CL-16

LINEAR FADER CONTROL SURFACE
FOR 8-SERIES MIXER-RECORDERS

USER GUIDE

SOUND DEVICES

Manual Conventions

SYMBOL	DESCRIPTION
>	This symbol is used to show the order in which you select menu commands and sub-options, such as: Main Menu > Outputs indicates you press the Menu button for the Main Menu, then scroll to and select Outputs by pushing the Knob.
[ ]	This symbol is used to convey selectable menu items.
*	This symbol is used to convey factory default settings.
+	A plus sign is used to show button or keystroke combinations. For instance, Ctrl+V means to hold the Control key down and press the V key simultaneously. This also applies to other controls, such as switches and knobs. For instance, MIC+HP turn means to slide and hold the MIC/TONE switch left while turning the Headphone (HP) knob. METERS+SELECT means to hold the METERS button down as you press the SELECT knob.
Note	A note provides recommendations and important related information. The text for notes appears italicized.
*	A cautionary warning about a specific action that could cause harm to you, the device, or cause you to lose data. Follow the guidelines in this document or on the unit itself when handling electrical equipment. The text for cautionary notes also appears italicized and bold in a different color.

Warning! This device can drive headphones to potentially dangerous levels. Do not listen at high volume levels for long periods.

Read and fully understand this manual before operation.

Included Accessories

CL-16 Product Sheet with DOC
Promo Sticker (Black)
Promo Sticker (White)
Cable USB A to B 2M Length
1/4" to 1/4", 32"L, Tip Ring Sleeve
10-pin Phoenix Screw Terminal Block

Welcome to the CL-16

The CL-16 Linear Fader Control Surface for 8-Series combines the simplicity of traditional analog consoles with the power and flexibility of digital consoles. This bespoke control surface enhances the experience of cart-based mixing with its intuitive operation, 16 silky-smooth faders, 16 dedicated trims, and a glorious panoramic LCD. All of this is elegantly engineered into a 16.3"-wide compact unit which fits in a cart and operates from 12 V DC.

- Compatible with the 833, 888, and Scorpio
- 16 dedicated rotary trim controls
- 16 dedicated faders
- Intuitive design philosophy where channels 1-16 have dedicated, non-banking controls like a traditional analog console, and other important features may be quickly accessed
- 32 multi-function rotary controls for EQ, pan, channels 17-32 gains, bus gains, output gains, and more
- Large, sunlight-readable LCD screen folds down for easy and safe storage and transport
- New high-reliability, silent, soft-touch buttons for key functions like record, stop, metadata, coms, returns, and more
- Five user-assignable buttons
- Built-in 5-port USB hub with (two USB-C and three USB-A) for keyboards, SD-Remote tablet, and other USB peripherals
- 1/4" and 1/8" headphone jacks
- Remote 10-Pin connector for custom wiring of LEDs and switches, along with 1/4" foot pedal input
- Connects via USB-B
- 12 V DC-powered via 4-pin XLR (not included)
- 16 ultra-smooth gliding Penny & Giles 100 mm linear faders – best feeling faders on the market
- Quick bottom panel access for field servicing of faders
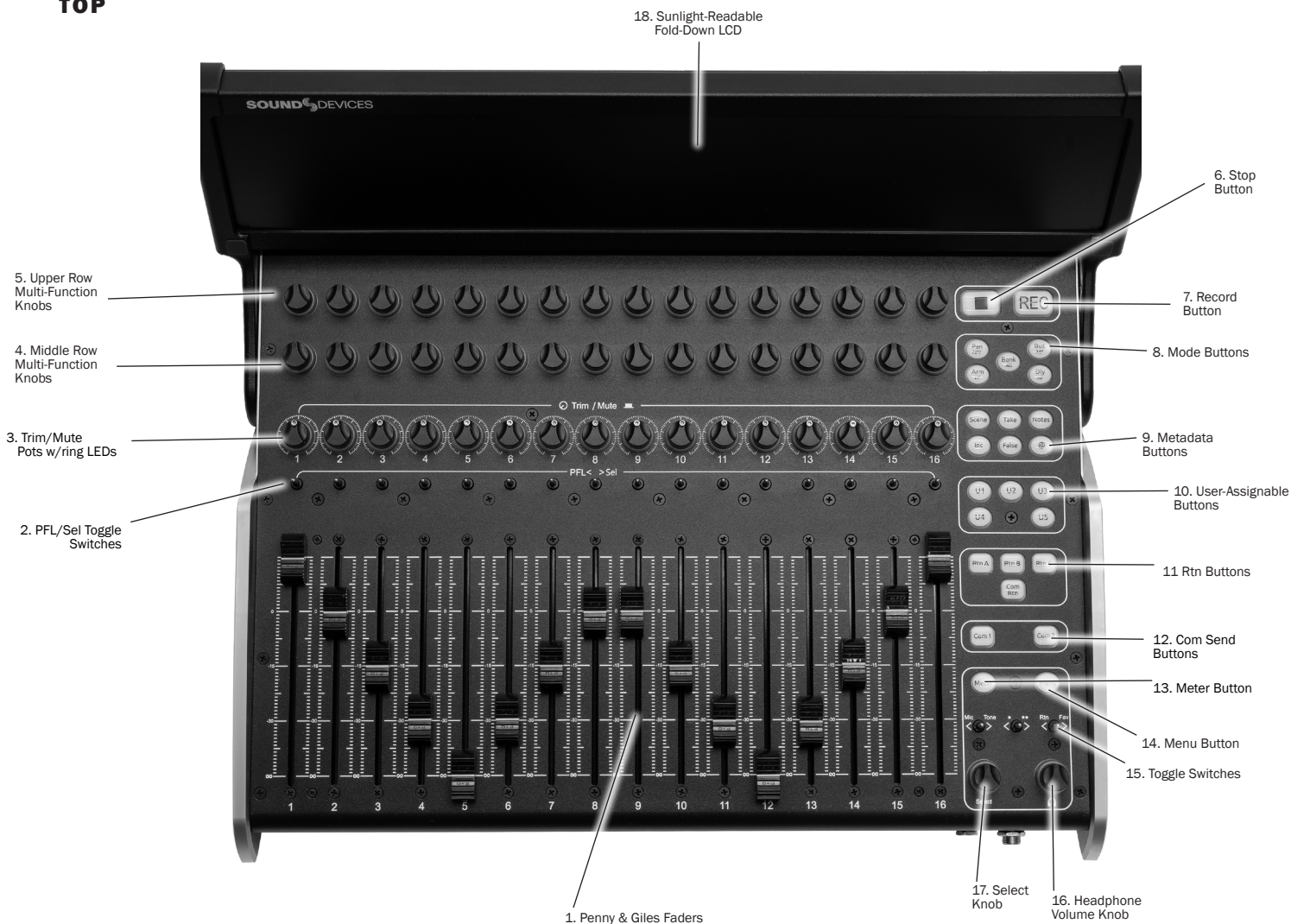
We are honored to be part of your kit.

Sincerely,
Sound Devices

Table of Contents

Panel Views

TOP

18. Sunlight-Readable Fold-Down LCD

6. Stop Button

5. Upper Row Multi-Function Knobs

4. Middle Row Multi-Function Knobs

3. Trim/Mute Pots w/ring LEDs

2. PFL/Sel Toggle Switches

7. Record Button

8. Mode Buttons

9. Metadata Buttons

10. User-Assignable Buttons

11 Rtn Buttons

12. Com Send Buttons

13. Meter Button

14. Menu Button

15. Toggle Switches

17. Select Knob

16. Headphone Volume Knob

1. Penny & Giles Faders

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1. PENNY & GILES FADERS Adjusts fader levels for channels 1-16. -Inf to +16 dB fader range. Fader gains are displayed on the LCD.

2. PFL/SEL TOGGLE SWITCHES Moving the toggle to the left, PFLs the selected channel or solos a bus when in Bus Mode. Moving the toggle to the right selects the channel's setup mode (aka FAT channel) or selects a bus sends on faders mode when in Bus Mode.

3. TRIM/MUTE POTS W/RING LEDS Rotate to adjust trim gain for channel's 1-16. Trim gains are displayed in the LCD. Press while holding Menu to mute/unmute channels 1-16. Surrounding ring LEDs provide visual indication of channel signal level, PFL, mute, and arm status.
1. Variable intensity green, yellow/orange, and red for signal level, pre/post fade limiter activity and clipping respectively.
2. Flashing yellow = channel PFL'd.
3. Blue = channel muted
4. Red = channel armed.

4. MIDDLE ROW MULTI-FUNCTION KNOBS W/RING LEDS Rotary/press knobs with multiple functions depending on the selected mode. Values and status are displayed on the second row of the LCD. Rotate or press to adjust or toggle different parameters. The surrounding ring LEDs display various status information.

5. UPPER ROW MULTI-FUNCTION KNOBS W/RING LEDS. Rotary/press knobs with multiple capabilities depending on the selected mode. Values and status are displayed on the top row of the LCD. Rotate or press to adjust or toggle different parameters. The surrounding ring LEDs display various status information.

6. STOP BUTTON Stops recording or playback. Pressing Stop while stopped switches to displaying the next take name in the LCD to be edited with the Scene, Take, Notes buttons.

7. RECORD BUTTON Starts a new recording. Illuminates red when recording.

8. MODE BUTTONS Selects various modes to determine what meters and other info is displayed on the LCD and the function of the upper and middle row multi-function knobs and PFL/Sel toggle switches.

9. METADATA BUTTONS Shortcut buttons for quick editing of metadata. Edit Scene, Take and Notes for the current or next takes. Increment a scene name, circle a take or delete the last recording (False take).

10. USER-ASSIGNABLE BUTTONS User-mappable to various functions for fast access Mapped functions are displayed above in the LCD.

11. RETURN BUTTONS Dedicated buttons for monitoring the various returns in headphones

12. COM SEND BUTTONS Press to talk. Routes the selected slate mic to destinations configured in the Com Send Routing menus.

13. METER BUTTON Press to return to the default home LCD view and current HP preset. Also duplicates the functionality of the Meter button on the 8-Series front panel.

14. MENU BUTTON Duplicates the assigned functions of the Menu button on the 8-Series front panel. Hold then press a channels' trim pot to mute that channel. Also used to mute buses and outputs in relevant modes

15. TOGGLE SWITCHES Duplicates the assigned functions of the three toggle switches below the 8-Series front panel LCD.

16. HEADPHONE KNOB Duplicates the functions of the headphone knob on the 8-Series front panel LCD. On Scorpio, hold while pressing the Com Rtn button to toggle on/off the monitoring of Com Rtn 2 in headphones. Press when a channel or bus is soloed to toggle to the current headphone preset. Hold during playback to enter audio scrub mode.

17. SELECT KNOB Duplicates the functions of the Select knob on the 8-Series front panel LCD.

18. SUNLIGHT-READABLE FOLD-DOWN LCD Bright color display of metering, parameters, modes, transport, timecode, metadata and more. LCD Brightness is set in the Menu>Controllers>CL-16>LCD Brightness menu.

Panel Views
BOTTOM

1/4" 20 screw hole for mounting

Removable screws for
service panel

Panel Views

10-18V DC In   Remote   Footswitch   To 8-Series Headphone Out   To 8-Series Mixer   USB 1   USB 2   USB 3   USB 4   USB 5

DC Input 4-pin XLR (M) accepts 10-18 V DC

10-Pin Phoenix connector with GPIO (General Purpose Input and Output) programmable from 8-Series menus for remote control

1/4" TRS Jack Mappable Foot Pedal Control

1/4" TRS Jack Headphone Connection to Mixer-Recorder

USB-B Connection to 8-Series Mixer-Recorder

5-port USB hub with (two USB-C and three USB-A) for peripherals

FRONT

SOUND DEVICES   CL-16

1/8" TRS Jack Headphone Output

1/4" TRS Jack Headphone Output

LCD DISPLAY

1. Upper Row Knob Descriptor
2. Middle Row Knob Descriptor
3. Middle Row Fields
4. Upper Row Fields
5. Main Info Area
6. Main LR Mix Meters
7. Take Name
8. Scene Name
9. Take No.
10. Notes
11. User Button 1-5 Descriptors
13. Absolute and Remaining Time Counter
12. Timecode Counter
16. Sync/Sample Rate
15. HP Preset
14. Frame Rate
17. Return Meters
20. Channel or Bus meters
21. Customizable Color Channel Group Indicators
19. Linked Channels
18. Channel or Bus Name fields
22. Meter View Name
23. Drive/Power Info Area

Out X1-BmOp1 X2-BmOp2 X3 X4:-3 dB X5-Util1 X6 X7 X8 X9 X10 OutL OutR L R

Scorpio-100456-01/32
S: 100456-01   T: 32
N: Ambient Noise
Play AutoMix Select
Slate User 1-5 No Action
00:00:01.8
23:59:59:29
INT:48048 29.97nd LR Stereo

1-16 Ch 1 Boom1 Ch 2 Boom2 Ch 3 Frederick Ch 1 Frederick Ch 5 James Ch 6 Vladimir Ch 7 Penelope Ch 8 Kabalevs Ch 9 Chopin Ch 10 Lacazette Ch 11 Frederick Ch 12 Frederick Ch 13 Frederick Ch 14 Frederick Ch 15 Frederick Ch 16 Frederick

SSD 62h23 SD1 4h59 SD2 6h15 Scp:DC1 14.8V CL-16 12.1V

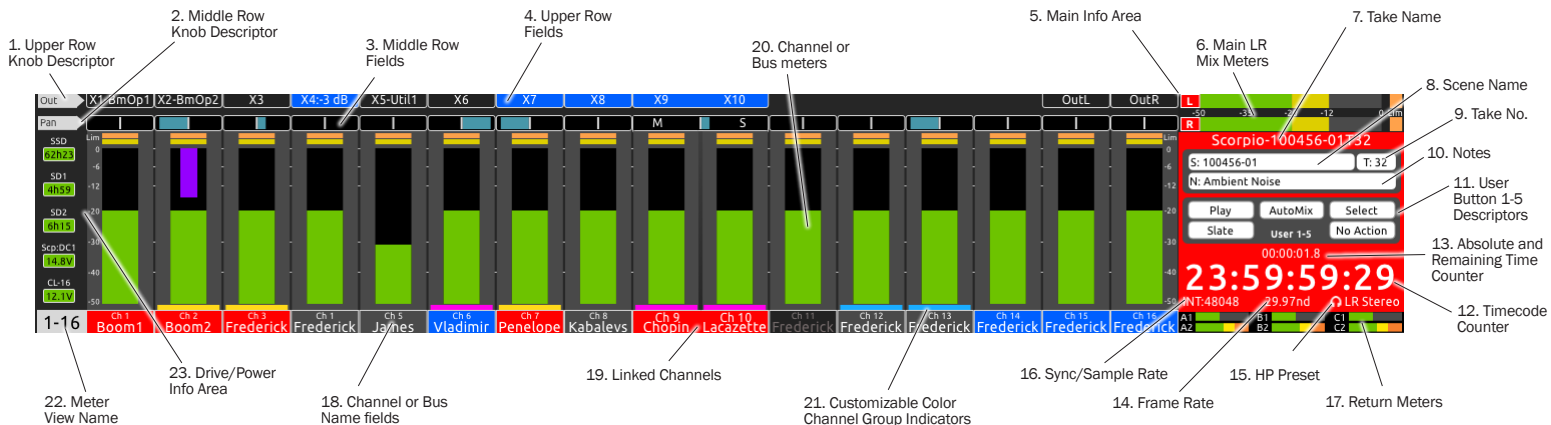**1. UPPER ROW KNOB DESCRIPTOR** Describes the function of the multi-function upper row control knobs. The function changes depending on the selected mode.

2. MIDDLE ROW KNOB DESCRIPTOR Describes the function of the multi-function middle row control knobs. The function changes depending on the selected mode.

3. MIDDLE ROW FIELDS Displays pertinent data for each channel or bus depending on which parameters are being adjusted using the middle row knobs such as Pan, Delay, HPF, EQ, Ch 17-32, Bus Gains, Bus Routing, Bus Sends, FAT Channel Parameters and more.

4. UPPER ROW FIELDS Displays pertinent data for each channel, bus, or output depending on which parameters are being adjusted using the upper row knobs such as Output Gains, HPF, EQ, Bus Gain, Bus Routing, Bus Sends, FAT Channel Parameters and more.

5. MAIN INFO AREA Displays various information including LR metering, time counters, metadata, and more. The background color changes depending on the transport state as follows:
- Red background = recording
- Black background = stopped
- Green background = playing
- Flashing green background = playback paused
- Blue background = FFWD or REW

6. MAIN LR MIX METERS Displays the main LR bus mix meters and their record arm status.

7. TAKE NAME
Display and edit the current Take Name. Press Stop while stopped to display the next take name.

8. SCENE NAME
Display and edit the current Scene name. Press Stop while stopped to display the next Scene name.

9. TAKE NUMBER
Display and edit the current Take number. Press Stop while stopped to display the next Take number.

10. NOTES Display and edit the current Take's notes number. Press Stop while stopped to display the next Take's notes.

11. USER BUTTONS 1-5 DESCRIPTORS Displays the names of the shortcuts that are mapped to the U1 - U5 buttons.

12. TIMECODE COUNTER Displays the current timecode during record and stop and the playback timecode during play.

13. ABSOLUTE AND REMAINING TIME COUNTER Displays the elapsed take time during record and playback. During playback, the take's remaining time is displayed after the '/'.

14. FRAME RATE Displays the current timecode frame rate.

15. HP PRESET Displays the currently selected HP source and HP volume when adjusted by the HP knob.

16. SYNC/SAMPLE RATE Displays the current sync source and sample rate.

17. RETURN METERS Displays metering for both channels of each return signal.

18. CHANNEL OR BUS NAME FIELDS Displays channel name, trim, and fader gains when viewing channel meters. Displays bus number and bus gains when viewing bus meters. These fields change their color as follows:
- Black background/gray text = channel off or no source selected.
- Gray background/white text = channel/bus on and disarmed.
- Red background/white text = channel/bus on and armed.
- Blue background/white text = channel/bus muted.

19. LINKED CHANNELS Channel Info fields are merged when channels are linked.

20. CHANNEL OR BUS METERS Displays channel or bus metering depending on the selected mode.

21. CUSTOMIZABLE COLOR CH. GROUP INDICATORS Channels with the same color indicator are grouped. Choose which color applies to a group in the CL-16>Group Color menu.

22. METER VIEW NAME
- Displays '1-16' when viewing Channel 1-16 meters
- Displays '17-32' when viewing Channel 17-32 meters
- Displays a channel name when viewing a FAT channel
- Displays 'Buses' when viewing Bus meters
- Displays Bus No. when viewing a bus sends-on-faders mode

23. DRIVE/POWER INFO AREA
- Displays SSD, SD1, and SD2 remaining record time.
- Displays 8-Series and CL-16 power source health and voltage.

Connecting to Your 8-Series Mixer-Recorder

Begin with both the CL-16 and your 8-Series mixer-recorder powered down.

1. Using the supplied USB-A to USB-B cable, connect the 8-Series USB-A port to CL-16 USB-B port.
2. Connect the 8-Series' 1/4" TRS headphone out jack to the CL-16's 1/4" TRS "To 8-Series Headphone Out" jack using supplied cable.
3. Connect a 10-18 V DC power source using a 4-pin XLR (F) to the DC Input of the CL-16. Power source not included.
4. Power on the 8-Series Mixer-Recorder. Refer to the appropriate 8-Series User Guide for all operating instructions and details.

Powering On/Off

1. Power on the 8-Series Mixer-Recorder. Once the 8-Series has powered up, it will automatically start up the CL-16.
2. To power off, simply flick the 8-Series power toggle switch to the off position. The CL-16 will also power down.

Unplugging the CL-16 from the 8-Series

The CL-16 can be plugged/unplugged from the 8-Series while powered on with no damage to either unit. When the CL-16 is unplugged, "Control Surface Unplugged" is displayed in the 8-Series LCD. No levels will change. At this point:

Expect sudden level changes if Controllers>Soft Fader/trim Pickup is not enabled as audio levels will now be determined by the trims and faders on the 8-Series.

or

Reconnect the CL-16. No levels will change unless OK is selected.

Updating CL-16 Firmware

When necessary, CL-16 firmware is automatically updated when updating the 8-Series firmware. The 8-Series PRG firmware update file contains update data for both the 8-Series and the CL-16.

Connect the CL-16 to the 8-Series and ensure both are connected to reliable power sources. Update the 8-Series firmware using the normal procedure. If there is an available CL-16 firmware update, it will automatically start after the 8-Series has completed its update process. The CL-16's stop button will flash yellow while the CL-16 is updating. Once the CL-16 update has completed, the 8-Series/CL-16 combo will power on and be ready for use.

Operational Overview

The CL-16 combines the paradigm of a traditional mixer channel strip with the multi-function capability of a modern digital mixer. Once you become familiar with the various controls, different modes and their associated meter views, the vast potential of your 8-Series mixer/recorder will become apparent. All 8-Series functions (channels, buses, outputs, menus metadata, coms) can be controlled from the CL-16. Although the majority of information is displayed on the CL-16 LCD, the 8-Series LCD still provides useful information when performing some operations e.g. routing, text entry.
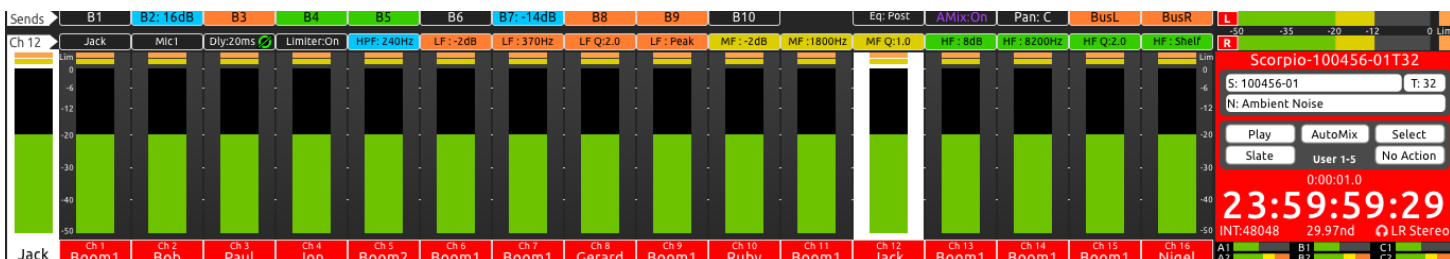
Channel Strip

Top panel channel controls and their LCD meters, names, and values are aligned in a vertical 'strip' such that the eye can move naturally between channel control and display.

CHANNEL TRIMS 1-16 The 16 trim pots are dedicated to adjusting trim gain for channels 1-16. Trim gain is not available for channels 17-32. Rotate a trim pot to adjust its gain and display its gain value in dB in the bottom row of the LCD. Trim pot ring LEDs display channel level (variable intensity green), channel pre/post fade limiting (yellow/orange), and clipping (red).

CHANNEL TRIMS 17-32 Press Bank to switch to Ch 17-32 then rotate a top knob to adjust its trim gain and display its gain value in dB in the bottom and top row of the LCD.

CHANNEL MUTES 1-16 Press a trim pot while holding Menu to mute/unmute channels 1-16. When muted, a trim pot's ring LED turns blue.

CHANNEL MUTES 17-32 Press Bank to switch to Ch 17-32 then press a middle knob while holding Menu to mute/unmute channels 17-32. When muted, a middle knob's ring LED turns blue.

CHANNEL FADERS 1-16 The 16 Penny and Giles linear faders are dedicated to adjusting fader gain for channels 1-16. Slide a fader to adjust its gain and display its gain value in dB in the bottom row of the LCD.

CHANNEL FADERS 17-32 To mix channels 17-32, press Bank to switch to Ch 17-32 then rotate a middle knob to adjust its fader gain and display its gain value in dB in the bottom and middle row of the LCD.

CHANNEL PFLS 1-16 When Ch 1-16 meters are displayed, move a toggle left to PFL channel's 1-16. When a channel 1-16 is PFL'd, it's associated trim pot ring LED blinks yellow and PFL 'n' blinks in the headphone field in the Main Info Area. Move the toggle left again or press Meter to cancel the PFL and return to the current HP preset.

CHANNEL PFLS 17-32 When Ch 17-32 meters are displayed (by pressing bank), move a toggle left to PFL channel's 17-32. When a channel 17-32 is PFL'd, it's associated middle knob ring LED blinks yellow and PFL 'n' blinks in the headphone field in the Main Info Area. Move the toggle left again or press Meter to cancel the PFL and return to the current HP preset.
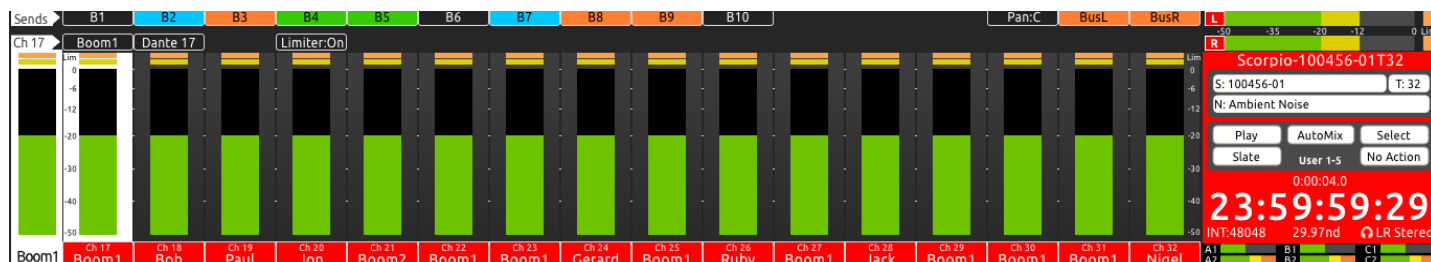
CH 17-32 (BANK)

Modes/Meter Views

The CL-16 has various operation modes (listed below). Changing a mode changes the function of the multi-function knobs and in some cases, switches the LCD Meter View. The function and/or value of the multi-function knobs are displayed in the Upper and Middle Row LCD fields and in the top left corner descriptor fields.

CH 1-16 (DEFAULT HOME METER VIEW) Press Meter button to always get back to this default home meter view. Rotate upper knobs to adjust output gains; press and hold Menu then press an upper knob to mute the corresponding output.

CH 17-32 (BANK) Press Bank button. The Bank button blinks green and the meter view changes to a green background. Rotate middle knobs to adjust Ch 17-32 fader gain; press while holding Menu to mute.
Rotate upper knobs to adjust Ch 17-32 trim gains.
Banking to Ch17-32 can be disabled by navigating to Controllers>CL-16>Bank Disable to On.

PAN CH 1-16 Press Pan button when viewing Ch 1-16. Pan button illuminates pink. Rotate middle knobs to adjust ch 1-16 pan; press knobs to center pan. Pan position is indicated by a horizontal blue bar.
Rotate upper knobs to adjust output gains; press while holding menu to mute outputs.

PAN CH 17-32 Press Pan button when viewing Ch 17-32. Pan button illuminates pink. Rotate middle knobs to adjust ch 17-32 pan; press knobs to center pan. Pan position is indicated by a horizontal blue bar.
Rotate upper knobs to adjust output gains; while holding menu to mute outputs.

DELAY/POLARITY CH 1-16 Press Dly Button. Dly button illuminates light blue. Rotate middle knobs to adjust ch 1-16 delay; press knobs to invert polarity. Rotate upper knobs to adjust output gains; press while holding menu to mute outputs.

ARM Press and hold Arm button (arms can only be toggled when holding the arm button). Displays channel 1-16 arm status on trim pot ring LEDs and channel 17-32 arm status on middle knob ring LEDs. Red is armed. Press knobs to toggle arm/disarm. In Buses mode (press Bus), pressing and holding Arm displays bus arms (Bus 1, Bus 2, Bus L, Bus R) on middle knob ring LEDs. In a Bus Sends on Faders mode, pressing and holding Arm displays all arms:- Ch 1-16 arms on trim pot ring LEDs, Ch 17-32 arms on middle knob ring LEDs, and bus arms on upper knob ring LEDs.

CHANNEL COLORS Channel colors can be used to help easily identify and differentiate between channel sources.
For each channel 1-32, choose a color from the Controllers>-CL-16>Channel Colors menu. The selected color is applied to the channel strip's background and overrides the factory default colors of gray for ch 1-16 and green for ch 17-32.
Note: Channel colors are not displayed in a Bus Sends On Faders view.
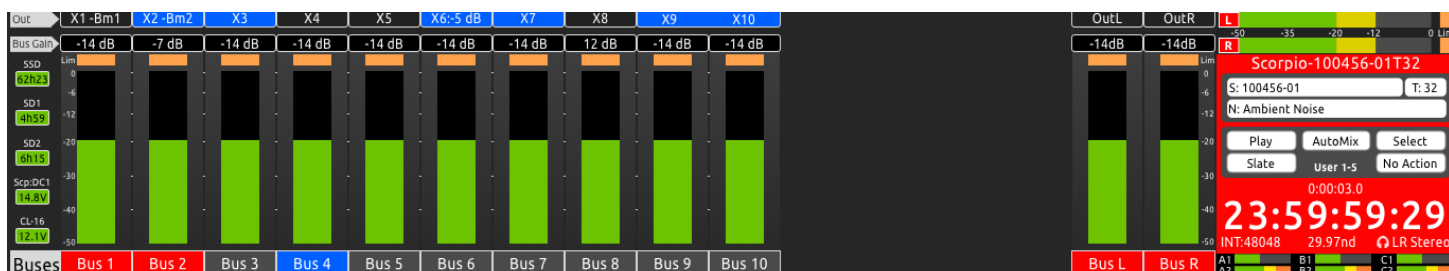
BUSES
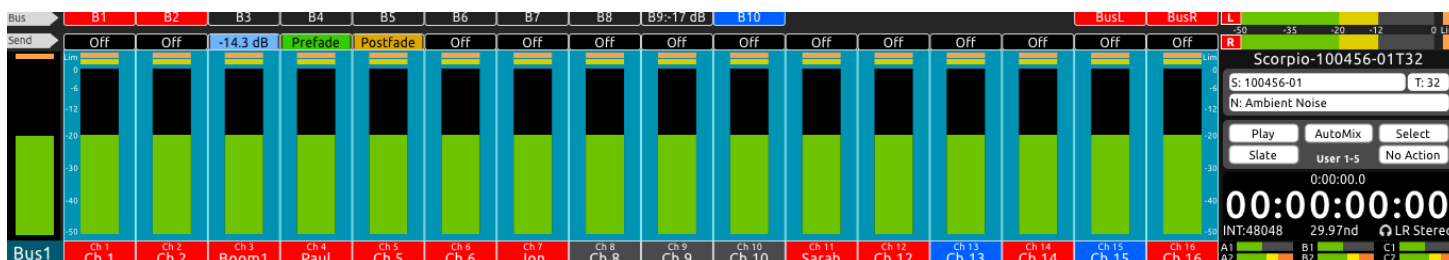
BUS SENDS ON FADERS CH 1-16

BUSES Press to display Bus 1-10, L, R meters on the CL-16 LCD and Bus Routing screens on the 8-series LCD Bus button illuminates light pink. Rotate middle knobs to adjust Bus L, R, B1 - B10 master gains; move a toggle left to solo a bus; press while holding Menu to mute. Rotate upper knobs to adjust output gains; press while holding Menu to mute outputs.

BUS SENDS ON FADERS CH 1-16 Press Bus button + Sel toggle. The bus is solo'd and its routing screen is displayed on the 8-series LCD. The Bus button blinks light pink and the meter view changes to a light blue background. Press middle knobs to route Ch 1-16 to bus prefade (green), postfade (orange) or via send gain (light blue). When set to send gain, rotate middle knob to adjust send gain. Press Bank button to access sends for ch 17-32. Rotate upper knobs to adjust master Bus gains; press upper knobs to mute buses.

BUS SENDS ON FADERS CH 17-32 Press Bus button + Sel toggle when viewing Ch 17-32. The bus is solo'd and its routing screen is displayed on the 8-series LCD. The Bus button blinks light pink and the meter view changes to a light blue background. Press middle knobs to route Ch 17-32 to bus prefade (green), postfade (orange) or via send gain (light blue). When set to send gain, rotate middle knob to adjust send gain. Press Bank button to access sends for Ch 1-16.

HPF CH 1-16 Press and hold Bank button then Pan button. Rotate top knobs to adjust HPF freq. Press middle knobs to bypass HPF.

EQ LF CH 1-16 Press and hold Bank button then Arm button. Rotate top knobs to adjust LF freq/Q. Press top knobs to toggle between LF freq/Q. Rotate middle knobs to adjust LF gain. Press middle knobs to bypass LF. Use Mic toggle to switch LF band between Off/Pre/Post. Use Fav toggle to toggle LF band between Peak and Shelf. When adjusting a channel's top or middle EQ knobs, its EQ curve is displayed on the 8-series LCD.

EQ MF CH 1-16 Press and hold Bank button then Bus button. Rotate top knobs to adjust MF freq/Q. Press top knobs to toggle between MF freq/Q. Rotate middle knobs to adjust MF gain. Press middle knobs to bypass MF. Use Mic toggle to switch MF band between Off/Pre/Post. When adjusting a channel's top or middle EQ knobs, its EQ curve is displayed on the 8-series LCD.

EQ HF CH 1-16 Press and hold Bank button then Dly button. Rotate top knobs to adjust HF freq/Q. Press top knobs to toggle between HF freq/Q. Rotate middle knobs to adjust HF gain. Press middle knobs to bypass HF. Use Mic toggle to switch HF band between Off/Pre/Post. Use Fav toggle to toggle HF band between Peak and Shelf. When adjusting a channel's top or middle EQ knobs, its EQ curve is displayed on the 8-series LCD.

CH 1-16 FAT CHANNELS Sel toggle. Rotate and/or press top and middle knobs to adjust various channel parameters.

CH 17-32 FAT CHANNELS Bank button + Sel toggle. Rotate and/or press top and middle knobs to adjust various channel parameters.

CHANNEL SELECTS 1-32 (FAT CHANNELS) A fat channel is an often-used term in digital consoles to describe a display mode for setting parameters for a selected channel. It is equivalent to the Channel Screen on the 8-Series. When Ch 1-16 meters are displayed, move a toggle right towards 'Sel' to select a fat channel for Ch 1-16. When Ch 17-32 meters are displayed, move a toggle right towards 'Sel' to select a fat channel for Ch 17-32. To exit a Fat Channel, press Meter or move the channel's toggle right again. When a fat channel is selected:

- The selected channel's meter changes to a white background.
- The selected channel's meter along with the channel's number and name is displayed on the left hand side in the Drive/Power Info Area
- The selected channel is PFL'd. Its associated trim pot ring LED blinks yellow and PFL 'n' blinks in the headphone field in the Main Info Area. Press the HP knob to toggle between the channel's PFL and the current HP preset. This allows you to monitor the mix even when adjusting parameters for a channel.
- The upper and middle row knobs switch to the selected channel's parameter controls whose functions are described in the upper and middle row fields as follows:

Upper	B1 Send	B2 Send	B3 Send	B4 Send	B5 Send	B6 Send	B7 Send	B8 Send	B9 Send	B10 Send	--	EQ Routing	AMix	Pan	Bus L Send	Bus R Send
Middle	Ch Name	Ch Source	Dly/Polarity	Limiter	HPF	LF Gain	LF Freq	LF Q	LF Type	MF Gain	MF Freq	MF Q	HF Gain	HF Freq	HF Q	HF Type

MIDDLE ROW (FROM LEFT TO RIGHT):

▶ Ch Name: Press knob to bring up the channel's Edit Channel Name virtual keyboard in the 8-Series display. Use a USB keyboard or the Select Knob, HP knob, and Toggle switches near the bottom right hand corner of the CL-16 to edit channel (track) name.

▶ Ch Source: Press knob to bring up the channel's Source screen in the 8-Series display. Then rotate the Select knob to highlight a source, then press to select it.

▶ Dly/Polarity (Ch 1-16 only): Press knob to invert polarity - the field's icon changes to green when inverted. Rotate knob to adjust input channel delay.

▶ Limiter: Press knob to toggle limiter on/off

▶ HPF (Ch 1-16 only): Press knob to toggle HPF on/off. Rotate knob to adjust HPF 3dB roll off frequency. When on, the field and mid row ring LED will display light blue

▶ LF Gain, LF Freq, LF Q, LF Type (Ch 1-16 only): Rotate knobs to adjust LF band EQ values. Press any of 4 knobs to bypass/unbypass LF band. When unbypassed, the fields and middle row ring LEDs display orange.

▶ MF Gain, MF Freq, MF Q (Ch 1-16 only): Rotate knobs to adjust MF band EQ values. Press any of 3 knobs to bypass/unbypass MF band. When unbypassed, the fields and mid row ring LEDs display yellow.

▶ HF Gain, HF Freq, HF Q, HF Type (Ch 1-16 only): Rotate knobs to adjust HF band EQ values. Press any of 4 knobs to bypass/unbypass HF band. When unbypassed, the fields and mid row ring LEDs display green.

UPPER ROW (FROM LEFT TO RIGHT):

▶ B1 - B10 Send: Press knob to toggle the selected bus send between Off, Prefade (green), Postfade (orange), and Send (light blue). When set to Send (light blue), rotate the knob to adjust the channel's send gain to that bus.

▶ EQ Routing (Ch 1-16 only): Rotate knob to choose whether EQ is applied prefade or postfade or turned off.

▶ AMix: Press (Ch 1-16 only) knob to select the channel for the automixer. The field's text is gray if the automixer is disabled, purple of Dugan is enabled and green if MixAssist is enabled. For Ch 17-32 AMix is replaced with Trim gain. Rotate to adjust the selected channels trim gain.

▶ Pan: Rotate knob to adjust pan. Press knob to center pan

▶ BusL, BusR: Press knob to route to Bus L, R , prefade (green), postfade (orange), or not routed (off).

How to make the CL-16 feel like an analog mixer

An analog mixer's channel strip typically includes trim, fader, solo, mute, pan and EQ. The CL-16 has a similar feel with its dedicated faders, trims, solos (PFLs), and mutes. By setting the CL-16 to an EQ mode e.g. LF EQ (Hold Bank then Arm), the channel strip's upper and middle knob give access to EQ control and provide more of an analog channel strip feel.

Outputs

In all modes except the Fat Channel, EQ and Bus Sends on Faders modes, rotate upper knobs to adjust output gains and press upper knobs while holding Menu to mute outputs.

Transport Control

STOP Press to stop playback or recording. The stop button illuminates yellow when stopped. While stopped, press stop to display the next take in the LCD.

RECORD Press to start recording a new take. The record button and Main Info Area illuminate red when recording.

Note: Rewind, Play and Fast Forward transport controls default to the U1, U2, ands U3 user buttons, respectively.

Mode Buttons

See Modes/Meter Views above for more information.

PAN/HPF Press pan to switch middle knobs to pan controls. While holding Bank/ALT, press pan to switch middle knobs to HPF controls.

ARM/LF Press and hold Arm to display arm status on knobs, then press a knob to toggle arm/disarm. While holding Bank/ALT, press Arm to switch upper and middle knobs to LF EQ controls.

BANK/ALT Press to display and control Ch 17-32.

BUS/MF Press to display and control buses. While holding Bank/ALT, press Bus to switch upper and middle knobs to MF EQ controls.

DLY/HF Press to switch middle knobs to delay and polarity invert controls. While holding Bank/ALT, press Dly to switch upper and middle knobs to HF EQ controls.

Metadata Buttons

Edits metadata for the current or next takes. While recording, the current take's metadata is edited. While stopped, the last recorded take or next take's metadata can be edited. While in stop mode, press Stop to switch between editing the current and next takes.

SCENE Press to edit scene name. While recording, the current take's scene is edited. While stopped, the last recorded take or next take's scene can be edited. While in stop mode, press stop to switch between editing the current and next take's scene.

TAKE Press to edit the take number. In record, the current take's take number is edited. In stop, the last recorded take or next take's take number can be edited. While in stop, press stop to switch between editing the current and next take's take number.

NOTES Press to edit notes. In record, the current take's notes are edited. In stop, the last recorded take or next take's notes can be edited. While in stop, press stop to switch between editing the current and next take's notes.

INC Press to increment the scene name. Requires that the Files>Scene Increment Mode is set to Character or Numeric.

FALSE Press to make the last recorded take a false take.

@ Press to circle the selected take.

User Assignable Buttons

The CL-16 provides five primary user-programmable buttons, U1 through U5 for quick access to five favorite functions. The functions mapped to these buttons are described in the User Button Descriptor fields of the LCD's Main Info Area. Assign functions to these buttons in the Controllers>Mapping>Learn mode.
An additional five user button shortcuts (for a total of ten) can be accessed by holding the Bank/Alt button then pressing U1-U5.
Map these by holding Alt then the U button in the Mapping>Learn mode.
Some other switches/buttons on the right hand side of the CL-16 can be mapped from this menu as well.

Return / Com Buttons

Press to monitor the returns in headphones. When using Scorpio, monitor Com Rtn 2 by pressing Com Rtn while pressing the HP knob. The Com Rtn button illuminates green when monitoring Com Rtn 2 and orange when monitoring Com Rtn 1.
Press Com 1 to activate Com 1 communication. Press Com 2 to activate Com 2 communication.

Meter Button

Press to exit a mode and switch back to the current HP preset to return to the ch 1-16 home meter view.

Menu Button

Press to enter menu.
Hold Menu then press trim pot to mute a channel.
Hold Menu then press top row encoder to mute an output (when top row set is displaying outputs)
Hold Menu then press mid row encoder in Bus Mode or top row encoder in Bus Send on Faders Mode to mute a bus.
Hold Menu then move PFL toggles left to access menus as defined in the System>Menu+PFL Switch Action menu.
Determines when momentary operation kicks in. Holding a selected option for longer than threshold time will configure that option to act as momentary.

Specifications

Specifications are subject to change without prior notice.
For the latest information available on all Sound Devices products,
visit our website: www.sounddevices.com.

VOLTAGE
10-18 V DC at XLR-4. Pin 4 = +, pin 1 = ground.

CURRENT DRAW (MIN)
560 mA quiescent at 12 V DC in, all USB ports left open

CURRENT DRAW (MID)
2.93 A, USB ports total load 5A

CURRENT DRAW (MAX)
5.51 A, USB ports total load 10A

USB-A PORTS
5 V, 1.5 A each

USB-C PORTS
5 V, 3 A each

REMOTE PORTS, POWER
5 V, 1 A available on pin 10

REMOTE PORTS, INPUT
60 k ohm typical input Z. Vih = 3.5 V min, Vil = 1.5 V max

REMOTE PORTS, OUTPUT
100 ohm output Z when configured as output

FOOT SWITCH
1 k ohm typical input Z. Connect to ground to operate (active low).

WEIGHT:
4.71 kg
(10 lbs 6 oz)

DIMENSIONS: (H X W X D)

SCREEN FOLDED DOWN
8.01 cm X 43.52 cm X 32.913 cm
(3.15 in. X 17.13 in. X 12.96 in.)

SCREEN FOLDED UP
14.64 cm X 43.52 cm X 35.90 cm
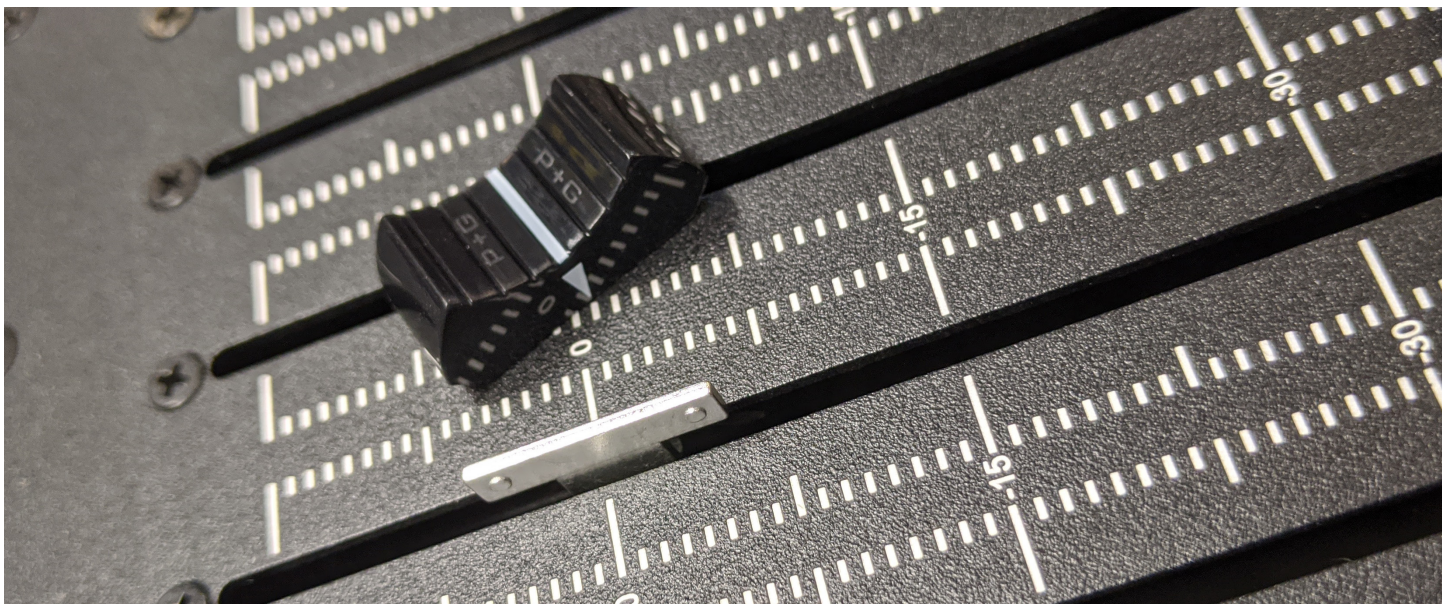(5.76 in. X 17.13 in. X 14.13 in.)

Servicing Faders

The CL-16 features field-serviceable Penny & Giles faders. The faders can be quickly changed with minimal effort.
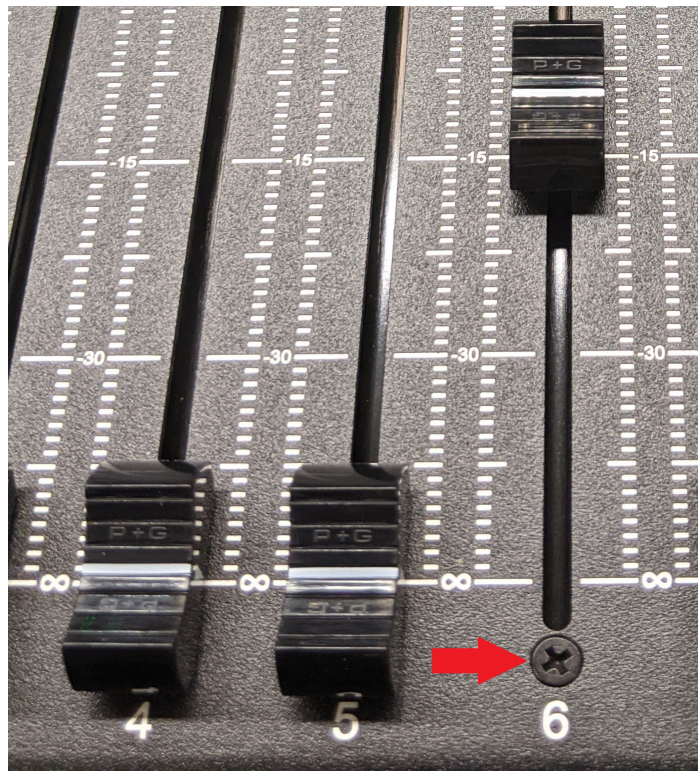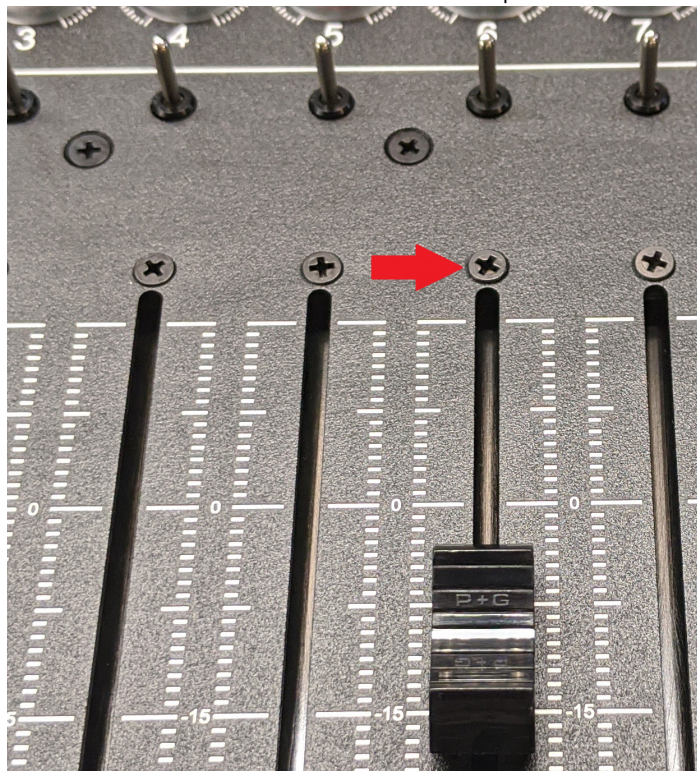
REPLACEMENT FADER:
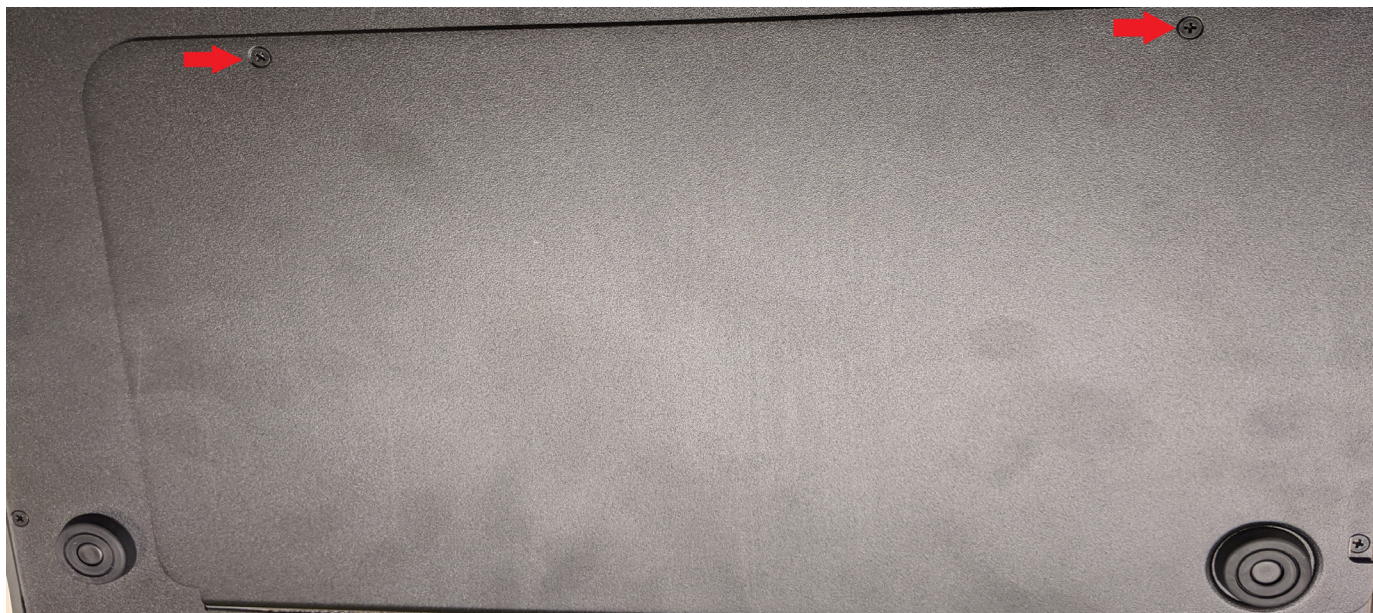Penny & Giles 104 mm Linear Manual Fader PGF3210

TO REMOVE A FADER:

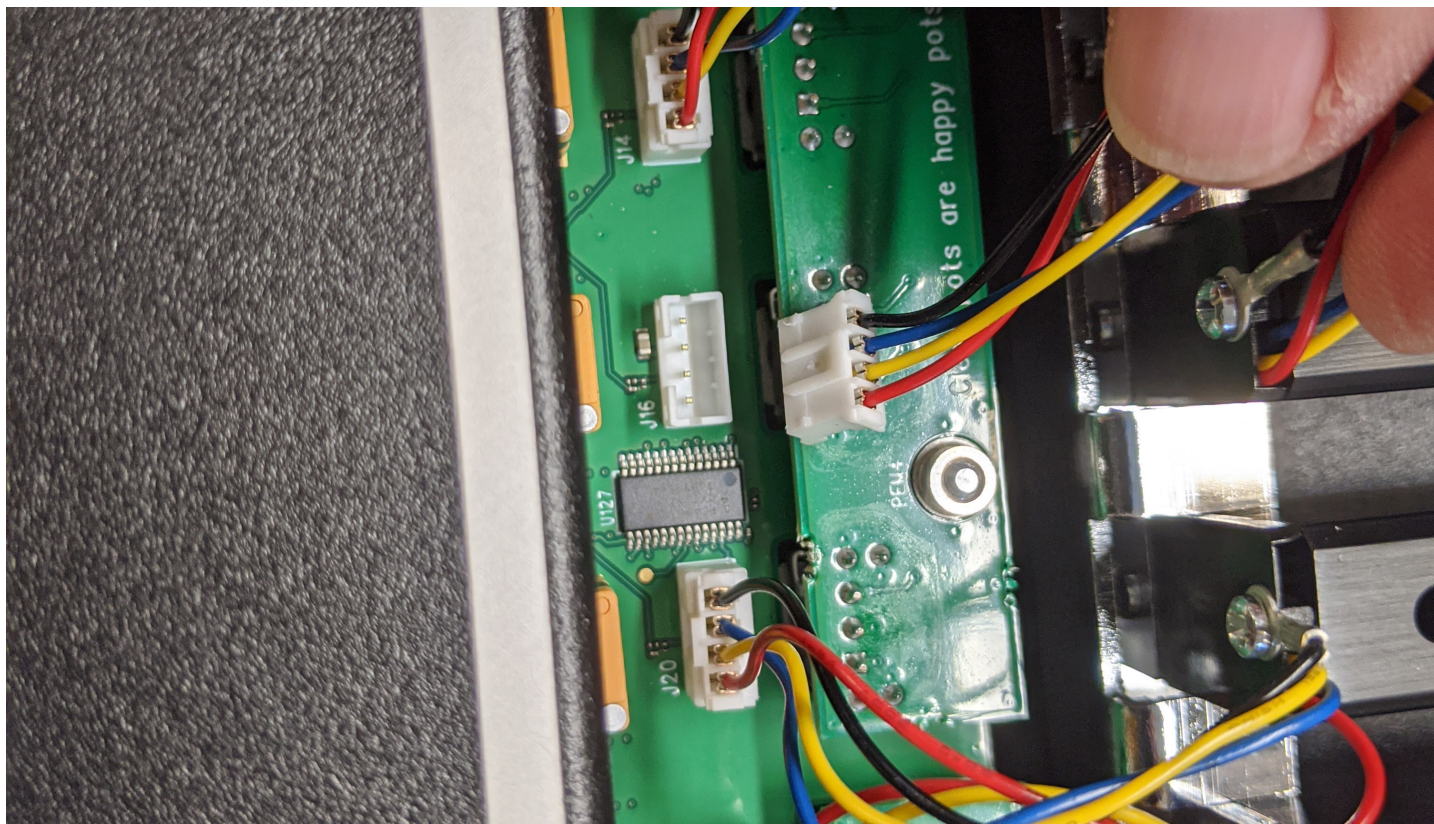**STEP 1** Remove fader knob by gently pulling up.

STEP 2 Remove the screws that hold the fader in place. One above

STEP 3 Flip the unit over to access the fader port. Remove the two screws and remove the cover.

STEP 4 Disconnect the fader electrical connections by pulling gently.

STEP 5 Remove the fader.

TO INSTALL A NEW FADER REVERSE THE PREVIOUS STEPS:

STEP 6 Insert the new replacement fader. Replace with
Penny & Giles 104 mm Linear Manual Fader PGF3210.

STEP 7 Reconnect the fader electrical connections.

STEP 8 Replace the rear panel and back access screws.

STEP 9 Replace the two fader screws.

STEP 10 Replace the fader knob.

Declaration of Conformity

Manufacturer's Name: Sound Devices, LLC
Manufacturer's Address: E7556 State Road 23 and 33
                         Reedsburg, WI 53959 USA

$C\epsilon$

We, Sound Devices LLC, declare under our sole responsibility that the product:

        Product Name: CL-16

        Model Number: CL-16

        Description: Linear Fader Control Surface for 8-Series

is in conformity with the essential requirements of the following relevant Union harmonisation legislation:

Electromagnetic Compatibility Directive	2014/30/EU
Low Voltage Directive	2014/35/EU
RoHS Directive	2011/65/EU

The following harmonized standards and/or normative documents were applied:

Safety	EN 62368-1:2014
EMC	EN 55032:2015, Class B EN 55035:2017

This Declaration of Conformity applies to the above-listed product(s) placed on the EU market after:

February 11, 2020
Date

M. Anderson

Matt Anderson - Sound Devices, LLC President

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Two Level Segregated Fit memory allocator, version 3.1.
 Written by Matthew Conte
Http://tlsf.baisoku.org
Based on the original documentation by Miguel Masmano:
http://www.gii.upv.es/tlsf/main/docs
This implementation was written to the specification of
the document, therefore no GPL restrictions apply.
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