371 SPL Computer

APPLICATIONS

- Restaurants
- Retail Stores
- Casinos
- Offices
- Transit Stations
- Hospitals

The Symetrix 371 SPL Computer automatically raises and lowers sound system levels in response to changes in ambient noise conditions. Designed for installations featuring foreground music and/or paging, it ensures that music and announcements are always clearly audible and distinct, but never too loud. Proprietary AmbiSense™ technology enables the 371 to *continuously* monitor changing ambient noise levels—not just during gaps in the audio program—so it can respond quickly to sudden changes.

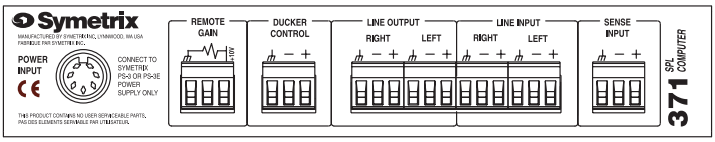
A simple set of step-through menus displayed on the front panel LCD guides you through setup of the 371. You set the parameters of the acoustic environment and then set the way you want the unit to respond to changes in it. In operation, the 371 tracks environmental noise levels, internal signal levels and all the control settings. It makes appropriate gain changes whenever it finds measured noise levels that deviate from the stored performance characteristics. Menu adjustments determine how much the gain is changed, and how quickly that change occurs.

Simple calibration, precise performance, and value priced. Backed by our 15-year history of SPL processing innovation, the Symetrix 371 offers a complete and affordable solution for audio level management.

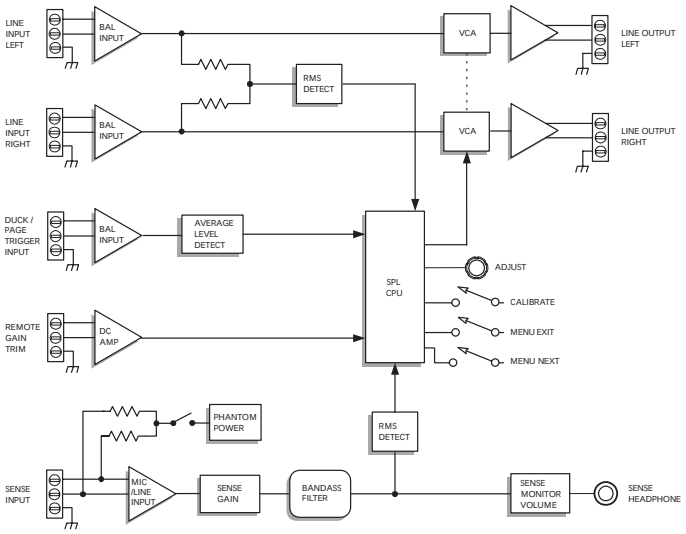
FEATURES

Uses Microphone for Noise Sensing	The 371 uses an external microphone to measure changes in the ambient noise level.
Continuously Monitors Ambient Noise Levels	Proprietary AmbiSense™ technology responds to environmental noise changes in real time—not just during gaps in audio program.
Headphone Monitoring	Monitor the sense signal using a separate front panel headphone output.
Sense Signal	Display numeric reading and relative bargraph of the signal appearing at the sense terminals.
3 Operating Modes	**Active**—Indicates continuous measurement of the ambient noise level. **History**—Displays the lowest and highest SPL readings from when the unit was last reset. **Bypass**—Bypasses the gain control of the SPL controller and the AGC.
Signal Path	Controls mono or stereo signals through Euroblock connectors.
Easy Calibration	Perform calibration under typical installation conditions. No waiting for the quietest or noisiest ambient environment.
Phantom Power	Sense input provides microphone with 15V phantom power. Enable or disable through front panel menu adjustment.
Ratio Adjustment	Choose an adjustment ratio of SPL change vs. program level change.
Gain Controls	Set minimum and maximum limits for SPL gain range between +20 to –30 dB. Adjust gain of sense input and line output through menu selection. Connect an external trim pot to the 371's rear panel to control output gain remotely.
Averaging Time	Choose integration time of the running average SPL.
Ducker Control	Ducker input provides momentary reduction of program level (from 0 db to –40 dB) and inhibits sense operation for the duration of externally supplied control signal.

REAR PANEL



SIGNAL FLOW DIAGRAM



ACCESSORIES

19" Rackmount Tray height is 1U	#RM-3
Filler Panel covers unused half of rack tray	#FP-3
RC-3 Remote Control controls one volume channel	#RC-3

SPECIFICATIONS

Input/Output

Maximum Input Level	+20 dBu balanced, +20 dBu unbalanced
Program Input Impedance	>20 k ohms balanced, >10 k ohms unbalanced
Input Common Mode Rejection	>40 dB
Maximum Output Level	+26 dBu balanced (20 k 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	<0.025% (+4 dBu in, +4 dBu out)
Output Gain Limits	+20, –30 dB
Sense Channel Frequency Response	–3 dB at 300 Hz and 6000 Hz
Sense Channel Gain	selectable, 0 dB to +70 dB
Additional Headphone Monitor Gain	28 dB maximum
Program Channel Output Noise	–95 dBu @ unity gain, typical
Master Output Level Adjustment Range	+/–10 dB internal, +10 dB to –50 dB remote

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. The ALC shall utilize an external microphone to sense the ambient noise level. These measurements shall be made continuously. The ALC shall accommodate musical or paging program signals. Provision shall be made for the user to monitor the audio signal used by the ambient sense system by using headphones.

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, gain:sense ratio, and averaging time. In addition, the ALC shall provide active mode, bypass mode, and a history mode that collects and displays ambient noise history from the controlled space. The sense input shall accept either mic or line level signal. The sense input gain shall be adjustable, and 15 volt phantom power shall be available. A master output level control shall also be provided.

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 0.025% 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.

All connections shall utilize barrier-style terminal strips. In addition to the audio input/output connections, there shall be a connection provided for a ducker input. The ducker circuit will have an adjustable threshold and will inhibit response to changes in ambient level when signals applied to the ducker input are above the threshold level.

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. A lockout function shall be available to prevent parameter setting changes by unauthorized users.

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 371 SPL Computer.

Connections

Line Inputs, Sense Input, Ducker Control, Remote Gain, Line Outputs	Euroblock
Power In	7-pin DIN
Headphone	1/4 in. TRS, will drive mono or stereo headphones

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./2.03 kg

Electrical

Power Requirements	10 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

Symetrix

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