

460 Presentation Audio Mixer



A/V presentation systems require flexible routing and mixing of various audio sources plus easy control of source selection and output levels. The lack of affordable mixers with the required functions frequently turns audio signal management into a problem. Presentation mixers need to provide separate speech and program equalization, dynamics processing, routings, and levels. They also need to interface easily with the popular remote control systems on the market.

The 460 Presentation Audio Mixer offers all of these features. Use the 460 to process speech separately from program audio, combine multiple audio sources, control everything remotely, and configure it through simple front-panel step-through menus.

The 460 is a true audio mixer, not just a router/switcher. Inputs may be mixed to all outputs, with individual level control. All levels may be remotely controlled, eliminating the need for external VCA cards. Choose AGC,

limiting, or compression for output dynamics processing, and each output provides high and low shelving EQ plus one parametric filter. HPF, LPF, and downward expansion may be selected for each mono input.

Remote control links for RS232, RS485, contact closures and rotary pots ensure that remote control is possible for installations of any complexity or budget level. These features give the 460 the versatility typically found only in much more expensive mixers.

APPLICATIONS

- Boardrooms
- Training Facilities
- Classrooms
- Conference & Meeting Rooms

FEATURES

Complete Mixing & Routing Options

All inputs are fully assignable for maximum versatility and audio control. Two mono mic/line and 4 stereo line inputs mix to 2 stereo outputs. The mono inputs may be linked and used as another stereo input pair. The stereo outputs may be configured independently as mono outputs. Two stereo inputs provide unbalanced RCA connections for easy connections from semipro or consumer (-10 dBV) level devices. All other inputs and outputs are balanced.

Easy Setup

Streamlined step-through menus on the front panel LCD configure mixing, routing, level, dynamics settings and 8 nonvolatile presets. No laptop PC required.

Input Controls

Routing—Each stereo input channel (3 to 6) can route signal into either or both of the stereo output buses. When channels 1 and 2 are operating independently, they route their signal into both sides of the stereo bus identically (i.e., mono). When operating as a stereo pair they function like channels 3 to 6.

Filtering & Downward Expansion (mono inputs only)—Channels 1 and 2 have 6 dB/octave low pass and high pass filters available at 125 Hz and 8 kHz respectively, plus selectable downward expansion with threshold adjustment.

Input Controls

continued

Gain—All inputs have independent level settings (stereo level controls for the stereo inputs).

Output Controls

Dynamics Processing—Choose AGC, compression, or limiting, and set the active threshold. AGC helps maintain a consistent output level. The compressor features a moderately fast attack, slower release, and a moderate compression level. The limiter is peak sensing, with fast attack and release times.

EQ—Each stereo output section has 6 dB/octave shelving filters with a boost/cut range of +/-12 dB. Each section also has a sweepable parametric equalizer with a +/-12 dB boost/cut range, 16k to 20k frequency range, and a bandwidth adjustable between 0.05 and 3 octaves.

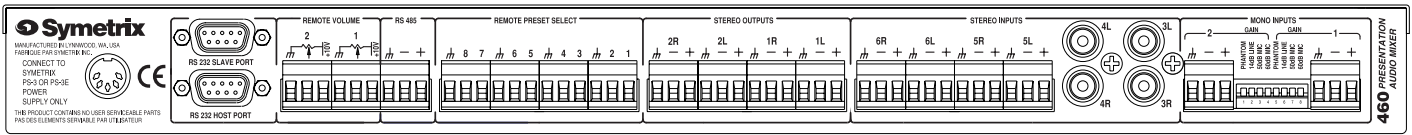
Gain—Each stereo output has stereo level controls.

Mono/Stereo Selection—Each stereo output may be set to provide two mono sums of the signals assigned to it.

Remote Control Options

Rear panel RS232 and RS485 ports allow Panja™ or Crestron controllers to select presets and change levels and routing. Additional contact closure inputs allow remote selection of presets. Inputs for rotary pot level controls are also provided.

REAR PANEL



SPECIFICATIONS

Performance Data

| | |
|-----------------------------------|-----------------------------------|
| A/D and D/A Conversion Resolution | 24 bit |
| Internal Sampling Frequency | 48 kHz |
| Remote Control Baud Rates | 9600, 19200, 38400, 57600, 115200 |

Input Channels 1 and 2

| | |
|--------------------------------|--|
| Type | Balanced, with additional gain for microphone |
| Frequency Response | +/-0.25 dB, 20 Hz to 20 kHz at line level |
| THD+N | <0.005% at -1 dBFS |
| Available Preamp Gain Settings | 0 dB, +4 dB line level 14 dB, -10 dB line level 50 dB, mic level 60 dB, mic level |

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| Dynamic Range | 104 dBFS, A-weighted at line level gains >85 dBFS at +60 dB gain |
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| Maximum Input Level | +22 dBu, 0 dB preamp gain +8 dBu, 14 dB preamp gain -28 dBu, 50 dB preamp gain -38 dBu, 60 dB preamp gain |
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| Preamp CMRR | >40 dB at 60 Hz |
| Phantom Power | 12 V |
| High Pass Filter | 125 Hz, 6 dB/octave |
| Low Pass Filter | 6 kHz, 6 dB/octave |
| Gate Threshold | 0 dBFS to -99 dBFS |

Input Channels 3 and 4

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|--------------------|---|
| Type | Stereo, unbalanced, nominal -10 dBV level |
| Dynamic Range | 100 dBFS, A-weighted |
| Frequency Response | +/- 0.25 dB, 20 Hz to 20 kHz |
| THD | <0.005% at +8 dBV, 1 kHz |

Input Channels 5 and 6

| | |
|-----------------------------|--|
| Type | Stereo, balanced, nominal +4 dBu, internally switchable to -10 dBV |
| Dynamic Range | 104 dBFS, A-weighted, 1 kHz |
| Frequency Response | +/-0.25 dB, 20 Hz to 20 kHz |
| THD | <0.005% at +20 dBu, 1 kHz |
| Maximum Input Level | +22 dBu balanced |
| Common Mode Rejection Ratio | >40 dB at 60 Hz |

Output Channels 1 and 2

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|---------------------------|--|
| Type | Stereo, balanced, ground reference 300 ohm source impedance |
| Dynamic Range | 105 dB, A-weighted, 1 kHz |
| THD | <0.005% at +4 dBu, 1 kHz |
| Shelving Low Pass Filter | +/- 12 dB, 125 Hz, 6 dB/octave |
| Shelving High Pass Filter | +/- 12 dB, 8 kHz, 6 dB/octave |
| Parametric Filter | +/- 12 dB, 16.2 Hz to 19.7 kHz bandwidth 0.05 to 3 octaves |
| Maximum Output | +22 dBu, internally switchable to -10 dBV |

Connections

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| Power In | 7-pin DIN |
| Mic/Line Input | Euroblock |
| Stereo Line Inputs | RCA and Euroblock |
| Stereo Line Output | Euroblock |
| Serial Data Ports | RS485: Euroblock RS232 host and slave: DB-9 |
| Remote Preset Recall and Output Volume Control | Euroblock |

Physical

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| Size | 1 rack unit: 1.72 in. (H) x 19 in. (W) x 5 in. (D) 4.37 cm (H) x 48.26 cm (W) x 12.7 cm (D) |
| Shipping Weight | 7.64 lb (3.47 kg) |

Electrical

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| Power Requirements | 20 W maximum, Symetrix PS-3 or PS-3E only |
| PS-3 | 115 V, 60 Hz AC nominal |
| PS-3E | 230 V, 50 Hz to 60 Hz AC nominal |

ACCESSORIES

USC-1 Security Cover fits 1 U (19 in. x 1.72 in.) products

SIGNAL FLOW DIAGRAM

