



**Electro-Voice®**  
a MARK IV company

## 7300A Power Amplifier

### SPECIFICATIONS

#### Conditions:

1. 0 dBu = 0.775 volts rms.
2. Dual-mode ratings are for each channel, both channels operating.
3. Both channels operating at rated output power unless noted.
4. 120-volt ac line input voltage maintained for all tests unless noted.

#### Continuous Rated Output Power (20 Hz-20 kHz at less than 0.1% THD),

- Dual Mode, 4 Ohms:  
300 watts
- Bridge Mode, 8 Ohms:  
600 watts
- Dual Mode, 8 Ohms:  
200 watts
- Bridge Mode, 16 Ohms:  
400 watts

#### Continuous Rated Output Power to Subwoofer (20 Hz-1 kHz at less than 0.1% THD),

- Dual Mode, 4 Ohms,  
375 watts
- Bridge Mode, 8 Ohms:  
750 watts
- Dual Mode, 8 Ohms:  
225 watt
- Bridge Mode, 16 Ohms:  
450 watts

#### Maximum Midband Output Power (reference 1 kHz, 1% THD, 120-volts ac line voltage),

- Dual Mode, 4 Ohms:  
>400 watts
- Bridge Mode, 8 Ohms:  
>800 watts
- Dual Mode, 8 Ohms:  
>250 watts
- Bridge Mode, 16 Ohms:  
>500 watts

#### Maximum Midband Output Power (reference 1 kHz, 1% THD, 108 volts ac (10% sag)),

- Dual Mode, 4 Ohms:  
>325 watts
- Bridge Mode, 8 Ohms:  
>650 watts
- Dual Mode, 8 Ohms:  
>200 watts
- Bridge Mode, 16 Ohms:  
>400 watts

#### Maximum Midband Output Power (reference 1 kHz, 1% THD, 100 volts ac (17% sag)),

- Dual Mode, 4 Ohms:  
>230 watts
- Bridge Mode, 8 Ohms:  
>460 watts
- Dual Mode, 8 Ohms:  
>175 watts
- Bridge Mode, 16 Ohms:  
>350 watts

#### Headroom (before clipping) reference 1 kHz, 1 % THD, any mode: ≥1 dB

#### Frequency Response (reference 1 kHz, 1 watt output, +0/-3 dB): 10 Hz-90 kHz

#### Power Bandwidth (reference 1 kHz, +0/-1 dB where 0 dB = rated output power in any mode): 20 Hz-20 kHz

#### Voltage Gain, (reference 1 kHz),

- Dual Mode, 4 Ohms or 8 Ohms:  
33 dB
- Bridge Mode, 8 Ohms or 16 Ohms:  
39 dB

#### Input Sensitivity for Rated Output Power, (reference 1 kHz, ±0.15 dB),

- Dual Mode, 4 Ohms:  
+0.1 dBu (0.78 V rms)

#### Bridge Mode, 8 Ohms: +0.1 dBu (0.78 V rms)

#### Dual Mode, 8 Ohms: +1.2 dBu (0.89 V rms)

#### Bridge Mode, 16 Ohms: +1.2 dBu (0.89 V rms)

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

#### Input Impedance (reference 1 kHz): Balanced:

15 kilohms

#### Unbalanced:

15 kilohms

#### Polarity:

Positive-going signal applied to pin 2 of  
XLR or tip of 1/4-in. TRS jack produces  
positive-going signal at (+) output  
terminal.

#### Phase Response (any mode):

- 20 Hz: <+25°
- 20 kHz: >-15°

#### THD (any mode, 30-kHz measurement band- width),

Maximum:  
<0.05%

Typical:  
<0.01%

#### IMD (SMPTE 4:1) any mode:

Maximum:  
<0.05%

Typical:  
<0.01%

#### TIM (DIM 100), any mode: <0.05%

#### Rise Time, 10% to 90%, any mode): <6μsec

#### Slew Rate,

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 -1,000 Hz:

>200

20,000 Hz:

>75

**Crosstalk (reference 1 kHz, 0 dBr = rated output power into 8 ohms, single channel operating):**

<75 dBr

**Noise (below rated output power, A-weighting filter, 8 Ohm dual mode, 50/60 Hz ac line):**

>100 dB

**Amplifier Protection:**

Shorted output terminals  
Over temperature,  
RF interference

**Load Protection:**

Startup/shutdown transients,  
dc faults,  
Infrasonic signals

**Cooling,**

**Heatsink:**

Thermally equalized 3/16-in.  
black anodized aluminum

**Fan:**

Thermostatically controlled  
dual speed, approximately 50 CFM  
at low speed and 100  
CFM at high speed;  
ball bearing fan has  
minimum life rating of  
50,000 hours at 25° C  
ambient temperature

**Output Topology:**

True complementary  
symmetry with grounded  
collectors (no mica insulators  
means better heat transfer)

**Output Type,**

**Dual Mode:** Unbalanced, each channel

**Bridge Mode:** Balanced

**Output Devices:**

Total number: 16 devices  
P<sub>dm</sub> rating: 250 watts  
V<sub>ceo</sub>: 250 volts DC  
I<sub>c</sub>: 16 amps DC  
T<sub>jmax</sub>: 200° C

**Controls and Switches:**

Rear: Mode switch  
Front: Two input level controls; power  
switch

**Front-Panel Indicators:**

Power LED  
Clip LED's (two)  
Protect LED's (two)

**Connections,**

**Input:**

1/4-in. phone jacks (two),  
Female XLR-type connectors (two)  
Octal accessory sockets (two),  
powered with  $\pm 15$  volts DC at  
25 mA

**Output:**

5-way binding posts (two)

**Power:**

3-terminal IEC ac line receptacle

**Power Requirements:**

120 V ac, 50/60 Hz, 1000 watts  
(configurable to 240 V ac)

100-V, 50/60-Hz model available

**Minimum ac Operating Voltage (at reduced power output, 120-V nominal line):**

90 volts

**Power Consumption/Heat Produced:**

(both channels operating in dual mode  
with 1 kHz input signal at stated output  
power into 4 Ohm loads)

**Idle:**

72 watts/0.245 KBTU/h

**1/8th max midband power:**

720 watts/2.100 KBTU/h

**1/3rd max midband power:**

1,068 watts/2.702 KBTU/h

**Rated output power:**

1,464 watts/2.938 KBTU/h

**Max midband power:**

1,680 watts/2.873 KBTU/h

**Maximum Ambient Operating Temperature:**

60° C (140° F)

**Dimensions Overall,**

Height: 13.3 cm (5.25 in.)

Width: 48.3 cm (19 in.)

Depth (behind rack ears): 33 cm (13 in.)

**Shipping Weight:**

19.1 kg (42 lb)

**Net Weight:**

15.5 kg (34 lb)

**Color:**

Black

**Enclosure:**

16-GA steel rack-mount chassis  
3/16-in. 5052 aluminum alloy front panel

**Supplied Items:**

Operating instructions and  
service manual  
Four "U" jumper plugs for octal sockets  
One detachable power cord  
One 5-A/250-V fuse for 220/240-V use

**Optional Plug-In Accessory Modules:**

APX 24-dB-per-octave Linkwitz-Riley  
crossover, switch selectable on ISO  
1/3-octave center frequencies from  
50-10,000 Hz

APX-2 crossover, as APX but with  
external high-pass output for other  
amplifiers

APX-200 dual-channel equalizer for FR200  
and S-200 speaker systems

**DESCRIPTION**

The EV 7300A utilizes proven design  
concepts in conjunction with a new protection  
circuit to provide the musician an ultra-  
reliable amplifier with unmatched perform-  
ance characteristics. It achieves this without  
increased complexity or cost, making it a real  
value.

Each channel delivers 250 watts of continu-  
ous average power at 1 kHz into 8 ohms, or  
400 watts into 4 ohms. In the bridge mode,  
the amplifier can deliver more than 800 watts  
at 8 ohms.

Sixteen 250-watt, 250-volt metal output trans-  
istors are utilized for a total device power  
dissipation of 4,000 watts. A very quiet dual-  
speed fan is incorporated as an added  
reliability measure for the most demanding  
conditions. The massive 3/16-inch heatsinks  
specially engineered to minimize thermal  
gradients, meaning that all of the output  
devices will operate at approximately the  
same temperature. As a result, the amplifier  
runs cooler than most, enabling it to operate  
under the most adverse conditions without  
failure.

Each channel is independently protected

against...

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

The load is also protected from startup/shut-  
down transients, infrasonic signals, low ac  
line voltage and dc.

The proprietary "Output Z protection" circuit  
guards against premature current limiting  
and flyback pulses and assures the amplifier  
is stable with any load regardless of its reac-  
tance.

The 7300A has electronically balanced  
inputs (both XLR and 1/4-inch TRS) and un-  
balanced 1/4-inch inputs. It also has octal  
accessory sockets for Electro-Voice  
modules. The output connectors are five-way  
binding posts. The transformer allows  
operation at 120 V ac and is configurable to  
220/240 V ac, 50/60 Hz. A dedicated 100-V-  
ac model is available. The power cable is  
removable and utilizes an IEC connector.

Typical performance characteristics are  
shown in Figures XX to YY and each  
amplifier is measured for power and  
distortion before shipment. The EV 7300A is  
usable in any situation that demands high  
power levels and superior sonic perform-  
ance.

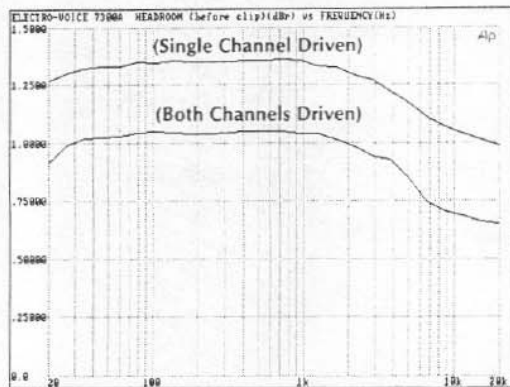
**ARCHITECTS' AND ENGINEERS'  
SPECIFICATIONS**

The power amplifier shall be a dual-channel  
model of solid-state design employing true  
complementary-symmetry output circuitry  
with grounded collectors and capable of  
operating from a 120/240-volts-ac, 50/60-Hz  
line. The amplifier shall contain sensing  
circuitry to provide protection against over  
temperature, shorted output terminals, and  
radio frequency interference. The load shall  
be protected against infrasonic signals,  
startup/shutdown transients, and dc faults.

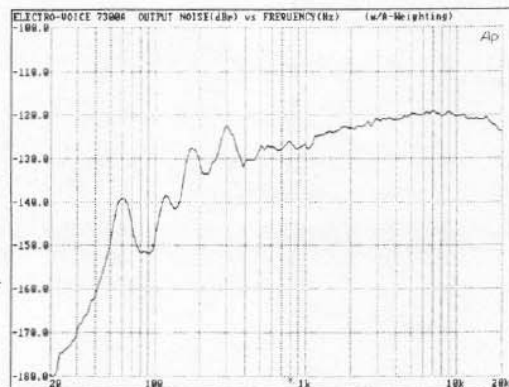
On the rear panel shall be a two-position  
mode switch for selecting between the dual-  
channel mode or the bridged monophonic  
mode. Input connections for each channel  
shall include a powered octal accessory  
socket for use with optional plug-in accessory  
modules, a three-pin female XLR connector  
and a 1/4-in. TRS connector. Output terminals  
shall be binding posts.

Front panel indicators shall include an illumi-  
nated power on/off indicator, individually illu-  
minating clipping ("CLIP") indicators, and in-  
dividually illuminated protection-circuit-  
activation ("PROTECT") indicators. The front  
panel controls shall include two detented  
rotary potentiometers and the power on/off  
switch.

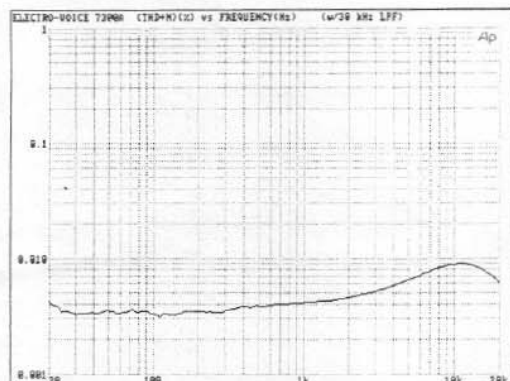
The power amplifier shall meet the following  
performance criteria. Maximum input voltage:  
7.75 V rms. Input sensitivity for rated output  
power into 4 ohms: 0.784 V rms. Rated  
power: 300 watts per channel into 4 ohms  
from 20 Hz to 20 kHz at less than 0.05%



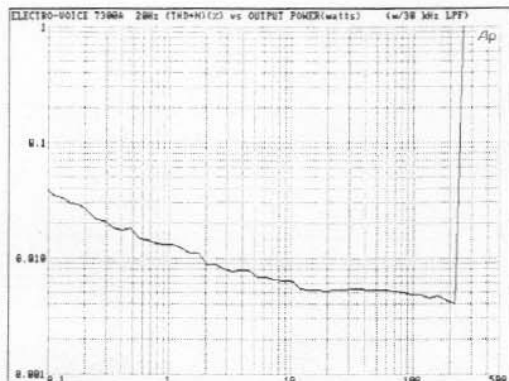
Headroom LEVEL (dBu) vs Frequency (Hz)



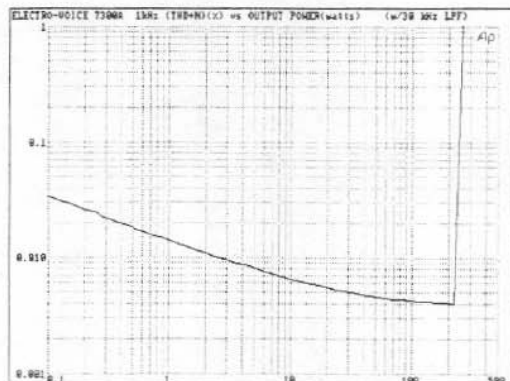
A-weighted Noise (dBr) vs Frequency (Hz)



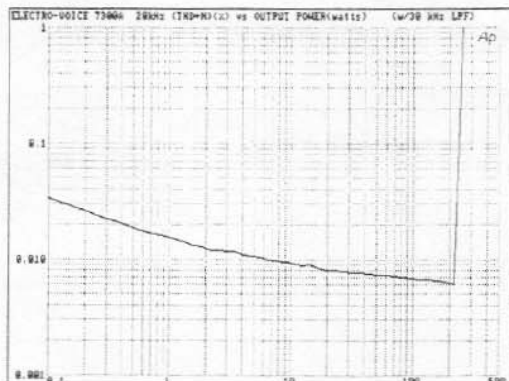
(THD+N) (%) vs Frequency (Hz)



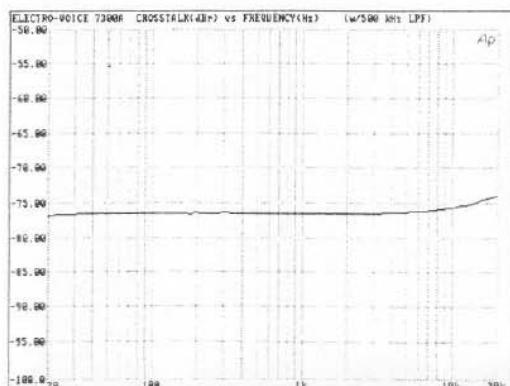
20 Hz (THD+N) (%) vs Output Power (W)



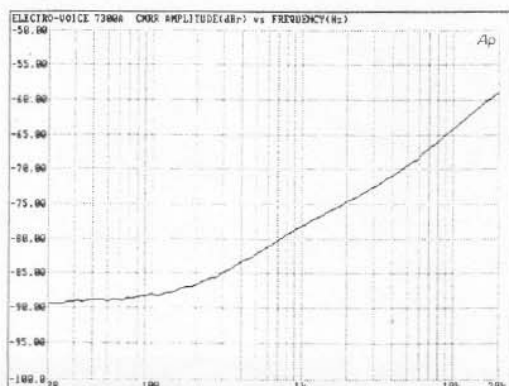
1 kHz (THD+N) (%) vs Output Power (W)



20 kHz (THD+N) (%) vs Output Power (W)



Crosstalk (dB) vs Frequency (Hz)



CMRR (dBr) vs Frequency (Hz)

THD; 200 watts per channel into 8 ohms from 20 Hz to 20 kHz at less than 0.05% THD; 400 watts into a 16-ohm bridged load from 20 Hz to 20 kHz at less than 0.05% THD; and 600 watts into an 8-ohm bridged load from 20 Hz to 20 kHz at less than 0.05% THD. Voltage gain in dual mode shall be 33 dB. Hum and noise: at least 100 dB (A weighted) below rated output power. Frequency response: 20 Hz to 20 kHz, +0/-1 dB at any power up to rated output power. Damping factor: greater than 200 at any frequency up to 1 kHz in dual mode with 8 ohm loads. Intermodulation distortion (SMPTE 4:1): less than 0.05%. Transient intermodulation distortion (DIM 100): less than 0.05%. Crosstalk: less than 75 dB below rated output power. Operating temperature range: up to 60° C (140° F) ambient. Dimensions: 5.25 in. H x 19 in. W x 13 in. D. Net weight: 34 pounds. Color: black. Enclosure: rack-mounted chassis, 16 GA steel, 3/16-inch 5052 aluminum alloy front panel.

The power amplifier shall be the Electro-Voice 7300A.

#### **WARRANTY (Limited)**

Electro-Voice products are guaranteed against malfunction due to defects in materi-

als 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) and/or Electro-Voice West, at 8234 Doe Avenue, Visalia, CA 93291 (209/651-7777). **Incidental and Consequential Damages Excluded:** Product repair or replacement and return to the customer are 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.

Service and repair of this product: Electro-Voice, Inc., 600 Cecil Street, Buchanan, Michigan 49107.

Specifications subject to change without



**ELECTRO-VOICE, INC., 600 Cecil Street, Buchanan, Michigan 49107**

MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ GANANOQUE, ONT.  
©Electro-Voice Inc. 1991 ■ Litho in U.S.A. Part Number 3210

a MARK IV company