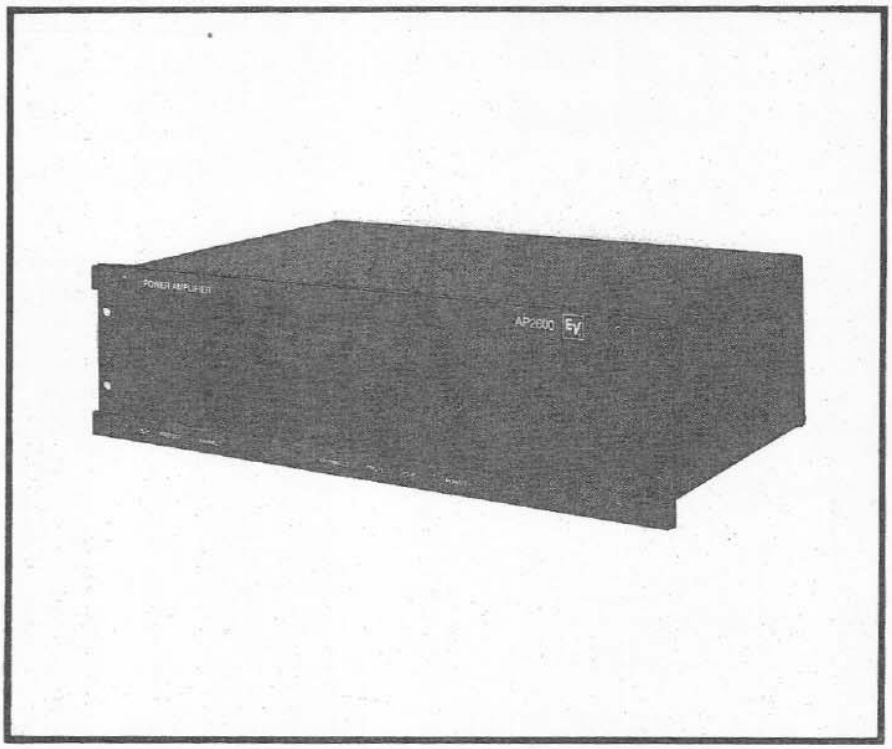

Electro-Voice®
a MARK IV company

Model AP2600
Two-Channel Power Amplifier

SPECIFICATIONS

Conditions:
1. 0 dBu = 0.775 V rms.
2. Dual-mode ratings are for each channel.
3. Both channels operating at rated output power unless noted.
4. 120 volt ac line voltage maintained throughout testing.

Continuous Rated Output Power
(20 Hz, reference 1 kHz),
- Dual Mode, 4 Ohms:
  300 watts at <0.10% THD
- Bridge Mode, 8 Ohms:
  600 watts at <0.10% THD
- Dual Mode, 8 Ohms:
  200 watts at <0.05% THD
- Bridge Mode, 16 Ohms:
  400 watts at <0.05 THD

Maximum Midband Output Power
(reference 1 kHz, 1% THD),
- Dual Mode, 4 Ohms:
  400 watts
- Bridge Mode, 8 Ohms:
  800 watts
- Dual Mode, 8 Ohms:
  250 watts
- Bridge Mode, 16 Ohms:
  500 watts

Dynamic Headroom (reference 1 kHz),
- Dual Mode, 4 Ohms:
  >1.25 dB
- Bridge Mode, 8 Ohms:
  >1.25 dB
- Dual Mode, 8 Ohms:
  >1.0 dB
- Bridge Mode, 16 Ohms:
  >1.0 dB

Power Bandwidth (+0, −3 dB,
reference 0 dB at 1 kHz),
- Dual Mode, 4 Ohms:
  7 Hz-70 kHz
- Bridge Mode, 8 Ohms:
  7 Hz-60 kHz
- Dual Mode, 8 Ohms:
  7 Hz-85 kHz
- Bridge Mode, 16 Ohms:
  7 Hz-65 kHz

Voltage Gain (reference 1 kHz),
- Dual Mode:
  32.0 dB
- Bridge Mode:
  38.0 dB

Input Sensitivity for Rated Output Power
(reference 1 kHz, ±0.3 dB),
- Dual Mode, 4 Ohms:
  0 dBu (0.775 V rms)
- Bridge Mode, 8 Ohms:
  0 dBu (0.775 V rms)
- Dual Mode, 8 Ohms:
  +3 dBu (0.902 V rms)
- Bridge Mode, 16 Ohms:
  +1.3 dBu (0.902 V rms)

Maximum Input Level (reference 1 kHz):
+20 dBu (7.75 V rms)

Input Impedance
(per channel, 20 Hz-20 kHz),
- Balanced:
  >30 kilohms
- Unbalanced:
  >15 kilohms

Phase Response
(at rated output power, any mode),
at 20 Hz:
+15 degrees
at 20 kHz:
−15 degrees

THD (at rated output power),
- Dual Mode, 4 Ohms, 20 Hz-20 kHz:
  <0.10%
- Bridge Mode, 8 Ohms, 20 Hz-20 kHz:
  <0.10%
- Dual Mode, 8 Ohms, 20 Hz-1 kHz:
  <0.01%
- Dual Mode, 8 Ohms, 1 kHz-20 kHz:
  <0.05%
- Bridge Mode, 16 Ohms, 20 Hz-1 kHz:
  <0.01%
- Bridge Mode, 16 Ohms, 1 kHz-20 kHz:
  <0.05%

IMD [SMPTE] (at rated output power),
- Dual Mode, 4 Ohms:
  <0.05%
- Bridge Mode, 4 Ohms:
  <0.05%

Dual Mode, 8 Ohms:
<0.03%
Bridge Mode, 16 Ohms:
<0.03%

TIM [DIM 100] (at rated output power),
- Dual Mode, 4 Ohms:
  <0.05%
- Bridge mode, 8 Ohms:
  <0.05%
- Dual Mode, 8 Ohms:
  <0.03%
- Bridge Mode, 16 Ohms:
  <0.03%

Rise Time
(10% to 90%, at rated output power),
- Dual Mode, 4 Ohms:
  <5 μsec

Bridge Mode, 8 Ohms:
<6 μsec
Dual Mode, 8 Ohms:
<4.5 μsec
Bridge Mode, 16 Ohms:
<5.5 μsec

Slew Rate (at rated output power),
Dual Mode, 4 Ohms:
>20 V/μsec
Bridge Mode, 8 Ohms:
>30 V/μsec
Dual Mode, 8 Ohms:
>30 V/μsec
Bridge Mode, 16 Ohms:
>60 V/μsec

Damping Factor,
Dual Mode, 4 Ohms,
20 Hz-1 kHz: >100
20 kHz: >40
Bridge Mode, 8 Ohms,
20 Hz-1 kHz: >200
20 kHz: >50
Dual Mode, 8 Ohms,
20 Hz-1 kHz: >200
20 kHz: >80
Bridge Mode, 16 Ohms,
20 Hz-1 kHz: >400
20 kHz: >100

Channel Separation (below rated output power, single channel operating):
>80 dB at 1 kHz

Noise (below rated output power, A weighted, any mode):
>100 dB

Amplifier Protection:
Excessive output voltage
Shorted loads
Excessive phase shift
RF interference
Over temperature

Load Protection:
Startup/shutdown transients
dc fault
Infrasonic signals
Low ac line voltage

Cooling,
Heatsink:
Thermally equalized 3/16-inch aluminum, black anodized heatsink
Dual-Speed Fan:
106 CFM (high speed), minimum life rating of 20,000 hours at 72 degrees C, or 43,500 hours at 25 degrees C ambient temperature

Output Topology:
True complementary symmetry

Output Type,
Dual Mode: Unbalanced, each channel
Bridge Mode: Balanced

Output Devices:
Sixteen 250-watt, 250-V/16-A, TO-3 transistors

Controls and Switches:
Input level controls (two), rear
Mode switch, rear
Power switch, front

Front-Panel Indicators:
Power LED
Clip LED's (two)
Protect LED's (two)

Connections,
Input:
6-terminal barrier strip
Female XLR-type connectors (two)
Output:
4-terminal barrier strip
Power:
8-foot, 3-wire, 16-GA power cord with NEMA 5-15 plug

Power Requirements:
100, 120, 200, 220, 240 V ac, 50/60 Hz, 900 watts

Power Consumption/Heat Produced (both channels operating dual mode with 1 kHz input signal at stated output power into 4 ohms, or bridge mode into 8 ohms),
Idle:
130 watts/0.442 kBTU/hr
⅓ Power:
900 watts/2.380 kBTU/hr
½ Power:
1060 watts/2.584 kBTU/hr
Rated Power:
1430 watts/2.822 kBTU/hr
Maximum Midband Power:
960 watts/1.564 kBTU/hr

Operating Temperature Range:
Up to 60 degrees C (140 degrees F) ambient

Dimensions:
13.3 cm (5¼ in.) H x 48.2 cm (19 in.) W x 32.4 cm (12¾ in.) D

Color: Black

Enclosure:
Rack mount chassis
16-GA steel bottom/sides
1/16-inch aluminum top/back
3/16-inch 6061-T6 aluminum front panel

Shipping Weight:
21.8 kg (48 lb)

Net Weight:
17.7 kg (39 lb)

Optional Accessories:
The octal sockets permit a variety of plug-in accessories to be used with the amplifier. The options are listed below.
APM-1 Bridging Input transformer
APM-2 Bridging Input transformer with pad
APL-125 low pass module, 125 Hz
APL-500 low pass module, 500 Hz
APL-800 low pass module, 800 Hz
APL-1250 low pass module, 1250 Hz
APH-125 high pass module, 125 Hz
APH-315 high pass module, 315 Hz
APH-500 high pass module, 500 Hz
APH-800 high pass module, 800 Hz
APH-1250 high pass module, 1250 Hz
APX crossover module, 24 dB/octave, freq. selectable 50 Hz-10 kHz.

Three output transformers for line operation are available.
TR600 600-watt 70-volt line transformer
TR300 300-watt 70-volt line transformer
AT300 300-watt 70-volt line transformer

INSTALLATION

Unpacking

Upon receipt of the unit, inspect the shipping carton for possible damage during transit. If damage is found, notify the transportation company immediately. Should damage occur during shipping, it is the responsibility of the consignee to initiate a claim with the carrier.

***** CAUTION ******

No user serviceable parts inside. Hazardous voltage and currents may be encountered within the chassis. The service information contained within this document is for use only by Electro-Voice, Inc. authorized warranty stations and qualified service personnel. To avoid electric shock, do not perform any servicing unless you are qualified to do so.

DESCRIPTION

As the level of sophistication in power amplifier designs increases, two things typically result: increased cost and reduced reliability. The EV AP2600 two-channel power amplifier utilizes the best proven concepts to provide an ultra reliable amplifier with virtually unmatched performance characteristics. It achieves this success without increased complexity or cost, making it a real value.

Each channel delivers 200 watts of continuous average power into 8 ohms or 300 watts into 4 ohms over full audio frequency range. In the bridge mode, the amplifier can deliver more than 600 watts at less than 0.10% THD.

Sixteen metal output transistors are utilized for a total device power dissipation of 4,000 watts. A dual-speed fan is incorporated as an added reliability measure for the most thermally stressing situations. The massive 3/16-inch heatsink is specially engineered to minimize thermal gradients meaning that all of the transistors will operate at approximately the same temperature. As a result, the amplifier runs cooler than most, enabling it to operate under more adverse environmental conditions without failure. In a typical fixed installation, this means that the long-term reliability is substantially increased.

Each channel is independently protected against . . .

- Over temperature
- Excessive output voltage
- Excessive phase shift
- Radio-frequency interference
- Shorted loads

The load is protected from startup/shutdown transients, infrasonic signals, low ac line voltage, and dc. When a problem is detected, an output relay automatically disconnects the load from the channel and illuminates the Protect LED located on the front panel.

The AP2600 has electronically balanced inputs and accessory sockets for plug-in transformers and electronic modules. The level controls are rear mounted to avoid accidental changes. The universal power transformer permits 100-, 120-, 200-, 220-, and 240-V 50/60 Hz ac operation. The Electro-Voice AP2600 power amplifier is the choice for serious professional installations which demand the highest quality at high power levels for extended periods of time.

Typical key performance characteristics versus frequency are shown in Figures 1 through 3.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The power amplifier shall be a dual-channel model of solid-state design employing true complementary-symmetry output circuitry and capable of operating from a 100/120/200/220/240-V, 50/60-Hz ac line. The amplifier shall contain sensing circuitry to provide protection for the output transistors against over temperature, excessive output voltage, radio-frequency interference, shorted loads, and excessive output phase shift. The load shall be similarly protected against infrasonic signals, startup/shutdown transients, low ac line voltage, and dc.

Rear-mounted panel controls shall include a two-position mode switch for selecting between the dual monophonic mode or the bridged monophonic mode, and individual input level controls. Input connections for each channel shall include an octal socket for use with an optional plug-in input bridging transformer or electronic accessory modules, a 3-pin female XLR-type connector, and a barrier-strip connector. Output terminals shall be a barrier-strip connector.

Front panel indicators shall include an illuminated power on/off indicator, individually illuminated clipping indicators (Clip), and individually illuminated protection-circuit-activation indicators (Protect). The front panel control shall be the power on/off switch.

The power amplifier shall meet the following performance criteria. Maximum input voltage: 7.75 V rms. Input voltage for rated output power into 4 ohms: 0.775 rms. Rated output power channel: 300 watts into 4 ohms from 20 Hz to 20 kHz at less than 0.10% THD; 200 watts into 8 ohms from 20 Hz to 20 kHz at less than 0.05% THD; 400 watts into 16-ohm bridged load from 20 Hz to 20 kHz at less than 0.10% THD with channel 1 driven. Voltage amplication in dual mode: 32.9 dB. Hum and noise: at least 100 dB (A weighted) below rated output power. Frequency response: 20 Hz to 20 kHz, ±1 dB at any output power up to rated output power. Damping factor: greater than 200 at any frequency up to 1 kHz in dual mode with 8-ohm load.

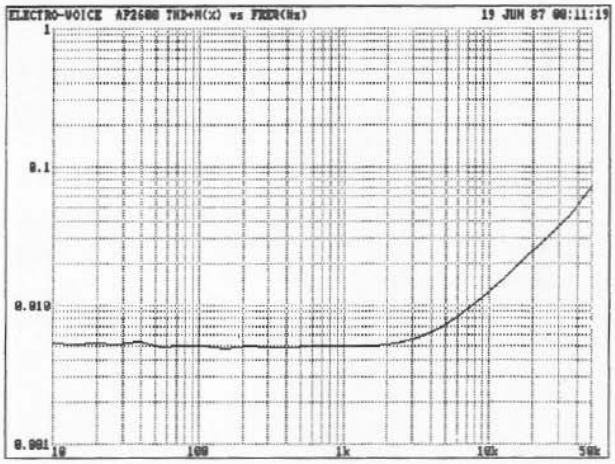

FIGURE 1
Total Harmonic Distortion (plus noise) vs Frequency (one channel operating at rated output into 8 ohms)

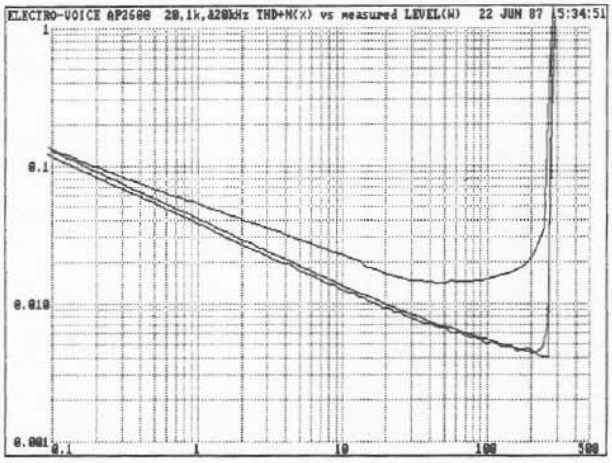

FIGURE 2
THD (plus noise) vs Output Power at 20 Hz, 1 kHz, and 20 kHz (one channel operating into 8 ohms)

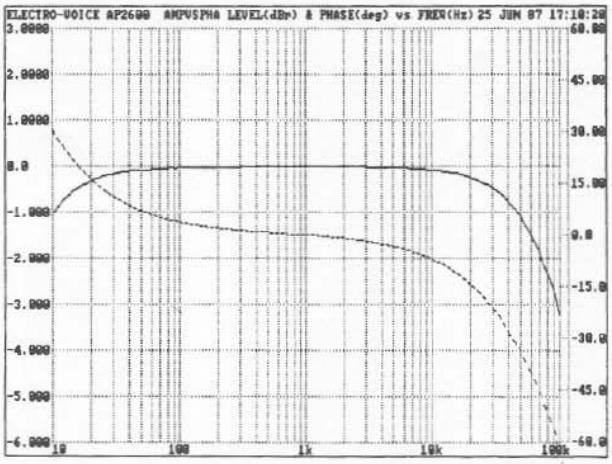

FIGURE 3
Amplitude and Phase vs Frequency (one channel operating at rated output into 8 ohms)

Transient intermodulation distortion (DIN 100): less than 0.03% in dual mode into 8 ohms. Intermodulation distortion (SMPTE): less than 0.03% in dual mode into 8 ohms. Crosstalk: less than 80 dB below rated output power. Operating temperature range: up to 60 degrees C (140 degrees F) ambient. Dimensions: 5¼" H x 19" W x 12¾" D. Net weight: 39 pounds. Color: black. Enclosure: rack mounted chassis; 16GA steel bottom/sides; 1/16" aluminum top/back; 3/16" 6061-T6 aluminum front panel.

The power amplifier shall be the Electro-Voice AP2600.

WARRANTY (Limited)
Electro-Voice Professional Sound Reinforcement Electronic Components are guaranteed for two years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to the proper Electro-Voice service facility. Unit will be returned prepaid. Warranty does not extend to finish, appearance items or malfunction due to abuse or operation under other than specified conditions, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than Electro-Voice or its authorized service agencies will void this guarantee. A list of authorized service centers is available from Electro-Voice, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831); or Electro-Voice West, 8234 Doe Avenue, Visalia, CA 93291 (AC/209-651-7777) and/or Electro-Voice, 10500 West Reno, Oklahoma City, OK 73125 (AC/405-324-5311). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Service and repair address for this product: Electro-Voice, Inc., 10500 West Reno, Oklahoma City, OK 73125.

Specifications subject to change without notice.

ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107
MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ GANANOQUE, ONT.

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