

Restaurants, clubs, retailers, theme parks, and just about everyone else have discovered the power of great sounding foreground music and paging systems. Customers stay longer and spend more money. There is just one little problem, though... A steady upward trend in listener sophistication means that foreground music and paging systems must now deliver a much higher level of audio quality than ever before. Achieving this on a budget is the contractor's challenge. Symetrix answers this challenge with the 440 Foreground Audio Controller, a comprehensive, cost-effective mixer for high performance installations with paging and foreground/background audio.

The Symetrix 440 provides three stereo inputs with level-matching trim controls to accommodate a variety of program sources, such as CD players, satellite music receivers, tuners, tape players or TV audio. Adjustable ducking controls allow the selected source to be attenuated by a paging signal. Inputs are supplied for both mic and line-level paging signals. Both inputs may be used simultaneously for those applications needing an emergency line-level page or a message repeater, in addition to a typical paging mic. A music-on-hold output with its own level control provides program material without the page signal for a telephone system.

The 440's flexibility makes it the perfect mixer for a wide range of system applications. The simple front panel controls enable fast set up, and there are extra features that greatly expand its versatility. Rear-panel insert jacks for adding external processors (such as a Symetrix 422 AGC/Leveler), internal jumpers for rerouting the page and program signals, and internal adjustments for the ducking circuit allow configuring of the 440 to exactly match the requirements of the installation.

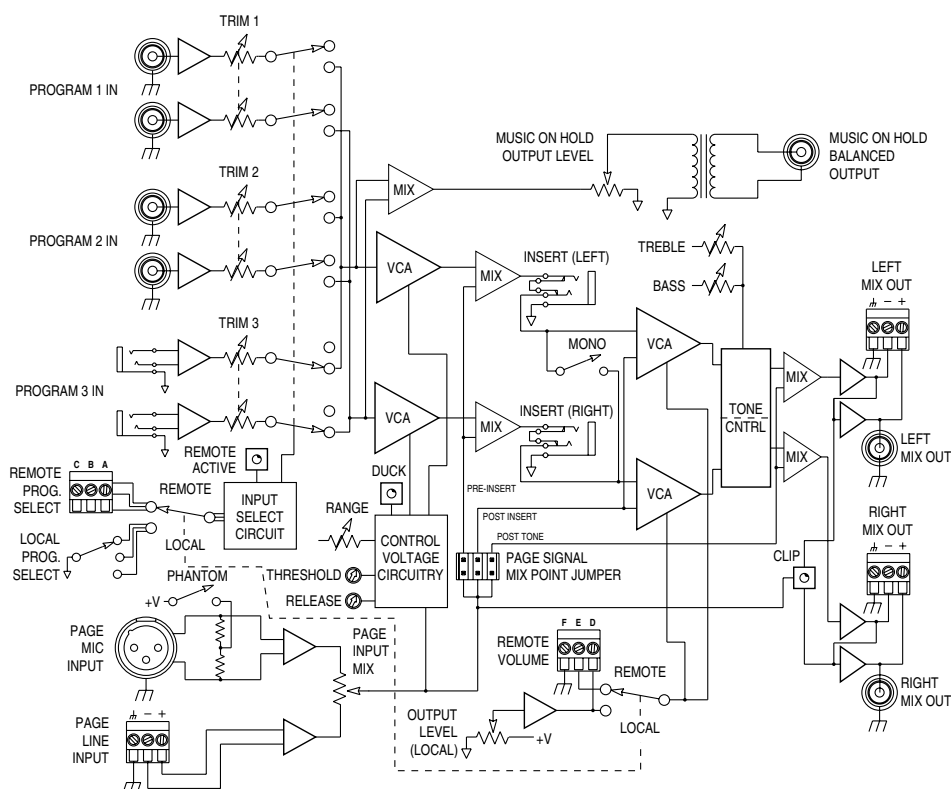
The 440 Foreground Audio Controller:
The complete music and paging front-end for great sounding systems. •

APPLICATIONS

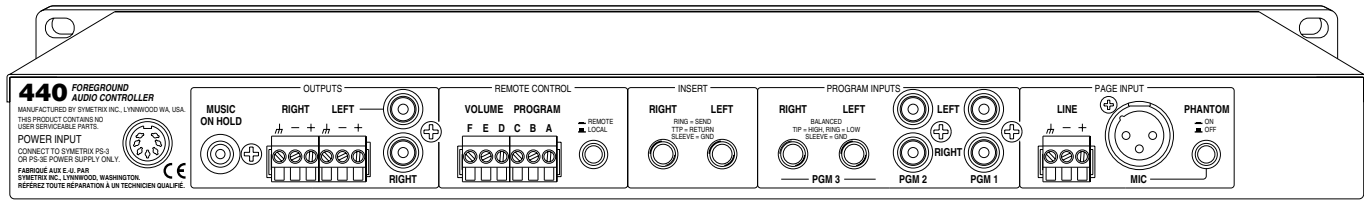
- Foreground Music & Paging Systems
- Restaurants, Nightclubs, & Bars
- Themed Retail
- Corporate Facilities
- Museums

FEATURES

- Simultaneous Mic/Line input for paging sources
- Adjustable ducking parameters
- Transformer-isolated music on hold output
- Three switch-selectable line inputs for CD, Radio, Tape or TV audio sources
- Bass & Treble tone controls
- Optional remote control selects line input source and adjusts master output volume



440



SPECIFICATIONS

Specifications subject to change without notice.

Program Inputs

Gain	0dB +/- 12dB
Maximum Input Level	+20dBu, 0dB gain
Program Input Impedance	20k Ohms Balanced, 20k Ohms Unbalanced
CMRR	>40dB, Input 3 (TRS jack) only

Paging Inputs

Microphone Input Gain	40dB
Line Input Gain	unity gain (0dB)
Microphone Input Impedance	>1500 Ohms
Line Input Impedance	20k Ohms
Mic Input Max Input Level	-20dBu
Line Input Max Input Level	+20dBu
CMRR	>40dB
Phantom Power (Mic input only)	+15VDC switchable

Ducker Sidechain

Threshold	Factory preset at equivalent of -20dBu at page preamp output, Internally adjustable from -40dB to 0dB
Hold Delay	Fixed at 1 second
Release Time	Factory preset at .5 Sec., Internally adjustable from .5 Sec. to 4 Sec.
Attack Time	10mS – 16mS program dependent
Range	-60dB to 0dB

Insert Patching

Signal Level	0dBu nominal
Output Impedance	200 Ohms
Input Impedance	20k Ohms
Maximum I/O Level	+20dBu

Tone Controls

Bass	+/-12dB maximum at 100Hz
Treble	+/-12dB maximum at 8kHz

Outputs

Maximum Output, Unbalanced	+20dBu into 10k Ohm load
Maximum Output, Balanced	+20dBm into 600 Ohm load
Output Impedance	200 Ohms Unbalanced, 400 Ohms Balanced

Performance Data

Frequency Response	20Hz – 20kHz, +/-1dB with tone controls centered (any input to any output)
Frequency Response, MOH output	100Hz to 15kHz, +/-1dB (at 0dBm into 600 Ohm load)
Channel Balance	1dB maximum offset with controls at unity (typical 0.5dB)
	1.5dB maximum offset with controls in any position (typical 0.75dB)
Noise Floor with Page Level CCW	-89dBu typical (20kHz NBW)
Page Mic Preamp EIN	-125dBu typical (20kHz NBW)
THD+Noise	<0.08 at +4dBu output level (any input to any output, all controls at unity gain)

Physical

Size (hwd)	1.72 x 19 x 6 inches, 4.37 x 48.26 x 15.24 centimeters
Shipping Weight	8 lbs (3.6kg)

Electrical

Power Requirements	115V nominal, 60 Hz, 15 watts maximum 230V nominal, 50 – 60Hz, 15 watts maximum
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RC-2 REMOTE CONTROL

The RC-2 remote control provides remote selection of the 440's program source and master volume.

440 ARCHITECTS AND ENGINEERS SPECIFICATIONS

The foreground audio controller shall provide page-over-music capability and shall allow the user to select between three music inputs. The unit shall occupy a single rack space (1U).

The controller shall provide separate mic-level and line-level page inputs. The mic-level page input shall be balanced and low-impedance, and shall use one XLR connector. The mic-level page input shall also have a rear-panel pushbutton which shall apply +15V phantom power to the mic-level page input. The line-level page input shall be balanced and high-impedance, and shall use one Euroblock detachable terminal connector. A front-panel mix control shall be continuously

adjustable from mic-level page input signal only, to a mix of mic-level and line-level page input signals, to line-level page input signal only.

Three stereo line-level program inputs shall be provided. Program inputs 1 and 2 shall use unbalanced left and right RCA input connectors. Program input 3 shall use balanced left and right 1/4" tip-ring-sleeve connectors. Each program input shall be individually buffered, and shall have an associated front-panel trimpot, which provides a continuous adjustment range from +12dB signal boost to -12dB signal cut. Any one of the three program inputs may be selected by a front-panel program select control.

Remote control shall be available for control of program selection and output level. Remote control shall be enabled/disabled by a rear-panel pushbutton switch. When remote control is enabled, a front-panel indicator LED shall light, the front-panel program select control shall be disabled, and the front-panel output level control shall become a master gain limit control.

Bass and treble tone controls shall be provided. These controls shall act on the combined page signal and selected program signal or optionally only on the program signal. The bass tone control shall have a center frequency of 100 Hz, and shall have a continuous adjustment range of -12dB to +12dB. The treble control shall have a center frequency of 8kHz, and shall have a continuous adjustment range of -12dB to +12dB.

Rear-panel 1/4-inch, tip-ring-sleeve left and right insert jacks shall be provided to allow external processing of the combined paging and selected program signals, or optionally on the program signal only.

The unit shall incorporate a priority ducking system. When audio is present at either page input, the selected program signal shall be attenuated (ducked). There shall be a duck LED to indicate that ducking is occurring. A continuously adjustable range control shall set the amount of attenuation from -60dB to 0dB.

The stereo main outputs of the unit shall be available at left and right unbalanced

RCA connectors, and also at balanced left and right Euroblock detachable terminal connectors. A front-panel switch shall allow stereo or mono main output capability. A front-panel gain control with a clip LED shall simultaneously and continuously adjust the level of the left and right main outputs.

A music-on-hold output, available at a single unbalanced RCA connector, shall also be provided. The music-on-hold output shall provide a mono sum of the selected program input, prior to any processing. A front-panel trimpot shall provide gain control for this signal.

The foreground audio controller shall be a Symetrix, Inc. model 440 Foreground Audio Controller.

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