	PAN/ SURROUND	Switch to Multi Channel View—Pan/surround angle.
	EQ	Switch to Multi Channel View—Bypass.
	SEND	Switch to Multi Channel View—Destination.
	MARKER	Create Marker without rounding
	NUDGE	Nudge value: Tick
F2	—	Recall screen set 2.
	SHIFT	Toggle Track Mixer window.
	CMD/ALT	Copy
	TRACK	Switch to Multi Channel View—Pan.
	PAN/ SURROUND	Switch to Multi Channel View—Pan/surround radius.
	EQ	Switch to Multi Channel View—EQ Type.
	SEND	Switch to Multi Channel View—Level.
	MARKER	Create Marker with rounding
	NUDGE	Nudge value: Format

Logic Control	Modifier	Function/Comments
F3	—	Recall screen set 3.
	SHIFT	Toggle Event Editor window.
	CMD/ALT	Paste
	TRACK	Switch to Multi Channel View—Track Mode.
	PAN/ SURROUND	Switch to Multi Channel View—Pan/surround LFE.
	EQ	Switch to Multi Channel View—Frequency.
	SEND	Switch to Multi Channel View—Position.
	MARKER	Delete Marker
	NUDGE	Nudge value: Beat
F4	—	Recall screen set 4.
	SHIFT	Toggle Score window.
	CMD/ALT	Clear
	TRACK	Switch to Multi Channel View—Input.
	PAN/ SURROUND	Switch to Multi Channel View—Pan/surround mode.
	EQ	Switch to Multi Channel View—Gain.
	SEND	Switch to Multi Channel View—Mute.
	NUDGE	Nudge value: Bar
	F5	—
SHIFT		Toggle Hyper Edit window.
CMD/ALT		Select All
TRACK		Switch to Multi Channel View—Output.
PAN/ SURROUND		Switch to Channel Strip View.
EQ		Switch to Multi Channel View—Q Factor.
SEND		Switch to Channel Strip View.
NUDGE		Nudge value: Frame
F6		—
	SHIFT	Toggle Matrix Editor window.
	CMD/ALT	Select All Following
	TRACK	Switch to Multi Channel View—Automation.
	PAN/ SURROUND	Switch to Angle/Diversity View.
	EQ	Switch to Channel Strip View.
	SEND	Switch to Channel Strip 2 View.
	NUDGE	Nudge value: 1/2 Frame

Logic Control	Modifier	Function/Comments
F7	—	Recall screen set 7.
	SHIFT	Toggle Transport window.
	CMD/ALT	Select Similar Objects
	TRACK	Switch to Multi Channel View—Displayed Parameter
	PAN/ SURROUND	Switch to Surround X/Y View
	EQ	Switch to Frequency/Gain Multi Channel View.
	SEND	Switch to Destination/Level Multi Channel View.
F8	—	Close top-most floating window.
	SHIFT	Toggle Audio window.
	CMD/ALT	Select Inside Locators
	TRACK	Switch to Track Setup View.
	EQ	Switch to Frequency/Gain Channel Strip View.
	SEND	Switch to Destination/Level Channel Strip View.

GLOBAL VIEW Buttons

Logic Control	Modifier	Function/Comments
MIDI	—	Switch to Global View and show MIDI instruments.
	SHIFT	Set to fader bank no. 1 (e.g. tracks 1 to 8).
INPUTS	—	Switch to Global View and show audio input objects.
	SHIFT	Set to fader bank no. 2 (e.g. tracks 9 to 16).
AUDIO TRACKS	—	Switch to Global View and show audio track objects.
	SHIFT	Set to fader bank no. 3 (e.g. tracks 17 to 24).
INSTRUMENTS	—	Switch to Global View and show audio instrument objects.
	SHIFT	Set to fader bank no. 4 (e.g. tracks 25 to 32).
AUX	—	Switch to Global View and show aux objects.
	SHIFT	Set to fader bank no. 5 (e.g. tracks 33 to 40).
BUSSES	—	Switch to Global View and show bus objects.
	SHIFT	Set to fader bank no. 6 (e.g. tracks 41 to 48).
OUTPUTS	—	Switch to Global View and show outputs and master objects.
	SHIFT	Set to fader bank no. 7 (e.g. tracks 49 to 56).
USER	—	Currently unassigned.
	SHIFT	Set to fader bank no. 8 (e.g. tracks 57 to 64).

MODIFIERS—While Held Down:

SHIFT	Switch to second function.
OPTION	Apply function to all tracks or set parameter to minimum/maximum.
CONTROL	Engage Group Clutch while held down
C/ALT	Enable fine mode; shift parameter page by 1 parameter instead of page.

AUTOMATION Buttons

Logic Control	Modifier	Function/Comments
READ/OFF	—	Set selected track's automation to Read or Off.
	OPTION	Set all tracks' automation to Read or Off.
TOUCH	—	Set selected track's automation to Touch.
	OPTION	Set all tracks' automation to Touch.
LATCH	—	Set selected track's automation to Latch.
	OPTION	Set all tracks' automation to Latch.
WRITE	—	Set selected track's automation to Write.
	OPTION	Set all tracks' automation to Write.
TRIM		Currently unassigned.
GROUP	—	Enter Group Edit Mode.
	SHIFT	Create a new group, open the Group window and enter Group Edit mode
	TRACK	Switch to Track Multi Channel View, displaying Track Group parameter

UTILITIES Buttons

Logic Control	Modifier	Function/Comments
SAVE	—	Save Song.
	OPTION	Save Song as...
UNDO	—	Undo.
	SHIFT	Redo.
	OPTION	Open Undo History.
CANCEL	—	Leave folder.
		Flashing pre-selection:
	—	Cancel pre-selection.
		In alerts:
	—	Execute "Cancel" button.
ENTER	—	Enter folder of selected track.
		In alerts:
	—	Execute default button.

TRANSPORT Buttons

Logic Control	Modifier	Function/Comments
MARKER	—	Toggle Small Marker Mode.
	SHIFT	Toggle Large Marker Mode
NUDGE	—	Toggle Small Nudge Mode.
	SHIFT	Toggle Large Nudge Mode
	MARKER	Create a marker. This allows you to create a marker with one hand without entering “Big Permanent Marker Mode”.
CYCLE	—	Toggle Cycle.
	SHIFT	Switch to Cycle View.
DROP	—	Toggle Drop.
	SHIFT	Switch to Drop View.
REPLACE	—	Toggle Replace.
CLICK	—	Toggle playback or record metronome click.
	SHIFT	Toggle internal/external sync and MMC.
SOLO	—	Toggle track solo (of selected track).
	SHIFT	Enable Solo Lock
REWIND ◀◀	—	Shuttle rewind.
	MARKER	Go to previous marker.
	NUDGE	Nudge left by chosen value.
	CYCLE	Engage Cycle and set left locator to SPL.
	DROP	Engage Drop and set Drop In to SPL.
	In Marker Mode:	
	—	Go to previous marker.
	In Nudge Mode:	
	—	Nudge left by chosen value.
	F.FWD ▶▶	—
MARKER		Go to next marker.
NUDGE		Nudge right by chosen value.
CYCLE		Engage Cycle and set right locator to SPL.
DROP		Engage Drop and set Drop Out to SPL.
In Marker Mode:		
—		Go to previous marker.
In Nudge Mode:		
—		Nudge right by chosen value.
STOP ■		—

Logic Control	Modifier	Function/Comments
PLAY ▶	—	Play.
	SHIFT	Pause.
RECORD ●	—	Record.

Cursor Keys & Scrub Wheel

Logic Control	Modifier	Function/Comments
CURSOR ◀ ▶		If in Multi Channel View:
	—	Select previous/next parameter or of current View.
ZOOM		Scroll window horizontally by page
		If in Channel Strip EQ, Send View or Plug-in/Instrument Edit View:
	—	Shift current editor page by 1 page.
⌘/ALT		Shift current editor page by 1 parameter.
ZOOM		Scroll window horizontally by page
		Otherwise (always in Nudge mode):
	—	Mimic computer keyboard cursor left/right keys.
ZOOM		Scroll window horizontally by page
		In Zoom mode:
	—	Change horizontal zoom level
SHIFT		Reset individual track zoom of current track (Cursor left) or all tracks of same class (Cursor right)
CURSOR ▲ ▼		In Channel Strip EQ-, Send View- or Plug-In/Instrument Editor View:
	—	Select previous/next EQ band, Send or insert slot.
ZOOM		Scroll window vertically by page
		Otherwise (always in Nudge mode):
	—	Mimic computer keyboard cursor up/down keys
ZOOM		Scroll window vertically by page
		In Zoom Mode:
	—	Change vertical zoom level
SHIFT		Change individual track zoom of current track
ZOOM	—	Toggle between default cursor button behavior (see above) and Zoom mode
	SHIFT	Toggle between default cursor button behavior and permanently mimicking computer keyboard cursor keys
SCRUB	—	Toggle scrub mode
	SHIFT	enable Shuttle mode on the Jog Wheel (SCRUB button LED flashes)

Logic Control	Modifier	Function/Comments
JOG WHEEL	—	Move song position line.
	CYCLE	Set the Left Locator to the current SPL, advance the SPL as normally, then set the Right Locator to the SPL. Further Jog Wheel turns while still holding down CYCLE advances the SPL and sets the Right Locator again. Tip: rotating the jog wheel counterclockwise while holding down CYCLE defines a skip-cycle range.
	DROP	Set the Drop In Locator to the current SPL, advance the SPL as normally, then set the Drop Oout Locator to the SPL. Further Jog Wheel turns while still holding down DROP advances the SPL and sets the Drop out Locator again.
	In Scrub Mode (SCRUB button LED on):	
	—	Scrub
	In Shuttle Mode (SCRUB button LED flashing):	
	—	Shuttle

External Inputs

Logic Control	Modifier	Function
USER SWITCH A	—	Play/Stop
USER SWITCH B	—	Drop In/Out
EXTERNAL CONTROL	—	Master Volume

You can use the C4 in an own control surface group (place its icon below Logic Control) or combined with a Logic Control/XT (place the icon right of the existing icons). In the latter case, the C4 adds 8 channels in Multi Channel views.

We recommend to use the C4 in an own control surface group. This allows you to edit instruments and plug-ins and independently do mixing on the Logic Control or other control surface.

V-POTs, V-SELECTs

The function depends on current view and optional overlay (see below).

The top row (row 1) consists of V-POT/V-SELECT 1 to 8.

Row 2 consists of V-POT/V-SELECT 9 to 16.

Row 3 consists of V-POT/V-SELECT 17 to 24.

The bottom row (row 4) consists of V-POT/V-SELECT 25 to 32.

V-POT/V-SELECT 1 to 8

While no overlay is active, V-POT/V-SELECT 1 to 8 (i.e. the top row) normally do the same as on a Logic Control or Logic Control XT.

V-POT/V-SELECT 9 to 32

These V-POTs have additional functionality in many views.

In Multi Channel views, the V-POT/V-SELECTs of row 2, 3, and 4 usually edit the parameter following the parameter edited on row 1.

Example: in Pan Multi Channel view, when row 1 edits Pan/Surround angle, row 2 edits Surround Diversity, row 3 edits LFE and row 4 edits Surround Mode

In Channel Strip view, all four rows build a group of 32 parameters which can be edited.

In Plug-in and Instrument edit views, it can be split up into two groups (8/24, 16/16 or 24/8 parameters), see below.

Pan/Surround Multi Channel View:

Row 2 edits Pan/Surround parameter 2

Row 3 edits Pan/Surround parameter 3

Row 4 edits Pan/Surround parameter 4

(in the order Pan/Angle, Diversity, LFE, Surround Mode, X, Y)

SINGLE left/right changes the parameter edited in row 1, and thus also affects the parameter edited in row 2 to 4

Surround Angle/Diversity View

(to be entered on C4 with CHAN STRIP, V-SELECT 31)

Row 1 edits Surround Angle

Row 2 edits Surround Diversity

Surround X/Y View

(only to be entered from Logic Control)

Row 1 edits Surround X

Row 2 edits Surround Y

Track Multi Channel View

Row 1 edits Track parameter 4

Row 2 edits Track parameter 3

Row 3 edits Track parameter 2

Row 4 edits Track parameter 1, i.e. the parameter edited by V-POTs on a Logic Control or XT

(in the order Volume, Pan/Angle, Track Mode, Input, Output, Automation Mode, Group, Displayed Automation Parameter)

The row order is reversed, so that the lowest row editing parameter 1 is closest to the buttons

BANK left/right and SINGLE left/right change the parameter edited in row 4, and thus also affects the parameter edited in row 1 to 3

EQ Multi Channel View

Row 1 edits EQ Band Bypass

Row 2 edits EQ Band Frequency

Row 3 edits EQ Band Gain

Row 4 edits EQ Band Q Factor

INSERT up/down selects the edited EQ band

EQ Channel Strip View

Row 1 edits EQ Frequency of all 8 bands

Row 2 edits EQ Gain of all 8 bands

Row 3 edits EQ Q of all 8 bands

Row 4 edits EQ Bypass of all 8 bands

Send Multi Channel View

Row 1 edits Send Destination

Row 2 edits Send Level

Row 3 edits Send Position

Row 4 edits Send Mute

INSERT UP/DOWN selects the edited Send slot

Send Channel Strip View

Rows 1 to 4 edit 32 Send parameters

SINGLE left/right shifts display of Send parameters

Send Channel Strip View 2

Rows 1 to 4 edits 32 Send parameters

SINGLE left/right shifts display of Send parameters

Send Destination/Level View

Row 1 edits Send Destination

Row 2 edits Send Level

Row 3 edits Send Position

Row 4 edits Send Mute

INSERT up/down selects the edited Send slot

Plug-in Select Multi Channel View

INSERT up/down selects the edited plug-in insert

Plug-in Edit View

V-POT/V-SELECT 1 to 32 build a group of 32 parameters. Split is possible.

INSERT up/down selects the edited plug-in insert

BANK left/right shifts the edited parameters by 32. In Split mode, this applies to Split Upper; when holding down SHIFT: applies to Split Lower

SINGLE left/right shifts the edited parameters by 1. In Split mode, this applies to Split Upper; when holding down SHIFT: applies to Split Lower

Instrument Edit View

V-POT/V-SELECT 1 to 32 build a group of 32 parameters. Split is possible.

BANK left/right shifts the edited parameters by 32. In Split mode, this applies to Split Upper; when holding down SHIFT: applies to Split Lower

SINGLE left/right shifts the edited parameters by 1. In Split mode, this applies to Split Upper; when holding down SHIFT: applies to Split Lower

Buttons at Bottom

SPLIT

Toggles edit split between 4/0, 1/3, 2/2 and 3/1 rows. Edit Split allows you to edit two separate sections of a plug-in/instrument or even two different ones.

Split Edit is also possible across multiple C4 units. As an example with two units, pressing the SPLIT button gets you following split modes:

- 1/7 (i.e. Split Upper is top line of first unit, Split Lower is bottom 3 lines of first unit and all lines of second unit. LED 1/3 is lit),
- 2/6 (i.e. Split Upper is top 2 lines of first unit, Split Lower is bottom 2 lines of first unit and all lines of second unit. LED 2/1 is on),
- 3/5 (LED 3/1 is on),
- 4/4 (all 3 LEDs are on),
- 5/3 (all 3 LEDs are on),
- 6/2 (all 3 LEDs are on) and
- 7/1 (all 3 LEDs are on).

LOCK

Toggles Track Lock. When enabled, selecting a track does not switch the currently selected track

SPOT ERASE

Currently unassigned

MARKER

Toggles between Marker overlay (see below) and normal view

TRACK

Toggles between Track overlay (see below) and normal view

Alternate Mode Options

Holding down the TRACK button accesses a further sub-menu in the bottom LCD to enter Global View with a certain object type:

- V-SELECT 25 switches to MIDI tracks
- V-SELECT 26 switches to Inputs
- V-SELECT 27 switches to Audio tracks
- V-SELECT 28 switches to Audio Instrument tracks
- V-SELECT 29 switches to Auxiliary tracks
- V-SELECT 30 switches to Busses
- V-SELECT 31 switches to Outputs
- V-SELECT 32 switches to Master output

Releasing the TRACK button without pressing a V-SELECT returns to Mixer View.

CHAN STRIP

Toggles between Channel Strip overlay (see below) and normal view.

Alternate Mode Options

Holding down the CHAN STRIP button accesses a further sub-menu in the bottom LCD:

- V-SELECT 25 switches to Pan/Surround Channel Strip
- V-SELECT 26 switches to EQ Channel Strip
- V-SELECT 27 switches to Send Channel Strip

FUNCTION

Toggles between Function overlay (see below) and normal view.

Modifier Buttons

SHIFT: as with Logic Control, switches other buttons to alternate function, see “+ SHIFT”

OPTION: as with Logic Control, while held down, parameters are set to minimum/maximum when edited with V-POT

CTRL: as with Logic Control, engages the Group Clutch

CMD/ALT: as with Logic Control, while held down, parameters are edited in fine mode with V-POT

BANK left/right

Shifts parameter display by one page in certain views (see above).

SINGLE left/right

Shifts parameter display by one parameter in certain views (see above).

TRACK L/R

Shifts the currently edited track (in a Channel Strip view) to the previous or next track.

While SHIFT is held down: same, but for Split Lower.

SLOT UP/DOWN

Selects the currently edited EQ, Send or plug-in insert (see above).

Marker Overlay

While the MARKER button light is on, the Marker overlay is active.

A Logic Control in the same control surface group shows “MA” in the assignment display.

V-SELECT 1 to 30 goes to Marker 1 to 30. The upper LCD line shows the marker name; the lower line shows “INSIDE” when the song position is inside a marker.

V-SELECT 31 creates a new marker.

V-SELECT 32 deletes the current marker.

Track Overlay

While the TRACK button light is on, the Track overlay is active.

A Logic Control in the same control surface group shows “tr” in the assignment display.

V-SELECT 1 to 32 changes currently edited track. When a track is selected for Split Upper, the lower LCD line shows “UPPER” for this track. For a track selected for Split Lower, “LOWER” is shown.

To select a track for Split Upper, press the appropriate V-SELECT.

To select a track for Split Lower, press the V-SELECT while holding down SHIFT. A Logic Control in the same control surface group shows “tL” in the assignment display.

BANK left/right shifts the fader bank by 32 tracks.

SINGLE left/right shifts the fader bank by 1 track.

Channel Strip Overlay

While the CHAN STRIP button light is on, the Channel Strip overlay is active.

A Logic Control in the same control surface group shows “CS.” in the assignment display.

V-POT/V-SELECT row 1 edits EQ band 3 to 6 (i.e. the parametric bands’) frequency and gain.

V-POT/V-SELECT row 2 switches to Plug-in insert 1 to 8 edit.

V-POT/V-SELECT row 3 edits Send 1 to 8 Level.

V-POT/V-SELECT 25 switches to Instrument edit.

V-POT/V-SELECT 26 edits track output.

V-POT/V-SELECT 27 edits automation mode.

V-POT/V-SELECT 28 edits group membership.

V-POT/V-SELECT 29 edits Volume.

V-POT/V-SELECT 30 edits Pan.

V-POT/V-SELECT 31 edits Surround Diversity.

V-POT/V-SELECT 32 edits Track Mode.

Function Overlay

While the FUNCTION button light is on, the Function overlay is active.

A Logic Control in the same control surface group shows “FU” in the assignment display.

The V-POT/V-SELECTs are predefined with the following assignments:

- 1 (display: “Params”)—toggles the parameter display of the active window
- 2 (“Channl Strip”)—toggles option “Channel Strip Only” in Arrange windows
- 3 (“Delay in ms”)—toggles display of Delays in Milliseconds
- 4 (“Ruler: SMPTE”)—toggles display of time ruler in SMPTE
- 5 (“Global Track”)—toggles display of Global Tracks
- 6 (“Arrang Grid”)—toggles display of the grid in Arrange windows
- 7 (“Event Float”)—toggles display of the Event Floating window
- 8 (“Name/Value”)—switches the display mode between Name and Value (just like the NAME/VALUE button on the Logic Control)
- 9 (“Track Autom.”)—toggles display of Track Automation in Arrange windows
- 10 (“Trk>Ob Autom.”)—performs key command “Move Current Track Automation Data To Object”

With the SHIFT button held down (display: “Trk>Ob Au All”), key command “Move All Track Automation Data To Object” is performed

- 11 (“Ob>Trk Autom.”)—performs key command “Move Current Object Control Data To Track Automation”

With the SHIFT button held down (display: “Ob>Trk Au All”), key command “Move All Object Control Data To Track Automation” is performed

- 12 ("Clear Autom.")—performs key command "Delete currently visible Automation Data of Current Track"
With the SHIFT button held down (display: "Clear Au All"), key command "Delete All Automation Data of Current Track" is performed
- 13 ("ClrAll Overld")—resets the Level Meter Overload displays
- 14 ("ClrAll RecRdy")—switches off Record Ready for all tracks
- 15 ("ClrAll Solo")—switches off Solo for all tracks
- 16 ("ClrAll Mute")—switches off Mute for all tracks
- 17 ("Tool: Arrow")—chooses the Arrow tool
- 18 ("Tool: Pencil")—chooses the Pencil tool
- 19 ("Tool: Scissr")—chooses the Scissors tool
- 20 ("Tool: Glue")—chooses the Glue tool
- 21 ("Tool: Text")—chooses the Text tool
- 22 ("Tool: Xfade")—chooses the Crossfade tool
- 23 ("Tool: Marque")—chooses the Marquee tool
- 24 ("Tool: Autom.")—chooses the Automation tool
- V-POT 25 ("WfZoom")—edits the active Arrange window's waveform zoom factor
- V-POT 26 ("V.Zoom")—edits the active window's vertical zoom factor
- V-POT 27 ("H.Zoom")—edits the active window's horizontal zoom factor
- V-POT 28 ("Move Cycle")—moves the Cycle locators
- V-POT 29 ("Quantz")—chooses the "Quantize Again" value
V-SELECT 29 performs "Quantize Again" for the selected regions or events
- V-POT 30 ("Format")—chooses the Format value for clock display
- V-SELECT 31 ("Prev SetEXS")—performs key command "Next Plug-In Setting or EXS Instrument"
- V-SELECT 32 ("Next SetEXS")—performs key command "Previous Plug-In Setting or EXS Instrument"

Holding down the SHIFT button currently only has V-SELECTs 10 to 12 assigned (see above); holding down the OPTION, CTRL or CMD/ALT buttons currently contains no assignments, so you can assign new key commands in these views. Of course you can also reassign the existing assignments.

Assignment Overview

See also section “Channel Strip (x8)” on page 65.

C4	Modifier	Function/Comments
SPLIT	—	Toggle edit split between 4/0, 1/3, 2/2 and 3/1 rows
LOCK	—	Toggle Track Lock
SPOT ERASE		currently unassigned
MARKER	—	Toggle between Marker overlay and normal view
TRACK	—	Toggle between Track overlay and normal view
CHAN STRIP	—	Toggle between Channel Strip overlay and normal view
FUNCTION	—	Toggle between Function overlay and normal view
BANK ◀ ▶	—	Shift parameter display by one page in certain views
	SHIFT	Same, but for Split Lower
SINGLE ◀ ▶	—	Shift parameter display by one parameter in certain views
	SHIFT	Same, but for Split Lower
TRACK L/R	—	Shift the currently edited track (in a Channel Strip view) to the previous or next track
	SHIFT	Same, but for Split Lower
SLOT UP/DOWN	—	Select the currently edited EQ, Send or plug-in insert
	SHIFT	Same, but for Split Lower

Introduction

Logic supports the Tascam FW-1884 and FE-8 extension.

Version 1.10 also supports the SoftLCD application which displays information on track names, parameter assignment and current value of the encoders. While one of the automation mode buttons is held down, SoftLCD displays the tracks' current automation mode, and encoder edits it.

Alerts are displayed in SoftLCD. Select buttons allow to remote-control alert buttons.

Requirements

You need

- one or more FW-1884, optionally one or more FE-8
- Logic Pro 7 or Logic Express 7 or newer

Set Up

- Make sure that the FW-1884's MIDI driver is installed. See the FW-1884 documentation for details
- Connect the FW-1884 using the FireWire cable
- The FW-1884 and FE-8 units are installed automatically.
- If you have multiple units, place their icons in the Setup window left to right so that they have the same order as the physical units.

Operation

See the Assignment overview section.

The FE-8 extensions only have the Channel Strip section, so the other sections don't apply here. The FW-1884 ENCODERS section also applies to the FE-8 channel strips.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

ENCODERS Section

Control	Assignment
FLIP	toggles Flip Mode between Off and Swap
PAN	assigns Pan to encoders
AUX 1	assigns Send 1 Level to encoders
AUX 2	assigns Send 2 Level to encoders
AUX 3	assigns Send 3 Level to encoders
AUX 4	assigns Send 4 Level to encoders
AUX 5	assigns Send 5 Level to encoders
AUX 6	assigns Send 6 Level to encoders
AUX 7	assigns Send 7 Level to encoders
AUX 8	assigns Send 8 Level to encoders

SHORTCUTS Section

Control	Assignment
SAVE/F1	saves the active song. The button's LED is on when the song has been edited.
REVERT/F2	reverts the active song to the saved version.
ALL SAFE/F3	disables Record Ready for all tracks
CLR SOLO/ F4	switches Solo off on all tracks
SHIFT	switches Mute off on all tracks
MARKERS/F5	creates a new marker at the current song position line
SHIFT	deletes the marker at the SPL
LOOP/F6	Toggles Cycle mode
CUT	cuts the current selection and puts it in the clipboard
DEL	deletes the current selection
COPY	copies the current selection to the clipboard
PASTE	pastes the clipboard
ALT/CMD	Modifier for other buttons. See their description
UNDO	performs Undo. The button LED is on when Redo is possible.
SHIFT	performs Redo
SHIFT	Modifier for other buttons. See their description
CTRL	Modifier for other buttons. See their description

Channel strips

Control	Assignment
REC LEDs	These LEDs are on when the corresponding track is recording and flash when the track is Record Ready
SEL	selects the track
SHIFT	when encoders control a Send Level, toggles Send Mute
READ	sets the track's automation mode to Read
WRITE	sets the track's automation mode to Write
TCH	sets the track's automation mode to Touch
LATCH	sets the track's automation mode to Latch
SOLO	toggles the Solo status of the track
MUTE	toggles the Mute status of the track
Encoder	controls parameter chosen with the ENCODERS section
SET	when ENCODERS section has chosen Send editing, sets the Send's destination
Fader	controls volume of the track

EQ Section

The EQ controls apply to a certain EQ band of the selected track. A Channel EQ must be inserted in the track (or the song must use the old, pre 6.0 EQs).

Mode	Assignment
REC	while held down, the SEL buttons in the channel strips toggle Record Ready status
GAIN	edits Gain of currently selected EQ band
SET	selects Track input
FREQ	edits Frequency of currently selected EQ band
SET	selects Track output
Q	edits Q factor of currently selected EQ band
SET	selects Track mode
HIGH	selects parametric EQ band 4 (for Channel EQ)
SHIFT	selects High Cut (for Channel EQ)
HI-MID	selects parametric EQ band 3 (for Channel EQ)
SHIFT	selects High Shelf (for Channel EQ)
LOW-MID	selects parametric EQ band 2 (for Channel EQ), or EQ band 4 (for pre-6.0 EQs)
SHIFT	selects Low Shelf (for Channel EQ), or EQ band 2 (for pre-6.0 EQs)
LOW	selects parametric EQ band 1 (for Channel EQ), or EQ band 3 (for pre-6.0 EQs)
SHIFT	selects Low Cut (for Channel EQ), or EQ band 1 (for pre-6.0 EQs)

MASTER fader

This fader always controls the master volume. If no Master object exists in the environment, it controls Output 1-2.

Master Section

Control	Assignment
READ	while held down, SEL buttons are on if a track has Read automation mode. Pressing the SEL button sets Read mode. Turning the encoder also edits the automation mode.
WRITE	while held down, SEL buttons are on if a track has Write automation mode. Pressing the SEL button sets Write mode. Turning the encoder also edits the automation mode.
TCH	while held down, SEL buttons are on if a track has Touch automation mode. Pressing the SEL button sets Touch mode. Turning the encoder also edits the automation mode.
LATCH	while held down, SEL buttons are on if a track has Latch automation mode. Pressing the SEL button sets Latch mode. Turning the encoder also edits the automation mode.
F7	switches encoders to editing of surround parameters on selected track: angle, radius, LFE, surround mode, X, Y
F8	switches encoders to EQ editing on selected track. For parameter assignment, see upper line on SoftLCD. Cursor left/right shifts parameter bank.
F9	switches Encoders to plug-in editing on selected track. Cursor left/right shifts parameter bank; Cursor up/down chooses insert to edit
F10	switches encoders to instrument editing on selected track. Cursor left/right shifts parameter bank.
Cursor buttons	like computer keyboard cursor keys; except while encoders are in EQ, plug-in or instrument editing mode (see above)
SHIFT	zooms in and out horizontally or vertically
SHTL	Enables Shuttle mode for Wheel
Wheel	Shuttle mode off: moves SPL by bar Shuttle mode on: shuttles SPL
Bank LEDs	Show currently selected fader bank. With only an FW-1884 installed, a bank means 8 tracks. If you have FE-8 extensions added, a bank means the entire number of channel strips, e.g. 16, 24 etc. If no LED is on, a bank higher 4 is selected.
BANK buttons	shifts fader bank up or down by one bank
SHIFT	shifts fader bank up or down by one track
LOCATE buttons	goes to previous or next marker
NUDGE buttons	nudges the selected objects left or right (by the current nudge value)
SET	chooses the current nudge value, in the order Tick, Format, Denominator, Bar, Frame, 1/2 Frame
SET	modifier for other buttons. See their description.
IN	goes to left locator

Control	Assignment
SET	sets left locator to current song position
SHIFT	sets Drop In locator to current song position
OUT	goes to right locator
SET	sets right locator to current song position
SHIFT	sets Drop Out locator to current song position
REW	Shuttle Rewind key command
FFWD	Shuttle Forward key command
STOP	Stop key command
PLAY	Play key command
REC	Record key command

Requirements

You need

- a HUI or compatible product
- Logic Pro 7 or newer

Set Up

- Make sure that an XSKey with a Logic Pro 7 authorization is connected.
- Make sure that your HUI unit(s) are connected bidirectionally with the computer, using a MIDI interface.
- Choose menu item Logic Pro > Control Surfaces > Setup...
- Choose menu item New > Install... in the Setup window's local menu.
- For every HUI unit, select *HUI* in the Install window, choose Add, then set the appropriate MIDI In and Out ports in the Setup window.

Other HUI-compatible Devices

If the unit emulates one HUI unit, proceed as if you have a HUI.

If you experience problems in the DSP Edit display, instead install the unit as a DM2000.

If the unit emulates more than one HUI, add an according number of additional devices in the setup, similarly as for the Yamaha digital mixers. If the unit supports only one HUI DSP edit section, choose *HUI Channel Strips only* as the model name for the additional units. This ensures that scrolling in the DSP edit section scrolls by four parameters.

For the the assignment of the buttons, refer to section *Assignment Overview* chapter, from page 92 and the device's user manual.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

ASSIGN Section

Control	Assignment
SEND A	assigns Send 1 Level to V-POTs, and Send 1 to 4 Levels to DSP V-POTs. While held down, the scribble strips show the current Send 1 destination assignment
SHIFT/ADD	as above, but Send 6
SEND B	assigns Send 2 Level to V-POTs, and Send 1 to 4 Levels to DSP V-POTs. While held down, the scribble strips show the current Send 2 destination assignment
SHIFT/ADD	as above, but Send 7
SEND C	assigns Send 3 Level to V-POTs, and Send 1 to 4 Levels to DSP V-POTs. While held down, the scribble strips show the current Send 3 destination assignment
SHIFT/ADD	as above, but Send 8
SEND D	assigns Send 4 Level to V-POTs, and Send 1 to 4 Levels to DSP V-POTs. While held down, the scribble strips show the current Send 4 destination assignment
SEND E	assigns Send 5 Level to V-POTs, and Send 5 to 8 Levels to DSP V-POTs. While held down, the scribble strips show the current Send 5 destination assignment
PAN	assigns Pan to V-POTs; assigns selected track's pan/surround parameters to DSP V-POTs
INPUT	assigns Track Input to V-POTs. While held down, the scribble strips show the current Track Input assignment
OUTPUT	assigns Track Output to V-POTs. While held down, the scribble strips show the current Track Output assignment
REC/RDY ALL	Disable Record Ready on all tracks
BYPASS	toggles the INSERT buttons between Insert Select and Insert Bypass mode
MUTE	toggles the V-SELECT buttons between Send Position and Send Mute mode
SHIFT	toggles Flip mode
SELECT-ASSIGN	displays the V-POT assignment as follows: Pan, Snd1 to Snd8, S1As to S8As, In, Out
SUSPEND	—
DEFAULT	toggles V-SELECT buttons between normal behavior and setting default value
ASSIGN	When V-POTs display a Send level, switches them to Send Destination assignment mode. Press V-SELECT or ASSIGN again to confirm the assignment.

Fader Bank Buttons

Control	Assignment
Bank Left	shifts channel strips by one bank to the left
Bank Right	shifts channel strips by one bank to the right
Channel Left	shifts channel strips by one channel to the left
Channel Right	shifts channel strips by one channel to the right

WINDOW Section

Control	Assignment
TRANSPORT	toggles the Transport window
EDIT	toggles the Arrange window
MIX	toggles the Track Mixer window
ALT	toggles the Sample Editor window
STATUS	toggles the Audio Pool window
MEM-LOC	toggles the Marker List window

KEYBOARD SHORTCUTS Section

Control	Assignment
UNDO	performs undo
SHIFT/ADD	performs redo
OPTION/ALL	opens undo history window
SAVE	saves the song
OPTION/ALL	Save As...: saves the song with a different name
EDIT MODE	—
EDIT TOOL	selects the next tool. While held down, digit buttons select a specific tool
SHIFT/ADD	Shifts to second meaning of some buttons See also description of other buttons
OPTION/ALL	While held down, value change mode is set to “full”: relative value changes to go minimum or maximum See also description of other buttons
CTRL/CLUTCH	While held down, the Group Clutch is engaged, i.e. all groups are disabled
CMD/ALT/FINE	While held down, value change mode is set to “fine”: relative value changes work with maximum resolution See also description of other buttons

Channel Strips

Control	Assignment
Level Meters	display momentary and peak level
REC/RDY	toggles Record Ready
OPTION/ALL	disables Record Ready for all tracks
INSERT	BYPASS off: selects track for plug-in selection BYPASS on: toggles bypass of currently selected insert slot
V-SEL	Pan selected: sets Pan to center if DEFAULT on Send 1 to 8 selected: edits Send Pre/Post, toggles Send Mute or sets Send Level to default value Send Assign, Input or Output: confirms selection
V-POT	adjusts parameter selected in the ASSIGN section
AUTO	cycles automation mode. With an automation mode button held down, sets this automation mode
SOLO	toggles Solo
OPTION/ALL	disables Solo for all tracks
MUTE	toggles Mute
OPTION/ALL	unmutes all tracks
Scribble Strip	displays track name, or Send, In or Out assignment
SELECT	selects track
SHIFT/ADD	Sets volume to unity level
DEFAULT	Sets volume to unity level
Fader	adjusts volume, or duplicates V-POT in Flip mode

DSP EDIT/ASSIGN Section

Control	Assignment
ASSIGN	—
COMPARE	toggles DSP display between modes “track name/parameter name” and “parameter name/parameter value”
BYPASS	toggles bypass of currently edited plug-in insert
DSP Select 1 to 4	<p>Assignment Pan:</p> <ul style="list-style-type: none"> • DSP Select 1 sets Pan or Surround Angle to center • DSP Select 2 sets Surround Diversity to center • DSP Select 3 sets Surround LFE to center • DSP Select 4 sets Surround Mode to center <p>Assignment Send:</p> <ul style="list-style-type: none"> • toggle Send 1 to 4 or 5 to 8 Mute <p>Plug-In Assign:</p> <ul style="list-style-type: none"> • confirm insert 1 to 4 or 5 to 8 plug-in selection, selects this insert and enters Plug-In Edit mode <p>Plug-In Edit:</p> <ul style="list-style-type: none"> • sets value to default, or toggles switch
DSP V-POTs	<p>Assignment Pan:</p> <ul style="list-style-type: none"> • DSP V-POT 1 controls Pan or Surround Angle • DSP V-POT 2 controls Surround Diversity • DSP V-POT 3 controls Surround LFE • DSP V-POT 4 controls Surround Mode <p>Assignment Send:</p> <ul style="list-style-type: none"> • control Send 1 to 4 or 5 to 8 Level <p>Plug-In Assign:</p> <ul style="list-style-type: none"> • assigns insert 1 to 4 or 5 to 8 plug-in <p>Plug-In Edit:</p> <ul style="list-style-type: none"> • sets value to default
INSERT/PARAM	toggles between Plug-in Assign and Plug-in Edit modes
SCROLL	Plug-In Edit: shifts parameter display by the number of DSP V-POTs in the control surface group (usually four)
CMD/ALT/FINE	Plug-In Edit: shifts parameter display by one

Function Keys

Control	Assignment
F1	Clears Overload LEDs
SHIFT/ADD	Switches to Global View and enables MIDI Tracks
CMD/ALT/FINE	Toggles Arrange window
F2	Recalls Screen Set 2
SHIFT/ADD	Switches to Global View and enables Inputs
CMD/ALT/FINE	Toggles Track Mixer window
F3	Recalls Screen Set 3
SHIFT/ADD	Switches to Global View and enables Audio Tracks
CMD/ALT/FINE	Toggles Event Editor window
F4	Recalls Screen Set 4
SHIFT/ADD	Switches to Global View and enables Audio Instruments
CMD/ALT/FINE	Toggles Score Editor window
F5	Recalls Screen Set 5
SHIFT/ADD	Switches to Global View and enables Aux Tracks
CMD/ALT/FINE	Toggles Hyper Editor window
F6	Recalls Screen Set 6
SHIFT/ADD	Switches to Global View and enables Busses
CMD/ALT/FINE	Toggles Matrix Editor window
F7	Toggles counter display between SMPTE and bars/beats/format/ticks
SHIFT/ADD	Switches to Global View and enables Outputs and Master object
CMD/ALT/FINE	Toggles Transport window
F8/ESC	Default: leaves folder Goto Marker: cancels dialog
CMD/ALT/FINE	Toggles Audio window

AUTO ENABLE Section

Control	Assignment
FADER	toggles automation playback and recording of Volume
PAN	toggles automation playback and recording of Pan
PLUG IN	toggles automation playback and recording of Plug-in parameters
MUTE	toggles automation playback and recording of Mute
SEND	toggles automation playback and recording of Send Level
SEND MUTE	—

AUTO MODE Section

Control	Assignment
READ	sets selected track to automation mode "Read". While held down, channel Strip AUTO buttons set automation mode to Read
OPTION/ALL	sets all tracks to automation mode "Read"
LATCH	sets selected track to automation mode "Latch". While held down, channel Strip AUTO buttons set automation mode to "Latch"
OPTION/ALL	sets all tracks to automation mode "Latch"
TRIM	—
TOUCH	sets selected track to automation mode "Touch". While held down, channel Strip AUTO buttons set automation mode to "Touch"
OPTION/ALL	sets all tracks to automation mode "Touch"
WRITE	sets selected track to automation mode "Write". While held down, channel Strip AUTO buttons set automation mode to "Write"
OPTION/ALL	sets all tracks to automation mode "Write"
OFF	sets selected track to automation mode "Off". While held down, channel Strip AUTO buttons set automation mode to "Off"
OPTION/ALL	sets all tracks to automation mode "Off"

STATUS/GROUP Section

Control	Assignment
AUTO	while held down, the Scribble Strips display the tracks' automation mode
MONITOR	—
PHASE	—
GROUP	enters Group Edit mode: <ul style="list-style-type: none">• the upper line in the DSP edit section displays the currently edited group number and name• DSP Select buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line• When INSERT/PARAM is off, DSP Edit Scroll V-POT scrolls through the group properties. Otherwise it selects the currently edited group• the SELECT buttons toggle group membership of the track
SHIFT/ADD	switches to Track View
CREATE	creates a new group and enters Group Edit mode (see above)
SHIFT/ADD	switches to Global View
SUSPEND	toggles the Group Clutch
SHIFT/ADD	switches to Extended Track View

EDIT Section

Control	Assignment
CAPTURE	—
SEPARATE	—
CUT	Cuts the selection
COPY	Copies the selection
PASTE	Pastes the clipboard contents
DELETE	Deletes the selection

Time Display

Control	Assignment
TIME CODE	checked if counter displays time code
FEET	(not assigned)
BEATS	checked if counter displays bars/beats/format/ticks
Time display	displays time code or bars/beats/format/ticks
RUDE SOLO LIGHT	flashes if any track is soloed

LOCATE/NUMBERS Section

Control	Assignment
CLR	Deletes current marker
=	Creates a marker at the current song position
/	equivalent to computer keyboard / key
*	equivalent to computer keyboard * key
-	equivalent to computer keyboard – key
+	equivalent to computer keyboard + key
0 to 9	Normal: 1 to 9 recalls marker 1 to 9 Goto Marker: equivalent to computer keyboard keys 0 to 9
SHIFT/ADD	Switches to Global View and enables <ul style="list-style-type: none"> 1: MIDI Tracks 2: Inputs 3: Audio Tracks 4: Audio Instruments 5: Aux Tracks 6: Busses 7: Outputs and Master object 9: 0:
EDIT TOOL	selects tool: <ul style="list-style-type: none"> 1: arrow 2: pencil 3: rubber 4: text edit 5: scissors 6: glue 7: solo 8: mute 9: zoom
0	Goto Marker: equivalent to computer keyboard 0 key
.	Normal: enters Goto Marker Mode Goto Marker: confirms entered marker number
ENTER	Normal: enters folder of selected track Goto Marker: confirms entered marker number

Transport Section

Control	Assignment
AUDITION	—
PRE	Sets left locator
IN	Sets Drop In locator
OUT	Sets Drop Out locator
POST	Sets right locator
RTZ	goes to the left locator
END	goes to the right locator
ON LINE	toggles internal/external Sync
LOOP	toggles Cycle mode
QUICK PUNCH	toggles Drop mode
REWIND	Shuttles backward
FAST FWD	Shuttles forward
STOP	Stop
PLAY	Play
SHIFT/ADD	Pause
RECORD	Record

Cursor Buttons

Control	Assignment
Cursor Up	Cursor mode: equivalent to computer keyboard arrow up key Zoom mode: zooms out vertically
SHIFT/ADD	Zoom mode: Individual track zoom in
CMD/ALT/FINE	Page Up
OPTION/ALL + CMD/ALT/FINE	Scroll to top
Cursor Down	Cursor mode: equivalent to computer keyboard arrow down key Zoom mode: zooms out vertically
SHIFT/ADD	Zoom mode: Individual track zoom out
CMD/ALT/FINE	Page Down
OPTION/ALL + CMD/ALT/FINE	Scroll to bottom
Cursor Left	Cursor mode: equivalent to computer keyboard arrow left key Zoom mode: zooms out horizontally
SHIFT/ADD	Zoom mode: Individual track zoom reset of tracks with same type
CMD/ALT/FINE	Page Left
OPTION/ALL + CMD/ALT/FINE	Scroll to left border
Cursor Right	Cursor mode: equivalent to computer keyboard arrow right key Zoom mode: zooms in horizontally
SHIFT/ADD	Zoom mode: Individual track zoom reset of all tracks
CMD/ALT/FINE	Page Right
OPTION/ALL + CMD/ALT/FINE	Scroll to right border
MODE	Toggles between Cursor and Zoom mode

Jog Wheel

Control	Assignment
Jog wheel	Default: move SPL by one bar Scrub: scrubbing Shuttle: Shuttle mode
SCRUB	toggles Scrub mode
SHUTTLE	toggles Shuttle mode

Foot Switches

Control	Assignment
Foot Switch 1	Play or Stop
Foot Switch 2	Record Toggle

Requirements

You need

- a Baby HUI
- Logic Pro 7 or newer

Set Up

- Make sure that an XKey with a Logic Pro 7 authorization is connected.
- Make sure that your Baby HUI unit(s) are connected bidirectionally with the computer.
- Choose menu item Logic Pro > Control Surfaces > Setup...
- Choose menu item New > Install... in the Setup window's local menu.
- For every Baby HUI unit, select *Baby HUI* in the Install window, choose Add, then set the appropriate MIDI In and Out ports in the Setup window.

Assignment Overview

A right-aligned SHIFT below a button description means: while holding down SHIFT, the button has this alternate meaning.

Channel Strips

Control	Assignment
Rotary encoder	adjusts parameter selected in the Encoder Assignment Section
Rotary encoder push button	selects track
	SHIFT toggles Record Ready
Signal indicator	illuminates when a signal is present in the channel. It also indicates when the channel is selected
MUTE	toggles Mute
SOLO	toggles Solo
Fader	adjusts volume

Encoder Assignment Section

Control	Assignment
PAN	assigns Pan to Rotary encoders
SEND 1	assigns Send 1 Level to Rotary encoders
SEND 2	assigns Send 2 Level to Rotary encoders
SEND 3	assigns Send 3 Level to Rotary encoders
SEND 4	assigns Send 4 Level to Rotary encoders

Automation Section

Control	Assignment
BYPASS/OFF	sets selected track to automation mode "Off"
SHIFT	toggles automation playback and recording of Volume
READ	sets selected track to automation mode "Read"
SHIFT	toggles automation playback and recording of Mute
WRITE	sets selected track to automation mode "Write"
SHIFT	toggles automation playback and recording of Pan
TOUCH	sets selected track to automation mode "Touch"
SHIFT	toggles automation playback and recording of Send Level

Display Section

Control	Assignment
TRANSPORT	toggles the Transport window
MEM-LOC	toggles the Marker List window
MIXER	toggles the Track Mixer window
EDIT	toggles the Arrange window

Utility Section

Control	Assignment
UNDO	performs undo
SHIFT	Shifts to second meaning of some buttons (labelled below them in a box)

Navigation Section

Control	Assignment
RTZ	goes to the left locator
SHIFT	Sets Drop In locator
END	goes to the right locator
SHIFT	Sets Drop Out locator
BANK SELECT Left	shifts channel strips by one bank to the left
SHIFT	shifts channel strips by one channel to the left
BANK SELECT Right	shifts channel strips by one bank to the right
SHIFT	shifts channel strips by one channel to the right

Transport Section

Control	Assignment
REWIND	Shuttles backward
FAST FWD	Shuttles forward
STOP	Stop
PLAY	Play
RECORD	Record

Requirements

You need

- a DM2000 or compatible product
- Logic Pro 7 or newer

Set Up

- Make sure that an XKey with a Logic Pro 7 authorization is connected.
- Make sure that your DM2000 unit(s) are connected with the computer via USB.
- Make sure that the MIDI driver which comes with the unit is installed.

At DM2000 Front Panel

Basically you set up the DM2000 as if you are using it with Pro Tools. See the DM2000 user manual, section 19. Here are the necessary steps:

- Press DISPLAY ACCESS [SETUP], then [F4] (below the LCD). Now move the cursor to the port parameters right to *DAW*, select *USB* and right to it *1-3*.
- Press DISPLAY ACCESS [REMOTE], then [F1] (below the LCD). For the *TARGET* parameter, choose *ProTools*.
- Press LAYER [REMOTE 1]

In Logic

When Logic Pro is launched, the unit is installed automatically. You should now see three DM2000 icons in the setup window, aligned horizontally.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

MATRIX SELECT Section

Control	Assignment
MATRIX 1	toggles Encoder Push-Switch buttons between normal behavior and setting default value
MATRIX 2	toggles the Encoder Push-Switch buttons between Send Position and Send Mute mode
MATRIX 4	If ENCODER MODE [ASSIGN 4] is on, toggles the channel strip SEL buttons between Insert Select (indicator off) and Insert Bypass mode (indicator on)

AUX SELECT Section

Control	Assignment
AUX 1	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment
USER 4	as above, but Send 6
AUX 2	assigns Send 2 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 2 destination assignment
USER 4	as above, but Send 7
AUX 3	assigns Send 3 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 3 destination assignment
USER 4	as above, but Send 8
AUX 4	assigns Send 4 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 4 destination assignment
AUX 5	assigns Send 5 Level to Encoders, and Send 5 to 8 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 5 destination assignment

ENCODER MODE Section

Control	Assignment
PAN	assigns Pan to Encoders; assigns selected track's pan/surround parameters to DSP Encoders
AUX/MTRX	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment
ASSIGN 1	assigns Track Input to Encoders. While held down, the Channel Strip displays show the current Track Input assignment
ASSIGN 2	assigns Track Output to Encoders. While held down, the Channel Strip displays show the current Track Output assignment
ASSIGN 3	When Encoders display a Send level, switches them to Send Destination assignment mode. Press Encoder Push-Switch or ASSIGN 3 again to confirm the assignment.
ASSIGN 4	determines mode of channel strip SEL buttons: <ul style="list-style-type: none">• indicator off: track selection• indicator on: Insert selection or Insert Bypass, depending on MATRIX SELECT [MATRIX 4].

FADER MODE Section

Control	Assignment
FADER	toggles Flip mode
AUX/MTRX	toggles Flip mode

DISPLAY ACCESS Section

Control	Assignment
METER	Clears Overload LEDs
USER 4	Switches to Global View and enables MIDI Tracks
USER 13	Toggles Arrange window

EFFECTS/PLUG-INS Section

Control	Assignment
Display	toggles the Sample Editor window
5	—
6	toggles DSP display between modes “track name/parameter name” and “parameter name/parameter value”
7	toggles bypass of currently edited plug-in insert
8	toggles between Plug-in Assign and Plug-in Edit modes
Parameter Up & Parameter Down	Plug-In Edit: shifts parameter display by the number of Parameter controls in the control surface group (usually four)
USER 13	Plug-In Edit: shifts parameter display by one
Parameter control 1–4 push-switch	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 push-switch sets Pan or Surround Angle to center • Parameter control 2 push-switch sets Surround Diversity to center • Parameter control 3 push-switch sets Surround LFE to center • Parameter control 4 push-switch sets Surround Mode to center Assignment Send: <ul style="list-style-type: none"> • toggle Send 1 to 4 or 5 to 8 Mute Plug-In Assign: <ul style="list-style-type: none"> • confirm insert 1 to 4 or 5 to 8 plug-in selection, selects this insert and enters Plug-In Edit mode Plug-In Edit: <ul style="list-style-type: none"> • sets value to default, or toggles switch
Parameter controls	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 controls Pan or Surround Angle • Parameter control 2 controls Surround Diversity • Parameter control 3 controls Surround LFE • Parameter control 4 controls Surround Mode Assignment Send: <ul style="list-style-type: none"> • control Send 1 to 4 or 5 to 8 Level Plug-In Assign: <ul style="list-style-type: none"> • assigns insert 1 to 4 or 5 to 8 plug-in Plug-In Edit: <ul style="list-style-type: none"> • sets value to default

LCD

Display	Assignment
LCD	displays parameter details, plug-in selection or plug-in parameters
TIME CODE	checked if counter displays time code
FEET	(not assigned)
BEATS	checked if counter displays bars/beats/format/ticks
Time display	displays time code or bars/beats/format/ticks
SELECT ASSIGN	displays the Encoder assignment as follows: Pan, Snd1 to Snd8, S1As to S8As, In, Out

TRACK ARMING Section

Control	Assignment
1 to 24	toggles Record Ready
USER 5	disables Record Ready for all tracks
MASTER	Disable Record Ready on all tracks

AUTOMIX Section

Control	Assignment
DISPLAY	while held down, the Channel Strip displays display the tracks' automation mode
REC	sets selected track to automation mode "Write". While held down, channel Strip AUTO buttons set automation mode to "Write"
USER 5	sets all tracks to automation mode "Write"
ABORT/UNDO	sets selected track to automation mode "Touch". While held down, channel Strip AUTO buttons set automation mode to "Touch"
USER 5	sets all tracks to automation mode "Touch"
AUTOREC	sets selected track to automation mode "Latch". While held down, channel Strip AUTO buttons set automation mode to "Latch"
USER 5	sets all tracks to automation mode "Latch"
RETURN	sets selected track to automation mode "Read". While held down, channel Strip AUTO buttons set automation mode to Read
USER 5	sets all tracks to automation mode "Read"
RELATIVE	—
TOUCH SENSE	sets selected track to automation mode "Off". While held down, channel Strip AUTO buttons set automation mode to "Off"
USER 5	sets all tracks to automation mode "Off"
OVERWRITE [FADER]	toggles automation playback and recording of Volume
OVERWRITE [PAN]	toggles automation playback and recording of Pan
OVERWRITE [EQ]	toggles automation playback and recording of Plug-in parameters
OVERWRITE [ON]	toggles automation playback and recording of Mute
OVERWRITE [AUX]	toggles automation playback and recording of Send Level
OVERWRITE [AUX ON]	—

USER DEFINED KEYS Section

Control	Assignment
DISPLAY	toggles the Audio Pool window
1	toggles the Transport window
2	shifts channel strips by one bank to the left
3	shifts channel strips by one bank to the right
4	Shifts to second meaning of some buttons See also description of other buttons
5	While held down, value change mode is set to "full": relative value changes to go minimum or maximum See also description of other buttons
6	enters Group Edit mode: <ul style="list-style-type: none"> • the upper line in the DSP edit section displays the currently edited group number and name • Parameter control push-switch buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line • When INSERT/PARAM is off, DSP Edit Scroll Encoder scrolls through the group properties. Otherwise it selects the currently edited group • the SELECT buttons toggle group membership of the track
USER 4	switches to Track View
7	toggles the Group Clutch
USER 4	switches to Extended Track View
8	creates a new group and enters Group Edit mode (see above)
USER 4	switches to Global View
9	toggles between the Arrange and Track Mixer windows
10	shifts channel strips by one channel to the left
11	shifts channel strips by one channel to the right
12	While held down, the Group Clutch is engaged, i.e. all groups are disabled
13	While held down, value change mode is set to "fine": relative value changes work with maximum resolution See also description of other buttons
14	—
15	performs undo
USER 4	performs redo
USER 5	opens undo history window
16	saves the song
USER 5	Save As...: saves the song with a different name

LOCATOR Section

Control	Assignment
DISPLAY	toggles the Marker List window
1 to 8	recalls marker 1 to 8
USER 4	Switches to Global View and enables 1: MIDI Tracks 2: Inputs 3: Audio Tracks 4: Audio Instruments 5: Aux Tracks 6: Busses 7: Outputs and Master object
DISPLAY HISTORY [FORWARD]	selects tool: 1: arrow 2: pencil 3: rubber 4: text edit 5: scissors 6: glue 7: solo 8: mute
AUDITION	—
PRE	Sets left locator
IN	Sets Drop In locator
OUT	Sets Drop Out locator
POST	Sets right locator
RETURN TO ZERO	goes to the left locator
END	goes to the right locator
ONLINE	toggles internal/external Sync
QUICK PUNCH	toggles Drop mode

Channel Strips

Control	Assignment
Level Meters	display momentary and peak level
Encoder	adjusts parameter selected in the AUX SELECT section
Encoder Push-Switch	Pan selected: sets Pan to center if MATRIX 1 on Send 1 to 8 selected: edits Send Pre/Post, toggles Send Mute or sets Send Level to default value Send Assign, Input or Output: confirms selection
AUTO	cycles automation mode. With an automation mode button held down, sets this automation mode
SEL	If ENCODER MODE [ASSIGN 4] off: selects track If ENCODER MODE [ASSIGN 4] on: <ul style="list-style-type: none"> • BYPASS off: selects track for plug-in selection • BYPASS on: toggles bypass of currently selected insert slot
USER 4	Sets volume to unity level
MATRIX SELECT 1	Sets volume to unity level
SOLO	toggles Solo
USER 5	disables Solo for all tracks
ON	toggles Mute
USER 5	unmutes all tracks
Channel strip display	displays track name, or Send, In or Out assignment
Fader	adjusts volume, or duplicates Encoder in Flip mode

Transport/Cursor Section

Control	Assignment
REW	Shuttles backward
FF	Shuttles forward
STOP	Stop
PLAY	Play
USER 4	Pause
REC	Record
DISPLAY HISTORY [BACK]	—
DISPLAY HISTORY [FORWARD]	selects the next tool. While held down, digit buttons select a specific tool
SCRUB	toggles Scrub mode

Control	Assignment
SHUTTLE	toggles Shuttle mode
Parameter Wheel	Default: move SPL by one bar Scrub: scrubbing Shuttle: Shuttle mode
DEC	Default: leaves Folder Goto Marker: cancels dialog
USER 13	Toggles Audio window
INC	Toggles between Cursor and Zoom mode
Cursor Up	Cursor mode: equivalent to computer keyboard arrow up key Zoom mode: zooms out vertically
USER 4	Zoom mode: Individual track zoom in
USER 13	Page Up
USER 5 + USER 13	Scroll to top
Cursor Down	Cursor mode: equivalent to computer keyboard arrow down key Zoom mode: zooms out vertically
USER 4	Zoom mode: Individual track zoom out
USER 13	Page Down
USER 5 + USER 13	Scroll to bottom
Cursor Left	Cursor mode: equivalent to computer keyboard arrow left key Zoom mode: zooms out horizontally
USER 4	Zoom mode: Individual track zoom reset of tracks with same type
USER 13	Page Left
USER 5 + USER 13	Scroll to left border
Cursor Right	Cursor mode: equivalent to computer keyboard arrow right key Zoom mode: zooms in horizontally
USER 4	Zoom mode: Individual track zoom reset of all tracks
USER 13	Page Right
USER 5 + USER 13	Scroll to right border
ENTER	enters folder of selected track

Requirements

You need

- a DM1000
- Logic Pro 7 or newer

Set Up

- Make sure that an XSKey with a Logic Pro 7 authorization is connected.
- Make sure that your DM1000 unit(s) are connected with the computer via USB.
- Make sure that the MIDI driver which comes with the unit is installed.

At DM1000 Front Panel

While this document was created, we didn't have access to DM1000 user documentation, but setting it up for Logic should be similar to the DM2000 setup—see above.

In Logic

When Logic Pro is launched, the unit is installed automatically. You should now see two DM1000 icons in the setup window, aligned horizontally.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

DISPLAY ACCESS Section

Control	Assignment
DISPLAY	toggles the Sample Editor window
AUTOMIX	while held down, the Channel Strip displays display the tracks' automation mode
PAIR/GROUP	enters Group Edit mode: <ul style="list-style-type: none">• the upper line in the DSP edit section displays the currently edited group number and name• Parameter control push-switch buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line• When INSERT/PARAM is off, DSP Edit Scroll Encoder scrolls through the group properties. Otherwise it selects the currently edited group• the SELECT buttons toggle group membership of the track
DAW SHIFT/ADD	switches to Track View
METER	Clears Overload LEDs
DAW SHIFT/ADD	Switches to Global View and enables MIDI Tracks
DAW ALT/FINE	Toggles Arrange window
EFFECT	toggles the Sample Editor window

AUX SELECT Section

Control	Assignment
AUX 1	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment
DAW SHIFT/ADD	as above, but Send 6
AUX 2	assigns Send 2 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 2 destination assignment
DAW SHIFT/ADD	as above, but Send 7
AUX 3	assigns Send 3 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 3 destination assignment
DAW SHIFT/ADD	as above, but Send 8
AUX 4	assigns Send 4 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 4 destination assignment
AUX 5	assigns Send 5 Level to Encoders, and Send 5 to 8 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 5 destination assignment
AUX 6	toggles Encoder Push-Switch buttons between normal behavior and setting default value
AUX 8	determines mode of channel strip SEL buttons while channel strip AUTO button is off: <ul style="list-style-type: none">• indicator off: track selection• indicator on: Insert selection

ENCODER MODE Section

Control	Assignment
PAN	assigns Pan to Encoders; assigns selected track's pan/surround parameters to DSP Encoders
AUX	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment

FADER MODE Section

Control	Assignment
FADER MODE	toggles Flip mode

LCD Function

Control	Assignment
Left & Right	Plug-In Edit: shifts parameter display by the number of Parameter controls in the control surface group (usually four)
DAW ALT/FINE	Plug-In Edit: shifts parameter display by one

LCD

The LCD displays different data, depending on the page you have selected with the buttons F2, F3, and F4:

- INSERT ASSIGN/EDIT Display Mode: parameter details, plug-in selection or plug-in parameters. Press [F2] to select this mode.

Display	Assignment
LCD	displays parameter details, plug-in selection or plug-in parameters
TIME CODE	checked if counter displays time code
FEET	(not assigned)
BEATS	checked if counter displays bars/beats/format/ticks
Time display	displays time code or bars/beats/format/ticks
SELECT ASSIGN	displays the Encoder assignment as follows: Pan, Snd1 to Snd8, S1As to S8As, In, Out

LCD Insert Page

Control	Assignment
ASSIGN	—
COMPARE	toggles DSP display between modes “track name/parameter name” and “parameter name/parameter value”
BYPASS	toggles bypass of currently edited plug-in insert
INSERT/PARAM	toggles between Plug-in Assign and Plug-in Edit modes
Parameter control 1 to 4 push-switch	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 push-switch sets Pan or Surround Angle to center • Parameter control 2 push-switch sets Surround Diversity to center • Parameter control 3 push-switch sets Surround LFE to center • Parameter control 4 push-switch sets Surround Mode to center Assignment Send: <ul style="list-style-type: none"> • toggle Send 1 to 4 or 5 to 8 Mute Plug-In Assign: <ul style="list-style-type: none"> • confirm insert 1 to 4 or 5 to 8 plug-in selection, selects this insert and enters Plug-In Edit mode Plug-In Edit: <ul style="list-style-type: none"> • sets value to default, or toggles switch
Parameter controls	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 controls Pan or Surround Angle • Parameter control 2 controls Surround Diversity • Parameter control 3 controls Surround LFE • Parameter control 4 controls Surround Mode Assignment Send: <ul style="list-style-type: none"> • control Send 1 to 4 or 5 to 8 Level Plug-In Assign: <ul style="list-style-type: none"> • assigns insert 1 to 4 or 5 to 8 plug-in Plug-In Edit: <ul style="list-style-type: none"> • sets value to default

Data Entry Section

Control	Assignment
Parameter Wheel	Default: move SPL by one bar Scrub: scrubbing Shuttle: Shuttle mode
– (DEC)	Default: leaves Folder Goto Marker: cancels dialog
DAW ALT/FINE	Toggles Audio window
+ (INC)	enters folder of selected track

Channel Strips

Control	Assignment
Level Meters	display momentary and peak level
Encoder	adjusts parameter selected in the AUX SELECT section
Encoder Push-Switch	Pan selected: sets Pan to center if MATRIX 1 on Send 1 to 8 selected: edits Send Pre/Post, toggles Send Mute or sets Send Level to default value Send Assign, Input or Output: confirms selection
SEL	If AUTO off: <ul style="list-style-type: none"> AUX [AUX 8] off: selects track AUX [AUX 8] on: selects track for insert assignment If AUTO on: <ul style="list-style-type: none"> cycles automation mode. With an automation mode button held down, sets this automation mode
DAW SHIFT/ADD	Sets volume to unity level
MATRIX SELECT 1	Sets volume to unity level
SOLO	toggles Solo
DAW OPTION/ALL	disables Solo for all tracks
ON	toggles Mute
DAW OPTION/ALL	unmutes all tracks
Fader	adjusts volume, or duplicates Encoder in Flip mode

Stereo Channel Strip

Control	Assignment
AUTO	toggles channel strips' SEL buttons between track and insert selection

USER DEFINED KEYS Section

These keys can be assigned to the following functions:

Control	Assignment
DAW WIN STATUS	toggles the Audio Pool window
DAW REC/RDY 1 to 16	toggles Record Ready
DAW WIN TRANSPORT	toggles the Transport window
DAW BANK-	shifts channel strips by one bank to the left
DAW BANK+	shifts channel strips by one bank to the right
DAW SHIFT/ADD	Shifts to second meaning of some buttons See also description of other buttons
DAW OPTION/ALL	While held down, value change mode is set to "full": relative value changes to go minimum or maximum See also description of other buttons

Control	Assignment
DAW GROUP STATUS	enters Group Edit mode: <ul style="list-style-type: none"> • the upper line in the DSP edit section displays the currently edited group number and name • Parameter control push-switch buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line • When INSERT/PARAM is off, DSP Edit Scroll Encoder scrolls through the group properties. Otherwise it selects the currently edited group • the SELECT buttons toggle group membership of the track
DAW SHIFT/ADD	switches to Track View
DAW SUSPEND	toggles the Group Clutch
DAW SHIFT/ADD	switches to Extended Track View
DAW CREATE GROUP	creates a new group and enters Group Edit mode (see above)
DAW SHIFT/ADD	switches to Global View
DAW WIN MIX/EDIT	toggles between the Arrange and Track Mixer windows
DAW CHANNEL -	shifts channel strips by one channel to the left
DAW CHANNEL+	shifts channel strips by one channel to the right
DAW CTRL/CLUTCH	While held down, the Group Clutch is engaged, i.e. all groups are disabled
DAW ALT/FINE	While held down, value change mode is set to “fine”: relative value changes work with maximum resolution See also description of other buttons
DAW MONI STATUS	—
DAW UNDO	performs undo
DAW SHIFT/ADD	performs redo
DAW OPTION/ALL	opens undo history window
DAW SAVE	saves the song
DAW WIN MEM-LOC	toggles the Marker List window
DAW OPTION/ALL	Save As...: saves the song with a different name
DAW EDIT TOOL	selects the next tool. While held down, digit buttons select a specific tool
DAW WIN INSERT	toggles the Sample Editor window
DAW REC/RDY ALL	Disable Record Ready on all tracks
DAW SCRUB	toggles Scrub mode
DAW SHUTTLE	toggles Shuttle mode
DAW REW	Shuttles backward
DAW FF	Shuttles forward
DAW STOP	Stop
DAW PLAY	Play
DAW SHIFT/ADD	Pause
DAW REC	Record

Control	Assignment
DAW PRE	Sets left locator
DAW IN	Sets Drop In locator
DAW OUT	Sets Drop Out locator
DAW POST	Sets right locator
DAW RTZ	goes to the left locator
DAW END	goes to the right locator
DAW ONLINE	toggles internal/external Sync
DAW QUICK PUNCH	toggles Drop mode
DAW AUTO FADER	toggles automation playback and recording of Volume
DAW AUTO PAN	toggles automation playback and recording of Pan
DAW AUTO PLUGIN	toggles automation playback and recording of Plug-in parameters
DAW AUTO MUTE	toggles automation playback and recording of Mute
DAW AUTO SEND	toggles automation playback and recording of Send Level
DAW AUTO SEND MUTE	—
DAW AUTO WRITE	sets selected track to automation mode "Write". While held down, channel Strip AUTO buttons set automation mode to "Write"
DAW OPTION/ALL	sets all tracks to automation mode "Write"
DAW AUTO TOUCH	sets selected track to automation mode "Touch". While held down, channel Strip AUTO buttons set automation mode to "Touch"
DAW OPTION/ALL	sets all tracks to automation mode "Touch"
DAW AUTO LATCH	sets selected track to automation mode "Latch". While held down, channel Strip AUTO buttons set automation mode to "Latch"
DAW OPTION/ALL	sets all tracks to automation mode "Latch"
DAW AUTO READ	sets selected track to automation mode "Read". While held down, channel Strip AUTO buttons set automation mode to Read
DAW OPTION/ALL	sets all tracks to automation mode "Read"
DAW AUTO TRIM	—
DAW AUTO OFF	sets selected track to automation mode "Off". While held down, channel Strip AUTO buttons set automation mode to "Off"
DAW OPTION/ALL	sets all tracks to automation mode "Off"
DAW AUTO STATUS	while held down, the Channel Strip displays display the tracks' automation mode

Requirements

You need

- a 02R96
- Logic Pro 7 or newer

Set Up

- Make sure that an XSKey with a Logic Pro 7 authorization is connected.
- Make sure that your 02R96 unit(s) are connected with the computer via USB.
- Make sure that the MIDI driver which comes with the unit is installed.

At 02R96 Front Panel

Basically you set up the 02R96 as if you are using it with Pro Tools. See the 02R96 user manual, section 19. Here are the necessary steps:

- Press DISPLAY ACCESS [SETUP], then [F4] (below the LCD). Now move the cursor to the port parameters right to *DAW*, select *USB* and right to it 1-3.
- Press DISPLAY ACCESS [REMOTE]. For the *TARGET* parameter, choose *ProTools*.
- Press LAYER [REMOTE]

In Logic

When Logic Pro is launched, the unit is installed automatically.

You should now see three 02R96 icons in the setup window, aligned horizontally.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

DISPLAY ACCESS Section

Control	Assignment
METER	Clears Overload LEDs

AUX SELECT Section

Control	Assignment
AUX 1	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment
AUX 2	assigns Send 2 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 2 destination assignment
AUX 3	assigns Send 3 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 3 destination assignment
AUX 4	assigns Send 4 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 4 destination assignment
AUX 5	assigns Send 5 Level to Encoders, and Send 5 to 8 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 5 destination assignment

ENCODER MODE Section

Control	Assignment
PAN	assigns Pan to Encoders; assigns selected track's pan/surround parameters to DSP Encoders
AUX	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment

FADER MODE Section

Control	Assignment
FADER	toggles Flip mode
AUX/MTRX	toggles Flip mode

EFFECTS/PLUG-INS Section

Control	Assignment
Display	toggles the Sample Editor window
PLUG-INS	toggles Encoder Push-Switch buttons between normal behavior and setting default value
CHANNEL INSERTS	determines mode of channel strip SEL buttons: <ul style="list-style-type: none"> • indicator off: track selection • indicator on: Insert selection
1	—
2	toggles DSP display between modes “track name/parameter name” and “parameter name/parameter value”
3	toggles bypass of currently edited plug-in insert
4	toggles between Plug-in Assign and Plug-in Edit modes
Parameter Up & Parameter Down	Plug-In Edit: shifts parameter display by the number of Parameter controls in the control surface group (usually four)
Parameter control 1–4 push-switch	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 push-switch sets Pan or Surround Angle to center • Parameter control 2 push-switch sets Surround Diversity to center • Parameter control 3 push-switch sets Surround LFE to center • Parameter control 4 push-switch sets Surround Mode to center Assignment Send: <ul style="list-style-type: none"> • toggle Send 1 to 4 or 5 to 8 Mute Plug-In Assign: <ul style="list-style-type: none"> • confirm insert 1 to 4 or 5 to 8 plug-in selection, selects this insert and enters Plug-In Edit mode Plug-In Edit: <ul style="list-style-type: none"> • sets value to default, or toggles switch
Parameter controls	Assignment Pan: <ul style="list-style-type: none"> • Parameter control 1 controls Pan or Surround Angle • Parameter control 2 controls Surround Diversity • Parameter control 3 controls Surround LFE • Parameter control 4 controls Surround Mode Assignment Send: <ul style="list-style-type: none"> • control Send 1 to 4 or 5 to 8 Level Plug-In Assign: <ul style="list-style-type: none"> • assigns insert 1 to 4 or 5 to 8 plug-in Plug-In Edit: <ul style="list-style-type: none"> • sets value to default

LCD

The LCD displays different data, depending on the page you have selected with the buttons F2, F3, and F4 (see page 171ff of the 02R96 user manual):

- INSERT ASSIGN/EDIT Display Mode: parameter details, plug-in selection or plug-in parameters. Press [F2] to select this mode.

Display	Assignment
TIME CODE	checked if counter displays time code
FEET	(not assigned)
BEATS	checked if counter displays bars/beats/format/ticks
Time display	displays time code or bars/beats/format/ticks
SELECT ASSIGN	displays the Encoder assignment as follows: Pan, Snd1 to Snd8, S1As to S8As, In, Out

- Channel Display Mode: Encoder values and Channel Strip display). Press [F3] to select this mode.
- level meters. Press [F4] to select this mode.

USER DEFINED KEYS Section

Control	Assignment
DISPLAY	while held down, the Channel Strip displays display the tracks' automation mode
1	toggles between the Arrange and Track Mixer windows
2	toggles the Group Clutch
3	sets selected track to automation mode "Write". While held down, channel Strip AUTO buttons set automation mode to "Write"
4	sets selected track to automation mode "Touch". While held down, channel Strip AUTO buttons set automation mode to "Touch"
5	sets selected track to automation mode "Latch". While held down, channel Strip AUTO buttons set automation mode to "Latch"
6	sets selected track to automation mode "Read". While held down, channel Strip AUTO buttons set automation mode to Read
7	—
8	sets selected track to automation mode "Off". While held down, channel Strip AUTO buttons set automation mode to "Off"
9	shifts channel strips by one bank to the left
10	shifts channel strips by one bank to the right
11	toggles automation playback and recording of Volume
12	toggles automation playback and recording of Mute
13	toggles automation playback and recording of Pan
14	toggles automation playback and recording of Send Level
15	—
16	toggles automation playback and recording of Plug-in parameters

Channel Strips

Control	Assignment
Encoder	adjusts parameter selected in the AUX SELECT section
Encoder Push-Switch	Pan selected: sets Pan to center if EFFECTS/PLUG-INS [PLUG-INS] on Send 1 to 8 selected: edits Send Pre/Post, toggles Send Mute or sets Send Level to default value Send Assign, Input or Output: confirms selection
AUTO	cycles automation mode. With an automation mode button held down, sets this automation mode
SEL	If EFFECTS/PLUG-INS [CHANNEL INSERTS] off: selects track If EFFECTS/PLUG-INS [CHANNEL INSERTS] on: selects track for plug-in selection
SOLO	toggles Solo
ON	toggles Mute
Fader	adjusts volume, or duplicates Encoder in Flip mode

MACHINE CONTROL Section

Control	Assignment
DISPLAY	toggles the Marker List window
1 to 8	recalls marker 1 to 8
REW	Shuttles backward
FF	Shuttles forward
STOP	Stop
PLAY	Play
REC	Record

Data Entry Section

Control	Assignment
SCRUB	toggles Scrub mode
SHUTTLE	toggles Shuttle mode
Parameter Wheel	Default: move SPL by one bar Scrub: scrubbing Shuttle: Shuttle mode
ENTER	enters folder of selected track
DEC	leaves Folder
INC	Toggles between Cursor and Zoom mode
Cursor Up	Cursor mode: equivalent to computer keyboard arrow up key Zoom mode: zooms out vertically
Cursor Down	Cursor mode: equivalent to computer keyboard arrow down key Zoom mode: zooms out vertically
Cursor Left	Cursor mode: equivalent to computer keyboard arrow left key Zoom mode: zooms out horizontally
Cursor Right	Cursor mode: equivalent to computer keyboard arrow right key Zoom mode: zooms in horizontally

Requirements

You need

- a 01V96
- Logic Pro 7 or newer

Set Up

- Make sure that an XSKey with a Logic Pro 7 authorization is connected.
- Make sure that your 01V96 unit(s) are connected with the computer via USB.
- Make sure that the MIDI driver which comes with the unit is installed.

At 01V96 Front Panel

Basically you set up the 01V96 as if you are using it with Pro Tools. See the 01V96 user manual, section 19. Here are the necessary steps:

- Press DISPLAY ACCESS [SETUP], then [F4] (below the LCD). Now move the cursor to the port parameters right to *DAW*, select *USB* and right to it 1-3.
- Press DISPLAY ACCESS [REMOTE]. For the *TARGET* parameter, choose *ProTools*.
- Press LAYER [REMOTE]

In Logic

When Logic Pro is launched, the unit is installed automatically.

You should now see two 01V96 icons in the setup window, aligned horizontally.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

DISPLAY ACCESS Section

Control	Assignment
DISPLAY	toggles the Sample Editor window
AUTOMIX	while held down, the Channel Strip displays display the tracks' automation mode
PAIR/GROUP	enters Group Edit mode: <ul style="list-style-type: none">• the upper line in the DSP edit section displays the currently edited group number and name• Parameter control push-switch buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line• When INSERT/PARAM is off, DSP Edit Scroll Encoder scrolls through the group properties. Otherwise it selects the currently edited group• the SELECT buttons toggle group membership of the track
DAW SHIFT/ADD	switches to Track View
EFFECT	toggles the Sample Editor window

FADER MODE Section

Control	Assignment
AUX 1	assigns Send 1 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 1 destination assignment
DAW SHIFT/ADD	as above, but Send 6
AUX 2	assigns Send 2 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 2 destination assignment
DAW SHIFT/ADD	as above, but Send 7
AUX 3	assigns Send 3 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 3 destination assignment
DAW SHIFT/ADD	as above, but Send 8
AUX 4	assigns Send 4 Level to Encoders, and Send 1 to 4 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 4 destination assignment
AUX 5	assigns Send 5 Level to Encoders, and Send 5 to 8 Levels to DSP Encoders. While held down, the Channel Strip displays show the current Send 5 destination assignment
AUX 6	toggles Encoder Push-Switch buttons between normal behavior and setting default value
AUX 7	assigns Pan to Encoders; assigns selected track's pan/surround parameters to DSP Encoders

Control	Assignment
AUX 8	determines mode of channel strip SEL buttons while channel strip AUTO button is off: <ul style="list-style-type: none"> • indicator off: track selection • indicator on: Insert selection
HOME	toggles Flip mode

LCD Function

Control	Assignment
Left & Right	Plug-In Edit: shifts parameter display by the number of Parameter controls in the control surface group (usually four)
DAW ALT/FINE	Plug-In Edit: shifts parameter display by one
F1	Clears Overload LEDs
DAW SHIFT/ADD	Switches to Global View and enables MIDI Tracks
DAW ALT/FINE	Toggles Arrange window

LCD

The LCD displays different data, depending on the page you have selected with the buttons F2, F3, and F4:

- INSERT ASSIGN/EDIT Display Mode: parameter details, plug-in selection or plug-in parameters. Press [F2] to select this mode.

Display	Assignment
LCD	displays parameter details, plug-in selection or plug-in parameters
TIME CODE	checked if counter displays time code
FEET	(not assigned)
BEATS	checked if counter displays bars/beats/format/ticks
Time display	displays time code or bars/beats/format/ticks
SELECT ASSIGN	displays the Encoder assignment as follows: Pan, Snd1 to Snd8, S1As to S8As, In, Out

LCD Insert Page

Control	Assignment
ASSIGN	—
COMPARE	toggles DSP display between modes “track name/parameter name” and “parameter name/parameter value”
BYPASS	toggles bypass of currently edited plug-in insert
INSERT/PARAM	toggles between Plug-in Assign and Plug-in Edit modes
Parameter control 1 to 4 push-switch	Assignment Pan: <ul style="list-style-type: none">• Parameter control 1 push-switch sets Pan or Surround Angle to center• Parameter control 2 push-switch sets Surround Diversity to center• Parameter control 3 push-switch sets Surround LFE to center• Parameter control 4 push-switch sets Surround Mode to center Assignment Send: <ul style="list-style-type: none">• toggle Send 1 to 4 or 5 to 8 Mute Plug-In Assign: <ul style="list-style-type: none">• confirm insert 1 to 4 or 5 to 8 plug-in selection, selects this insert and enters Plug-In Edit mode Plug-In Edit: <ul style="list-style-type: none">• sets value to default, or toggles switch
Parameter controls	Assignment Pan: <ul style="list-style-type: none">• Parameter control 1 controls Pan or Surround Angle• Parameter control 2 controls Surround Diversity• Parameter control 3 controls Surround LFE• Parameter control 4 controls Surround Mode Assignment Send: <ul style="list-style-type: none">• control Send 1 to 4 or 5 to 8 Level Plug-In Assign: <ul style="list-style-type: none">• assigns insert 1 to 4 or 5 to 8 plug-in Plug-In Edit: <ul style="list-style-type: none">• sets value to default

LCD Channel Page

Control	Assignment
Encoder	adjusts parameter selected in the FADER MODE section
Encoder Switch	Pan selected: sets Pan to center if MATRIX 1 on Send 1 to 8 selected: edits Send Pre/Post, toggles Send Mute or sets Send Level to default value Send Assign, Input or Output: confirms selection

Selected Channel

Control	Assignment
Pan Encoder	adjusts parameter selected in the FADER MODE section
SEL	toggles channel strips' SEL buttons between track and insert selection

Data Entry Section

Control	Assignment
Parameter Wheel	Default: move SPL by one bar Scrub: scrubbing Shuttle: Shuttle mode
- (DEC)	Default: leaves Folder Goto Marker: cancels dialog
DAW ALT/FINE	Toggles Audio window
+ (INC)	enters folder of selected track

Channel Strips

Control	Assignment
Level Meters	display momentary and peak level
SEL	If AUTO off: <ul style="list-style-type: none">• FADER MODE [AUX 8] off: selects track• FADER MODE [AUX 8] on: selects track for insert assignment If AUTO on: <ul style="list-style-type: none">• cycles automation mode. With an automation mode button held down, sets this automation mode
DAW SHIFT/ADD	Sets volume to unity level
MATRIX SELECT 1	Sets volume to unity level
SOLO	toggles Solo
DAW OPTION/ALL	disables Solo for all tracks
ON	toggles Mute
DAW OPTION/ALL	unmutes all tracks
Fader	adjusts volume, or duplicates Encoder in Flip mode

Stereo Channel Strip

Control	Assignment
SEL	toggles channel strips' SEL buttons between track and insert selection

USER DEFINED KEYS Section

These keys can be assigned to the following functions:

Control	Assignment
DAW WIN STATUS	toggles the Audio Pool window
DAW REC/RDY 1 to 16	toggles Record Ready
DAW WIN TRANSPORT	toggles the Transport window
DAW BANK-	shifts channel strips by one bank to the left
DAW BANK+	shifts channel strips by one bank to the right
DAW SHIFT/ADD	Shifts to second meaning of some buttons See also description of other buttons
DAW OPTION/ALL	While held down, value change mode is set to "full": relative value changes to go minimum or maximum See also description of other buttons
DAW GROUP STATUS	enters Group Edit mode: <ul style="list-style-type: none"> • the upper line in the DSP edit section displays the currently edited group number and name • Parameter control push-switch buttons 1 to 4 toggle properties of the currently edited group, labelled in the lower line • When INSERT/PARAM is off, DSP Edit Scroll Encoder scrolls through the group properties. Otherwise it selects the currently edited group • the SELECT buttons toggle group membership of the track
DAW SHIFT/ADD	switches to Track View
DAW SUSPEND	toggles the Group Clutch
DAW SHIFT/ADD	switches to Extended Track View
DAW CREATE GROUP	creates a new group and enters Group Edit mode (see above)
DAW SHIFT/ADD	switches to Global View
DAW WIN MIX/EDIT	toggles between the Arrange and Track Mixer windows
DAW CHANNEL -	shifts channel strips by one channel to the left
DAW CHANNEL+	shifts channel strips by one channel to the right
DAW CTRL/CLUTCH	While held down, the Group Clutch is engaged, i.e. all groups are disabled
DAW ALT/FINE	While held down, value change mode is set to "fine": relative value changes work with maximum resolution See also description of other buttons
DAW MONI STATUS	—
DAW UNDO	performs undo
DAW SHIFT/ADD	performs redo
DAW OPTION/ALL	opens undo history window
DAW SAVE	saves the song
DAW WIN MEM-LOC	toggles the Marker List window
DAW OPTION/ALL	Save As...: saves the song with a different name

Control	Assignment
DAW EDIT TOOL	selects the next tool. While held down, digit buttons select a specific tool
DAW WIN INSERT	toggles the Sample Editor window
DAW REC/RDY ALL	Disable Record Ready on all tracks
DAW SCRUB	toggles Scrub mode
DAW SHUTTLE	toggles Shuttle mode
DAW REW	Shuttles backward
DAW FF	Shuttles forward
DAW STOP	Stop
DAW PLAY	Play
DAW SHIFT/ADD	Pause
DAW REC	Record
DAW PRE	Sets left locator
DAW IN	Sets Drop In locator
DAW OUT	Sets Drop Out locator
DAW POST	Sets right locator
DAW RTZ	goes to the left locator
DAW END	goes to the right locator
DAW ONLINE	toggles internal/external Sync
DAW QUICK PUNCH	toggles Drop mode
DAW AUTO FADER	toggles automation playback and recording of Volume
DAW AUTO PAN	toggles automation playback and recording of Pan
DAW AUTO PLUGIN	toggles automation playback and recording of Plug-in parameters
DAW AUTO MUTE	toggles automation playback and recording of Mute
DAW AUTO SEND	toggles automation playback and recording of Send Level
DAW AUTO SEND MUTE	—
DAW AUTO WRITE	sets selected track to automation mode “Write”. While held down, channel Strip AUTO buttons set automation mode to “Write”
DAW OPTION/ALL	sets all tracks to automation mode “Write”
DAW AUTO TOUCH	sets selected track to automation mode “Touch”. While held down, channel Strip AUTO buttons set automation mode to “Touch”
DAW OPTION/ALL	sets all tracks to automation mode “Touch”
DAW AUTO LATCH	sets selected track to automation mode “Latch”. While held down, channel Strip AUTO buttons set automation mode to “Latch”
DAW OPTION/ALL	sets all tracks to automation mode “Latch”
DAW AUTO READ	sets selected track to automation mode “Read”. While held down, channel Strip AUTO buttons set automation mode to Read
DAW OPTION/ALL	sets all tracks to automation mode “Read”

Control	Assignment
DAW AUTO TRIM	—
DAW AUTO OFF	sets selected track to automation mode “Off”. While held down, channel Strip AUTO buttons set automation mode to “Off”
DAW OPTION/ALL	sets all tracks to automation mode “Off”
DAW AUTO STATUS	while held down, the Channel Strip displays display the tracks’ automation mode

Requirements

You need

- one or more CM Automation (or CM Labs) Motormix
- Logic Pro 7 or newer

Set Up

- Make sure that your Motormix unit(s) are connected in both directions with the MIDI interface.
- Choose menu item Logic Pro > Preferences > Control Surfaces > Setup...
- Choose menu item New > Install... from the Setup window's local menu
- For every Motormix unit, select "Motormix" in the Install window, choose "Add", then set the appropriate MIDI In and Out ports in the Setup window.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

VIEW Section

Control	Assignment
Left/right buttons	In Plug-in and Instrument Edit mode: shifts the parameter bank by one bank Otherwise: if BANK LED is off: <ul style="list-style-type: none"> • shifts the fader bank by one channel if BANK LED is on: <ul style="list-style-type: none"> • shifts the fader bank by one bank
SHIFT	In Plug-in and Instrument Edit mode: shifts the parameter bank by one parameter In Group Edit mode, the group parameter bank is shifted
bank	toggles mode of left/right buttons (see above)
SHIFT	sets Select buttons to Track View Select mode (see below)

Control	Assignment
group	sets select buttons, rotary encoders and Multi buttons to Group Edit mode
SHIFT	displays tracks' group assignments in the LCD. The rotary encoders allow to change them.

Select Switches

These buttons have multiple purposes, depending on the current mode.

Mode	Assignment
normal	selects track displayed in upper LCD line. Tracks can be shifted to the left and right with the View left and right buttons
bank button LED flashing	Track View Select mode: selects type of tracks to be displayed: <ul style="list-style-type: none"> • 1: Track View • 2: Extended Track View • 3: Global View, MIDI tracks • 4: Global View, Input channels • 5: Global View, Audio tracks • 6: Global View, Audio Instruments • 7: Global View, Bus and Aux channels • 8: Global View, Outputs and Master
WINDOW/ tool button LED on	opens, activates or closes a window of a certain class LED off: window is not open; switch opens it LED on: window is open, but not active; switch activates it LED flashes: window is active; switch closes it <ul style="list-style-type: none"> • 1: Arrange • 2: Track Mixer • 3: Event Editor • 4: Score • 5: Hyper Edit • 6: Matrix Editor • 7: Transport • 8: Audio
WINDOW/ tool button flashes	Chooses a tool <ul style="list-style-type: none"> • 1: arrow • 2: pencil • 3: rubber • 4: text cursor • 5: scissors • 6: glue • 7: solo • 8: mute

Mode	Assignment
PLAY/ transport button flashes	Transport section <ul style="list-style-type: none"> • 1: Record • 2: Pause • 3: Stop • 4: Play • 5: Rewind • 6: Fast Forward • Upper row displays current clock
STOP/locate button flashes	Locating functions <ul style="list-style-type: none"> • 1: goes to left locator • 2: goes to right locator • 3: toggles Cycle • 4: toggles Drop • 5: goes to Marker mode (see below) • 6: opens Marker list floating window • Upper row displays current clock
Marker mode	<ul style="list-style-type: none"> • 1 to 6: select markers 1 to 6. Their names are displayed in the upper line • 7: creates a new marker • 8: deletes current marker
Group Edit mode	toggles group parameter. Parameter view can be shifted by the View left and right buttons when the SHIFT button is held down.

Rotary Pots

Control	Assignment
Rotary pots 1 to 8	control parameter chosen with the Rotary Selector, as displayed in the 7 segment display (see below)
7 segment display	<p>shows current selection for Rotary pots:</p> <p>Send editing (S-MUTE or PRE/PST LED is on):</p> <ul style="list-style-type: none"> • S1 to S8 = Send 1 to 8 level • F1 to F8 = EQ band 1 to 8 frequency • G1 to G8 = EQ band 1 to 8 gain • q1 to q8 = EQ band 1 to 8 Q factor <p>Pan/Surround editing (select LED is on):</p> <ul style="list-style-type: none"> • Pn = Pan • An = Surround Angle • dv = Surround Diversity • FE = Surround LFO • Md = Assign Surround Mode • X = Surround X • Y = Surround Y <p>Track parameter editing (eff-4 LED is on):</p> <ul style="list-style-type: none"> • VL = Volume • Pn or An = Pan/Surround Angle • Md = Channel Mode • In = Channel input • Ou = Channel output • Au = Automation mode • Gr = Group membership <p>Assignment:</p> <ul style="list-style-type: none"> • d1 to d8 = Assign Send 1 to 8 destination <p>Plug-in editing (DSP/compare LED is on):</p> <ul style="list-style-type: none"> • P1 to 15 = Assign insert 1 to 15 plug-in • P1. to 15. = plug-in parameter editing <p>Instrument editing (DSP/compare LED is on):</p> <ul style="list-style-type: none"> • IA = Assign instrument • IE. = instrument parameter editing <p>Group property editing (group LED is on):</p> <ul style="list-style-type: none"> • G1 to 32 = group number
Rotary Selector	<p>selects a slot or parameter for Rotary encoders, depending on the parameters edited with the rotary encoders:</p> <ul style="list-style-type: none"> • send slot when editing Send Level or assigning Send destination • EQ band when editing an EQ parameter • plug-in slot when assigning a plug-in • Pan/Surround parameter when editing a Pan/Surround parameter • Track parameter when editing a Track parameter • Plug-in/instrument parameter page when editing a plug-in or instrument

Control	Assignment
Rotary Selector push button	toggles Flip Mode between <i>off</i> and <i>Duplicate</i> (i.e. faders duplicate Rotary encoders)
SHIFT	toggles Display mode for channel strip displays: switches between <ul style="list-style-type: none"> page info in upper line, parameter name in lower line parameter name in upper line, parameter value in lower line

Multi Buttons

These buttons (labelled A to H) have multiple purposes, depending on the current mode, indicated by the green and yellow LEDs to the right.

Mode	Assignment
fx bypass	toggles bypass of currently selected insert
SHIFT (eff-1)	toggles bypass of currently selected EQ band; switches rotary encoders to EQ Frequency editing
s-mute	toggles Send Mute of currently edited Send, switches rotary encoders to Send Level editing
SHIFT (eff-2)	toggles bypass of currently selected EQ band; switches rotary encoders to EQ Gain editing
pre/post	toggles between Pre and Post of currently edited Send, switches rotary encoders to Send Level editing Post is shown as LED on
SHIFT (eff-3)	toggles bypass of currently selected EQ band; switches rotary encoders to EQ Q factor editing
select	switches rotary encoders to Pan/Surround editing. The edited parameter is selected with the Rotary Selector.
SHIFT (eff-4)	switches rotary encoders to Track Parameter editing

Burn Buttons

These buttons (labelled I to P) have multiple purposes, depending on the current mode, indicated by the red LEDs to the left.

Mode	Assignment
record	toggles Record Ready status of track
	SHIFT (fnctA) switches automation mode to Latch
	ALL + SHIFT (fnctA) switches automation mode of all tracks to Latch
write	switches automation mode to Write
	ALL switches automation mode of all tracks to Write
	SHIFT (fnctB) switches automation mode to Read
	ALL + SHIFT (fnctA) switches automation mode of all tracks to Read
burn	switches automation mode to Touch
	ALL switches automation mode of all tracks to Touch
	SHIFT (fnctC) switches automation mode to Off
	ALL + SHIFT (fnctA) switches automation mode of all tracks to Off

SOLO Buttons

These buttons toggle the Solo status of the displayed track.

MUTE Buttons

These buttons toggle the Mute status of the displayed track.

Left Function Buttons

Control	Assignment
AUTO ENBL/mode	currently unassigned
	SHIFT switches rotary encoders to automation enable mode
SUSPEND/create	While held down, the group clutch is engaged, i.e. groups are disabled
	SHIFT creates a new group and goes to Group Edit view
PLUG-IN/compare	switches Rotary encoders and Multi buttons to Plug-in Assign mode. The Rotary Select knob then selects the insert to edit. In Plug-in Assign or Instrument Assign mode, switches back to Pan. In Plug-in Edit mode, switches back to Plug-in Assign mode. in Instrument Edit mode, switches back to Instrument Assign mode.
	SHIFT switches Rotary encoders and Multi buttons to Instrument Assign mode.
WINDOW/tools	switches Select Switches to Window select mode
	SHIFT switches Select Switches to Select Tool mode
ALL/alt/fine	while ALL/ALT/FINE is held down, rotary encoders are in full mode: rotating counterclockwise sets minimum, rotating clockwise sets maximum
	SHIFT while SHIFT and ALL/ALT/FINE are held down, rotary encoders are in fine mode
DEFAULT/bypass	currently unassigned
	SHIFT in instrument edit mode: toggles bypass of the instrument in plug-in edit mode: toggles bypass of the currently edited plug-in
UNDO/disk	performs an Undo step. The LED is on if there is a Redo step available.
	SHIFT saves the song. The LED is on if the song must be saved
SHIFT	switches to Shift mode—then the lower case inverted labels below the buttons apply

Faders

The faders normally control Volume, except when in Flip Mode, where they duplicate the Rotary Encoders.

Right Function Buttons

Control	Assignment
PLAY/ transport	Play key command
	SHIFT switches Select Switches to Transport section mode
STOP/locate	Stop key command
	SHIFT switches Select Switches to Locate mode
FFWD/monitor	Shuttle Forward key command
	SHIFT opens System Performance window
RWD/status	Shuttle Rewind key command
	SHIFT opens Synchronization window
NEXT/configure	goes to next marker
LAST/assign	When rotary encoders display Send Destinations, switches them back to Send Levels Otherwise: goes to previous marker
	SHIFT When rotary encoders display Send Levels, switches them to Send Destination When rotary encoders edit a plug-in, switches them to Plug-in Assign mode When rotary encoders edit an instrument, switches them to Instrument Assign Mode
ENTER/utility	same as Enter key on computer keyboard
	SHIFT opens Automation Settings window
ESCAPE	When LED on, escapes from special mode (whose LED is flashing) Otherwise: same as Esc key on computer keyboard.

Requirements

You need

- an SAC-2K or SAC-2.2
- Logic Pro 7 or newer

Set Up

- Make sure that an XSKey with a Logic Pro 7 authorization.
- Make sure that your SAC-2K unit(s) are connected bidirectionally with the computer, either using a MIDI interface or the USB connector built-in to the unit.
- If the unit(s) are connected via USB, make sure that the MIDI driver which comes with the unit is installed.
- Choose menu item Logic Pro > Control Surfaces > Setup...
- Choose menu item New > Install... in the Setup window's local menu
- Select the SAC-2K in the install list
- Click the Scan button.

Logic should now scan for and install the SAC-2K automatically.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

LCDs and Encoders

Control	Assignment
Left and middle LCDs	Upper row displays track number (if in a multi channel view) or parameter name (if in a channel strip view) Lower row displays parameter value of Encoder below. At the right, level meters are displayed.
Right LCD	Upper row displays name of parameter edited by Encoder below. Lower row displays parameter value of Encoder below. At the very right, a level meter of the Master Output is displayed.

Control	Assignment
Encoders	Edit the parameter displayed in the LCD above
Encoder push buttons	Parameters with two values: toggles between the two values Parameters which change structure (e.g. plug-in selection): confirms preselection Otherwise: sets parameter value to default

Channel Strips

Control	Assignment
Mute/Solo	toggles Mute/Solo 1 to 8 buttons between Mute and Solo mode. LED off: Mute/Solo buttons toggle Mute LED on: Mute/Solo buttons toggle Solo LED flashes: Mute/Solo buttons toggle Rec/Rdy
SHIFT	sets Mute/Solo buttons to Rec/Rdy mode
Mute/Solo 1 to 8	Mute/Solo LED off: toggles Mute; LED displays Mute status Mute/Solo LED on: toggles Solo; LED displays Solo status Mute/Solo LED flashing: toggles Rec/Rdy; LED displays Rec/Rdy status
SELECT 1 to 8 buttons	selects track Exception: in Group mode, these buttons define group membership of the track
Master Select button	toggles flip mode between Off and Duplicate
Fader 1 to 8	controls volume, or duplicates encoder above if Flip Mode is enabled. The silk screen lines are scaled to: +6 dB, +3 dB, 0 dB, -5 dB, -10 dB, -15 dB, -20 dB, -25 dB, -30 dB, -35 dB, -40 dB, -45 dB, -50 dB, -60 dB, -inf
Master Fader	controls master volume

Mixer-Mode Section

Control	Assignment
Pan	switches to multi-channel Pan editing. Encoders 9 to 12 edit Pan/Angle, Diversity, LFE and Surround Mode of selected track
High, HiMid, LowMid, Low	switches to multi-channel Gain editing of a certain EQ band. Encoders 9 to 12 edit frequency, gain, Q factor and on/off of the selected track. Pressing and releasing the button chooses a certain band, depending whether the song uses the old or new EQ. Old EQ: <ul style="list-style-type: none"> • Low: band 3 • LowMid: band 4 • HiMid: — • High: — New Channel EQ: <ul style="list-style-type: none"> • Low: band 3 (first parametric EQ band) • LowMid: band 4 (second parametric EQ band) • HiMid: band 5 (third parametric EQ band) • High: band 6 (fourth parametric EQ band) While held down, Encoder 9 lets you choose the EQ band to edit (old EQ: bands 1 to 4; new EQ; bands 1 to 8) The button's LED is on when in multi-channel Gain editing mode of the button's EQ band.
Snd/Ins	toggles the four Snd/Ins 1 to 4 buttons between Send and Insert mode. LED off: Send mode LED on: Insert mode
Snd/Ins 1 to 4	<ul style="list-style-type: none"> • If in Send mode, switches to multi-channel Send Level editing of Send 1 to 4 Encoders 9 to 12 edit Destination, Level, Pre/Post and Mute of the selected track. Destination must be confirmed by Encoder 10's push-button. While held down, Encoder 9 lets you choose the desired Send number (1 to 8) The button's LED is on when in multi-channel Send Level editing mode of the button's Send number. • If in Insert mode, switches to multi-channel insert plug-in selection of Insert 1 to 4. A plug-in must be confirmed by the Encoder's push-button. While held down, Encoder 9 lets you choose the desired Insert number (1 to 15) The button's LED is on when in plug-in selection mode of the button's insert number.
Audio	switches to Global View and displays Audio tracks
	SHIFT switches to Mixer View
MIDI	switches to Global View and displays MIDI tracks
	SHIFT switches to Arrange View
Input	switches to Global View and displays Audio Inputs
	SHIFT switches to Global View and displays Audio Outputs and Master

Control	Assignment
Inst	switches to Global View and displays Audio Instruments
	SHIFT switches to Global View and displays Aux objects
Bus	switches to Global View and displays Busses
	SHIFT switches to Global View and displays folders and other objects
Group	switches to Group editing: <ul style="list-style-type: none"> Encoder 1 to 10 push buttons edit a group property, labelled in the LCD's lower line Encoder 11 scrolls the group properties Encoder 12 selects a group to edit. Its name is displayed in the lower line above Encoder 12 Select buttons 1 to 8 toggle track membership of the group
1 to 8	shifts the fader bank offset left by one bank
9 to 16	shifts the fader bank offset right by one bank
17 to 24	shifts the fader bank offset left by one track
25 to 32	shifts the fader bank offset right by one track

Software Navigation Section

Control	Assignment
1	Num LED off: — Num LED on: equivalent to '1' on computer keyboard
2	Num LED off: equivalent to Cursor Left on computer keyboard Num LED on: equivalent to '2' on computer keyboard
3	Num LED off: equivalent to Cursor Up on computer keyboard Num LED on: equivalent to '3' on computer keyboard
4	Num LED off: equivalent to Cursor Right on computer keyboard Num LED on: equivalent to '4' on computer keyboard
5	Num LED off: Undo Num LED on: equivalent to '5' on computer keyboard
6	Num LED off: — Num LED on: equivalent to '6' on computer keyboard
7	Num LED off: Copy Num LED on: equivalent to '7' on computer keyboard
8	Num LED off: equivalent to Cursor Down on computer keyboard Num LED on: equivalent to '8' on computer keyboard
9	Num LED off: Paste Num LED on: equivalent to '9' on computer keyboard
0	Num LED off: Save Num LED on: equivalent to '0' on computer keyboard

Control	Assignment
Num	Toggles the numeric buttons between primary and secondary function (see above)
Enter	same as Enter key on the computer keyboard

Locator Section

The locator displays the current song position in bars/beats format, as defined in the Song Settings; however spaces between the sections are displayed with a period, as Logic's bars/beats format may take up up to 14 characters, whereas this display has only 8 digits.

Marker Section

Control	Assignment
SHIFT	shifts to secondary function of other buttons.
Scrub	Rotates thru the 3 modes for the jog wheel: <ul style="list-style-type: none">• LED off: Move SPL by 1 bar• LED on: Scrub• LED flashes: Shuttle
From	Sets left locator to current SPL
SHIFT	Sets SPL to left locator
Store Marker	Creates a marker at the current SPL
SHIFT	Deletes marker at the current SPL
To	Sets right locator to current SPL
SHIFT	Sets SPL to right locator
Recall Marker	Opens the “Goto Marker” dialog
SHIFT	Opens the Marker List window
Jog Wheel	Moves the SPL in one of three modes, depending on state of Scrub button (see above)

Transport Section

Control	Assignment
<<	Shuttles backward
SHIFT	Goes to previous marker
>>	Shuttles forward
SHIFT	Goes to next marker
STOP	Stop
PLAY	Play
SHIFT	Toggles Cycle mode
RECORD	Record
SHIFT	Toggles Replace mode

Channel-Strips Section

Control	Assignment
EQs	Enters Channel Strip EQ editing mode. Pressing the button again cycles through the available pages.
Inserts/Sends	Enters Channel Strip plug-in editing mode—edits the currently selected insert of the selected track. Pressing the button again cycles through the available pages.
Dynamics	—
MIDI	—
Instrument	Enters Channel Strip instrument editing mode—edits the instrument of the selected track (if it's an Audio Instrument track). Pressing the button again cycles through the available pages.

Troubleshooting

The track names are shorter than necessary, and the assignments don't work correctly.

The SAC-2K is in an emulation mode (Logic Control, HUI etc.) for some reason.

To solve this, simply switch off and then on the SAC-2K.

The faders don't work, and the locator display shows only 00000000.

You have switched the SAC-2K mode to SLAVE manually. This however does not initialize some settings required for correct communication.

To solve this, simply switch off and then on the SAC-2K.

Requirements

You need

- a Roland SI-24
- Logic Pro 7 or Express 7, or newer

Set Up

- Make sure that your SI-24 unit(s) are connected to the RPC card using the included blue cable. This connector provides both digital audio and MIDI connections.
- Make sure that the MIDI driver which comes with the unit is installed.
- Choose menu item Logic Pro > Preferences > Control Surfaces > Setup...
- Choose menu item New > Scan all models... in the Setup window's local menu

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

Channel Strips

Control	Assignment
EQ ON/OFF 1 to 4	in Pan mode: <ul style="list-style-type: none"> • toggles bypass of EQ band 1–4 • enters EQ/SEND mode in EQ/Send mode: <ul style="list-style-type: none"> • toggles bypass of EQ band 1–4 • The button LED is on if the EQ is enabled in Plug-in mode: <ul style="list-style-type: none"> • switches to insert 1–4 • One of the buttons' LED is on which displays the selected insert • If a Plug-in editor window is open, it will also switch to the selected insert
	SHIFT in EQ/Send mode: toggles Send 1–4 Mute
EQ/SEND	toggles track edit section between <ul style="list-style-type: none"> • EQ/Send mode (LED on) • Pan mode (LED off)

Control	Assignment
PLUG-IN	toggles track edit section between <ul style="list-style-type: none"> • Plug-in mode (LED on) (Plug-in editor window opens) • Pan mode (LED off) Plug-in editor window closes when Plug-in mode is left
SHIFT	toggles track edit section between <ul style="list-style-type: none"> • Instrument mode (LED on) (Instrument editor window opens) • Pan mode (LED off) Instrument editor window closes when Instrument mode is left
PAN 1 to 12	in Pan mode: <ul style="list-style-type: none"> • controls channel strip's Pan (tracks in surround mode: surround angle) in EQ/Send mode: <ul style="list-style-type: none"> • 1/3/5/7: EQ 1–4 gain • 2/4/6/8: EQ 1–4 frequency • 9–12: Send 1–4 level in Plug-in mode: <ul style="list-style-type: none"> • 1–10: edit plug-in parameter • 11: bypass plug-in • 12: shifts plug-in parameter page in Instrument mode: <ul style="list-style-type: none"> • 1–10: edit Instrument parameter • 11: bypass Instrument • 12: shifts Instrument parameter page
SHIFT	in EQ/Send mode: <ul style="list-style-type: none"> • 1/3/5/7: EQ 1–4 type • 2/4/6/8: EQ 1–4 Q factor • 9–12: Send 1–4 destination
CH SELECT 1 to 12	selects track/channel
STATUS 1 to 12	in Automation mode: toggles Automation Mode between <ul style="list-style-type: none"> • Off (LED off), • Read (green), • Latch (orange) and • Write (red) in Record Ready mode: toggles Record Ready in Solo mode: toggles Solo in Mute mode: toggles Mute
Fader 1 to 12	controls volume

STATUS MODE Section

Control	Assignment
AUTOMIX	sets STATUS 1 to 12 buttons to Automation mode
SHIFT	sets all tracks to automation mode Off, Read, Latch or Write (rotating)
REC/PLAY	sets STATUS 1 to 12 buttons to Record Ready mode
SOLO	sets STATUS 1 to 12 buttons to Solo mode
MUTE	sets STATUS 1 to 12 buttons to Mute mode

CH ASSIGN Controls

Control	Assignment
INPUT	shows the first 12 audio inputs (Global View) on channel strips
	SHIFT shows the first 12 MIDI channels (Global View) on channel strips
OUTPUT	shows the first 12 audio outputs (Global View) on channel strips: <ul style="list-style-type: none">• 1: Output 1-2 (Front)• 2: Output 3-4 (Rear)• 3: Output 5 (Center)• 4: Output 6 (LFE)• 5: Output 7-8 (Digital out)
	SHIFT shows the first 12 audio channels (Global View) on channel strips
BUS	shows the first 12 audio buses (Global View) on channel strips
	SHIFT shows the first 12 Audio Instruments (Global View) on channel strips
Tr 1 to 12	shows tracks 1 to 12 (Track View) on channel strips
Tr 13 to 24	shows tracks 13 to 24 (Track View) on channel strips

MASTER Section

Control	Assignment
Master Fader	controls output 1-2 volume

SURROUND PAN Section

Control	Assignment
ON/OFF	toggles selected track's output between <ul style="list-style-type: none">• Surround (LED on) and• Out 1-2 (LED off) Additionally shows/hides the surround editor window
Joystick	Surround X/Y of selected track

Numeric Key Section

Control	Assignment
SYSTEM	switches SI-24 to System mode. See SI-24 user manual for details
LOCATE	switches numeric keys to Locate mode
SHORT CUT	switches numeric keys to Shortcut mode
SCREEN SET	switches numeric keys to Screenset mode
0 to 9	<p>System mode: see SI-24 user manual</p> <p>Locate mode:</p> <ul style="list-style-type: none">• 1 to 9: goto Marker 1 to 9• 0: Create Marker at SPL <p>Shortcut mode:</p> <ul style="list-style-type: none">• 1: Save (LED is on if song needs saved)• 2: Undo (LED is on if Redo is possible)• 3: Copy• 4: Paste• 5: Clear• 6: toggles Scrub mode (LED is on if Scrub mode is enabled)• 7: toggles Cycle mode (LED is on if Cycle mode is enabled)• 8: toggles Drop mode (LED is on if Drop mode is enabled)• 9: switches Arrange window to Volume Automation View• 0: switches Arrange window to Pan Automation View <p>Screenset mode:</p> <ul style="list-style-type: none">• 1 to 9: Recall Screenset 1 to 9• 0: Toggle Lock Screenset
SHIFT	<p>Locate mode:</p> <ul style="list-style-type: none">• 1 to 9: goto Marker 10 to 18• 0: Delete Marker at SPL <p>Shortcut mode:</p> <ul style="list-style-type: none">• 1: Save as• 2: Redo• 3: Cut• 4: Paste <p>Screen Set mode:</p> <ul style="list-style-type: none">• 1: Toggle Arrange window• 2: Toggle Track Mixer window• 3: Toggle Event Editor window• 4: Toggle Score window• 5: Toggle HyperEdit window• 6: Toggle Matrix Editor window• 7: Toggle Transport window• 8: Toggle Audio window• 9: Toggle Sample Editor window

Transport Section

Control	Assignment
PAUSE	Pause
REW	rewinds SPL by one bar
F FWD	advances SPL by one bar
STOP	Stop
PLAY	Play
RECORD	Record
Jog wheel	Scrubbing off: move SPL in 1/1 bars Scrubbing on: scrub

Requirements

You need

- a US-428 or US-224
- Logic Pro 7 or Logic Express 7, or newer

Set Up

Make sure that your US-428/224 unit(s) are connected via USB with the computer. They are installed automatically.

Assignment Overview

A right-aligned modifier button below a button description means: while holding down this modifier, the button has this alternate meaning.

Note for US-224 users: there are only four channel strips, and the EQ section, as well the Master section (except the NULL button and data wheel) are not available.

Channel Strips

Control	Assignment
MUTE 1 to 8	SOLO LED off: toggles Mute; LED displays Mute status SOLO LED on: toggles Solo; LED displays Solo status
REC 1 to 8 LEDs	displays Record Ready status.
	NULL on if fader is higher than actual volume
SELECT 1 to 8 LEDs	displays Select status.
	NULL on if fader is lower than actual volume
SELECT 1 to 8 buttons	selects track
REC	toggles Record Ready status
Fader 1 to 8	controls volume
	NULL lets you update the fader position to match the actual volume
Master Fader	controls master volume

EQ Section

Control	Assignment
EQ Gain	controls gain of currently selected EQ of selected track
ASGN	controls EQ 1 type
EQ Freq	controls frequency of currently selected EQ of selected track
ASGN	controls EQ 2 type
EQ Q	controls Q factor of currently selected EQ of selected track
ASGN	controls EQ 3 type
HIGH	selects EQ 1 for EQ Gain, Freq and Q controls
ASGN	toggles EQ 1 bypass
HI-MID	selects EQ 2 for EQ Gain, Freq and Q controls
ASGN	toggles EQ 2 bypass
LO-MID	selects EQ 3 for EQ Gain, Freq and Q controls
ASGN	toggles EQ 3 bypass
LOW	selects EQ 4 for EQ Gain, Freq and Q controls
ASGN	toggles EQ 4 bypass

Master Section Controls

Control	Assignment
AUX 1	toggles data wheel between transport/scrub and Send Level 1
ASGN	toggles Send 1 Mute
AUX 2	toggles data wheel between transport/scrub and Send Level 2
ASGN	toggles Send 2 Mute
AUX 3	toggles data wheel between transport/scrub and Send Level 3
ASGN	toggles Send 3 Mute
AUX 4	toggles data wheel between transport/scrub and Send Level 4
ASGN	toggles Send 4 Mute
ASGN	Modifier for function of EQ controls, AUX 1 to 4 buttons, PAN knob and data wheel
F1	toggles Cycle
F2	toggles Drop
F3	toggles scrub mode
PAN	controls panning of selected track
ASGN	selects current track's input
NULL	Modifier for NULL mode. NULL mode lets you update the fader positions to match the actual volume

Control	Assignment
Data wheel	AUX 1 LED on: controls Send 1 level of selected track AUX 2 LED on: controls Send 2 level of selected track AUX 3 LED on: controls Send 3 level of selected track AUX 4 LED on: controls Send 4 level of selected track Otherwise: F3 LED on: performs scrubbing Otherwise: moves SPL by bars
ASGN	selects current track's output

LOCATE Section

Control	Assignment
<< LOCATE	goes to previous marker
LOCATE >>	goes to next marker
SET	creates a new marker at the current SPL

BANK Section

Control	Assignment
< BANK	shifts fader bank left by one bank. The LED is on if the fader bank is not yet left-most
BANK >	shifts fader bank right by one bank. The LED is on if the fader bank is not yet right-most

Transport Section

Control	Assignment
REW	Shuttles backward
F FWD	Shuttles forward
STOP	Stop
PLAY	Play
RECORD	Record

Logic Control (Base Unit)

Display

- 55 × 2-digit (LCD) backlit multi-function display for detailed parameter information and metering
- Built-in screensaver function
- 2-digit, 7-segment display for mode displays
- 10-digit, 7-segment display for song position information using SMPTE or bar/beats/ticks
- 1 × button to toggle the LCD between parameter name/value and to activate the level meters
- 1 × button to toggle the 7-segment display between SMPTE and bar/beats/format/ticks
- 2 × LEDs show the current 7-segment display status
- 1 × LED shows the current Solo status

Per channel (8 channels)

- 1 × motorized 100mm touch-sensitive Penny & Giles faders with 10Bit resolution (1024 steps)
- 1 × V-POT: digital endless rotary knob with position indicator and integrated push button for parameter adjustments of, for example, pan, EQ, send levels, etc.
- 4 × buttons with integrated colored LED for channel functions such as: Record, Solo, Mute and Channel Selection
- Signal Present LED shows if an audio or MIDI signal is present

Master Fader

- 1 × motorized 100mm touch-sensitive Penny & Giles fader with 10Bit resolution (1024 steps)

Controller

- 6 × buttons with status LED to directly select parameter groups for Track, Pan/Surround, EQ, Send, Plug-In, Instrument
- 8 × buttons to directly select sections of Logic's mixer such as audio tracks, MIDI tracks, inputs, busses etc.

- 4 × buttons to shift the displayed mixer channels to the left and right, either one channel at a time or in banks
- 1 × button with status LED for the channel fader/V-POT flip: swaps the assignments of fader and V-POTs
- 1 × button with status LED to toggle between Mixer View and Global View
- 4 × buttons with status LED to activate automation modes such as Read, Write, Touch and Latch
- 4 × buttons to select utility functions such as: “Save Song”, “Undo”, “Cancel” or confirm in dialogs
- 4 × buttons to access additional functions through modifier keys
- 8 × freely definable user keys
- 2 × currently unassigned buttons for future use

Transport Controls

- 5 × Transport buttons with status LED for Forward, Rewind, Stop, Play, Record
- 1 × Jog/Scrub wheel for precise location of any song position and audio scrubbing
- 1 × Scrub button with status LED to activate the scrub function
- 1 × Marker and 1 × Nudge button with status LED to extend the functionality of the Forward/Rewind buttons
- 4 × Navigation buttons to quickly navigate through plug-in slots and parameter pages
- 1 × Zoom button to switch the navigate buttons to zoom

Internal Processor

- High-speed RISC micro controller
- Firmware can be updated via MIDI dump

Connections

- 1 × MIDI in, 1 × MIDI out
- 2 × assignable foot switch inputs to control, for example, Start/Stop and Punch In/Out
- 1 × assignable external control signal input to connect a volume pedal
- Power supply jack

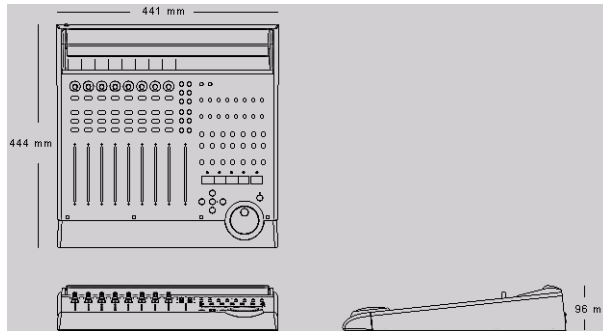
Power Supply (supplied)

- International (100—250V) external power supply for standard power cords
- Rear-mounted power switch

Weight and Construction

- Logic Control weighs 5.05 kg (unpacked)
- High quality, sturdy 1mm steel chassis and case
- Comfortable, durable wrist rest

Dimensions



Logic Control XT (Extension Unit)

Display

- 55 × 2-digit (LCD) backlit multi-function display for detailed parameter information and metering
- Built-in screensaver function

Per channel (8 channels)

- 1 × motorized 100mm touch-sensitive Penny & Giles faders with 10Bit resolution (1024 steps)
- 1 × V-POT: digital endless rotary knob with position indicator and integrated push button for parameter adjustments of, for example, pan, EQ, send levels, etc.
- 4 × buttons with integrated colored LED for channel functions such as: Record, Solo, Mute and Channel Selection
- Signal Present LED shows if an audio signal is present

Internal Processor

- High-speed RISC micro controller
- Firmware can be updated via MIDI dump

Connections

- 1 × MIDI in, 1 × MIDI out
- Power supply jack

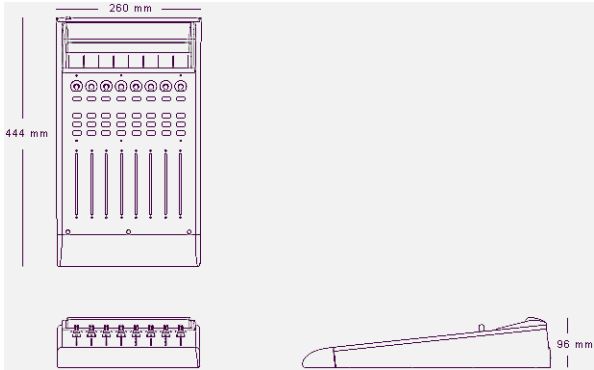
Power Supply (included)

- International (100—250V) external power supply for standard power cords
- Rear-mounted power switch

Weight and Construction

- Logic Control XT weighs 3.45 kg (unpacked)
- High quality, sturdy 1mm steel chassis and case
- Comfortable, durable wrist rest

Dimensions



Logic Control—MIDI Implementation

B

The following information is important for software vendors who want to create a software integration for Logic Control/XT.

This documentation covers firmware version V1.0.

Note: All numbers are in hexadecimal format

Variable bytes are shown in *italics* and use characters other than a-f as a placeholder

All channel messages use running status messages. Once an initial 3-byte message has been sent, the status byte is dropped from proceeding transmitted channel messages to conserve bandwidth.

SysEx Message Header

The following documentation uses the place holder “<Hdr>” whenever the SysEx header is transmitted or received. It has the following form:

F0	MIDI SysEx status byte
00 00 66	Mackie 3-byte SysEx manufacturer ID
<i>ii</i>	Model ID
10	Logic Control
11	Logic Control XT

A device ID is not required, as each unit needs a dedicated MIDI cable.

Global Control Messages

Host Connection and Initialization

Received:

<Hdr> 00 F7
Device Query
<Hdr> 02 *ss ss ss ss ss ss rr rr rr rr* F7
Host Connection Reply
<Hdr> 0F 7F F7
Go Offline

Transmitted:

<Hdr> 01 *ss ss ss ss ss ss // // // //* F7
Host Connection Query
<Hdr> 03 *ss ss ss ss ss ss* F7
Host Connection Confirmation
<Hdr> 04 *ss ss ss ss ss ss* F7
Host Connection Error

ss = Serial number (7 bytes ASCII text, non null-terminated)
// = Challenge code (4 bytes)
rr = Response code (4 bytes)

Offline Mode:

Logic Control employs a query system to maintain connection to the host software. When Logic Control is initially powered up, it defaults to Offline mode. In Offline mode, Logic Control's faders move to their lowest setting, and the LCD reads "EMAGIC LOGIC CONTROL -- by MACKIE." After power-on, Logic Control also transmits a system exclusive Host Connection Query message that is used by the host to detect a connection, and what type of device is connected (Logic Control/Logic Control XT).

Communications Initialization:

When the host software receives a Host Connection Query message (containing a serial number and a random challenge code), it should transmit a Host Connection Reply command within 300ms to initialize Logic Control. The command must contain the same serial number and the correct response code for the challenge code. Here is the algorithm (*I1* to *I4* = challenge code bytes 1 to 4, *r1* to *r4* = response code bytes 1 to 4):

$$\begin{aligned} r1 &= 0x7F \& (I1 + (I2 \wedge 0xa) - I4); \\ r2 &= 0x7F \& ((I3 >> 4) \wedge (I1 + I4)); \\ r3 &= 0x7F \& (I4 - (I3 << 2) \wedge (I1 | I2)); \\ r4 &= 0x7F \& (I2 - I3 + (0xF0 \wedge (I4 << 4))); \end{aligned}$$

Logic Control will in turn respond with either a Host Connection Confirmation message containing the serial number and switch to Online mode—where it will await further instructions from the host, or reply with a Host Connection Error message in case the response code was wrong.

Online Mode:

Once the connection between Logic Control and the host software has been made, Logic Control stays in Online Mode until it receives a Go Offline message.

Firmware version request

Received:

<Hdr> 13 00 F7 Version request

Transmitted:

<Hdr> 14 vv vv vv vv vv F7 Version reply

vv 5 ASCII bytes containing version string, e.g. "V1.0"

Note: When Logic Control receives a version request message, it sends the version reply message

Reset Messages

Received:

<Hdr> 61 F7 Faders to minimum
(Sends all faders to the bottom of their throw)

<Hdr> 62 F7 All LEDs off
(Turns off all LEDs on Logic Control)

<Hdr> 63 F7 Reset
(Re-Boots Logic Control into Offline mode)

Transmitted: No

Configuration Messages

Received:

<Hdr> 0A tt F7 Transport button click

<Hdr> 0B // F7 LCD back light saver

<Hdr> 0C mm F7 Touchless movable faders

<Hdr> 0E ii ss F7 Fader touch sensitivity

Transmitted: No

tt 00 = no transport button click
 01 = transport button click (default)

// 00 = LCD back light off
 01 to 7F = LCD back light on, with time out in minutes (default: 0F = 15 minutes)

mm 00 = fader movements are only transmitted if the fader has been recognized as touched
 01 = fader movements are also transmitted if the fader has not been recognized as touched (e.g. with finger nail or pen)

ii Fader ID (00 thru 07; Master = 08)

ss Fader touch sensitivity (00 to 05; default: 03)

Common Control Messages

Faders

Received: Ei, ll, hh Move fader to position

Transmitted: Ei, ll, hh Fader moved by user

i Fader ID (00 thru 07; Master = 08)

ll Fader position value low 7 bits(00–7F)

hh Fader position value high 7 bits (00–7F)

Example: $E0, 40, 55$ = Fader Ch. 1, position $(55 \ll 7) + 40$

Note: Message format for transmitted fader position is the same as for received position. Only the high 10 of the 14 transmitted bits are required. So positions 0 to 1023 (decimal) are transmitted as 0000 to 03FF (Ei 00 00 to Ei 7F 7F)

Switches

Received: None

Transmitted: $90, ii, ss$ Switch pressed/released by user

ii Switch ID (See *Logic Control—Control Surface Layout and IDs* section on page 181)

ss Switch State

00 = switch or fader released

7F = switch pressed or fader touched

Example: $90, 0F, 7F$ = SOLO Ch. 8 is pressed

$90, 0F, 00$ = SOLO Ch. 8 is released

Note: LEDs and switches use the same control message. This way, an LED has the same ID as its corresponding switch.

LEDs

Received: $90, ii, ss$ Set LED status

Transmitted: None

ii LED ID (See *Logic Control—Control Surface Layout and IDs* section on page 181)

ss LED State (7F = on, 00 = off, 01 = flashing)

Example: $90, 08, 7F$ = Turn LED 08 on

$90, 08, 00$ = Turn LED 08 off

Note: Switches and LEDs use the same control message. In this way, an LED always shares the same ID as its corresponding switch.

V-POTs

Received: None
Transmitted: B0, 1*i*, XX V-POTs turned by user
i V-POT ID (00–07)
XX delta value in the form of (0 *s* *v* *v* *v* *v* *v* *v*)
s direction bit:
0 = clockwise,
1 = counter clockwise
vv number of ticks

Examples:

- B0, 10, 01 = V-POT Ch. 1 is being turned clockwise by one tick.
- B0, 17, 47 = V-POT Ch. 8 is being turned counter-clockwise by 7 ticks.

V-POT LED ring

Received: B0, 3*i*, XX Set LED ring display
Transmitted: None
i V-POT number (0 thru 7)
XX V-POT display control byte in the form of
(0 *p* *x* *x* *v* *v* *v* *v*):
p V-POT display center LED state
(1 = on, 0 = off)
xx V-POT mode (00 thru 03; see diagrams below)
vv V-POT display position value
00 = all LEDs in ring off;
01 thru 0B see diagrams below

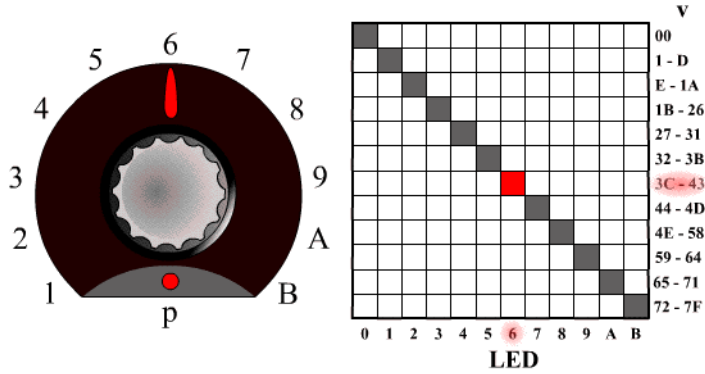
Example:

- B0, 31, 06 = V-POT 2 display shows LEDs at position 6

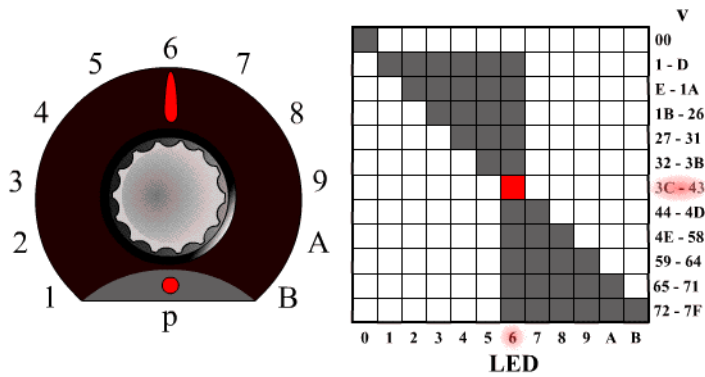
Note: In any V-POT display mode, a received LED position value of 00 will turn off all of the V-POT LEDs.

V-POT Display modes available:

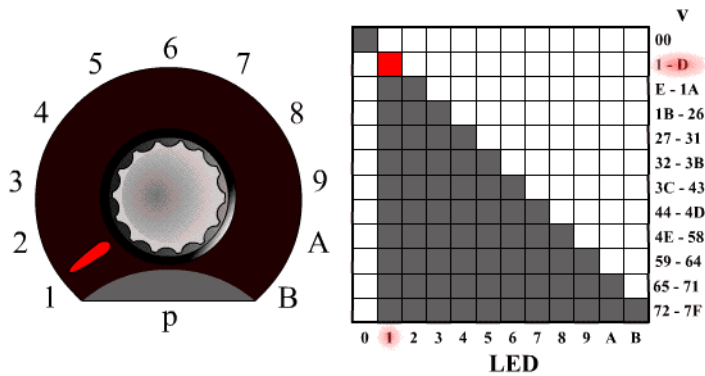
Mode 0 - Single Dot



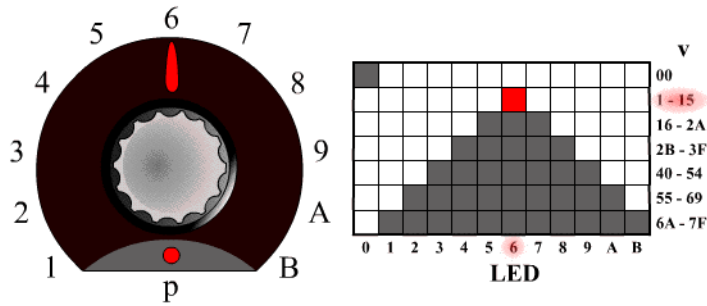
Mode 1 - Boost/Cut



Mode 2 - Wrap



Mode 3 - Spread



External Controller

Received: None

Transmitted: B0, 2E, vv External Controller changed

vv External Controller position value (00–7F)

Example:

- B0, 2E, 07 = External Controller value = 07

Jog Wheel

Received: None

Transmitted: B0, 3C, XX Jog wheel turned by user

XX delta value in the form of (0 s v v v v v v)

s direction bit: 0 = clockwise, 1 = counter clockwise

vv number of ticks

Examples:

- B0, 3C, 01 = Jog forward
- B0, 3C, 41 = Jog reverse

LCD

Received: <Hdr>, 12, oo, yy, ..., F7 Update LCD

Transmitted: None

oo Display offset to write from:
00 thru 37 for upper line,
38 thru 6F for lower line.

yy Data: ASCII equivalents for display characters written from left to right, including line wrapping between upper and lower line. Up to 100 data bytes may be sent in one message.

Example:

- The following message writes “Hello” to top left of the LCD on a Logic Control master section.

```
F0 00 00 66 10 12 00 48 65 6C 6C 6F F7
```

Notes:

- There are 7 displayed characters per channel, with the exception of channel 8, which displays only the first 6 characters. Internally however, the LCD stores 2 x 56 characters.
- In most cases you will use the LCD in a scribble-strip fashion (text above each channel). In this case, you should use only the first six characters per channel to leave space between channel text.
- The lower line can be switched into meter mode. See *Metering* section on page 179 for further details.
- While the LCD switches between horizontal and vertical metering mode, it ignores LCD messages. After you sent an LCD metering mode change message, you should delay LCD messages for at least 600 ms.

Time Code/BBT Display

Received:

<Hdr>, 10, yy, ..., F7 Update multiple characters
B0, 4i, yy Update single character

Transmitted: None

i Digit ID: 0 = right-most, 9 = left-most

yy Data bytes representing character to be written (See *7-Segment Display Character Table* section on page 178). Up to ten characters can be sent in the SysEx message.

Examples:

- The following message writes “109.02.01.126” to the Time Code display (note decimal points)
F0 00 00 66 10 10 36 32 31 71 30 72 30 79 30 31 F7
- B0 40 30 41 31 = writes “10” into the last two digits.

Important: The digits in the Time Code display and Assignment display are written RIGHT-TO-LEFT to help conserve bandwidth.

Assignment 7-segment display

Received:

<Hdr>, 11, yy, yy, F7 Update multiple characters
B0, 4i, yy Update single character

Transmitted: None

i Digit ID: A= right, B = left

yy Data bytes representing character to be written (See *7-Segment Display Character Table* section on page 178). Two characters can be sent in the SysEx message

Example:

- B0 4B 10 4A 4E = writes “Pn.” to the Assignment display

Important: The digits in the Time Code display and Assignment display are written RIGHT-TO-LEFT to help conserve bandwidth.

7-Segment Display Character Table

	0x	1x	2x	3x
x0	@	P	0	0
x1	A	Q	!	1
x2	B	R	"	2
x3	C	S	#	3
x4	D	T	\$	4
x5	E	U	∞	5
x6	F	V	&	6
x7	G	W	'	7
x8	H	X	(8
x9	I	Y)	9
xA	J	Z	*	:
xB	K	[+	;
xC	L	\	,	<
xD	M]	-	=
xE	N	^	.	>
xF	O	_	/	?

Hint:

- Characters @ (40h) thru ` (60h) = (ASCII value) – 40h
- Characters ! (21h) thru ? (3Fh) = ASCII value

Note: The decimal point on each 7-segment character can be lit by adding 40 Hex to the value of the data.

Metering

Received:

D0, <i>XX</i>	Peak level
<Hdr>, 20, <i>ii</i> , <i>mm</i> , F7	Channel meter mode
<Hdr>, 21, <i>yy</i> , F7	Global LCD meter mode

Transmitted: None

XX Meter level in the form of (0 *h h h l l l l*):

hh Channel to be addressed (0 thru 7)

ll Meter level:

0 thru C = level meter 0% to 100%

Overload not cleared!

E = set overload

F = clear overload

ii Channel ID (0 to 7)

mm mode bit map in the form of (0 0 0 0 0 / *p s*):

l Enable level meter on LCD

p Enable peak hold display (horizontal only)

s Enable Signal LED

yy 00 = horizontal; 01 = vertical

Notes:

- There is only one level meter per channel. For stereo tracks, use the maximum of left and right levels.
- Only transmit peak levels. Logic Control automatically decreases the level meter bars, and switches off the Signal Present LED with time. This way, MIDI bandwidth takes up only a fraction compared to implementations where the current level (and peak level) has to be transmitted constantly.
- Decay rate is approximately 300ms per meter division (1.8 seconds to fall from 100% to 0%)
- The LCD meter value and the duration of the Signal Present LED are controlled by the same data byte.
- While the LCD switches between horizontal and vertical metering mode, it ignores LCD messages. After you sent an LCD metering mode change message, you should delay LCD messages for at least 600 ms.

Logic Control— Control Surface Layout and IDs

C

ID	Switch	LED	Function
00	•	•	REC/RDY Ch. 1
01	•	•	REC/RDY Ch. 2
02	•	•	REC/RDY Ch. 3
03	•	•	REC/RDY Ch. 4
04	•	•	REC/RDY Ch. 5
05	•	•	REC/RDY Ch. 6
06	•	•	REC/RDY Ch. 7
07	•	•	REC/RDY Ch. 8
08	•	•	SOLO Ch. 1
09	•	•	SOLO Ch. 2
0A	•	•	SOLO Ch. 3
0B	•	•	SOLO Ch. 4
0C	•	•	SOLO Ch. 5
0D	•	•	SOLO Ch. 6
0E	•	•	SOLO Ch. 7
0F	•	•	SOLO Ch. 8
10	•	•	MUTE Ch. 1
11	•	•	MUTE Ch. 2
12	•	•	MUTE Ch. 3
13	•	•	MUTE Ch. 4
14	•	•	MUTE Ch. 5
15	•	•	MUTE Ch. 6
16	•	•	MUTE Ch. 7
17	•	•	MUTE Ch. 8
18	•	•	SELECT Ch. 1
19	•	•	SELECT Ch. 2

ID	Switch	LED	Function
1A	•	•	SELECT Ch. 3
1B	•	•	SELECT Ch. 4
1C	•	•	SELECT Ch. 5
1D	•	•	SELECT Ch. 6
1E	•	•	SELECT Ch. 7
1F	•	•	SELECT Ch. 8
20	•		V-Select Ch. 1
21	•		V-Select Ch. 2
22	•		V-Select Ch. 3
23	•		V-Select Ch. 4
24	•		V-Select Ch. 5
25	•		V-Select Ch. 6
26	•		V-Select Ch. 7
27	•		V-Select Ch. 8
28	•	•	ASSIGNMENT: TRACK
29	•	•	ASSIGNMENT: SEND
2A	•	•	ASSIGNMENT: PAN/SURROUND
2B	•	•	ASSIGNMENT: PLUG-IN
2C	•	•	ASSIGNMENT: EQ
2D	•	•	ASSIGNMENT: INSTRUMENT
2E	•		FADER BANKS: BANK Left
2F	•		FADER BANKS: BANK Right
30	•		FADER BANKS: CHANNEL Left
31	•		FADER BANKS: CHANNEL Right
32	•	•	FLIP
33	•	•	GLOBAL VIEW
34	•		NAME/VALUE
35	•		SMPTE/BEATS
36	•		F1
37	•		F2
38	•		F3
39	•		F4
3A	•		F5
3B	•		F6
3C	•		F7
3D	•		F8

ID	Switch	LED	Function
3E	•		GLOBAL VIEW: MIDI TRACKS
3F	•		GLOBAL VIEW: INPUTS
40	•		GLOBAL VIEW: AUDIO TRACKS
41	•		GLOBAL VIEW: AUDIO INSTRUMENT
42	•		GLOBAL VIEW: AUX
43	•		GLOBAL VIEW: BUSSES
44	•		GLOBAL VIEW: OUTPUTS
45	•		GLOBAL VIEW: USER
46	•		SHIFT
47	•		OPTION
48	•		CONTROL
49	•		CMD/ALT
4A	•	•	AUTOMATION: READ/OFF
4B	•	•	AUTOMATION: WRITE
4C	•	•	AUTOMATION: TRIM
4D	•	•	AUTOMATION: TOUCH
4E	•	•	AUTOMATION: LATCH
4F	•	•	GROUP
50	•	•	UTILITIES: SAVE
51	•	•	UTILITIES: UNDO
52	•		UTILITIES: CANCEL
53	•		UTILITIES: ENTER
54	•	•	MARKER
55	•	•	NUDGE
56	•	•	CYCLE
57	•	•	DROP
58	•	•	REPLACE
59	•	•	CLICK
5A	•	•	SOLO
5B	•	•	REWIND
5C	•	•	FAST FWD
5D	•	•	STOP
5E	•	•	PLAY
5F	•	•	RECORD
60	•		Cursor Up
61	•		Cursor Down

ID	Switch	LED	Function
62	•		Cursor Left
63	•		Cursor Right
64	•	•	Zoom
65	•	•	Scrub
66	•		User Switch A
67	•		User Switch B
68	•		Fader Touch Ch. 1
69	•		Fader Touch Ch. 2
6A	•		Fader Touch Ch. 3
6B	•		Fader Touch Ch. 4
6C	•		Fader Touch Ch. 5
6D	•		Fader Touch Ch. 6
6E	•		Fader Touch Ch. 7
6F	•		Fader Touch Ch. 8
70	•		Fader Touch Master
71		•	SMPTE LED
72		•	BEATS LED
73		•	RUDE SOLO LIGHT
76		•	Relay click

Logic Control— MIDI Implementation Chart

Function	Transmitted	Recognized	Remarks
Channel, Default:	1	1	Each Logic Control unit should be installed on a separate MIDI port.
Changed:	1	1	
Mode, Default:	X	X	
Messages:	X	X	
Altered:	X	X	
Note Number	O 0–127	O 0–127	
True Voice:	X	X	
Velocity, Note On:	O v = 1–127	O v = 1–127	
Note Off:	X v = 00	X v = 00	
After Touch, Keys:	X	X	
Chan's:	X	O	
Pitch Bend	O	O	used for motor faders
Control Change	O	O	
Program Change	X	X	
True #:			
SYSTEM EXCLUSIVE:	O	O	
SYSTEM COMMON:	X	X	

Mode 1: OMNI ON, POLY, Mode 2: OMNI ON, MONO, O: Yes

Mode 3: OMNI OFF, POLY, Mode 4: OMNI OFF, MONO, X: No

A

Abbreviation 22
ABORT/UNDO 112
About 16
Alert Messages 23
ALL SAFE 86
ALT 93
ALT/CMD 86
AMT 8 14
Arrange window 93, 96, 104, 109, 118, 133
arrow tool 99, 114
ASSIGN 92, 95, 121, 134
ASSIGN 1 109
ASSIGN 2 109
ASSIGN 3 109
Assignment LED 22
ASSIGN section 92
* 99
Audio Instruments 96, 99, 114
Audio Pool window 93, 113, 122, 136
Audio Tracks 96, 99, 114
Audio window 96
AUDITION 100, 114
AUTO 94, 97, 115, 122, 129
AUTO ENABLE section 96
Autoload Song 24
Automation 53
automation mode 94, 97, 104, 112, 115, 118, 122,
124, 129, 132, 135, 138
automation playback 96, 104, 129
Automation Section 104
AUTOMIX 118, 132
AUTOMIX section 112
AUTO MODE section 97
AUTOREC 112
AUX 86, 119
AUX/MTRX 109, 126
AUX 122, 135
FADER MODE 135
AUX SELECT section 108, 119, 126
Aux Tracks 96, 99, 114

B

DISPLAY HISTORY 115
BANK buttons 88
Bank LEDs 88
Bank Left 93
Bank Right 93
BANK SELECT Left 105
BANK SELECT Right 105
bars/beats/format/ticks 96, 98, 111, 120, 128, 133
BEATS 98, 111, 120, 128, 133
Busses 96, 99, 114
BYPASS 92, 95, 121, 134
bypass 94, 110, 115, 121, 127, 134
BYPASS/OFF 104

C

Cancel 19, 55
cancel 96
CAPTURE 98
CHANNEL INSERTS 127, 129
Channel Left 93
Channel Right 93
Channel strip display 115
Channel strips 94, 103, 115, 122, 129, 135
Channel Strip View 20, 32
Channel Strip view 33
Channel Views 20
Click 61
CLR 99
CLR SOLO 86
Cmd/ALT 29
Cmd/Alt 53
CMD/ALT/FINE 93
COMPARE 95, 121, 134
Compatibility 44
computer keyboard 99
Control 53
COPY 86, 98
CREATE 97
CTRL 86
CTRL/CLUTCH 93
Cursor buttons 88, 101

Cursor Down 101, 116, 130
Cursor Keys 64
Cursor Left 101, 116, 130
Cursor Right 101, 116, 130
Cursor Up 101, 116, 130
CUT 86, 98
Cycle 59, 100

D

Data Entry section 121, 135
DAW ALT/FINE 123, 136
DAW AUTO FADER 124, 137
DAW AUTO LATCH 124, 137
DAW AUTO MUTE 124, 137
DAW AUTO OFF 124, 138
DAW AUTO PAN 124, 137
DAW AUTO PLUGIN 124, 137
DAW AUTO READ 124, 137
DAW AUTO SEND 124, 137
DAW AUTO SEND MUTE 124, 137
DAW AUTO STATUS 124, 138
DAW AUTO TOUCH 124, 137
DAW AUTO TRIM 124, 138
DAW AUTO WRITE 124, 137
DAW BANK- 122, 136
DAW BANK+ 122, 136
DAW CHANNEL - 123, 136
DAW CHANNEL+ 123, 136
DAW CREATE GROUP 123, 136
DAW CTRL/CLUTCH 123, 136
DAW EDIT TOOL 123, 137
DAW END 124, 137
DAW FF 123, 137
DAW GROUP STATUS 123, 136
DAW IN 124, 137
DAW MONI STATUS 123, 136
DAW ONLINE 124, 137
DAW OPTION/ALL 122, 136
DAW OUT 124, 137
DAW PLAY 123, 137
DAW POST 124, 137
DAW PRE 124, 137
DAW QUICK PUNCH 124, 137
DAW REC 123, 137
DAW REC/RDY 122, 136
DAW REC/RDY ALL 123, 137
DAW REW 123, 137
DAW RTZ 124, 137
DAW SAVE 123, 136
DAW SCRUB 123, 137
DAW SHIFT/ADD 122, 136
DAW SHUTTLE 123, 137
DAW STOP 123, 137
DAW SUSPEND 123, 136
DAW UNDO 123, 136

DAW WIN INSERT 123, 137
DAW WIN MEM-LOC 123, 136
DAW WIN MIX/EDIT 123, 136
DAW WIN STATUS 122, 136
DAW WIN TRANSPORT 122, 136
DEC 116, 130
DEFAULT 92
default 108, 119, 127, 132
DEL 86
DELETE 98
dialog 96
DISPLAY 112, 113, 114, 118, 129, 130, 132
Display 110, 127
DISPLAY ACCESS section 109, 118, 126, 132
DISPLAY HISTORY 114
Display Section 104
Drop 60, 100, 114, 124, 137
Drop In locator 100, 105, 114, 124, 137
Drop Out locator 100, 105, 114, 124, 137
DSP display 110, 121, 127, 134
DSP EDIT/ASSIGN section 95
DSP Select 95, 110, 121, 127, 134
DSP V-Pot 95, 110, 121, 127, 134

E

EDIT 93, 104
EDIT MODE 93
EDIT section 98
EDIT TOOL 93, 99
EEPROM 16
EFFECT 118, 132
EFFECTS/PLUG-INS 129
EFFECTS/PLUG-INS section 110, 127
enables Inputs 96
Encoder 87, 115, 122, 129, 134, 135
Encoder Assignment Section 104
ENCODER MODE 92, 115
ENCODER MODE section 109, 119, 126
Encoder Push-Switch 115, 122, 129, 134
ENCODERS 86
Encoder Switch 134
END 100, 105, 114
ENTER 99, 116, 130
Enter 19, 56
EQ 37, 87
equalizer 37
= 99
Event Editor window 96
Extended Track View 19, 97, 113, 123, 136

F

F1 96
F10 88
F2 96
F3 96

- F4 96
- F5 96
- F6 96
- F7 88, 96
- F8 88
- F8/ESC 96
- F9 88
- FADER 96, 109, 126
- Fader 87, 94, 103, 115, 122, 129, 135
- FADER BANK 20
- Fader Bank 46
- Fader bank buttons 93
- FADER MODE 119
- FADER MODE section 109, 119, 126, 132
- FAST FWD 100, 105
- Fast Fwd 62
- FEET 98, 111, 120, 128, 133
- FF 115, 130
- FFWD 89
- fine 93, 113, 123, 136
- Firmware 16
- FLIP 86
- Flip Mode 47
- Flip mode 92, 109, 119, 126, 133
- folder 96, 99, 116, 121, 130, 135
- Folders 19
- Follow Control Surface 19
- Footswitch 15
- Foot Switch 1 101
- Foot Switch 2 101
- Foot switches 101
- DISPLAY HISTORY 115
- FREQ 87
- full 93, 113, 122, 136
- Function Keys 51
- Function keys 96

G

- GAIN 87
- Global View 18, 96, 97, 109, 113, 118, 123, 133, 136
- glue tool 99, 114
- Goto Marker 99
- GROUP 97
- Group 54, 97, 113, 118, 123, 132, 136
- Group Clutch 93, 97, 113, 123, 129, 136
- group membership 97

H

- HIGH 87
- HI-MID 87
- HOME 133
- Hyper Editor window 96

I

- IN 88, 100, 114

- INC 116, 130
- Individual track zoom 101, 116
- INPUT 92
- Inputs 99, 114
- INSERT 94
- INSERT/PARAM 95, 121, 134
- Insert Bypass 92, 108
- Insert Select 92, 108
- Instrument 45

J

- Jog/Scrub 65
- Jog wheel 101

K

- KEYBOARD SHORTCUTS section 93

L

- Large Marker Mode 57
- Large Nudge Mode 58
- LATCH 88, 97
- Latch 53, 97, 112, 124, 137
- LCD 111, 120, 128, 133
- LCD Channel page 134
- LCD Function 120, 133
- LCD Insert page 121, 134
- left locator 100, 114, 124, 137
- level 94, 115, 122, 135
- Level Meters 94, 115, 122, 135
- LOCATE 88
- LOCATE/NUMBERS section 99
- LOCATOR section 114
- LOOP 86, 100
- LOW 87
- LOW-MID 87

M

- MACHINE CONTROL section 130
- Marker 25, 57
- marker 99
- Marker List window 93, 104, 114, 123, 130, 136
- MARKERS 86
- MASTER 111
- MASTER fader 88
- Master Fader 48
- Matrix Editor window 96
- MATRIX SELECT section 108
- MEM-LOC 93, 104
- METER 109, 118, 126
- Metronome 61
- MIDI interface 14
- MIDI Tracks 96, 99, 109, 114, 118, 133
 - 99
 - (DEC) 121, 135
- MIX 93, 104

MODE 101
Modifier 52
MONITOR 97
Motor Fader 31
Multi Channel View 20, 32
Multi Channel view 33
MUTE 87, 92, 94, 96, 103
Mute 20, 30, 94, 96, 103, 104, 115, 122, 129, 135
mute tool 99, 114

N

Name/Value 21, 22, 49
Navigation section 105
next tool 93
NUDGE 88
Nudge 58

O

OFF 97
Off 97, 104, 112, 124, 129, 138
ON 115, 122, 129, 135
1 99
ON LINE 100
ONLINE 114
OPTION 29
Option 52
OPTION/ALL 93
OUT 89, 100, 114
OUTPUT 92
Outputs and Master object 96, 99, 114
Overload LEDs 96, 109, 118, 126, 133

P

Page Down 101, 116
Page Left 101, 116
Page Right 101, 116
Page Up 116
PAIR/GROUP 118, 132
PAN 86, 92, 96, 104, 109, 119, 126
Pan 35, 92, 96, 104, 129
Pan/Surround 35
Pan Encoder 135
parameter display 95, 110, 120, 127, 133
Parameter Wheel 116, 121, 130, 135
PASTE 86, 98
Pause 65, 100, 115, 123, 137
pedals 15
pencil tool 99, 114
PHASE 97
PLAY 89, 100, 105, 115, 130
Play 63
PLUG IN 96
Plug-in 42
Plug-in parameters 96, 129
PLUG-INS 127

+ 99
+ (INC) 121, 135
. 99
POST 100, 114
Power Supply Unit 15
PRE 100, 114
PSU 15

Q

Q 87
QUICK PUNCH 100, 114
Quick Start 17

R

READ 88, 97, 104
Read 97, 104, 112, 124, 137
Read/Off 53
REC 87, 89, 112, 115, 130
REC/RDY 94
REC/RDY ALL 92
REC LEDs 87
RECORD 100, 105
Record 63
Record/Ready 29
Record Ready 92, 94, 103, 111, 122, 136
redo 93, 113, 123, 136
RELATIVE 112
Replace 61
Requirements 91, 103, 107, 117, 125, 131
RETURN 112
RETURN TO ZERO 114
REVERT 86
REW 89, 115, 130
REWIND 100, 105
Rewind 62
right locator 100, 114, 124, 137
Rotary encoder 103
Rotary encoder push button 103
RTZ 100, 105
rubber tool 99, 114
RUDE SOLO LIGHT 98

S

Sample Editor window 93
SAVE 86, 93
Save 55, 113, 123, 136
Save As 93, 113, 123, 136
scissors tool 99, 114
Score Editor window 96
Screen Set 96
Scribble Strip 94
SCROLL 95
Scroll to bottom 101, 116
Scroll to left border 101, 116
Scroll to right border 116

Scroll to top 101, 116
SCRUB 101, 115, 130
Scrub 65, 115, 123, 130, 137
SEL 87, 115, 122, 129, 135
SELECT 94
Select 30
SELECT-ASSIGN 92, 111, 120, 128, 133
Selected Channel 135
SEND 96
Send 39, 86
SEND 1 104
Send 1 Level 92, 104, 108, 119, 126, 132
SEND 2 104
Send 2 Level 92, 104, 108, 119, 126, 132
SEND 3 104
Send 3 Level 92, 104, 108, 119, 126, 132
SEND 4 104
Send 4 Level 92, 104, 108, 119, 126, 132
Send 5 Level 92, 108, 119, 126, 132
SEND A 92
SEND B 92
SEND C 92
Send Channel Strip 2 View 40
SEND D 92
Send Destination 92, 109
SEND E 92
Send Level 96, 104, 129
SEND MUTE 96
Send Mute 92, 108
Send Position 92, 108
Send Pre/Post 94
SEPARATE 98
SET 88
Set up 91, 103, 125
SHIFT 86, 92, 104
Shift 52
SHIFT/ADD 93
SHORTCUTS 86
Shortcuts 34
SHTL 88
SHUTTLE 101, 116, 130
Shuttle 100, 105, 115, 116, 123, 130, 137
Signal LED 29
/ 99
Small Marker Mode 56
Small Nudge Mode 58
SMPTE 96
SMPTE/Beats 23, 50
SMPTE Time Display 23
SOLO 87, 94, 103, 115, 122, 129, 135
Solo 20, 29, 61, 94, 103, 115, 122, 129, 135
Solo LED 23
solo tool 99, 114
Specifications 165
STATUS 93
STATUS/GROUP section 97

Stereo Channel strip 122, 135
STOP 89, 100, 105, 115, 130
Stop 63
Surround 35
Surround Angle 95, 110, 121, 127, 134
Surround Diversity 95, 110, 121, 127, 134
Surround LFE 95, 110, 121, 127, 134
Surround Mode 95, 110, 121, 127, 134
SUSPEND 92, 97
Swap Mode 47
Sync 100, 114, 124, 137

T

TCH 88
Temporary Marker Mode 57
Temporary Nudge Mode 59
text edit tool 99, 114
TIME CODE 98, 111, 120, 128, 133
Time display 98, 111, 120, 128, 133
tool 115, 123, 137
TOUCH 97, 104
Touch 53, 97, 104, 112, 124, 129, 137
TOUCH SENSE 112
Track 33
TRACK ARMING section 111
Track Input 92, 109
Track Mixer 19
Track Mixer window 93, 96, 104, 113, 123, 129, 136
Track Output 92, 109
Track View 18, 97, 113, 118, 123, 132, 136
TRANSPORT 93, 104
Transport/cursor section 115
Transport section 100, 105
Transport window 93, 96, 104, 113, 122, 136
Transport Zone 56
TRIM 97
Trim 53

U

U 101
UNDO 86, 93, 104
Undo 55
undo 113, 123, 136
undo history window 93, 113, 123, 136
Unitor 8 14
unity level 94, 115, 122, 135
USER DEFINED KEYS section 113, 122, 129, 136
USER switch A 15
USER switch B 15
Utilities 55
Utility Section 104

V

View modes 17
Volume 96, 104, 129

V-Pot 28, 32, 94

V-SEL 94

V-SELECT 28

V-Select 32

W

Wheel 88

WINDOW section 93

WRITE 88, 97, 104

Write 53, 97, 104, 112, 124, 129, 137

X

XSKey 91, 103, 107, 117, 125, 131, 147

Z

0 99

Zero Mode 47

Zoom 101, 116

Zoom Key 64

Zoom mode 101, 130

zoom tool 99