372 SPL Computer

APPLICATIONS

- Restaurants
- Retail Stores
- Casinos
- Factories
- Hospitals

During their many years in the field, Symetrix SPL computers have assured sound system intelligibility in a multitude of installations around the world. To this family of ambient noise controllers, we now add a processor with extensive functionality, updated processing algorithms, and a budget-conscious price.

Designed for installations featuring foreground or background music and/or paging, the Symetrix 372 utilizes the loudspeakers of a sound system to sense changing ambient noise levels. A pair of analog voltage controlled amplifiers raise or lower the audio level in response to changes in acoustical ambient noise within the unit's installation zone.

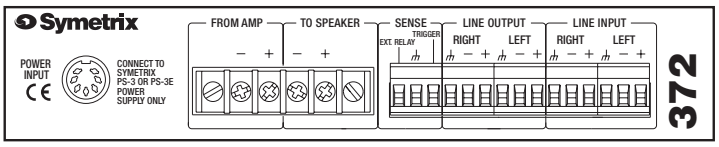
A simple set of step-through menus displayed on the front panel LCD guides you through the calibration process. You set the parameters of the acoustic environment and then set the way you want the unit to respond to changes in it. In operation, the 372 tracks environmental noise levels, internal signal levels and all the control settings. It makes appropriate gain changes whenever it finds measured noise levels that deviate from the stored performance characteristics. How much the gain is changed, and how quickly that change occurs, are adjustments made using the step-through menus.

Simple calibration, precise performance, and value priced. Backed by our 15-year history of SPL processing innovation, the Symetrix 372 offers affordable SPL control.

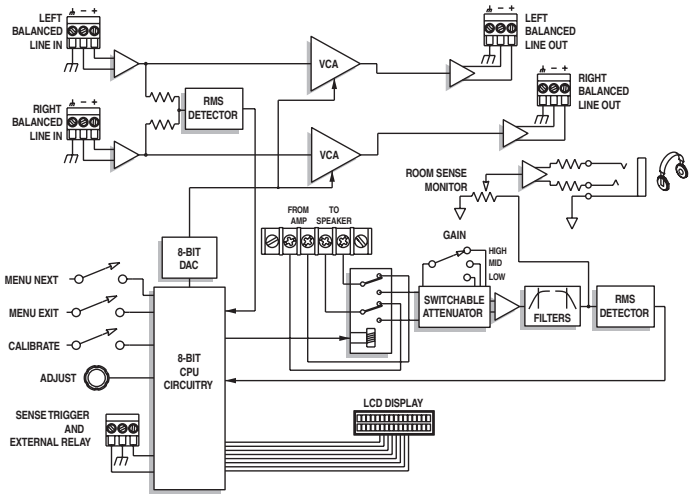
FEATURES

Uses Speakers for Noise Sensing	In less than one second, the 372 temporarily opens up the amplifier connection and routes the loudspeakers to a preamplifier for the purpose of measuring changes in the ambient noise level. Samples during absence of page and/or music audio, or at preset intervals.
Headphone Monitoring	Monitor the sense signal using a separate front panel headphone output.
5 Operating Modes	**Music Mode**—Music only or music + page. Use Gap and/or Force Sense Time. **Page Mode**—Only paging and annoucement audio. Use Force Sense Time at preset intervals. **Slave Mode**—Forces all 372 units in a multi-zone system to execute a sense sample at the same time. **History Mode**—Records and displays the lowest and highest SPL readings from when the unit was last reset. **Bypass Mode**—Bypasses the gain control of the SPL controller and the AGC.
Signal Path	Controls mono or stereo signals through Euroblock connectors.
Programmable Sensing Operation	Select the auto-sense mode and/or the time interval between sense samples.
Simple Calibration	Use step-through menus on the front panel LCD. Perform calibration under typical installation conditions. No waiting for the quietest or noisiest ambient environment.
AGC Control	Enables or disables auto leveling of input signals.
Ambient Adjustment Ratio	Choose an adjustment ratio of SPL change vs. program level change.
Sense Signal Monitoring	Display numeric reading and relative bargraph of the signal appearing at the sense terminals. Listen to sense signal with headphones connected to front panel mono output.
Gain Controls	Set minimum and maximum limits for SPL gain range. Gain range is +20 to –30 db.
Averaging Time	Choose integration time of the running average SPL.

REAR PANEL



SIGNAL FLOW DIAGRAM



ACCESSORIES

19" Rackmount Tray height is 1U	#RM-3
Filler Panel covers unused half of rack tray	#FP-3
Y Power Cable connects a 372 with any other 300 Series product	#PY-3

ADDITIONAL FUNCTIONALITY

Add Mic/Line Page Override Ducking Features

Available with Symetrix 306 Preamp/Ducker

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The Ambient Level Controller (ALC) shall control the output level of the sound system in response to the observed acoustical noise level within the controlled space during system operation. These measurements shall be made during silent portions of the program material. Provision shall be made to alter the noise sensing protocol to make the noise level measurement under timer or external control and to accomodate musical or paging program signals.

The ALC shall utilize the loudspeakers of a sound system as microphones to sense the ambient noise level. Provision shall be made for the user to monitor the audio signal used by the ambient sense system by using headphones. The ALC shall be capable of operating from sound systems using direct loudspeaker drive or constant voltage distribution.

The ALC shall provide user-adjustable parameters to alter the way that it responds to changes in the ambient noise level. These parameters are: minimum and maximum gain through the device, silence sensing threshold, noise sensing protocol, gain:sense ratio, program AGC or compression, and averaging time. In addition, the ALC shall provide music or paging signal modes, bypass mode, slave mode for linking multiple units, and a history mode that collects and displays ambient noise history from the controlled space.

The ALC shall provide two independent line level balanced inputs and outputs that control two audio signals. The maximum input level shall be +20 dBu and the maximum output level shall be +26 dBu (+22 dBm into 600 ohms) balanced. The balanced input impedance shall be 20,000 ohms and the output source impedance shall be 200 ohms balanced, 100 ohms unbalanced. The gain control range shall be –30 dB to +20 dB. The frequency response shall be 20 Hz to 20 kHz +0/–1 dB with THD+N less than 0.25% at +4 dBu over the same range of frequencies. The output noise of the device shall be less than –95 dBu (20 kHz noise bandwidth, unity gain). The input and output configuration shall be active balanced.

The speaker switching relay contacts shall be rated at 8A.

Screw terminals shall be used for all connections except for the speaker connections which shall utilize a barrier-style terminal strip. In addition to the audio input/outut connections, there shall be connections provided for a sense trigger input and an open-collector sense trigger output.

A front panel power indicator shall be provided. A liquid crystal display shall be provided to communicate operating parameters and setup information with the user.

The ALC shall occupy half of the width of one rack space and shall be housed in a metal enclosure. It shall use an external, safety agency approved, power supply. The Ambient Level Controller shall be the Symetrix model 372 SPL Computer.

SPECIFICATIONS

Input/Output

Maximum Input Level	+20 dBu balanced, +20 dBu unbalanced
Program Input Impedance	>20k ohms balanced, >10k ohms unbalanced
Input Common Mode Rejection	>40 dB line inputs
Maximum Output Level	+26 dBu balanced (20k ohm load)
	+22 dBm balanced (600 ohm load)
Output Impedance	200 ohms balanced, 100 ohms unbalanced

Performance Data

Program Frequency Response	20 Hz to 20 kHz, +0, –1 dB
Program Path THD+N	<.025% (+4 dBu in, +4 dBu out)
Output Gain	+20, –30 dB
Sense Channel Frequency Response	–3 db at 300 Hz and 6000 Hz
Sense Channel Gain	Selectable unity, +20 dB, +40 dB
Additional Headphone Monitor Gain	28 dB maximum
Program Channel Output Noise	–95 dBu @ unity gain, typical

Connections

Program Inputs, Outputs	Euroblock
Power In	7-pin DIN
External Trigger, External Relay	Euroblock
Headphone	1/4 in. TRS, will drive mono or stereo headphones
Internal Relay	Double pole, contacts rated 8A maximum

Physical

Size (H x W x D)	1/2 rack unit
	1.75 in. x 8.5 in. x 6.5 in. / 4.445 cm x 21.59 cm x 15.875 cm
Shipping Weight	4.5 lbs.

Electrical

Power Requirements	10W maximum, Symetrix PS-3 or PS-3E only
PS-3	115V, 60 Hz AC nominal
PS-3E	230V, 50 to 60 Hz AC nominal

Symetrix

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