

# AUDIO

## PreSonus StudioLive 16.4.2 Digital Mixer

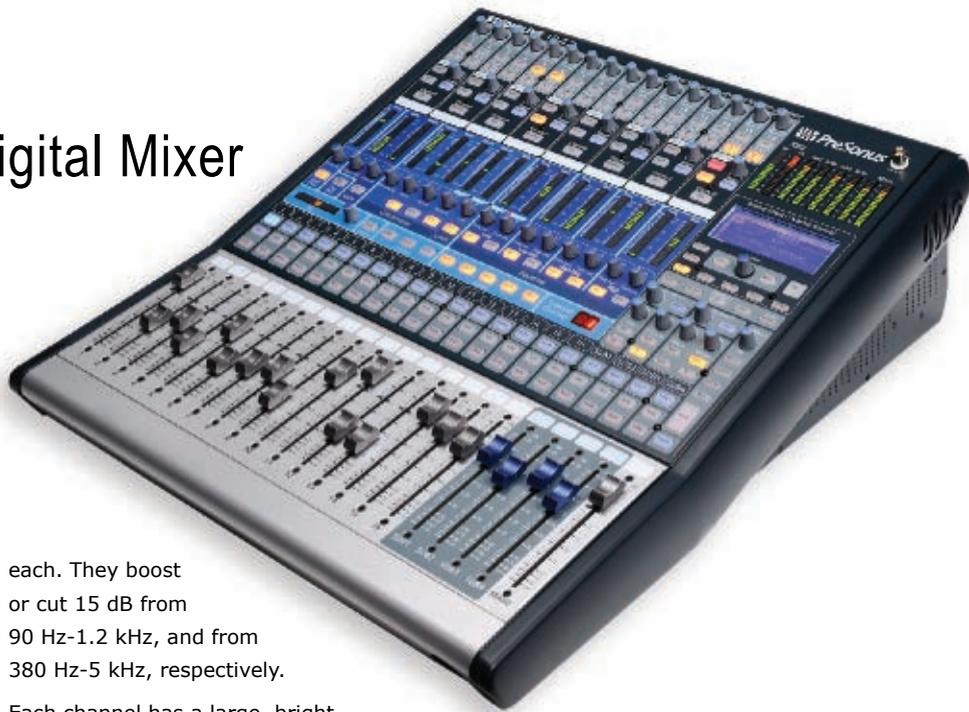
Reviewed by: John Mc Junkin

When I first heard last year that PreSonus would be introducing its first mixing console, I was not the least bit surprised. In fact, I was very anxious to see what PreSonus had accomplished. I've since learned that the StudioLive is a 16x4x2 digital console intended for both recording and live sound. A lot of mixers introduced recently are designed for this transition, but there are critical live sound and recording applications for which a hybrid console simply will not do. Certain compromises must happen when straddling the line between live and studio consoles, but PreSonus has done reasonably well at keeping the compromises to a minimum.

The StudioLive has 16 mic pres, and the capacity to send 32 and receive 18 channels of audio in real time to or from a computer via FireWire. Each mic pre has discreet 48V phantom power. Each input is routed through what PreSonus calls the "Fat Channel," which provides a high-pass filter, gate, compressor, limiter, and four band semi-parametric EQ. The high and low bands are second-order (12 dB/octave), shelving-type, providing boost or cut of 15 dB from 36-465 Hz, and from 1.4-18 kHz, respectively. The low- and hi-mid bands are semi-parametric (no continuous bandwidth control) but they do feature a switch to narrow the Q for

each. They boost or cut 15 dB from 90 Hz-1.2 kHz, and from 380 Hz-5 kHz, respectively.

Each channel has a large, bright LED meter to indicate level, and the meters also double to indicate settings of Fat Channel parameters. Fat Channel processing is also available for all the auxiliaries, subgroups, effects outputs, and the main bus. In addition to the Fat Channel, a 31-band graphic equalizer is available in the mixer's digital effects section for the main bus. Each channel also has access to six auxiliaries with physically represented outputs, and two internal effects buses, which feed the console's two on-board digital signal processors. Each channel also features a pan pot, routing assignment buttons (subs 1-4 and main), select, solo and mute buttons, and a 100-millimeter fader. Adjacent channel pairs can be linked in stereo, but only in odd-even pairs (e.g., 1-2, 3-4, etc.). Unfortunately, channels cannot be linked in



company: <b>PreSonus</b>
product(s): <b>StudioLive Console</b>
phone: <b>(800) 750-0323</b>
website: <b>www.PreSonus.com</b>
List price: \$2,499.99

any other way (e.g., more than two channels at a time, or non-adjacent channels). One nice thing: Individual channels can be copied, saved, and loaded easily via three buttons. It's nice to not be forced to snapshot the entire mixer.

A single button changes the FireWire outputs from the 16 main channels from pre-Fat Channel to post-Fat Channel. The controls for the gate are simplified, featuring only a threshold and release control, but the compressor features more controllable parameters—threshold,

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**The PreSonus StudioLive is a very good quality mixer, with great mic pres, EQs, dynamics processing, and internal DSP. It sounds great.**

ratio, attack, release, and make-up gain. A single button turns the limiter on or off for the selected channel. The limiter is permanently set with a threshold of 0 dB and an 8:1 ratio. I was excited to see an "auto" button among the compressor controls ("auto" anything is a big plus when untrained volunteers use the console,) but I was a bit disappointed to discover that the "auto" button only establishes pre-established attack and release times of 10ms and 150ms, respectively. By all rights, the button should be labeled "attack/release preset" or some such thing. One positive in the compressor is a soft-knee function. It's nice to tame the onset of the compression a bit for certain applications.

All eight of the console's buses (including the two internal effects buses) can

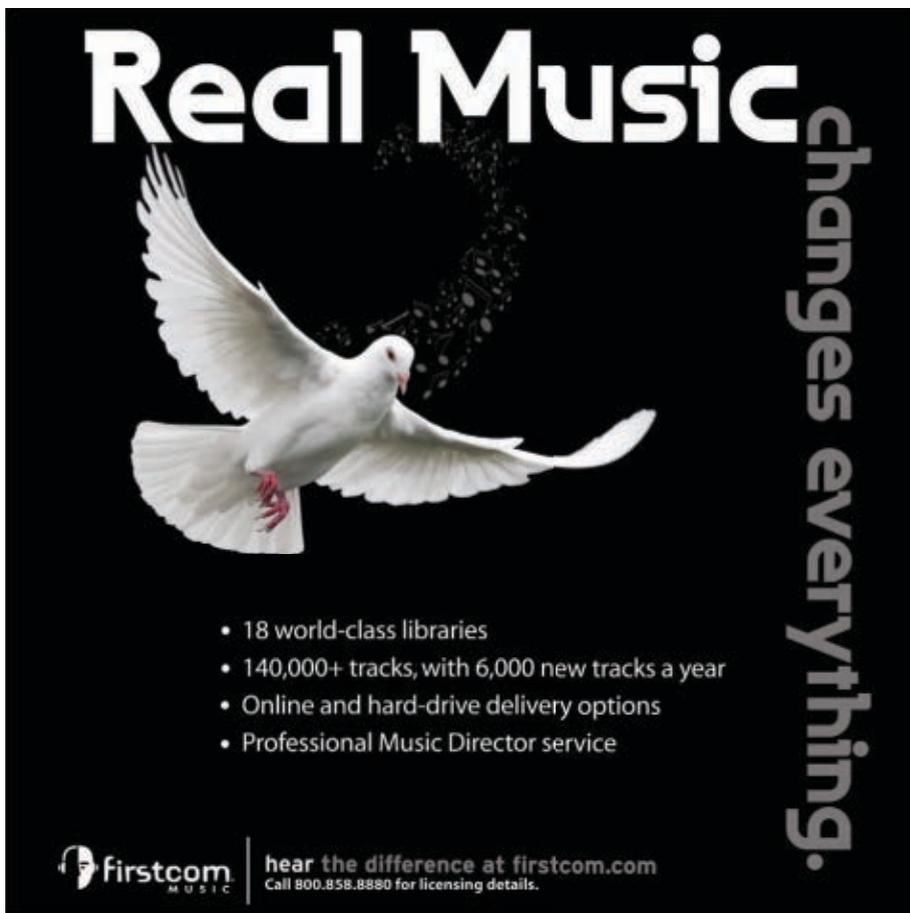
be switched pre or post-fader, and the six auxiliaries with outputs can be soloed to hear monitor mixes. The two internal buses feature mute switches. I like this because if the worship leader is speaking (not singing,) there should be no reverb. There are four subgroups available, through which any of the sixteen main channels can be routed—always nice for a volunteer to have, for instance, music, choir, pastor, and drama to contend with.

There is also a talkback mic input with a level control. In addition to the stereo XLR main outputs, there is an XLR mono output as well—nice for distribution, a cry room feed, broadcast, or Internet streaming. Quarter-inch TRS main outputs mirror the aforementioned XLRs, and a discrete pair of 1/4-inch TRS outputs provide a control room signal. A stereo

S/PDIF output is included, and two DB25 connectors represent the direct pre-insert outputs of the pre-amplifiers. There are also stereo RCA pairs for tape I/O. All the remaining connections are 1/4-inch TRS jacks representing two auxiliary inputs, the four subgroup outputs, and the six auxiliary outputs.

The console features two internal digital effects processors, each with 50 factory presets and 50 user-programmable presets. The programs are all reverbs and delays—no modulation, EQ or dynamics. Certainly, the principal use for this type of effect is going to be reverb or delay, but modulation effects, particularly chorus-ing, would be nice here too. The reverbs do sound quite nice. Included with the console is an application called Capture—a very basic computer application intended to facilitate multi-track recording from the console. The application was developed specifically for use with the StudioLive, and is limited to recording the 16 main channels and a stereo mix from the console. Capture is spartan, but handles the basics of recording a service and is pre-configured to do so with maximum ease. PreSonus will soon be shipping a more sophisticated DAW called Studio One, which should satisfy much more advanced requirements.

Aside from the "auto" compressor button I mentioned prior, there are a small handful of other things on the StudioLive that fall a bit short of the mark. It seems to me that a digital console that competes in the over-\$1000 market should have a simple convention for reversing the order of the EQ and the dynamics processing in the main channels. There are some applications for which it's nice to have EQ slotted in front of dynamics and others for which the opposite is true. This can be accomplished in a creative, backdoor way, but it costs you one subgroup per channel, limiting this routing sequence to only four input channels.



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**One big plus is the capacity to use the console as a front end for DAW recording—that's one thing that really sells me on it.**

And finally, in evaluating this console specifically for church-oriented applications, I am sensitive as to how quickly untrained volunteers can be brought up to speed on operation. The console's monitoring control section distinguishes between PFL and SIP (pre-fader listen and solo-in-place, respectively). I believe it may be a little difficult for a volunteer to get a handle on this. Similarly, in lieu of moving faders, PreSonus has implemented a nice null point-based "fader locate" convention using the meters. Knowing the volunteers at my church, this would be a bit confusing in comparison to moving faders.

All things considered, the PreSonus StudioLive is a very good quality mixer, with great mic pres, EQs, dynamics processing, and internal DSP. It sounds great. Clever signal routing can be accomplished by a creative professional with some experience, but it would be challenging to an untrained or inexperienced volunteer. I love the ability to use the console as a front end for DAW recording. You can also do virtual soundchecks in a live situation, using recordings made previously—a great feature for training volunteers. I

expect future software revisions will address shortcomings. This is a very credible start down the console-development path for PreSonus.

**JOHN MCJUNKIN** is the CEO of Avalon Podcasting in Chandler, Ariz., which offers high-quality podcast production and consultation services to a broad range of clients. He is also the host of Podcast Pro Tech & Tips podcast at [www.avalonpodcasting.com](http://www.avalonpodcasting.com). 

## PROS

- Multi-channel audio to and from computer
- Sound quality is good

## CONS

- No simple convention for reversing sequence of EQ and dynamics on input channels
- Some aspects of operation a little complex for volunteers



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