



PreSonus
CONTRACTOR

StudioLive™ 16.4.2

16-input digital mixer /
FireWire interface for
live performance and
recording

The PreSonus StudioLive™ 16.4.2 is a 16-channel (16x4x2) digital mixer that is designed for live events, live and studio recording, and corporate, institutional, and other installations.

Each channel features an XLR mic input and high-headroom Class A XMAX™ mic preamps, individually switched 48V phantom power, 1/4" balanced line inputs, and insert points. Channel, subgroup, and main levels are set with 100 mm faders.

The StudioLive 16.4.2 has six aux buses, four subgroups with variable (2 to 500 ms) output delay, a talkback section with Class A XMAX preamp, extensive LED metering, mixer Scene save and recall, and channel-strip save/recall/copy/paste. A stereo, graphic EQ is available on the Main output bus, and four more dual-mono graphic EQs are available for the aux buses. Every channel and subgroup has Solo and Mute buttons, the two FX buses have Mute buttons, and the Aux buses have Solo buttons. A Solo-in-Place (SIP) button is provided, and the Cue bus is switchable between AFL and PFL. The Solo and Main bus, Tape Input, and Main FireWire return can be monitored via the Control Room Outputs.

All buttons on the mixing surface glow gently when inactive and brightly when selected for easy viewing in low-light conditions. The mixer also offers a 12 VDC, BNC lamp socket.

Main outputs are on both XLR and balanced 1/4" jacks, and a full-range XLR Mono output is provided. The subgroup, aux send, and control room outputs are balanced 1/4" jacks, as are the two stereo Aux returns. The stereo tape sends and returns use RCA jacks. Pre-insert, analog direct outputs are provided on DB25 connectors. A stereo coax S/PDIF digital output is included.

The mixer incorporates a built-in 32x18 FireWire recording/playback engine and has two FireWire 400 (IEEE 1394) ports.

In addition to providing computer connectivity, the ports permit pass-through for connecting a hard drive, and they allow two StudioLive 16.4.2s to be daisy-chained, providing a 32x8x2 or 32x4x2 (selectable) mixer with computer recording. Up to four StudioLive 16.4.2s can be daisy-chained for live mixing without recording.

The StudioLive 16.4.2's Fat Channel™ processing section offers 4-band quasi-parametric EQ (with high/low Q switch on the two midbands and switchable shelving on the low and high bands), compressor, limiter, and expander/gate on every channel, aux, and subgroup, as well as a high-pass filter and phase reverse on each channel, aux, and effects bus.

- 16 mic/line channel inputs with 100 mm faders and insert sends/returns
- 17 Class A XMAX™ solid-state mic preamplifiers (16 ch. + talkback)
- 4 subgroups with variable output delay
- 6 auxiliary buses (pre/post-fader send)
- 2 stereo 32-bit digital effects processors
- Fat Channel signal processing on all channels and buses, with high-pass filter, 4-band quasi-parametric EQ, compressor, gate, and limiter
- Stereo 31-band graphic EQ on the main bus and 4 dual-mono 31-band graphic EQs on the aux buses.
- 32-in/18-out FireWire recording interface (24-bit/44.1 kHz and 48 kHz)
- Scene and individual settings store and recall
- Software bundle for Mac® and Windows® includes PreSonus Studio One™ Artist DAW, Capture™ live-recording software, Virtual StudioLive™ bidirectional mixer-control software
- Daisy-chain 2 StudioLive 16.4.2s for 32x8x2 (or 32x4x2, selectable) mixing and recording or 4 mixers for 64x16x2 live mixing (no recording)
- Free StudioLive Remote iPad® wireless-control software and QMix™ iPhone®/iPod touch® wireless aux-control software available from the Apple App Store.

RESOURCES

To obtain these documents, please go to the following Web page and click on the Downloads tab:

www.presonus.com/products/Detail.aspx?ProductId=52

This data sheet: PreSonus_StudioLive_16.4.2.pdf

CAD drawings: PreSonus_StudioLive_16.4.2.dxf

A&E Specs: PreSonus_StudioLive_16.4.2_AE.doc

Color brochure: PreSonus_Mixer_Brochure.pdf

RELATED PRESONUS PRODUCTS

StudioLive Linking Adapter

StudioLive 16.4.2 Dustcover

StudioLive 16.0.2 Digital Mixer

StudioLive 24.4.2 Digital Mixer

text continued on page 4



The StudioLive Software Library ships free with the StudioLive 16.4.2!

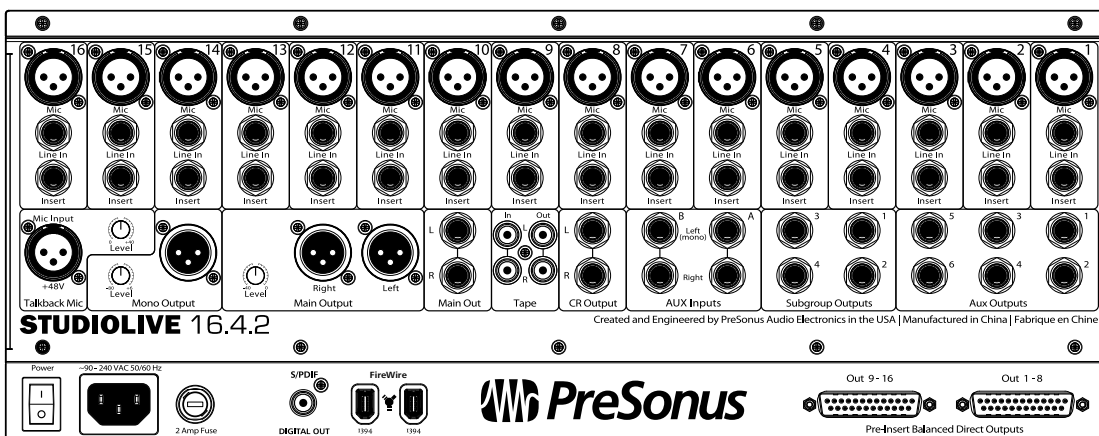


Virtual StudioLive™ Remote Control

Studio One™ Artist 2 DAW

Capture™ Multitrack Recording

- Up to 34x34 multitrack recording application
 - Record with two mouse clicks
 - Essential editing suite (copy, cut, paste, splice, resize)
 - Peak LED-style meter bridge with clip indicators
 - Marker placement and recall
 - Export between markers
 - Record stereo mix of StudioLive mixer
 - Full transport control
 - Import/export individual WAV or OpenTL files
 - Mac®- and Windows®- compatible
- Remote control of all main StudioLive 16.4.2 mixer functions via FireWire-connected computer
 - Easy drag-and-drop workflow
 - Drag presets directly to channels
 - Drag parts of presets directly to components in the Fat Channel
 - Adjust the Fat Channel gate, compressor, and EQ, plus the graphic EQs and effects, in a huge pop-up window
 - Quickly drop entire Scenes to the mixer for instant recall of all channel, effects, and graphic EQ settings
 - Load effects quickly by simply dragging presets into the GUI
 - Use the mouse to quickly assign channels to multiple buses, mute, solo, etc.
 - Timestamp backups of the entire board
 - Copy and load channels, copy main mix to aux mix (and aux to aux), link channel faders so that they move together
 - Remote-control VSL wirelessly using Apple iPad®, iPhone®, and iPod touch®
 - Set permissions for iOS devices
- Elegant single-window work environment
 - Powerful drag-and-drop functionality
 - Unlimited audio tracks, MIDI tracks, virtual instruments, buses, and FX channels
 - Content browser with convenient sort options and preview player
 - Most intuitive MIDI-mapping system available
 - Real-time audio time-stretching and resampling
 - Multitrack comping and MIDI editing
 - Transient detection and editing and groove extraction
 - Automatic delay compensation
 - Advanced automation
 - Integrates tightly with Celemony Melodyne
 - Instantly configures to PreSonus interfaces
 - Compatible with ASIO-, Windows Audio-, and Core Audio-compliant interfaces
 - 26 Native Effects™ 32-bit effects and virtual instrument plug-ins
 - 10+ GB of third-party software, loops, and instruments
 - Mac®- and Windows®-compatible



STUDIOLIVE 16.4.2

Digital Recording and Performance Mixer

Selected Channel: LVL GR SUB1 SUB2 SUB3 SUB4 Main

Digital Effects | Master Control

FX 1: Vocal Candy - RMBANCE
Decay(s): 1.60 >Aux 123456
FX 1: Vocal Candy - RMBANCE
Decay(s): 1.60 >Aux 123456

Value

PG UP Prev Next TAP

PG DN

FX Scene System Store Recall

Meters

Input Output GR Aux Faders Locate

Aux Input A Select Aux Input B Select TalkBack

CUE 2 Track In Phones Monitor

PFL Tape Tape Main

SIP Solo Solo

AUX 1/2 AUX 3/4 AUX 5/6

SUB1 SUB2 SUB3 SUB4 Main

Select Select Select Select Select

Solo Solo Solo Solo Solo

Mute Mute Mute Mute Mute

TALK

SUB1 SUB2 SUB3 SUB4 MAIN

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Mic/Line 48V Input

Aux 1 Solo Post Select Control Mix

Aux 2 Solo Post Select Control Mix/Pan

Aux 3 Solo Post Select Control Mix

Aux 4 Solo Post Select Control Mix/Pan

Aux 5 Solo Post Select Control Mix

Aux 6 Solo Post Select Control Mix/Pan

FX A Mute Level Post Select Control Mix

FX B Mute Level Post Select Control Mix

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Freq Gate Release Comp Ratio Attack Release Gain

High Pass Dig Out Gate

Compressor Limit

Equalizer

Low Low Mid High Mid High

On On On On On On On On On On On On On On On On

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Select Select Select Select Select Select Select Select Select Select Select Select Select Select Select

Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo Solo

Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute Mute

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

In addition, the Fat Channel provides panning, subgroup and main assigns, and sends to each aux and effects bus. The Fat Channel's 16-segment, multipurpose LED meters offer 4 modes for the levels of all 16 inputs: post-gain and pre-dynamics and fader; post-dynamics and fader; the amount of gain reduction; or the fader settings for a saved Scene. These meters can also be used to display output volume of each of the 6 Aux Sends. Channels can be linked in stereo as odd-even pairs (Ch. 1-2, 3-4, etc.), and a horizontal LED Pan meter displays the pan position for the selected channel or linked channels. The Fat Channel is available anywhere there is a blue Select button; when a Select button is fully lighted, the Fat Channel is active on that channel, aux, etc.

Time-based effects such as delay and reverb are delivered by two stereo 32-bit effects processors, which are assigned to dedicated effects buses and come with 50 user-editable factory presets and 49 empty locations for user-created presets. Both internal effects returns can be directly patched to any of the analog Aux Buses. An LCD display gives access to the effects parameters, graphic EQ, Scene store/recall, channel strip store/recall, and system settings.

In addition to the multifunction meters in the Fat Channel, the StudioLive 16.4.2 has a main metering section featuring 15-segment LED meters that display the levels of the currently selected channel or bus, the four Subgroups, and the Left and Right channels of the Main bus. This section features the same metering modes as the Fat Channel: pre-dynamics and pre-fader, post-dynamics and post-fader, the amount of gain reduction applied to each subgroup and the Main bus, or the fader settings for a saved Scene. In addition, the main meter section offers a dedicated Gain Reduction meter for the currently selected channel.

The StudioLive 16.4.2 can be rack mounted (12U), using the included rack rails. The mixer operates on 100-240 VAC and employs a standard IEC power connector.

Bundled software includes PreSonus Capture™ multitrack audio-recording application (primarily intended for recording live events), PreSonus Studio One™ Artist digital audio workstation (for audio and MIDI production), and PreSonus Virtual StudioLive™ (VSL) bidirectional mixer-control application,

which provides preset- and Scene-management features and enables real-time adjustment of the most commonly used mixer settings.

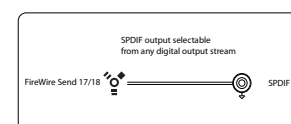
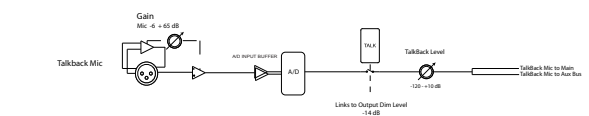
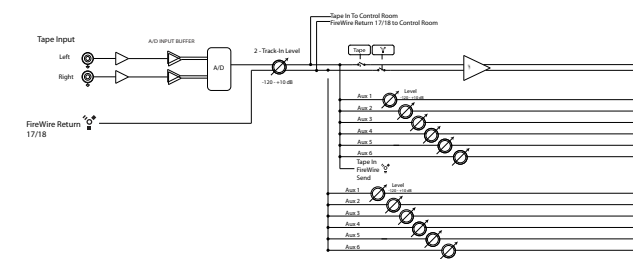
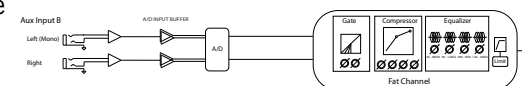
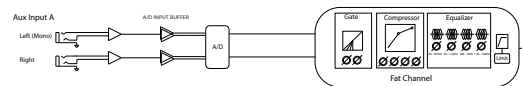
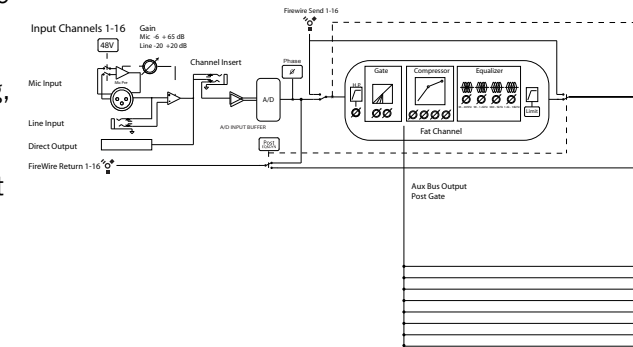
In addition, VSL enables the user to copy and load channels, copy Main mix to Aux mix (and Aux to Aux), and link channel faders so that they can move together. VSL can optionally make the StudioLive mixer default to Fader Locate Mode once a fader has been adjusted using either VSL or StudioLive Remote for iPad (described next).

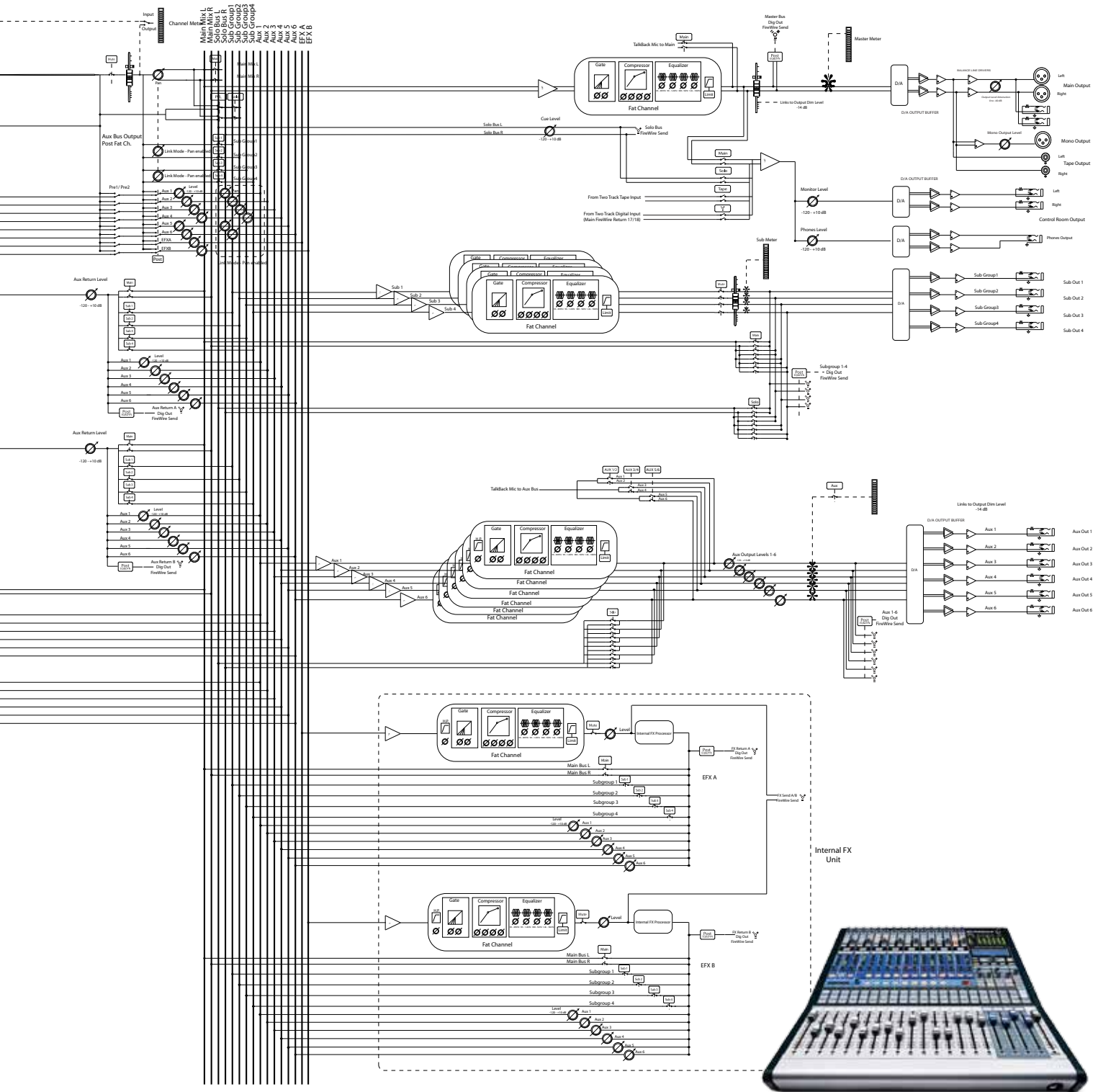
The StudioLive 24.4.2 can be controlled wirelessly by networking, via Wi-Fi, an Apple iPad® running PreSonus' StudioLive Remote app with a computer, running VSL, that is connected to the StudioLive mixer via FireWire. This enables the iPad to control VSL, and in turn, the StudioLive mixer. The Tap Tempo feature for the StudioLive's time-based effects can be controlled both from VSL and from StudioLive Remote.

Any Aux bus can be wirelessly controlled from an Apple iPhone® or iPod touch® that is running PreSonus' QMix™ app. As with StudioLive Remote, the iPhone/iPod touch must be networked via Wi-Fi to the FireWire-connected computer running VSL. Aux buses can be named in VSL or in QMix, and the names will appear in both programs.

Permissions can be set in VSL so that each networked iPad can only control front-of-house mixer features or a specified aux and so that each iPhone/iPod touch can only control a specified aux—or is ignored entirely.

StudioLive Remote and QMix are free from the Apple App Store.





StudioLive 16.4.2 Architect & Engineering Specifications

Also available as a Word document:

PreSonus_StudioLive_16.4.2_AE.doc



1. GENERAL CONFIGURATION.

The mixer shall be a digital mixer and shall accommodate 16 line and/or 16 microphone signals, Channels 1–16; and shall include 16 analog Send/Return channel Inserts; 16 channel Direct Outputs; 2 stereo pairs of Aux Return inputs; 2 stereo pairs of Main mix outputs; 1 Main mix Mono output, 1 stereo pair of Control Room outputs; 4 Subgroup outputs; 6 Aux Send outputs; 1 stereo pair of RCA-type phono Tape outputs; 1 stereo Headphones output; 1 stereo S/PDIF coaxial digital output; and two FireWire 400 ports that can connect to a Mac or Windows PC for recording and control and to act as a pass-through for attaching an external storage drive. The mixer shall be capable of placement on a table or installation in a standard 19-inch rack mount via rack rail brackets (included) and shall be fitted with 1 rocker-type Power switch; 1 3-pin IEC power receptacle that accepts 100–240 VAC, with user-replaceable, socketed 2A fuse; 1 BNC socket, providing +12 VDC at 0.5A for fitting an external lamp (not included); and shall be entirely self-contained.

2. MIXER INPUTS.

CHANNELS 1–16: Each channel shall include an electrically balanced, mono microphone input, using an XLR-3-F-type connector, providing gain from -30 to +16 dBu via a rotary Trim control. Each channel shall include one XMAX™ Class A solid-state microphone preamplifier. Phantom power shall be individually enabled/disabled for each channel via a button-type switch. Sixteen balanced line inputs shall be wired using ¼" TRS phone jacks and shall accept nominal levels from -10 to +22 dBu. Each channel shall include a pre-fader Insert point, using ¼" TRS phone jacks (tip=send, ring=return, sleeve=ground), delivering and accepting nominal levels from -10 dBV to +4 dBu. In addition, each channel shall accept an input signal from the FireWire 400 bus. The input of each channel shall be switchable between the analog inputs and the FireWire input, using a button-type switch. Each channel and Subgroup shall have a Solo switch and a Mute switch. Each channel shall have a dedicated, 100 mm level-control fader with marked increments at ∞, -60, -50, -40, -30, -20, -10, -5, 0, +5, and +10 dB.

OTHER INPUTS: The mixer shall include 4 balanced Aux Return inputs, forming 2 stereo pairs, using ¼" TRS phone jacks, accepting nominal levels from -10 dBV to +4 dBu and maximum input levels of +22 dBu; a Talkback Microphone input that shall include one XMAX Class A solid-state microphone preamplifier with 48V phantom power always present, plus a rear-panel rotary level control; and 1 stereo pair of Tape Input jacks, using unbalanced RCA-type phono jacks, accepting nominal levels from -10 dBV to +4 dBu. The Tape Input source shall be switchable between the analog Tape Input and the FireWire input, using a button-type switch. The Tape Input level shall be controllable using a rotary encoder.

3. MIXER OUTPUTS.

MAIN OUTPUTS: The mixer's Main mix-bus stereo outputs shall be fitted in three ways: Using balanced XLR jacks, delivering a maximum output of +24 dBu, with an output impedance of 100Ω; using balanced (also accepting unbalanced) ¼" TRS phone jacks, delivering a maximum output of +24 dBu; and using unbalanced RCA-type phono jacks (labeled Tape Out), delivering nominal levels from -10 dBV to +4 dBu. Output level for both the XLR and TRS Main mix-bus outputs shall be controllable using a single rear-panel knob. The Main mix-bus Mono output shall be fitted with one balanced XLR jack, delivering nominal levels from -10 dBV to +4 dBu, and with an output impedance of 100Ω; and it shall include a rear-panel rotary level control.

OTHER OUTPUTS: Channels 1–16 shall include pre-insert, balanced, analog Direct Outputs, using two sub-DB25 jacks (channels 1–8 and channels 9–16), delivering nominal levels from -10 dBV to +4 dBu. The mixer shall include 4 Subgroup outputs, using balanced ¼" TRS phone jacks, delivering a maximum output level of +18 dBu and nominal levels from -10 dBV to +4 dBu, with an output impedance of 100Ω; 1 stereo pair of Control Room outputs, using balanced ¼" TRS phone jacks, delivering a maximum output level of +18 dBu and nominal levels from -10 dBV to +4 dBu, with an output impedance of 100Ω; 6 Aux Send outputs using balanced ¼" TRS phone jacks, delivering a maximum output level of +18 dBu and nominal levels from -10 dBV to +4 dBu, with an output impedance of 100Ω; and 1 stereo Headphones output, using an unbalanced ¼" TRS phone jack (tip=left, ring=right, sleeve=ground), and with a maximum output level of 150 mW.

4. MIXER INPUT SECTION.

In addition to the controls listed in section 2 (MIXER INPUTS), the mixer shall include 6 sets of Aux Send controls, each of which shall have a pre/post switch, a Solo switch, an Output level control that employs a rotary encoder, and a Select switch for routing to the Fat Channel processing section.

5. DYNAMICS PROCESSING, PARAMETRIC EQ, AND BUS ASSIGNMENT.

All input channels, Aux Sends, Subgroups, and the Main Bus shall be routed to a section called the "Fat Channel" when their associated Select buttons are pressed. The Fat Channel shall provide the following digital signal-processing: High-pass Filter and Phase Reverse (input channels only), Gate, Compressor, Limiter, Pan, and 4-band quasi-parametric equalizer (EQ). The Low band of the EQ shall have a sweepable frequency from 36 Hz to 465 Hz, ±15 dB, and shall be switchable between shelf and peaking. The Low Mid band shall have a sweepable center frequency from 90 Hz to 1.2 kHz, ±15 dB, and it shall include a Hi/Lo (0.55/2.0) Q switch. The High Mid EQ shall have a sweepable center frequency from 380 Hz to 5 kHz, ±15 dB, and it shall include a Hi/Lo (0.55/2.0) Q switch. The High band shall have a sweepable frequency from 1.4 kHz to 18 kHz, ±15 dB, and shall be switchable between shelf and peaking.

In addition, the Fat Channel shall enable signals to be assigned to the Subgroups and Main bus and shall enable adjacent odd-even channels (Channels 1/2, 3/4, etc.) to be linked in stereo. The Fat Channel also shall provide button switches that enable Channel settings to be copied, loaded, and saved to and from onboard memory.

6. MIXER OUTPUT SECTION.

The mixer shall have 1 stereo 100 mm fader for the Main bus, providing up to 10 dB gain, and 4 mono 100 mm Subgroup faders, each providing up to 10 dB gain. These 5 faders shall be marked at ∞, -60, -50, -40, -30, -20, -10, -5, 0, +5, and +10 dB. Each subgroup output shall offer a defeatable variable output delay (2 to 500 ms). The mixer shall have a Solo bus that shall include a rotary Cue Mix volume control; a button switch that shall toggle between After-Fader Listen (AFL) and Pre-Fader Listen (PFL); and a Solo-in-Place (SIP) mode, which shall be engaged using a button switch. The mixer shall have a Monitor bus that feeds the Control Room and Headphone outputs. The Headphone output level and Control Room output level shall be controllable with dedicated rotary encoders. The Tape Input, Solo bus, Main bus, and main L/R FireWire returns shall each be assignable to the Monitor bus using dedicated button-type switches. The mixer shall have a Talkback mic section that shall include a rotary level control; four buttons that assign the Talkback mic to Aux Sends 1/2, 3/4, and 5/6 and to the Main bus; and a latching Talkback (Talk) on/off button.

7. EFFECTS AND GRAPHIC EQ.

The mixer shall include two stereo, 32-bit effects processors and a library of effects presets that shall include time-based processing such as delay and reverb. The effects library and effects parameters shall be accessed using an FX button. The mixer shall also include one stereo, 31-band graphic equalizer that is assigned to the Main mix bus and four dual-mono 31-band graphic equalizers that are assignable to the Aux buses.

8. MEMORY AND GENERAL SETTINGS.

The mixer shall provide digital memory (storage) for the status of all digital mixer parameters but not for the status of the analog channel Trims. The mixer shall enable storage of up to 80 Global Scenes, 99 Fat Channel presets, 99 FX presets, and 99 GEQ presets. The mixer shall permit settings to be copied between channels. Memory shall also be provided for effects settings. The mixer shall include a Digital Effects I Master Control section that includes an LCD display and controls that provide access to systems settings and the graphic equalizer and that enables store and recall of mixer Scenes and Fat Channel and effects settings. These controls shall include a rotary Value encoder, Previous and Next buttons, Page Up and Page Down buttons, an FX button for accessing the effects, and Scene, System, Store, and Recall buttons. This section also shall include a Tap button, the primary purpose of which is setting tempo for the delay effects described in Section 7 (EFFECTS AND GRAPHIC EQ).

9. AUDIO INTERFACE.

The mixer shall provide a built-in computer interface for recording and playing back audio. The interface shall enable 32 audio streams to be sent to a Mac or Windows computer and 16 streams to be returned from the computer to the mixer via FireWire 400, as described in Section 1 (GENERAL CONFIGURATION) and Section 2 (MIXER INPUTS). The interface shall support digital audio with up to 24-bit bit depth and (selectable) 44.1 or 48 kHz sample rate.

10. METERING.

MAIN METERING: The mixer shall provide individual level meters for the left and right channels of the Main bus and for each of the four Subgroups; these 6 meters shall be 15-segment LED meters, each with labeled points at -80, -65, -40, -25, -10, 0, and +10 dB, with an additional point labeled "OL" (Overload). The Main and Subgroup meters shall be calibrated so that a 0 dBu signal at the Main or Subgroup output shall be indicated as 0 dB on the meters, ±1 dB. The mixer shall provide one 15-segment LED meter to display the level of the currently selected channel; this meter shall have labeled points at -72, -38, -24, -15, -10, -6, and -2 dB, with an additional point labeled "OL" (Overload). The mixer shall provide one 15-segment LED meter to display the Gain Reduction for the currently selected channel; this meter shall have labeled points at -21, -18, -15, -12, -9, -6, and -2 dB. Button switches shall be provided that turn PFL input metering on/off; turn post-fader output metering on/off; turn gain-reduction metering on/off; turn aux bus master output metering on/off, and turn fader-recall (Locate) metering on/off.

MULTIPURPOSE METERING: Multipurpose metering shall be provided in the Fat Channel section (described in Section 5, DYNAMICS PROCESSING, PARAMETRIC EQ, AND BUS ASSIGNMENT) that shall display the levels of all 16 inputs, post-gain and pre-dynamics, pre-EQ, and pre-fader; the levels of all 16 inputs, post-dynamics, post-EQ, and post-fader; the gain reduction for all 16 inputs; the output volume of each of the 6 Aux Sends; or the fader settings for a saved Scene. A horizontal LED Pan meter shall be provided that shall display the pan position for the selected channel or linked channels.

11. BUNDLED SOFTWARE.

The mixer shall ship with at least three software packages for Mac and Windows computers. These packages shall include:

- A multitrack audio-recording application primarily intended for recording live events.
- A digital audio workstation application that enables recording, editing, and playback of both MIDI data and audio.

- A bidirectional mixer-control application that provides preset- and scene-management features, enables real-time adjustment of the most commonly used mixer settings, and sets permissions for optional iOS wireless-control apps.

The mixer shall also be wirelessly controllable from an Apple iPad, and its Aux buses shall be controllable from an Apple iPhone or iPod touch, using dedicated applications when networked via Wi-Fi (802.11) to a FireWire-connected computer running VSL.

12. PHYSICAL CONFIGURATION.

The mixer shall be made of steel, with an aluminum armrest, and shall be painted gray, silver, and blue with black-and-white graphics. The mixer shall weigh 35 lbs., 0 oz. (15.88 kg). Included brackets shall allow the mixer to be mounted in a rack system, with the chassis surface (except faders and knobs) to be flush with the rack rail. Dimensions of the mixer, not including rack rails, shall be 22.35" (56.77 cm) in length, 17.22" (43.74 cm) in width, and 6.9" (17.53 cm) in depth.

13. SPECIFICATIONS.

In addition to specifications already cited, the mixer shall meet or exceed the following specifications:

Microphone Preamp

Type

XLR Female, balanced

Frequency Response to Direct Output (at unity gain)

20 Hz-40 kHz, 0 / -0.5 dBu

Frequency Response to Main Output (at unity gain)

20 Hz-20 kHz, ± 0.5 dBu

Input Impedance

1 k Ω

THD to Direct Output (1 kHz at unity gain)

0.005%, +4 dBu, 20 Hz-20 kHz, unity gain, unwtld

THD to Main Output (1 kHz at unity gain)

0.005%, +4 dBu, 20 Hz-20 kHz, unity gain, unwtld

EIN to Direct Output

125 dB unwtld, +130 dB A-wtd

S/N Ratio to Direct Output

(Ref = +4 dB, 20 kHz BW, unity gain, A-wtd)

97 dB

S/N Ratio to Main Output

(Ref = +4 dB, 20 kHz BW, unity gain, A-wtd)

94 dB

Common Mode Rejection Ratio (1 kHz at unity gain)

65 dB

Gain Control Range (± 1 dB)

16 dB to +67 dB

Maximum Input Level (unity gain)

16 dBu

Phantom Power (± 2 VDC)

48 VDC

Line Inputs

Type

$\frac{1}{4}$ " TRS Female, balanced mono

Frequency Response to Direct Outputs (at unity gain)

10 Hz-40 kHz, 0 / -0.5 dBu

Frequency Response to Main Outputs (at unity gain)

20 Hz-20 kHz, ± 0.5 dBu

Input Impedance

10 k Ω

THD to Direct Output (1 kHz at unity gain)

<0.0007%, +4 dBu, 20 Hz-20 kHz, unity gain, unwtld

THD to Main Output (1 kHz at unity gain)

<0.005%, +4 dBu, 20 Hz-20 kHz, unity gain, unwtld

S/N Ratio to Direct Output

(Ref = +4 dBu, 20 kHz BW, unity gain, A-wtd)

105 dB

S/N Ratio to Main Output

(Ref = +4 dBu, 20 kHz BW, unity gain, A-wtd)

94 dB

Gain Control Range (± 1 dB)

-20 dB to +20 dB

Maximum Input level (unity gain)

22 dBu

Tape Inputs

Type

RCA Female, unbalanced (stereo pair)

Maximum Input Level

22 dBu

Auxiliary Inputs

Type

$\frac{1}{4}$ " TRS Female, balanced (2 stereo pairs)

Maximum Input Level

22 dBu

Main Outputs

Type

XLR Male, balanced (stereo pair); $\frac{1}{4}$ " TRS Female, balanced (stereo pair); XLR Male, balanced (mono)

Rated Output Level

24 dBu

Output Impedance

100 Ω

Aux Outputs

Type

$\frac{1}{4}$ " TRS Female, balanced (mono)

Rated Output Level

18 dBu

Output Impedance

100 Ω

Subgroup Outputs

Type

$\frac{1}{4}$ " TRS Female, balanced (mono)

Rated Output Level

18 dBu

Output Impedance

100 Ω

Tape Outputs

Type

RCA Female, unbalanced (stereo pair)

Rated Output Level

18 dBu

Output Impedance

100 Ω

Control Room Outputs

Type

$\frac{1}{4}$ " TRS Female, balanced (stereo pair)

Rated Output Level

18 dBu

Output Impedance

51W

System Crosstalk

Input to Output (Ref = +4 dBu 20 Hz-20 kHz, unwtld)

90 dB

Adjacent Channels (Ref = +4 dBu 20 Hz-20 kHz, unwtld)

87 dB

Noise Gate / Expander

Threshold Range

-84 dB to 0 dB

Attack Time

0.5 ms

Release Time

0.05s to 2s

Compressor

Threshold Range

-56 dB to 0 dB

Ratio

1:1 to 14:1

Attack Time

0.2 ms to 150 ms

Release Time

40 ms to 1000 ms

Auto Attack and Release

Attack = 10 ms, Release = 150 ms

Curve Types

hard and soft knee

EQ

Type

2nd order shelving filter (Q = 0.55)

Low (Lowpass or Bandpass)

36 to 465 Hz, ± 15 dB

Low Mid (Lo Q: 0.55; Hi Q: 2)

90 Hz to 1.2 kHz, ± 15 dB

High Mid (Lo Q: 0.55; Hi Q: 2)

380 Hz to 5 kHz, ± 15 dB

High (Highpass or Bandpass)

1.4 kHz to 18 kHz, ± 15 dB

Digital Audio

ADC Dynamic Range (A-wtd, 48 kHz)

118 dB

DAC Dynamic Range (A-wtd, 48 kHz)

118 dB

FireWire

S400, 400Mb/s

Internal Processing

32-bit, floating point

Sampling Rate

44.1, 48 kHz

A/D/A Bit Depth

24

Reference Level for 0 dBFS

18 dBu

Clock

Jitter

20 ps rms (20 Hz-20 kHz)

Jitter Attenuation

60 dB (1 ns in \approx 1 ps out)

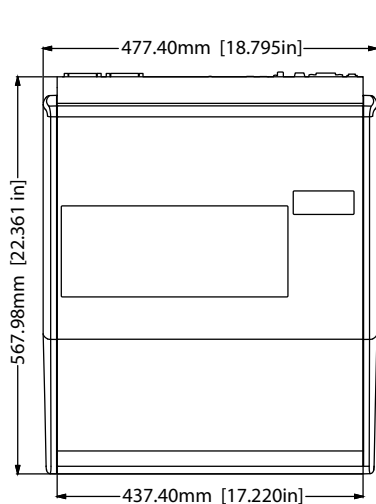
The mixer shall be a PreSonus StudioLive 16.4.2.



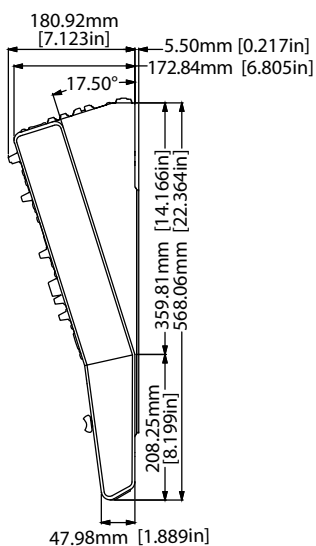


StudioLive™ 16.4.2

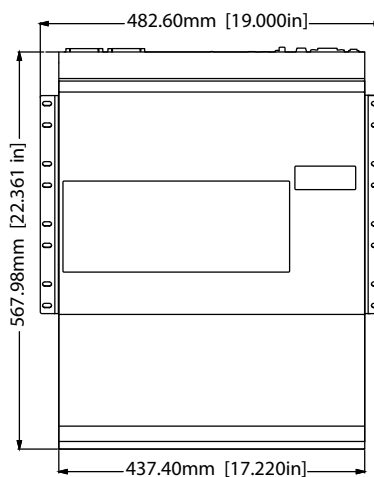
16-input digital mixer /
FireWire interface for live
performance and recording



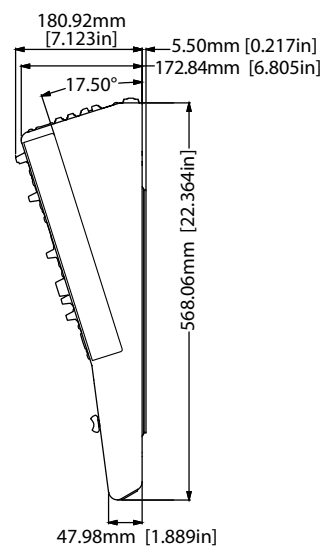
TOP VIEW
SCALE 1:2



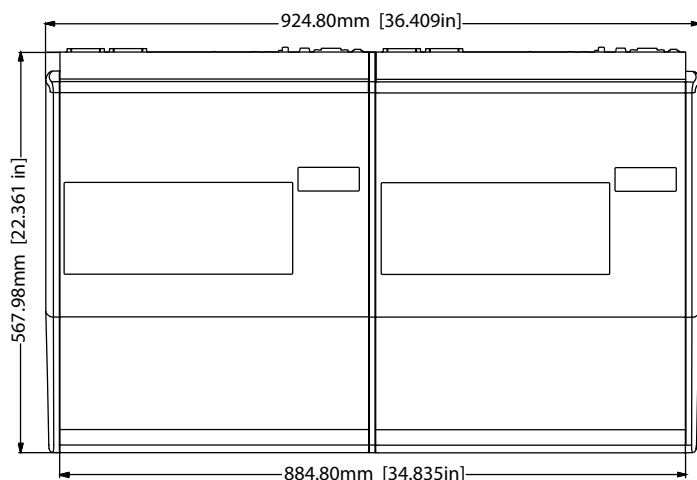
RIGHT VIEW
SCALE 1:2



TOP VIEW
SCALE 1:2



RIGHT VIEW
SCALE 1:2



TOP VIEW
SCALE 1:2



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