Mix Rack

All-in-one I/O and processing live sound component

Avid® live sound systems are complete state-of-the-art live production solutions comprised of high-quality components that work together as one, offering studio-quality sound, powerful performance, rock-solid reliability, and unprecedented flexibility. Mix Rack is a more compact and affordable alternative to employing the FOH Rack and Stage Rack combo in a system and is the key component of the Mix Rack System. The 11-space Mix Rack combines all stage and local I/O, VENUE software control, and processing power into a single compact enclosure. Compatible with D-Show® and Profile consoles, Mix Rack offers expandable DSP, enables flexible I/O distribution with the optional Stage 48, and integrates with Pro Tools® through an option card.

Features

- Durable 11-space steel rack houses local and remote I/O, computer control, and processing cards

- Includes VENUE software, the industry's easiest yet most comprehensive graphical user interface, for system control and show file portability

- 48 high-quality, fully recallable, analog XLR mic/line inputs (max capacity); 16 analog XLR line outputs (expandable to 32)

- Add remote I/O to your Mix Rack Sytem with the optional Ethernet Snake Card and Stage 48

- Supports up to three DSP Mix Engine Cards (comes standard with two), allowing up to 48 input and 16 stereo effects return channels (80 processing channels) to be mixed with ample headroom for professional plug-in processing

- 8 analog TRS line inputs and 8 outputs

- Dedicated analog and digital 2-track connections, 1x1 MIDI I/O, Word Clock I/O, intercom and talkback facilities, and outputs for near-field speaker monitoring

- Includes ECx Ethernet Card for remote control of the system using a wired or wireless laptop or computer

- Supports optional cards for A-Net connectivity, expanded analog or AES digital output, Pro Tools integration, and more

- Includes the VENUEPack plug-in bundle, which offers some of the most coveted processing in the industry

Compact Design

Designed with small-to mid-sized venues, houses of worship, regional sound reinforcement companies, and corporate A/V events in mind, Mix Rack provides the hallmarks Avid live sound systems—high-quality sound and unparalleled flexibility— in a compact footprint. For larger touring operations, Mix Rack complements your existing Avid live inventory, enabling you to scale a system for any size event. Since it fulfills the functionality of the usual two-component I/O and processing system, Mix Rack fits nicely into venues where stage real estate is at a premium. It can also easily replace an analog console; simply drop Mix Rack right into the existing analog snake system.

Integrated I/O, Computer, and DSP Processing

Mix Rack offers integrated and expandable I/O, computer control, and DSP processing in one rack (an analog snake is required to interface with Mix Rack). It features an embedded computer platform running VENUE software as the central point of control for the entire system. Mix Rack comes standard with two DSP Mix Engine Cards (expandable to three for additional TDM plug-in processing), 48 mic/line inputs, and 16 outputs (expandable to 32). Add the optional Stage 48 remote box to expand your I/O distribution. It also includes a host of local I/O, including MIDI I/O, ancillary I/O, and a COM input that can handle either microphone or intercom inputs, at no expense to mic/line input or output counts.

One Software Platform—Total File Portability

All Avid live sound systems operate under one common platform—VENUE software, the industry's easiest yet most comprehensive control software. VENUE software sets new standards in operational efficiency and workflow, giving you instant access to and full control over any function of the system. Just a simple button push on the control surface or click from the screen gives you access to inputs, outputs, show files, snapshots, patchbays, plug-ins, and more. And because all Avid live systems share this same software platform, you can create and load show files for use on any Avid live system; no need to learn new software or build new show files if you switch consoles or re-scale your system.

For more information visit **www.avid.com/mixrack**

Mix Rack Options

DSP Mix Engine Card—Run more plug-ins by adding more processing power. Mix Rack comes standard with two DSP Mix Engine Cards, but you can install up to three cards for increased mixer and plug-in processing.

MADI Option Card—Connect your Avid live system to MADI devices (including routers, other digital mixing consoles, and mobile recording setups) and send/receive up to 64 channels of audio.

FWx Option Card—Record live shows and do Virtual Soundchecks using Pro Tools®. This option enables you to record and play back up to 32 channels of high-quality 24-bit/48 kHz audio—no Pro Tools hardware required.

HDx Option Card—Record live shows and do Virtual Soundchecks using Pro Tools|HD®. This option enables you to record and play back up to 64 channels of 24-bit/48 kHz audio—no Pro Tools|HD audio interface required.

AI16 Analog Input Card—Get a replacement or spare 16 channels of fully recallable analog mic/line inputs, with 48V of phantom power per input. (Mix Rack comes standard with the full complement of three AI16 cards for a total of 48 analog mic/line input channels.)

AO16 Analog Output Card—Add 16 channels of analog line-level output to your system. Mix Rack comes with one AO16 card in the base configuration; you can install up to two output cards of the same type—or mix and match—for a total of 32 output channels.

XO16 Analog/Digital Output Card—Add eight channels of digital output as AES/EBU pairs via four XLR connections, plus eight channels of analog line-level output via eight balanced XLR connections, to your system. You can install up to two output cards of the same type—or mix and match—for a total of 32 output channels.

AT16 A-Net Output Card—Add A-Net integration to your system to support personal monitoring through Aviom networks and Pro16 Series mixers. The card transmits up to 16 channels of 24-bit/48 kHz audio to an unlimited number of Pro16 Series devices, providing you with integrated software control of all A-Net parameters.

Stage 48—Distribute your I/O across multiple locations by adding up to two Stage 48 remote boxes and the companion Ethernet Snake Card (required).

Specifications

MIX RACK SPECIFICATIONS

Dimensions (H x W x D)
- 19.25 x 19 x 18 inches (489 x 482 x 457 mm)

Rack Spaces
- 11U

Weight
- 100 lbs (45.4 kg)

Power Requirements
- AC 100–240V, 50–60 Hz, 360 W

MIX RACK I/O

Mic Preamps
 48 recallable mic preamps

Audio Outputs
- 16 outputs, expandable to 32 via analog, digital, or A-Net options

Ancillary I/O
- 8 TRS line inputs and outputs
- Analog and digital 2-track inputs and outputs
- Local monitor outputs
- Com/Aux input (XLR/TRS)
- MIDI input and output
- Word Clock input and output

Pro Tools Interface
- Optional HDx card for Pro Tools|HD (64 tracks) or FWx card for Pro Tools (32 tracks) recording/playback

Remote Control
- ECx Ethernet port

MIX RACK PROCESSING

Audio Processing Channels
- 48 input channels, 16 stereo effects returns (80 channels total)

Internal Processing
- Up to 48-bit, fixed point, 288 dB internal dynamic range

Internal Sample Rate
- 48 kHz

External Sample Rate
- 48 kHz +/-10 ppm (Word Clock input)

Processing Delay
- Less than 2.3 ms (48 channels, stage input through L–R bus to stage output)

MIX RACK AUDIO PERFORMANCE

THD+N
- 0.003% minimum gain, -1 dBFS output, 20 Hz—20 kHz

Frequency Response
- +/-0.2 dB 20 Hz—20 kHz, relative to 1 kHz

Dynamic Range
- 110 dB analog in to analog out, +24 dBu, A-weighted, 20 Hz—20 kHz

Crosstalk
- -100 dB adjacent inputs to L–R bus @ 1 kHz

Equivalent Input Noise (EIN)
- -126 dBu maximum gain, 150 Ohm source, 20 Hz—20 kHz, unweighted

Residual Output Noise
- -90 dBu, 20 Hz—20 kHz
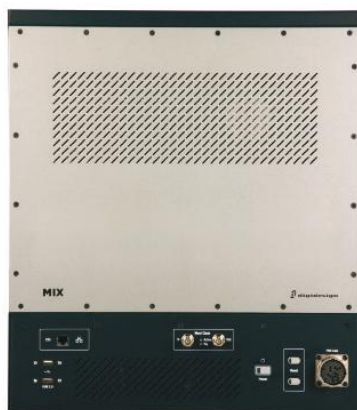
Mix Rack front panel

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