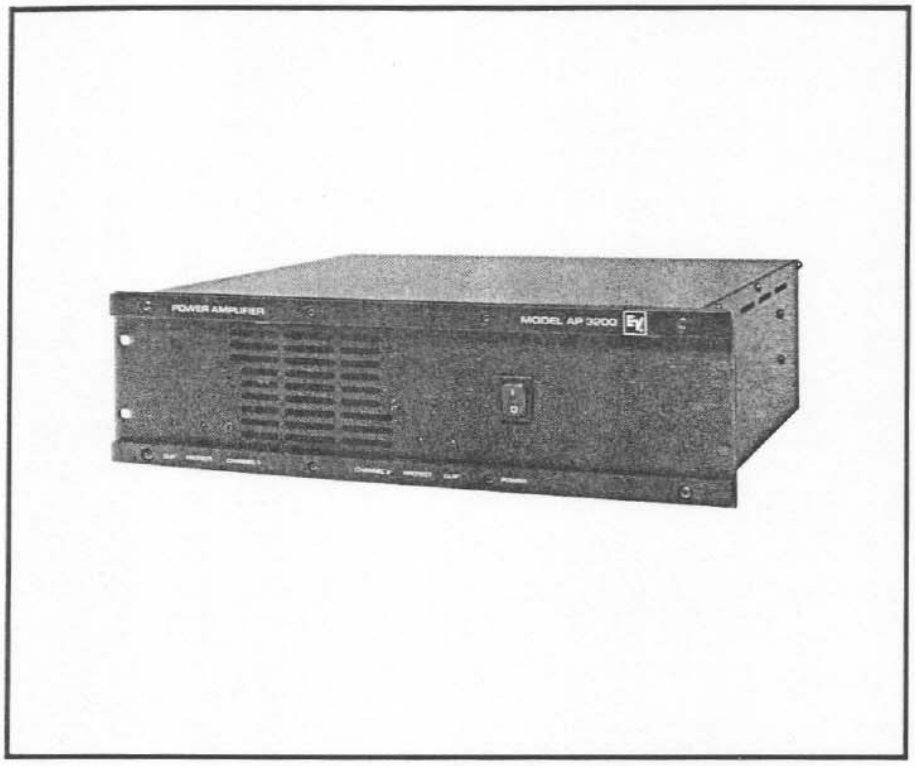


Electro-Voice®
a MARK IV company

Model AP3200 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-20 kHz, 30 kHz measurement bandwidth),
- Dual Mode, 4 Ohms:
  600 watts/ch at <0.10% THD
- Bridge Mode, 8 Ohms:
  1200 watts at <0.10% THD
- Dual Mode, 8 Ohms:
  400 watts/ch at <0.05% THD
- Bridge Mode, 16 Ohms:
  800 watts at <0.05% THD

Continuous Rated Output Power to Subwoofer
(20 Hz-1 kHz at less than 0.1% THD),
- Dual Mode, 4Ω: 650 watts/ch
- Bridge Mode, 8Ω: 1300 watts
- Dual Mode, 8Ω: 420 watts/ch
- Bridge Mode, 16Ω: 840 watts

Maximum Midband Output Power
(reference 1 kHz, 1% THD),
- Dual Mode, 4 Ohms:
  725 watts/ch
- Bridge Mode, 8 Ohms:
  1450 watts
- Dual Mode, 8 Ohms:
  450 watts/ch
- Bridge Mode, 16 Ohms:
  900 watts

Dynamic Headroom
(reference 1 kHz, 1% THD),
- Any Mode:
  ≥0.25 dB

Power Bandwidth (+0, −1 dB, reference 0 dB at 1 kHz, where 0 dB ref. = rated output power in any mode),
20 Hz-20 kHz

Frequency Response (ref. 1 kHz, 1 watt output, +0, −3 dB):
10 Hz - 90 kHz

Voltage Gain (reference 1 kHz),
- Dual Mode, 4 or 8 Ohms:
  36 dB
- Bridge Mode, 8 or 16 Ohms:
  42 dB

Input Sensitivity for Rated Output Power
(reference 1 kHz),
- Dual Mode, 4 Ohms:
  +0.2 dBu (0.79 V rms)
- Bridge Mode, 8 Ohms:
  +0.2 dBu (0.79 V rms)
- Dual Mode, 8 Ohms:
  +1.4 dBu (0.91 V rms)
- Bridge Mode, 16 Ohms:
  +1.4 dBu (0.91 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:
  < +25 degrees
- at 20 kHz:
  > −15 degrees

THD (at rated output power, 30 kHz measurement bandwidth),
- Any Mode:
  <0.10%

IMD [SMPTE 4:1] (at rated output power),
- Any Mode:
  <0.05%

TIM [DIN 100] (at rated output power),
- Any Mode:
  <0.05%

Rise Time
(10% to 90%, at rated output power),
- Any Mode:
  <6 μsec

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

Damping Factor,
- Dual Mode, 8 Ohms,
  - 20 Hz-1 kHz: >250
  - 20 kHz: >75

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

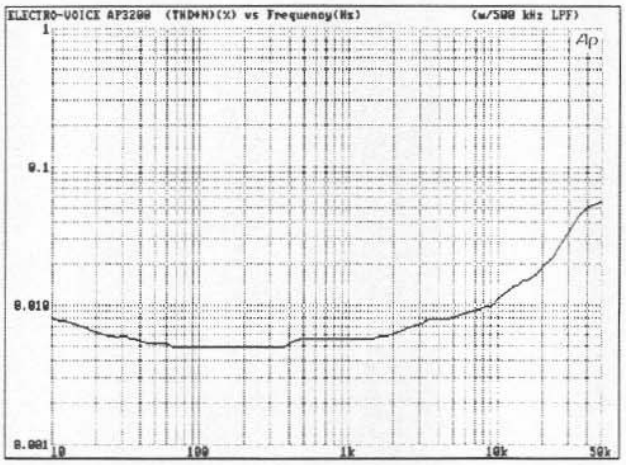
Amplifier Protection:
- Excessive output voltage
- Shorted loads
- Excessive phase shift
- RF inteference
- Over temperature

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

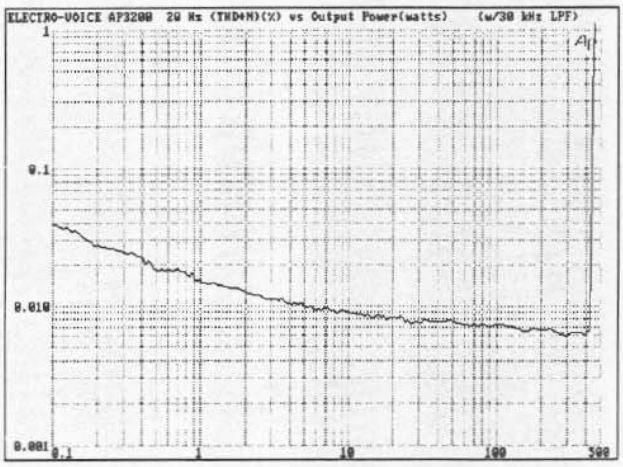
Cooling:
- 2-speed fan

Output Topology:
- True complementary symmetry

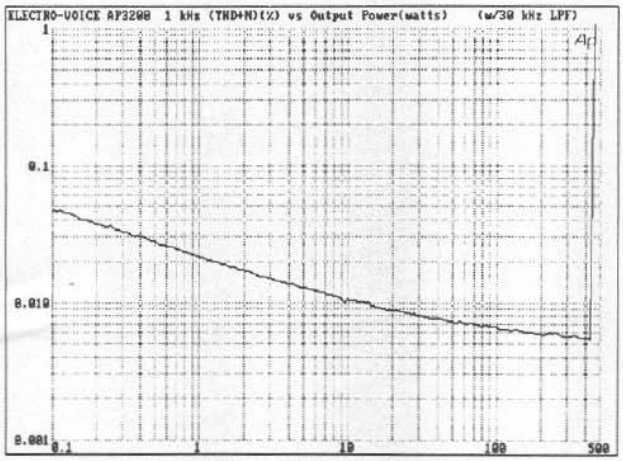
Output Type,
- Dual Mode: Unbalanced, each channel
- Bridge Mode: Balanced



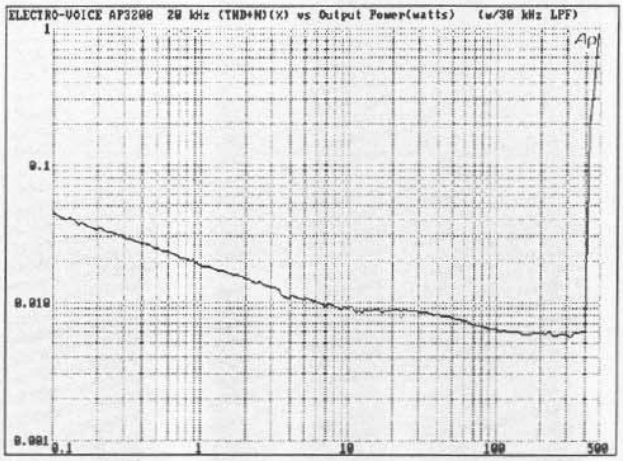
THD + NOISE VS. FREQUENCY



THD + NOISE VS. POWER (20 Hz)

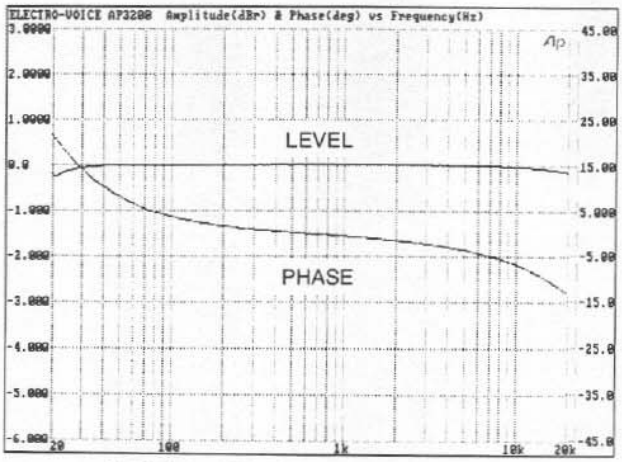


THD + NOISE VS. POWER (1 kHz)



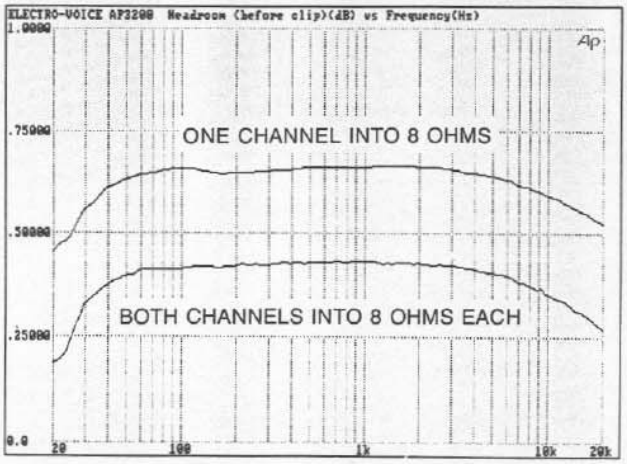
THD + NOISE VS. POWER (20 kHz)

FIGURE 1 — THD + Noise vs. Frequency/Power (one channel operating at rated output into 8 ohms)



LEVEL + PHASE VS. FREQUENCY

FIGURE 2 — Level + Phase vs. Frequency (one channel operating at rated output into 8 ohms)



HEADROOM BEFORE CLIPPING VS. FREQUENCY

FIGURE 3 — Headroom in dB vs. Frequency (0.0 dB referenced to 400-watt output power)

Output Devices (32, both channels),
Pd_{max}: 250 watts
Ic: 16 A dc
Vceo: 250 V dc
Tj_{max}: 200°C (392°F)

Controls and Switches,
Input Level Controls (two)-Rear:
Continuously variable
Dual/bridged 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)
Octal accessory sockets (two)
Output:
4-terminal barrier strip
Power:
3-terminal IEC ac line receptacle

Power Requirements:
120 V ac, 50/60 Hz, 1800 watts
(configurable to 240 V ac)
100 V ac, 50/60 Hz model available

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),
⅓ Power:
1800 watts/4.465 kBTU/hr
Rated Power:
2520 watts/4.488 kBTU/hr
Maximum Midband Power:
2700 watts/4.216 kBTU/hr

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

Dimensions,
Height: 13.3 cm (5.25 in.)
Width: 48.3 cm (19 in.)
Depth: 40.8 cm (15.75 in.)

Color:
Black

Enclosure:
Rack mount chassis
16-GA steel
3/16-inch 6061-T6 aluminum front panel

Shipping Weight:
28.1 kg (62 lb)

Net Weight:
23.6 kg (52 lb)

Supplied Items:
One owner's manual
One detachable power cord
Four "U" jumper plugs for octal sockets

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 with optional resistive padding
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 two-way crossover module, 24 dB/octave, freq. selectable 50 Hz-10 kHz.
APX-2 crossover module, as APX with separate high-pass output for other amplifiers
CX1 two-way crossover module, 24 dB/octave, switch-selectable high-frequency attenuation and 500 or 800 Hz crossover, resistive-selectable other crossover frequencies, and choice of modules for horn EQ and low-frequency signal delay
Five output impedance matching devices are available:
TR150 150-watt 70-volt line transformer
TR300 300-watt 70-volt line transformer
TR600 600-watt 70-volt line transformer
AT300 300-watt multi-tap auto-transformer
AT100 100-watt multi-tap auto-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

The AP3200 is a dual-channel power amplifier for professional sound reinforcement.

Each channel delivers 400 watts of continuous average power into 8 ohms or 600 watts into 4 ohms over full audio frequency range. In the bridge mode, the amplifier can deliver more than 1200 watts at less than 0.10% THD into 8 ohms.

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 AP3200 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 standard power transformer permits operation at 120/240 V ac, 50/60 Hz. A 100-V-ac, 50/60-Hz model is available. The Electro-Voice AP3200 power amplifier is the choice for serious professional installations which demand the highest quality at high power levels for extended periods of time.

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 120/240 V ac, 50/60 Hz ac line. 100 V ac, 50/60 Hz is available. 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, start-up/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: 0.79 Vrms. Rated output power per channel: 600 watts into 4 ohms from 20 Hz to 20 kHz at less than 0.10% THD; 400 watts into 8 ohms from 20 Hz to 20 kHz at less than 0.05% THD; 1200 watts into an 8-ohm bridged load from 20 Hz to 20 kHz at less than 0.10% THD with channel #1 driven. Voltage amplication in dual mode: 36 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 250 at any frequency up to 1 kHz in dual mode with 8-ohm load.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS (continued)

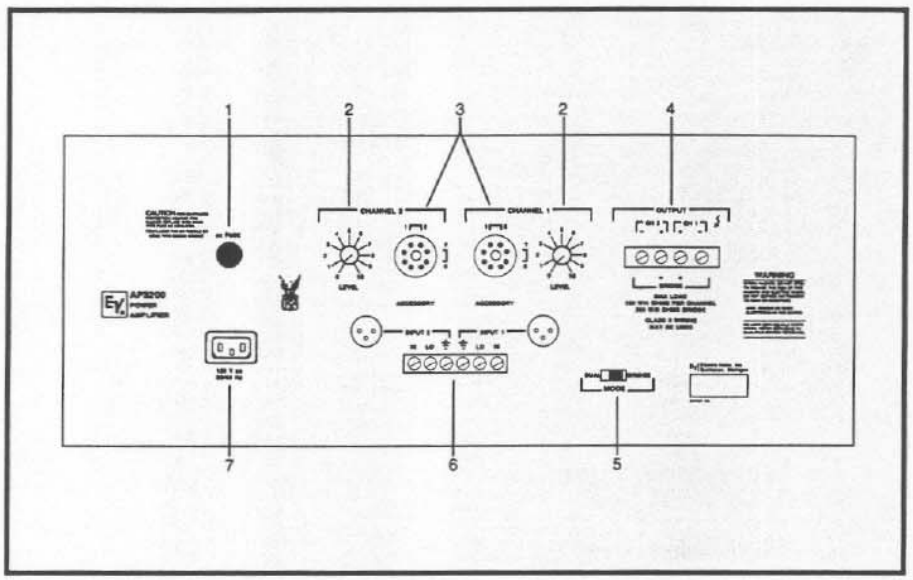
Transient intermodulation distortion (DIN 100): less than 0.05% in dual mode into 8 ohms. Intermodulation distortion (SMPTE): less than 0.05% in dual mode into 8 ohms. Crosstalk: more than 80 dB below rated output power. Operating temperature range: up to 60 degrees C (140 degrees F) ambient. Dimensions: 5.25"Hx19"Wx 15.75"D. Net weight: 52 pounds. Color: black. Enclosure: rack mounted chassis; 16GA steel bottom/sides; 3/16" 5052 aluminum front panel.

The power amplifier shall be the Electro-Voice AP3200.

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). This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Specifications subject to change without notice.



BACK PANEL LAYOUT

Figure 4 illustrates the items described below:

1. AC FUSE RECEPTACLE: This holder requires a Littelfuse type 3AB, 15 amp, 1250-volt SLO-BLO® 326 series ceramic cartridge body, or equivalent

   SLO-BLO® is a registered trademark of Littelfuse, Inc.

2. INPUT ATTENUATORS: These controls adjust the input levels for both channels.

3. ACCESSORY SOCKETS: These octal sockets allow the use of several accessories. See the SPECIFICATIONS section for a listing of all compatible accessories.

4. CHANNEL OUTPUT CONNECTIONS: This terminal strip is for speaker connections, either in the dual or bridge mode.

5. MODE SWITCH: This switch enables either the dual or bridge mode of operation.

6. CHANNEL INPUT CONNECTIONS: Differential input connections can be made to either the terminal strip or the XLR-type connectors.

7. POWER CORD RECEPTACLE: This receptacle is for the supplied three-prong male power cord.

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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