

PACIFIC RECORDERS & ENGINEERING CORPORATION



■ EATURES: ■ BRIDGING STEREO INPUT TO EIGHT STEREO OUTPUTS ■ HIGH OUTPUT LEVEL, HEADROOM CAPABILITY
ADJUSTABLE GAIN, UNITY TO 30 dB BRIDGING/TERMINATING INPUT MODE SELECTION . VERY LOW NOISE AND DISTORTION
EXCELLENT FREQUENCY AND TRANSIENT RESPONSE METERING, SWITCHABLE TO INPUTS/OUTPUTS
XLR – TYPE INPUT/OUTPUT

The SDA – 8 is a high quality stereo distribution amplifier designed for general purpose use in professional audio systems. While designed as a stereo amplifier, the SDA – 8 features excellent crosstalk isolation between the stereo channels, and, therefore is also an ideal distribution amplifier for two monaural signals.

The inputs are balanced bridging, 25K ohm, which are switchable to 600 ohm terminating. The stereo bridging inputs may be parallel fed from a common signal thus providing sixteen outputs. Careful attention to the input transformer and amplifier designs has insured excellent frequency and transient response while minimizing noise and distortion.

The gain of each stereo channel may be adjusted from unity to 30 dB. This wide range makes SDA - 8 the universal amplifier for broadcast signal distribution. The gain controls are feed-back type which maintain optimum noise and headroom performance for all gain settings.

The distribution outputs are differential, balanced to ground, and designed to drive 600 ohm or higher (bridging) loads. Each output is capable of simultaneous level in excess of +26 dBm into 600 ohm loads, and +27 dBm into 10K ohm or greater bridging loads.

The VU meters conform to ASA specifications and are switch-

able from output to input reading. The meters are driven by bridging buffer amplifiers which isolate the distortion products of the meter movement rectifiers. The buffer amplifiers allow a "O" VU calibration trim range of +4 dBm to +8 dBm.

The amplifier and power supply designs are a combination of discrete and integrated circuitry. All components are conservatively rated for high performance, long life operation. The amplifier is constructed on an epoxy glass, double-sided PC board. The use of an extensive ground plane shield on the component side of the circuit board, in addition to decoupling and bypass techniques, ensures amplifier stability in high RF environments.

STEREO DISTRIBUTION AMPLIFIER CONTROL FUNCTIONS:

Input Termination switch provides a 600 ohm termination for the bridging inputs.

Meter Input/Output switch selects the meter monitori source. INPUT reads the level at the amplifier input connectors; OUTPUT reads the pre-split level of the output amplifiers

Gain Trim controls have a range of unity to 30 dB input to output gain.





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SDA-8

Functional Block Diagram

www.SteamPoweredRadio.Com



Upper Trace 2KHz Square Wave Input

Lower Trace Amplifier Output

Left Trace 0.2 ms/div **Right Trace**

10 µs/div

Amplifier Output Rise Time: 9**µ** s Overshoot: 0% Ringing: None

SDA – 8 TECHNICAL SPECIFICATIONS

Source Impedance 600 ohms

Source Impedance 78 ohms, resistive

Input Impedance 25K ohms, balanced and floating, transformer isolated. Gain Range Unity to 30 dB. Outputs Eight balanced, differential outputs per channel. Load Impedance 600 ohms or greater per output Nominal Output Level +8 dBm. VU meter may be recalibrated for +4 dBm reference. Maximum Output Level +26 dBm into eight 600 ohm loads, +27 dBm into bridging loads. Output Isolation Short circuit of any one output results in no amplitude change at other outputs. Crosstalk Isolation Greater than 80 db, 20Hz to 20KHz Frequency Response 20Hz to 20KHz, +0, -0.7 dB Input Noise -112 dBm RMS equivalent input noise, 600 ohm source, 20KHz bandwidth. Output Noise -82 dB below output, (reference +8 dBm), 600 ohm source, 20KHz bandwidth, 30 dB gain. Distortion, T.H.D. Less than 0.005% @ 1KHz, +8 dBm. Less than 0.07% @ 1KHz, +26 dBm. Less than 0.06%, 20Hz to 20KHz, +8 dBm. Distortion I.M. Less than 0.003% SMPTE, +8 dBm. Less than 0.03% SMPTE, +26 dBm. Square Wave Response Rise time less than 10 µs. No overshoot or ringing. 2 KHz square wave test signal.