



PreSonus
CONTRACTOR

StudioLive™ 16.0.2

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

The PreSonus StudioLive™ 16.0.2 is a 16-channel (16x0x2) digital mixer that is designed for live events, live and studio recording, and corporate, institutional, and other installations.

Channels 1-8 are monaural channels, and channels 9-16 are configured as odd/even stereo pairs (Channels 9/10, 11/12, 13/14, and 15/16). Each channel features an XLR mic input and a high-headroom Class A XMAX™ mic preamp, ¼" balanced line inputs, and 48V phantom power. Channels 13-16 also include an unbalanced RCA input. Levels for Channels 1-8 are set with dedicated 60 mm faders, while Channels 9-16 have one dedicated, 60 mm level fader for each odd/even channel pair (Channels 9/10, 11/12, 13/14, and 15/16). A stereo 60 mm fader controls level for the main bus.

The StudioLive 16.0.2 has four aux buses, each with a dedicated, 60 mm level fader; a talkback section with Class A preamp and phantom power; LED metering; mixer Scene save and recall; and channel-strip save/recall/copy/paste. A stereo, 31-band graphic EQ is available on the Main output bus. Each channel shall accept an input signal from the FireWire 400 bus.

The mixer's Monitor bus feeds the Monitor and Headphone outputs. A Solo in Place button is provided, and the Cue bus is switchable between AFL and PFL. The Solo and Main buses and Main FireWire return can be monitored via the Monitor outputs.

A single set of 16 multifunction buttons controls Solo for Channels 1-8, 9/10, 11/12, 13/14, and 15/16 and for Aux Sends 1-4; controls Mute for Channels 1-8, 9/10, 11/12, 13/14, and 15/16 and for Aux Sends 1-4; and switches Channels 1-8, 9/10, 11/12, 13/14, and 15/16 between the analog inputs and the FireWire inputs. The active function of these multifunction buttons is selected using a set of three button switches.

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 ¼" jacks, and a full-range XLR Mono output is provided. The Aux Send and Monitor outputs are balanced ¼" jacks.

The mixer incorporates a built-in 16x16 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 a StudioLive 16.0.2 to be daisy-chained with a PreSonus FireStudio-series recording interface, providing additional inputs for computer recording.

- 8 mono and 4 stereo channel inputs with 60 mm faders (12 ch. faders)
- 12 Class A XMAX™ solid-state mic preamplifiers
- 4 aux sends with 60 mm faders
- 2 stereo 32-bit digital effects processors
- Fat Channel signal processing on all channels and buses, with high-pass filter, 3-band quasi-parametric EQ, compressor, expander, and limiter
- Stereo 31-band graphic EQ on the main bus
- 16-in/16-out FireWire recording interface (24-bit/44.1 kHz and 48 kHz)
- Scene and individual settings store and recall
- Bundle for Mac® and Windows® includes PreSonus Studio One™ Artist DAW, Capture™ live-recording software, Virtual StudioLive™ bidirectional mixer-control software
- MIDI I/O: control main and effects output levels, assign effects to the main bus, recall effects presets and Scenes, and serve as a MIDI interface
- Free StudioLive Remote iPad® wireless-control software available at the Apple App Store. Coming soon: QMix™ iPhone®/iPod® Touch wireless-control software.

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=62

This data sheet: PreSonus_StudioLive_16.0.2.pdf

CAD drawings: PreSonus_StudioLive_16.0.2.dxf

A&E Specs: PreSonus_StudioLive_16.0.2_AE.doc

Color brochure: PreSonus_Mixer_Brochure.pdf

RELATED PRESONUS PRODUCTS

StudioLive Linking Adapter

StudioLive 16.0.2 Dustcover

StudioLive 16.4.2 Digital Mixer

StudioLive 24.4.2 Digital Mixer

text continued on page 4



The StudioLive Software Library ships free with the StudioLive 16.0.2!



Capture™ Multitrack Recording

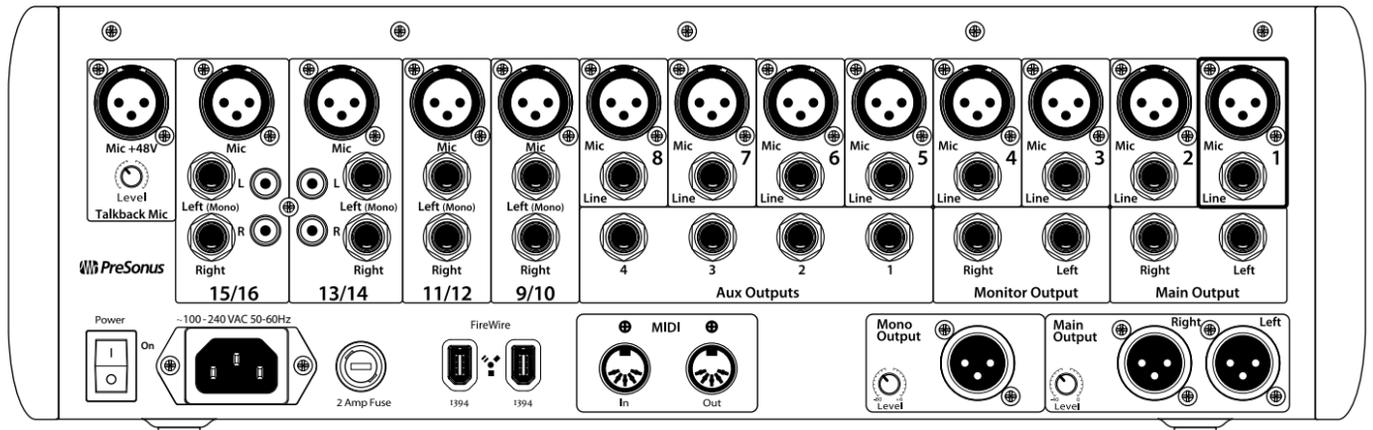
- Up to 34x34 multitrack recording application
- Record with two mouse clicks
- Essential editing suite (copy, cut, paste, splice, resize)
- Peak LED-style meter bridge with clip indicators
- Marker placement and recall
- Export between markers
- Record stereo mix of StudioLive mixer
- Full transport control
- Import/export individual WAV or OpenTL files
- Mac®- and Windows®-compatible

Virtual StudioLive™ Remote Control

- Remote control of all main StudioLive 16.0.2 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 drag-and-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
- Makes StudioLive as easy to use as Studio One
- Use the mouse to quickly assign channels to multiple buses, mute, solo, etc.
- Timestamp backups of the entire board

Studio One Artist™ DAW

- 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 re-sampling
- Automatic delay compensation
- Advanced automation
- Instantly configures to PreSonus interfaces
- Compatible with ASIO-, Windows Audio-, and Core Audio-compliant interfaces
- 25 Native Effects™ 32-bit effects and virtual instrument plug-ins
- 4+ GB of third-party software, loops, and instruments
- Mac®- and Windows®- compatible



The StudioLive 16.0.2's Fat Channel processing section offers 3-band quasi-parametric EQ (with high/low Q switch on the mid band and switchable shelving on the low and high bands) and a compressor, limiter, and downward expander on every channel, every aux, and the main bus. A high-pass filter is available for each channel, aux and effects bus. Phase reverse is provided for each channel. In addition, the Fat Channel provides pre-panning, main assigns, and sends to each aux and effects bus. The Fat Channel's 16-segment, multipurpose LED meters display the levels of all 16 inputs, post-gain and pre-dynamics, pre-EQ, and pre-fader; the gain reduction for all 16 inputs; the post-dynamics, post-EQ, and post-fader output level of each of the 4 Aux Sends and Main Bus; the amplitudes of each band of the graphic EQ; the send level for each channel to each aux; and the pan position of each channel in a stereo linked Aux bus. Channels and Auxes 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.

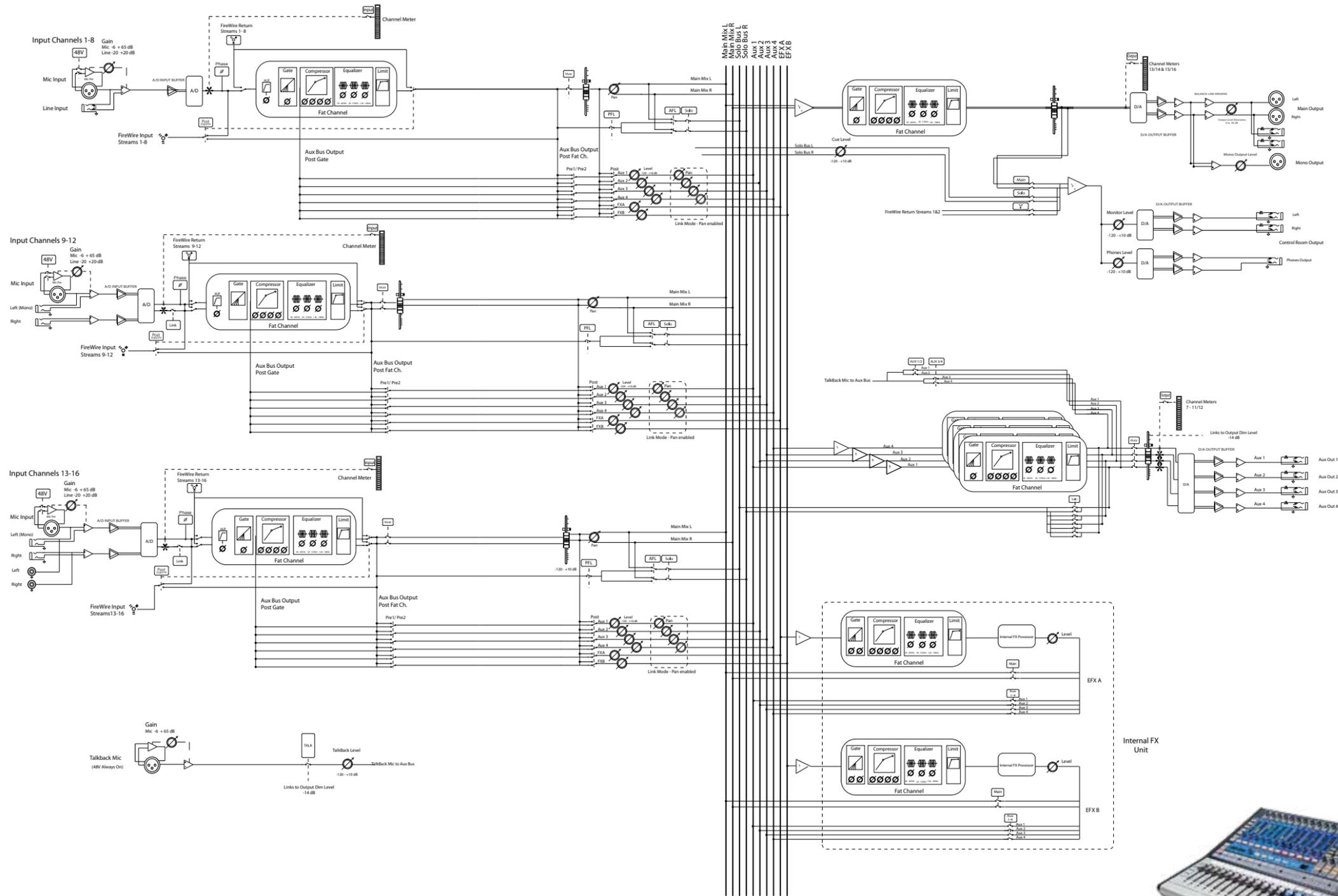
Time-based effects such as delay and reverb are delivered by two stereo 32-bit effects processors, which are assigned to dedicated effects buses and come with 50 user-editable factory presets and 49 empty locations for user-created presets. Both internal effects returns can be directly patched to any 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.

The StudioLive 16.0.2 provides MIDI In and Out jacks, acting as a MIDI interface for a computer and providing MIDI control over the mixer's main output level and effects output levels, effects preset recall, effects assignments to the main bus, and global mixer Scene recall. MIDI can also be sent and received over the FireWire bus, enabling these features to be controlled with a sequencer or DAW.

The StudioLive 16.0.2 can be rack mounted (10U), using an optional rack adapter. 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™ bidirectional mixer-control application, which provides preset- and Scene-management features and enables real-time adjustment of the most commonly used mixer settings.

The StudioLive 16.0.2 can also be controlled wirelessly by networking an Apple iPad® and the PreSonus StudioLive Remote App to a FireWire connected computer running VSL. And coming soon, any Aux bus will be wirelessly controllable from an iPhone® or iPod® Touch running PreSonus QMix™ and networked to the same computer. StudioLive Remote and QMix are free from the Apple App Store.



StudioLive 16.0.2 Architect & Engineering Specifications

Also available as a Word document:
PreSonus_StudioLive_16.0.2_AE.doc

1. GENERAL CONFIGURATION.

1. GENERAL CONFIGURATION. The mixer shall be digital and shall implement 8 mono and 4 stereo input channels, which shall accommodate 12 microphone signals (channels 1-8, 9, 11, 13, 15) and 16 line-level signals (with ¼" TRS inputs on channels 1-16 and both ¼" TRS and unbalanced RCA inputs on channels 13-16); and shall include 2 stereo pairs of Main mix outputs; 1 Main mix Mono output, 1 stereo pair of Control Room outputs; 4 Aux Send outputs; 1 stereo Headphones 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 adapter brackets (optional) 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 1-15/16: Channels 1-8 shall be configured as separate monaural channels, and Channels 9-16 shall be configured as odd/even stereo pairs (channels 9/10, 11/12, 13/14, 15/16). Each channel shall include an electrically balanced, mono microphone input, using an XLR-3-F-type connector, providing gain from -16 to +67 dBu via a rotary Trim control. Each channel shall include one XMAX™ Class A solid-state microphone preamplifier. Sixteen balanced line inputs shall be wired using ¼" TRS phone jacks and shall accept nominal levels from -10 to +22 dBu. Channels 13-16 shall also include an unbalanced RCA input accepting nominal levels from -10 dBV to +4 dBu.

Each channel shall accept an input signal from the FireWire 400 bus. Channels 1-8 shall each have a dedicated 60 mm level-control fader with marked increments at ∞, -60, -50, -40, -30, -20, -10, -5, Unity, +5, and +10 dB. Channels 9-16 shall have one dedicated 60 mm level-control fader for each odd/even channel pair (channels 9/10, 11/12, 13/14, 15/16), with marked increments at ∞, -60, -50, -40, -30, -20, -10, -5, Unity, +5, and +10 dB.

OTHER INPUTS: The mixer shall include a Talkback Microphone input that shall include one Class A solid-state microphone preamplifier with 48V phantom power always present, plus a rear-panel rotary level control.

MULTIFUNCTION SWITCHES: A single set of 16 multifunction button switches shall control the following features: Solo for Channels 1-8, 9/10, 11/12, 13/14, and 15/16 and for Aux Sends 1-4; Mute for Channels 1-8, 9/10, 11/12, 13/14, and 15/16 and for Aux Sends 1-4; and switching Channels 1-8, 9/10, 11/12, 13/14, and 15/16 between the analog inputs and the FireWire input. The active function of these multifunction buttons shall be selectable using a set of three button switches located to the left of the row of multifunction switches.

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; and using balanced ¼" TRS phone jacks, delivering a maximum output of +24 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 a maximum output of +24 dBu and 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: The mixer shall include 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; 4 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. The mixer shall also include one MIDI In jack and one MIDI Out jack, which shall employ five-pin DIN-type connectors.

4. MIXER INPUT SECTION.

In addition to the controls listed in section 2 (MIXER INPUTS), the mixer shall include 4 sets of Aux Send controls, each of which shall have a pre/post option in the system menu, a Solo switch, a Mute switch, and a Select switch for routing to the Fat Channel processing section. Each Aux Send shall have a dedicated, 60 mm Output level-control fader with marked increments at ∞, -60, -50, -40, -30, -20, -10, -5, Unity, +5, and +10 dB.

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

Each input channel, Aux Send, and the Main Bus shall be routed to a section called the "Fat Channel" when its associated Select button is pressed. The Fat Channel shall provide the following digital signal-processing: Phantom Power, High-pass Filter and Phase Reverse (input channels only), Downward Expander, Compressor, Limiter, Pan, and 3-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 Mid band shall have a sweepable center frequency from 260 Hz to 3.5 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 provide button switches that enable channel settings to be copied, loaded, and saved to and from onboard memory. Each channel or Aux's Select button shall also enable adjacent odd-even channels (Channels 1/2, 3/4, etc.) to be linked in stereo via the Link switch. A set of 7 button switches, located to the left of the Fat Channel, shall assign the Fat Channel's row of 12 rotary encoders to control the amplitudes of the graphic EQ bands, the channel send levels for each effects bus (FXA and FXB), the channel levels for each Aux Send, or the Pan levels for each channel for each stereo Aux Send.

6. MIXER OUTPUT SECTION.

The mixer shall have 1 stereo 60 mm fader for the Main bus, providing up to 10 dB gain. This fader shall be marked at ∞, -60, -50, -40, -30, -20, -10, -5, Unity, +5, and +10 dB. The mixer shall have a Solo bus that shall include a rotary Level control; button switches that shall select 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 Solo bus and Main bus shall each be assignable to the Monitor bus using dedicated, latching, button-type switches. The mixer shall have a Talkback Mic section that shall include a rotary Level control; two buttons that assign the Talkback mic to Aux Sends 1/2 and 3/4; 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 can be assigned to the Main mix bus.

8. MIDI CONTROL FEATURES.

The mixer shall employ the MIDI (Musical Instrument Digital Interface) protocol to provide remote control over main output level, effects output level, effects routing, effects preset recall, and Scene recall. These parameters shall be controllable using appropriate MIDI control devices (such as a MIDI foot pedal or control surface) that are connected to the mixer's MIDI In jack and also shall be controllable from a computer that is connected to the mixer's FireWire 400 port. The mixer shall also act as a MIDI interface, enabling MIDI data to be sent and received between the mixer, a computer that is connected to the mixer's FireWire 400 port, and external MIDI devices attached to the mixer's MIDI In and Out ports.

9. 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 channel-strip presets, 99 effects presets, and 99 Graphic EQ 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).

10. AUDIO INTERFACE.

The mixer shall provide a built-in computer interface for audio recording and playback. The interface shall enable 16 audio streams to be sent to a Mac or PC 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.

11. 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-processing, pre-EQ, and pre-fader; the gain reduction for all 16 inputs; the post-dynamics-processing, post-EQ, and post-fader output levels of each of the 4 Aux Sends and Main Bus; the amplitudes of each band of the graphic EQ; the send level for each channel to each aux; and the pan position of each channel in a stereo linked Aux bus. A horizontal LED Pan meter in the Fat Channel shall be provided that shall display the pan position for the selected channel or linked channels. A set of three button switches, located to the left of the channel faders, shall be provided that selects the meter functions to display channel Input levels, Aux and Main bus Output levels, or compressor Gain Reduction. A button switch shall also be provided that turns fader-recall (Locate) metering on/off.

12. 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 and enables real-time adjustment of the most commonly used mixer settings.

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.

13. 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 20 lbs., 0 oz. (9.07 kg). Optional adapter 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 15.56" (397 mm) in length, 16" (406 mm) in width, and 5.5" (140 mm) in depth.

14. 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 kΩ

THD to Direct Output (1 kHz at unity gain)

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

THD to Main Output (1 kHz at unity gain)

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

EIN to Direct Output

125 dB unwttd, +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, Balanced

Type

¼" 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 kΩ

THD to Direct Output (1 kHz at unity gain)

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

THD to Main Output (1 kHz at unity gain)

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

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

Line Inputs, Unbalanced

Type

RCA Female, unbalanced (stereo pair)

Maximum Input Level

22 dBu

Auxiliary Inputs

Type

¼" TRS Female, balanced (2 stereo pairs)

Maximum Input Level

22 dBu

Main Outputs

Type

XLR Male, balanced (stereo pair); ¼" TRS Female, balanced (stereo pair); XLR Male, balanced (mono)

Rated Output Level

24 dBu

Output Impedance

100Ω

Aux Outputs

Type

¼" TRS Female, balanced (mono)

Rated Output Level

18 dBu

Output Impedance

100Ω

Monitor Outputs

Type

¼" TRS Female, balanced (stereo pair)

Rated Output Level

18 dBu

Output Impedance

100Ω

System Crosstalk

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

-90 dB

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

-87 dB

Noise Gate (Expander)

Threshold Range

-84 dB to 0 dB

Attack Time

Adaptive: 0.2 to 2.5 ms

Release Time

70 ms

Compressor

Threshold Range

-56 dB to 0 dB

Ratio

1:1 to 14:1

Response Time: Attack /Release

0.2 ms/1s ("Tight") to 180 ms/1s ("Smooth")

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

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

260 Hz to 3.5 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

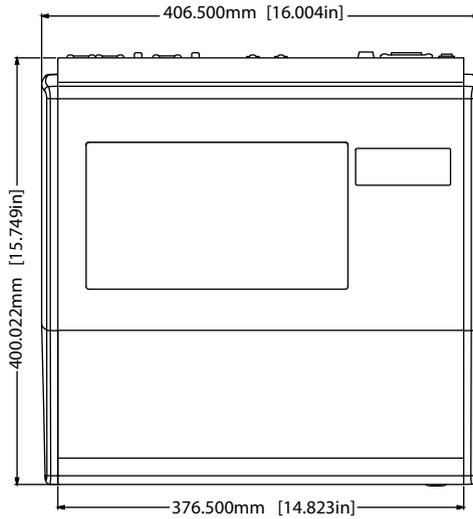
>60 dB (1 ns in ≈ 1 ps out)

The mixer shall be a PreSonus StudioLive 16.0.2.

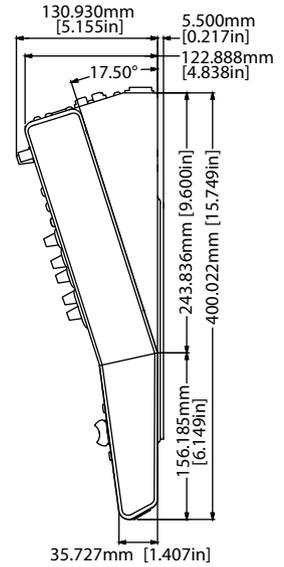


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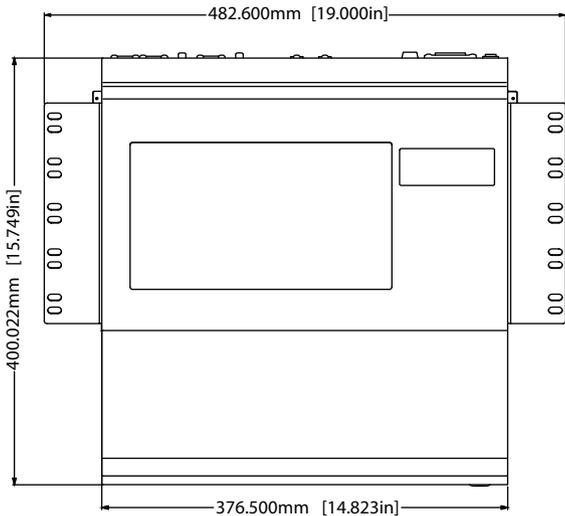
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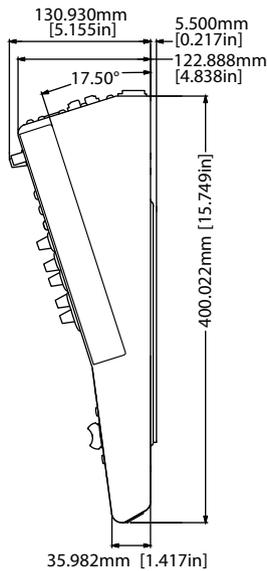
TOP VIEW



RIGHT VIEW



TOP VIEW



RIGHT VIEW