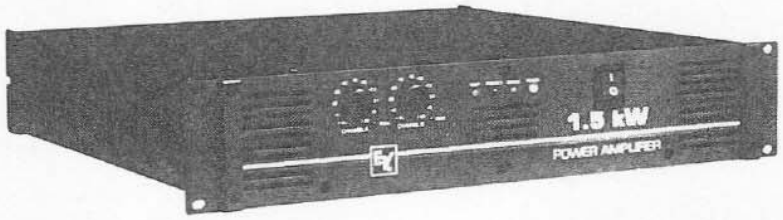
Electro-Voice®

1.5kW

Lightweight Power Amplifier



- 450 watts per channel at 8 ohms, 750 watts per channel at 4 ohms, 1,550 watts per channel at 8 ohms in bridge mode
- Dynamic Signal Processing™ provides excellent low-frequency performance
- Ultralightweight—only 24 pounds
- Conservative thermal design ensures low-operating temperature
- Class H circuitry
- Dual-Mono Construction
- Separate switch-mode power supply for each channel
- Three-year parts-and-labor warranty

Description

The Electro-Voice 1.5kW is a very high-quality amplifier designed to provide maximum sonic quality with minimum weight. Its built-in Dynamic Signal Processing™ extracts maximum performance from any full-range speaker system.

Each channel of the 1.5kW can deliver more than 750 watts into a 4-ohm load, or 450 watts into an 8-ohm load at less than 1% THD at 1 kHz. In bridge mode, the amplifier delivers more than 1,550 watts into an 8-ohm load.

The 1.5kW design features an innovative Class H operation. Class H operation allows a primary compliment of output devices to operate in low-power situations, as larger power requirements are made of the amplifier, a secondary group of output devices are pressed into operation. Class H operation offers the ability to supply large amounts of power with excellent efficiency and reduces the potential for heat buildup inside the amplifier chassis.

The high-speed switch-mode power supplies in the 1.5kW hold the secret to the light weight of the amplifier. Each channel of the amplifier has a separate power supply that switches at a rate of 84,000 times per second, which allows the toroidal transformers to be significantly downsized. The smaller transformers substantially decrease the weight of the amplifier and also lower the amount of heat created inside the amplifier.

Heat is a major contributor to the failure of electronic equipment and the 1.5kW utilizes a thermal system that effectively removes heat from the amplifier. Each channel of the 1.5kW has a totally separate heat sink more than 18 inches in length that runs down each side of the amplifier. Placing the heat sinks on opposite sides of the amplifier chassis avoids creating an area of concentrated heat, and makes removal of heat a much easier job. Each channel is also equipped with a continuously variable speed fan to remove the heat and the fans are quiet enough to be used in noise-sensitive situations.

The 1.5kW employs extensive protection circuitry that guards the amplifier and its load from problems. Protection circuits guard against over-temperature, turn on/off transients, shorted outputs, radio-frequency interference and dc faults.

The operating status of the amplifier is indicated by LED's mounted on the front panel. Each channel has an independent peak indicator. Power on, bridge mode, protection active and excessive heat situations are also individually indicated via an LED on the front panel of the amplifier.

The 1.5kW has electronically balanced combo type input connectors that accept an IEC 268 standard XLR-type connector, or a 1/4-inch phone plug. A parallel connection for routing signal to additional amplifiers is provided by a male XLR-type connector on each channel.

An input routing switch that allows selection of either dual-channel operation or bridge-mode operation of the amplifier is located at the bottom of the rear panel, and when engaged is flush with the panel to prevent accidental bumping of the switch.

Output connectors are heavy-duty binding posts that provide a secure connection via banana plugs, or will accept wire up to 7AWG in size.

Detented potentiometers on the front panel of the 1.5kW regulate the gain of the amplifier. The different levels of attenuation are indicated for each channel..

The Dynamic Signal Processing™ circuitry in

all kW Series amplifiers sets their performance apart from other lightweight amplifiers. Two switches on the rear of the amplifier select the mode of operation of the processor and a pole frequency that should be matched to the tuning of a speaker system. This innovative circuitry ensures that the transient response of a speaker systems low-frequency driver is accurately controlled and any phase distortion is minimized. The three settings available are LPN, B6 and Off. The LPN setting is used for compact, vented speaker systems other than those manufactured by Electro-Voice. It is a second-order shelving equalizer with a pole frequency of 50 Hz. The B6 setting is specifically for Electro-Voice speaker systems and supplies a 6 dB boost at the selected pole frequency that is flawlessly combined with an undamped second-order high-pass filter to provide maximum low-frequency impact and infrasonic protection. The B6 setting offers three different peak-boost frequencies: 26 Hz, 43 Hz and 60 Hz. The box tuning frequency of a speaker system determines which pole frequency is appropriate.

The 1.5kW has been evaluated and tested to applicable ANSI/UL and CSA standards for use in the U.S. and Canada. The NRTL/C mark adjacent to the CSA mark signifies the product meets applicable standards in the U.S. and Canada.

The 24-pound Electro-Voice 1.5kW delivers professional-quality amplification. Long-term reliability and maximum portability make this amplifier the foremost choice among mobile sound professionals.

Architects' and Engineers' Specifications

The power amplifier shall be a dual-channel model of solid-state design employing high-power output devices in a true-complimentary-symmetry output circuit. It shall be capable of operating from a 120 V, 60 Hz or 220/240 V, 50 Hz ac line.

The amplifier shall contain sensing circuitry to provide protection for the output transistors against overtemperature, excessive output voltage, radio-frequency interference, shorted loads and excessive phase shift. The load shall be similarly protected against start up/shutdown transients, low ac line voltage, and dc.

The power amplifier shall contain processing circuitry that will ameliorate the phase and transient response problems of the loudspeaker. The built-in processor shall be capable of being adjusted for the enclosure type and low-frequency characteristics of the connected speaker.

Rear-mounted panel controls shall include an input routing switch for selecting dual/stereo or parallel mono operation and two switches for control of the processor. The processor controls shall include a switch for turning the processor off and selecting the enclosure type and three selectable frequencies for B6 alignment of 60 Hz, 43 Hz and 26 Hz.

Front-panel indicators shall include power on, peak, overtemperature, protect active, and bridge-mode. Front-panel controls shall include a power switch and level controls that shall be detented potentiometers with accurate markings.

The power amplifier shall meet the following performance specifications: maximum input voltage, 7.75 V rms; input voltage for rated output power into 4 ohms, shall be .74 V rms; rated output power per channel, greater than 600 watts into 4 ohms from 20 Hz to 20 kHz at less than 0.10 THD, greater than 350 watts into 8 ohms from 20 Hz to 20 kHz at less than 0.10 THD, greater than 1,200 watts into an 8 ohm bridged load from 20 Hz to 20 kHz at less than 0.10% THD; hum and noise shall be greater than 100 dB (A weighted) below rated output power; frequency response shall be 12 to 60 kHz, +0/-3 dBr, any mode, at any output power up to rated output power; damping factor shall be greater than 200 at any frequency up to 1 kHz in dual mode with an 8 ohm load; intermodulation distortion (SMPTE) shall be less than 0.05% at rated power in any mode into 8 ohms; operating temperature shall be up to 50 °C ambient; channel separation shall be greater than 50 dB.

Dimensions shall be (H x W x D): 88.9 mm (3.5 in.) x 482.6 mm (19 in.) x 469.9 mm (18.5 in.). Net weight shall be 10.88 kg (24 lb). Color: dark gray with white nomenclature.

The 1.5kW has been evaluated and tested to applicable ANSI/UL and CSA standards for use in the U.S. and Canada. The NRTL/C mark adjacent to the CSA mark signifies the product meets applicable standards in the U.S. and Canada.

The power amplifier shall be the Electro-Voice 1.5kW.

Uniform Limited Warranty Statement

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 EVI Audio Service or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to EVI Audio Service 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 EVI Audio Service at 600 Cecil Street, Buchanan, MI 49107 (800/234-6831 or FAX 616/695-4743). **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 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.

For warranty repair, service information, or a listing of the repair facilities nearest you, contact the service repair department at: 616/695-6831 or 800/685-2606.

For technical assistance, contact Technical Support at 800/234-6831 or 616/695-6831, M-F, 8:00 a.m. to 5:00 p.m. Eastern Standard time.

Specifications subject to change without notice.

1.5kW Lightweight Power Amplifier

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Specifications

Conditions:
1. 0 dBu = 0.775 V rms
2. Dual-mode ratings are for each channel, both operating, unless noted
3. 120-volt ac line voltage maintained throughout testing

Rated output power (20 Hz-20,000 Hz at less than 0.1% THD, both channels driven per EIA RS-490).
Dual mode, 4 ohms: 600 watts
Dual mode, 8 ohms: 350 watts
Bridged mode, 8 ohms: 1,200 watts

Rated output power (1 kHz, 1% THD, both channels driven per EIA RS-490).
Dual mode, 4 ohms: 750 watts
Dual mode, 8 ohms: 450 watts
Bridged mode, 8 ohms: 1,550 watts

Power Bandwidth, (at 1 kHz, +0/-1 dBr where dBr equals rated output in any mode): 20-20,000 Hz
Frequency response (+0/-3 dBr, any mode, 1 kHz, 1 watt output): 12 Hz to 60 kHz

Voltage Gain, 1 kHz, Input Level Controls Full Clockwise:
36 dB in 8- or 4-ohm dual-channel mode; 43 dB in 8-ohm bridge mode

Maximum Input Level, 1 kHz:
8 V rms

Input Sensitivity (for rated full band power):
Dual mode, 4 ohms: 0.74 V rms
Dual mode, 8 ohms: 0.78 V rms
Bridge mode, 8 ohms: 0.73 V rms

Input Impedance (per channel, 20 - 20,000 Hz), Balanced:
20,000 ohms

Phase Response (at rated power, any mode):
at 20 Hz < 45 degrees
at 20 kHz > –40 degrees

THD Plus Noise at 1 kHz (at rated power, measurement bandwidth 30 kHz):
<1.0%

IMD at rated power (SMPTE):
0.05%

Slew Rate, Any Mode:
28 V/uSec

Damping Factor, Any Mode:
> 200

Signal to Noise:
> 100 dBr measured below rated output (A weighted)

Channel Separation:
>50 dB

Amplifier Protection:
Shorted loads, rf interference, over temperature

Load Protection:
Start-up/shutdown transients, DC faults

Output topology:
Class H

Output Devices,
Total Number:
eight per channel
Pd (max) Rating:
130 W
Ic (collector current):
15 amps
Tj (max):
150 degree C

Power Consumption (both channels operating, dual mode, with 1 kHz sinewave input signal at stated output power into an 8 ohm load:
Rated output power 1326 watts, 15.97 amps

Controls and Switches,
Rear,
Dynamic Signal Processing™:
LPN, B6, Off; Pole frequency 60 Hz, 43 Hz, 26 Hz
Bridged-Mode Switch:
Bridged/normal
Front,
Power:
On/off
Two detented input level controls

Front-Panel Indicators:
Peak/clip LED on each channel
Four LED's that indicate power, excessive temperature, protect status and bridge mode

Connections,
Input:
Electronically balanced, 3-pin female XLR and 1/4-inch phone combination in parallel with 3-pin male XLR-type output for signal routing to multiple amplifiers; the XLR connectors are wired according to IEC 268 standard with pin 1 shield, pin 2 positive and pin 3 negative.
Output:
Binding post connectors that accept banana plugs or up to 7AWG wire

Power:
12 gauge, 3 wire, permanently attached power cable with plug

Operating Voltage:
120 V, 60 Hz ac or 220/240 V, 50 Hz ac

Dimensions,
Height:
88.9 mm (3.5 in.)
Width:
482.6 mm (19.0 in.)
Depth:
469.9 mm (18.5 in.)

Color:
Dark gray

Net Weight:
24 lb

Shipping Weight:
30 lb

Electro-Voice®
600 Cecil Street, Buchanan, MI 49107
616/695-6831, 616/695-1304 Fax

Part Number 534317 — 9713