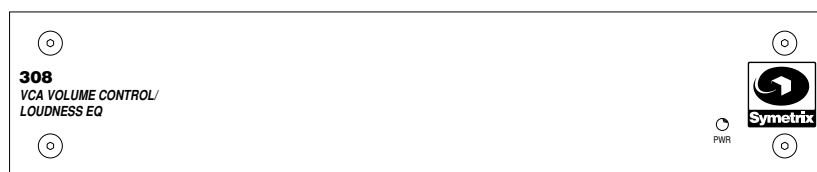


308 VCA Volume Control/Loudness EQ



The Symetrix 308 VCA Volume Control/Loudness EQ provides remote level control and loudness EQ for engineered sound systems featuring foreground or background music and/or paging. The 308 uses two voltage-controlled amplifiers (VCAs) to control the volume of a stereo signal in a single zone or mono signals in two zones.

It features a loudness-compensating EQ circuit that improves the sound quality of background music systems, which typically play music at lower levels. The 308's Loudness EQ action refines the frequency response of program signals by reducing the midrange when volume is lowered. This effectively enhances the bass and treble frequencies, and improves the sound of low volume audio. The Loudness EQ compensation automatically follows the VCA level adjustments, and disappears at higher listening levels.

Installers set the amount of Loudness EQ compensation via rear panel trimpots. This feature is easily defeated if remote volume control without loudness compensation is desired. For tamper-proof operation, all audio and control connections are provided on removable Euroblock connectors mounted on the rear panel. The compact half-rack size of the 308 allows it to be shelf-mounted next to a mixer/amp or it may be rackmounted.

APPLICATIONS

- Retail Stores
- Restaurants
- Boardrooms
- Offices
- Remote volume control for virtually any installed sound system

FEATURES

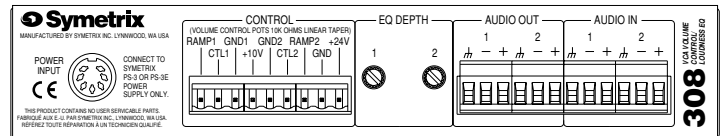
| | |
|-----------------------------------|---|
| Zone Operation | Control the volume of a stereo signal in a single zone or mono signals in two zones. |
| Loudness EQ Circuit | Enhances program frequency response as volume is lowered. |
| Remote Level Control | Volume control by use of Symetrix RC-3 Remote Control, or linear potentiometers* located up to 500 ft. from unit, or DC control voltages of 0 to 10V range*. Stereo signals may be adjusted by one control. |
| Audio Inputs & Outputs | Rear-panel Euroblock connectors accept balanced or unbalanced line-level signals. |

ACCESSORIES

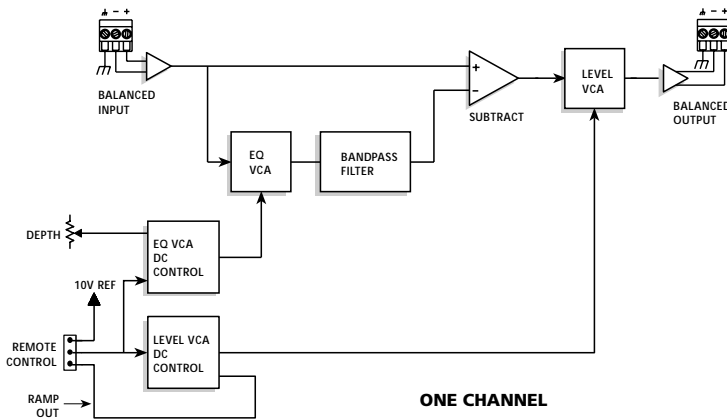
| | | |
|---------------------------|--|------------|
| 19" Rackmount Tray | Height 1U. | Model RM-3 |
| Filler Panel | Covers unused half of rack tray. | Model FP-3 |
| Y Power Cable | Connects a 308 with another 300 Series product to same power supply. | Model PY-3 |
| Remote Control | For use with the 308. | Model RC-3 |

*User-supplied

REAR PANEL



SIGNAL FLOW DIAGRAM



ONE CHANNEL

SPECIFICATIONS

Input/Output

| | |
|-----------------------------|--|
| Maximum Input Level | +20 dBu balanced, +20 dBu unbalanced |
| Maximum Output Level | +22 dBu balanced, +18 dBu unbalanced |
| Input Impedance | >20k ohms balanced, >10k ohms unbalanced |
| Output Impedance | 200 ohms balanced, 100 ohms unbalanced |
| Input Common Mode Rejection | >40 dB |

Performance Data

| | |
|-----------------------|---|
| Frequency Response | 20 Hz to 20 kHz +0, -0.5 dB (with no equalization applied) |
| | 20 Hz to 20 kHz +0, -1.5 dB (at unity gain with max EQ depth) |
| THD+N | <0.025% at unity gain, 0 dBu in/out |
| Residual Output Noise | -95 dBu typical at unity gain |
| Gain Control | 0 dB (unity) to -65 dB |
| Equalization | -15 dB max @ 1 kHz |

Analog Control

| | |
|------------------------------|--|
| Control inputs accept any of | (a) 10k linear rheostat to ground (b) 10k linear potentiometer from +10 reference output to ground (c) 0 to 10 VDC control voltage (d) Symetrix RC-3 Remote Control |
|------------------------------|--|

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The VCA volume control / loudness EQ shall provide two channels of remote level adjustment and automatic loudness EQ compensation for controlling a stereo signal in one zone or mono signals in two zones. There shall be a voltage controlled amplifier (VCA) in each channel controlled by either a 0 to 10 VDC ramp signal or by a 10k ohms linear taper potentiometer or other compatible remote control, such as the Symetrix RC-3. Potentiometers may be located up to 500 feet from the VCA volume controller. The loudness EQ will be flat at full volume and the output gain will be at unity. At lower volumes, the loudness EQ shall automatically effectively boost the bass and treble frequencies by lowering the midrange response. The maximum midrange attenuation will be -15 dB @ 1 kHz.

The VCA volume control / loudness EQ shall provide two balanced line-level audio inputs on Euroblock connectors. The input impedance shall be at least 20k ohms balanced, 10k ohms unbalanced. The maximum input level shall be +20 dBu balanced, +20 dBu unbalanced. There shall be two balanced line-level audio outputs on Euroblock connectors. The output impedance shall be 400 ohms balanced, 200 ohms unbalanced. The maximum output

level shall be +22 dBu balanced, +18 dBu unbalanced.

Screwdriver adjustable trimpots shall be provided for selecting the amount of loudness EQ compensation for each channel. Nine inputs for remote control connections shall also be provided on Euroblock connectors. These inputs shall consist of: Ramp Out, Control In, Ground for each channel; +10 VDC Out; Ground; +24 VDC Out.

A front panel power indicator shall be provided.

The frequency response shall be +0, -0.5 dB, measured between 20 Hz and 20 kHz. THD+N shall be less than 0.025% measured at unity gain. Power consumption shall be 12W maximum.

The unit shall occupy half of the width of one rack space. The physical dimensions shall be 1.75 in. (H) x 8.5 in. (W) x 6.5 in. (D) / 4.445 cm (H) x 21.59 cm (W) x 15.875 cm (D).

The VCA volume control / loudness EQ shall operate by means of a Symetrix PS-3 connected to 115 VAC nominal, (95-130 VAC), 60 Hz or a Symetrix PS-3E connected to 230 VAC nominal, (165-255 VAC), 50 to 60 Hz.

The VCA volume control / loudness EQ shall be a Symetrix model 308 VCA Volume Control / Loudness EQ.

Analog Control continued

| | |
|---------------------|---|
| Gain | Unity at +10 VDC and max attenuation at 0 VDC |
| Ramp Out | Buffered duplicate of the Control In voltage |
| Auxiliary Power Out | +24 VDC ±10%, 100 milliamps max continuous load |

Connections

| | |
|--------------------------------|-----------|
| Inputs, Outputs, Control Ports | Euroblock |
| AC Power In | 7-pin DIN |

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 | 12W maximum, Symetrix PS-3 or PS-3E only |
| PS-3 | 115V, 60 Hz AC nominal |
| PS-3E | 230V, 50 to 60 Hz AC nominal |