



PSX 850

Stereo, 8/10-Channel Processor-Controlled Mixer-Amplifier

- Eight phantom-powered mic inputs and 10 line inputs configured in six mono and two stereo input channels, each channel with a three-band EQ
- Stereo digital effects processor featuring EV/Dynacord's ARS-10 technology with 16 reverb, delay, chorus and pitch-shift programs
- Stereo, 250-watt processor-controlled amplifier for audibly superior sound quality and system protection
- Stereo tape record and playback controls, separate stereo line input and output controls and a complete patch bay allow extensive signal routing
- Three-year parts-and-labor warranty

SPECIFICATIONS

Conditions:

1. 0 dBV = 1 V rms.
2. Power ratings are for each channel, both operating, unless noted.
3. 120-volt ac line voltage.

Power Output, Left and Right Master Amplifiers,

- 4 Ohms:**
250 watts
- 8 Ohms:**
180 watts

Frequency Response,

- Power Amplifier:**
8-30,000 Hz
- Mixer:**
8-55,000 Hz

Total Harmonic Distortion,

- Power Amplifier (at rated power with a 4-ohm load, 1 kHz):**
<0.03%
- Mixer (at +7 dBV, 20-20,000 Hz):**
<0.08%

Noise,

- Power Amplifier (residual at speaker output with all faders down):**
-93 dBA
- Mixer:**
-122 dBA equivalent input noise (EIN), microphone input with 200-ohm termination

Microphone Inputs,

- Number:**
Eight
- Type/Connector:**
Low impedance, balanced, 3-pin XLR type
- Polarity:**
Pin 2 positive
- Input Impedance:**
2.9 kilohms at 1 kHz

Maximum Input Level:

-2 dBV (0.780 volts)

Peak Indicator Threshold:

-10 dBV (0.310 volts) at minimum gain

Line Inputs,

- Number:**
Six mono; two stereo
- Type/Connector:**
High impedance, unbalanced, 1/4-inch phone jacks
- Polarity:**
Tip positive

Input Impedance:

36 kilohms at 1 kHz

Maximum Input Level:

+18 dBV (7.6 volts)

Input Channel Equalization:

- ±15-dB low cut/boost centered at 50 Hz;
- ±10-dB mid cut/boost centered at 1.5 kHz;
- ±15-dB high cut/boost centered at 15 kHz

Power Amp Inserts (break jacks):

1/4-inch phone-plug sends and returns

Aux/Line/Tape Inputs,

- Type/Connector:**
High impedance, unbalanced, 1/4-inch phone or RCA-type phono jacks
- Polarity:**
Tip positive

Input Impedance:

47 kilohms

Maximum Voltage Gain (±3 dB),

Mic Input to Speaker Output:
86 dB

Line Input to Speaker Output:
68 dB

Mic Input to Master Break Send:
56 dB

Line Input to Master Break Send:
38 dB

Mic Input to Aux Send:

64 dB

Line Input to Aux Send:

46 dB

Mic Input to Line Output:

54 dB

Line Input to Line Output:

36 dB

Mic Input to Tape Record Output:

54 dB

Line Input to Tape Record Output:

36 dB

Line Input to Master Break Send:

10 dB

Aux Return to Master Break Send:

8 dB

Tape Input to Master Break Send:

14 dB

Crosstalk (1 kHz),

Adjacent Inputs:

-79 dB

Input to Output:

-81 dB

Phantom Power:

+48 volts dc at pins 2 and 3 on mic connector

Digital Effects Processor:

16 user-selectable stereo programs

"Busy" Indicators:

An LED on each channel's output display illuminates when the limiter circuit is activated by clipping or current limiting

"TBC" Indicators:

An LED on each channel's output display illuminates when the limiter circuit is triggered by the thermal overload voice-coil model

Power Requirements:

115/230-V ac, 50/60 Hz, 1,100 watts

FIGURE 1 — PSX 850 Overall Dimensions

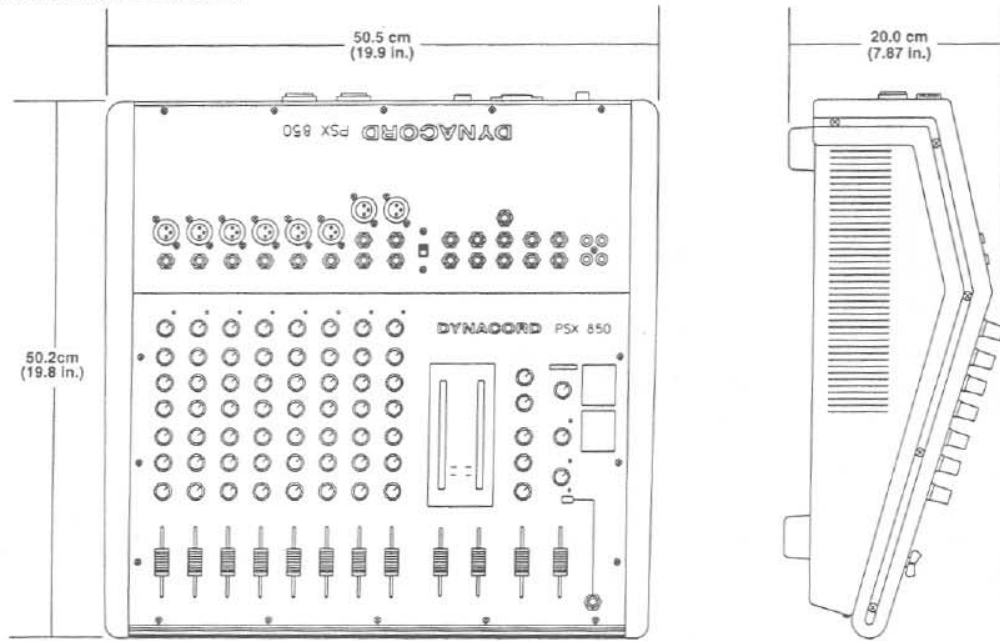


FIGURE 2 — PSX 850 Panel Drawing

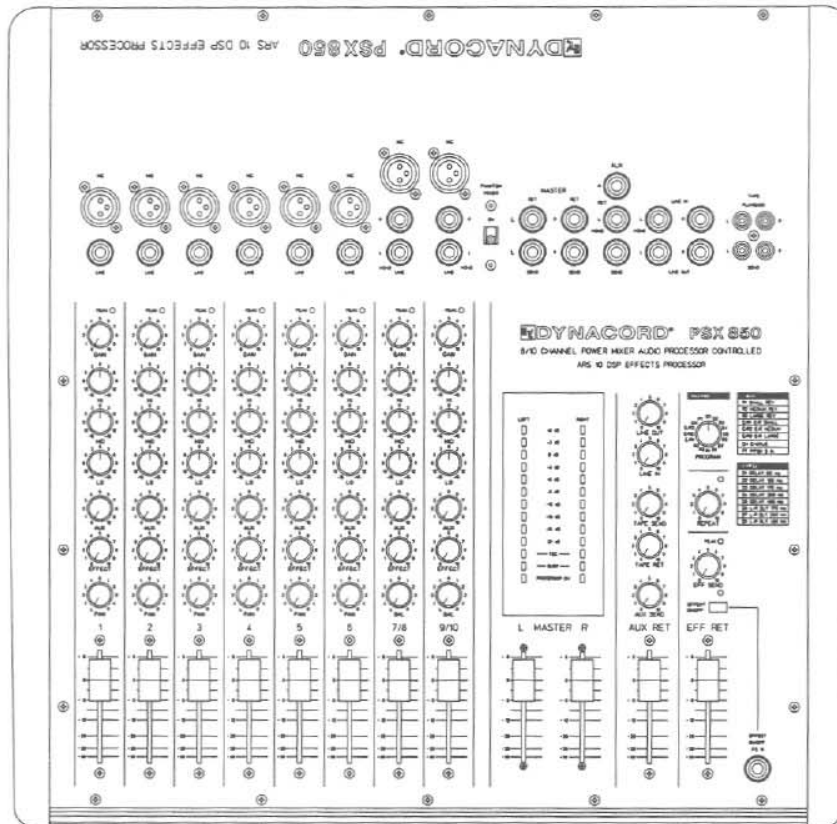
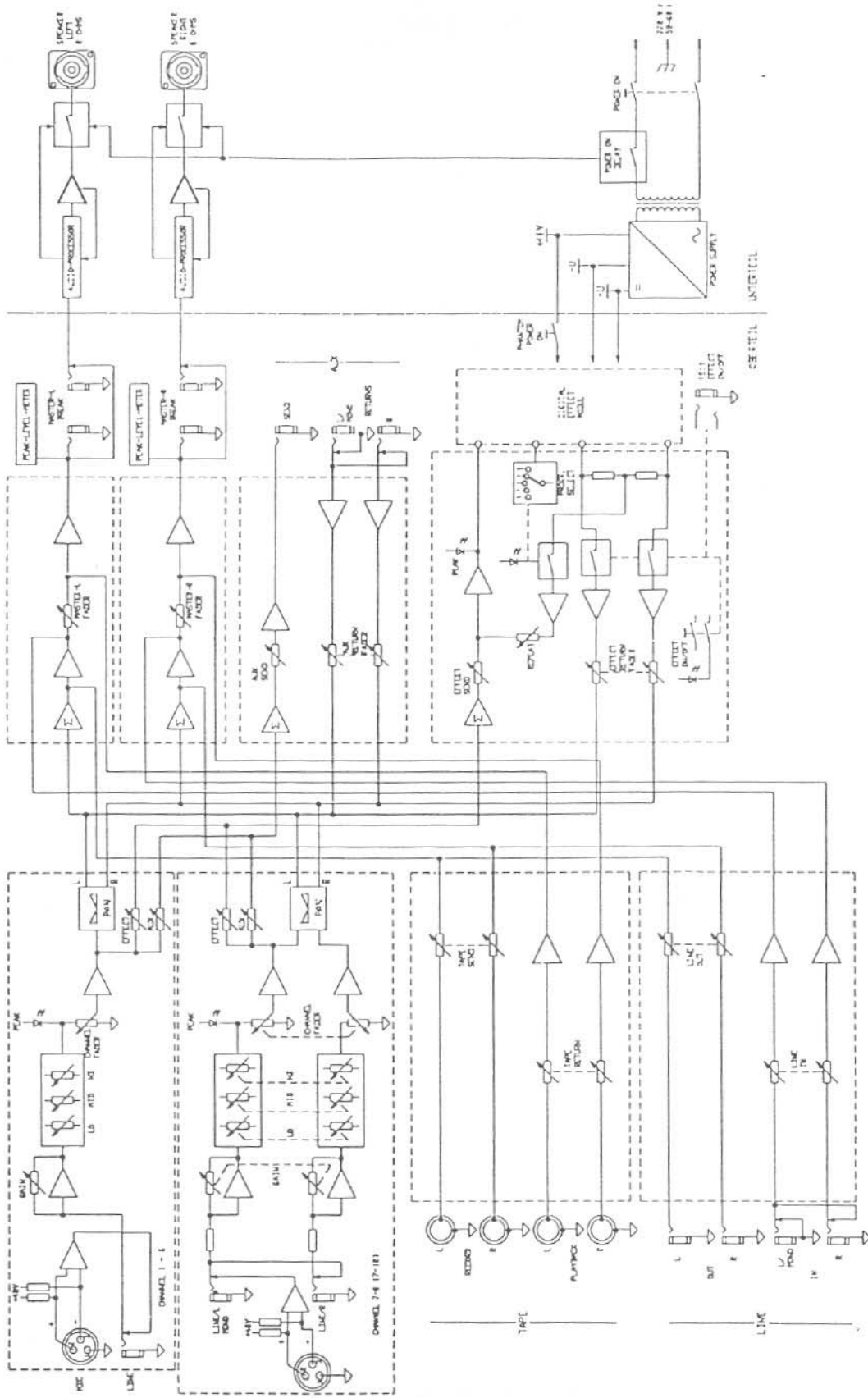


FIGURE 3 — PSX 850 Block Diagram



Dimensions (see Figure 1),

Height:

20.0 cm (7.87 in.)

Width:

50.5 cm (19.9 in.)

Depth:

50.2 cm (19.8 in.)

Net Weight:

19.0 kg (41.9 lb)

Shipping Weight:

22.2 kg (49 lb)

DESCRIPTION

The EV/Dynacord PSX 850 is a compact, high-power stereo mixer/amplifier that offers the performance of sophisticated separate audio components in a single chassis. Its ease of handling and operation coupled with its high performance make it perfect for a wide range of exacting audio applications.

The amplifiers of the PSX 850 utilize EV/Dynacord's proprietary PCA amplifier technology. The amplifiers contain unique audio circuits designed to make any speaker system sound its best, prevent amplifier clipping and ensure that speakers are protected against voice-coil burnout. The high-power MOSFET amplifiers, in combination with the large, heavy-duty power supply and the proprietary Dynamic Signal Processing™ (DSP) circuitry, give the PSX 850 stronger speaker-playing ability than its rating of 250 watts per channel at four ohms would suggest. Neutrik Speakon® output connectors are used to ensure loss-free transfer of signal and maximum safety and reliability.

The mixer section of the PSX 850 has six mono mic/line input channels and two stereo line/mono mic input channels. The stereo input channels allow connection of stereo sources like keyboards, drum machines and tape decks while using up only one input channel. All channels are equipped with a gain control with peak LED, three-band EQ, two post-fader sends (one for effects and one for aux), a pan or balance control and a 60-mm fader. The eight mic inputs have universal 48-volt phantom power.

The master section is equipped very comprehensively with separate control functions for tape playback and record, connection for additional external stereo effects units and a separately controllable stereo aux/line input and output for even more flexibility. The effects and aux returns are on faders to facilitate mixing. A large, 10-segment LED ladder and PCA processor monitors for each channel allow the amplifier status to be easily checked.

The effects section is equipped with a 16-bit digital stereo reverb/delay module based on the Dynacord-developed ARS-10 very-large-scale integrated circuit (VLSIC). The effects unit creates extremely natural sounding stereo reverbs, delays, echoes and a stereo chorus program specially structured for vocals, brass and woodwinds. The number of echo repeats is controllable from the front panel.

The compact PSX 850, with its superior amplifier technology, clean and quiet mixer circuitry and brilliant digital stereo effects is a state-of-the-art integrated mixer/amplifier.

The PSX 850 block diagram is shown in Figure 3. Controls and inputs are shown in Figure 2.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The powered mixer shall be a dual-channel model of solid-state design and capable of operating from a 115/230-volt, 50/60-Hz ac line.

The mixer section shall include eight input channels: six mono mic/line and two mono mic/stereo line. All mic inputs shall be phantom-powerable, 3-pin XLR-type connectors. All line inputs shall be 1/4-inch unbalanced connectors. The input channels shall have the following features: a gain control with a peak LED, three-band EQ, two post-fader sends, a pan or balance control and a 60-mm fader. All controls and faders shall be made by Alps. The mixer shall have an additional stereo line input and output and the effects and aux returns shall be controlled by 60-mm faders. The mixer shall have front-panel-controlled tape record and playback controls and RCA-type phono connectors for these functions.

The mixer section shall meet the following performance criteria: distortion shall be less than 0.08% THD at +7 dBV from 20 Hz to 20 kHz; equivalent input noise -122 dBA and frequency response from 8 Hz to 55 kHz.

The power amplifiers shall utilize high-power MOSFET output devices and meet the following performance criteria: rated output power of 250 watts per channel into 4 ohms at less than 0.03% THD at 1 kHz and 180 watts per channel into 8 ohms. The amplifiers shall include a low-pass network with second-order shelving equalization to improve the phase characteristics of the speakers connected to them. The amplifiers shall include fast-acting limiter circuits to prevent excessive overdrive. The amplifiers shall include a loudspeaker voice-coil modeling circuit connected to the limiter circuits to prevent overheating. The amplifier outputs shall be Neutrik Speakon® NL-4FC.

The powered mixer shall have a 16-bit digital stereo effects unit with 16 high-quality programs comprised of eight delay programs, three reverb programs, three echo/reverb programs, a chorus program and a pitch-shift program.

Dimensions: 20.0 cm (7.87 in.) x 50.5 cm (19.9 in.) x 50.2 cm (19.8 in.) HWD. Net weight: 19.0 kg (41.9 lb).

The stereo powered mixer shall be the EV/Dynacord PSX 850.

WARRANTY (Limited)

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. Exclusions and Limitations: The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives. Obtaining Warranty Service: To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice at 600 Cecil Street, Buchanan, MI 49107 (616/695-6831 or 800/234-6831) and/or Electro-Voice West, at 8234 Doe Avenue, Visalia, CA 93291 (209/651-7777 or 800/825-1242). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Electro-Voice and EV/Dynacord Electronics are guaranteed against malfunction due to defects in materials or workmanship for a period of three (3) years from the date of original purchase. Additional details are included in the Uniform Limited Warranty statement.

Service and repair address for this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107 (616/695-6831 or 800/234-6831).

Specifications subject to change without notice.



ELECTRO-VOICE a MARK IV company **600 Cecil Street, Buchanan, Michigan 49107**

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