Electro-Voice®

X_p200A

Electronic System Controller

- **Stereo full-range outputs and dual, paralleled subwoofer outputs**
- **Full infrasonic protection for Sb120, Sb120a, Sx100 and Sx200 speakers**
- **Crossover for Sb120 and Sb120a bass modules**
- **Special low-frequency profile circuit provides up to 12 dB of bass enhancement for the Sb120, Sb120a, Sx100 and Sx200**
- **Electronically balanced XLR inputs and outputs**

SPECIFICATIONS

Measurement Conditions and Notes:
1. Measurements at 1,000 Hz unless otherwise specified.
2. All level controls full clockwise.
3. 0-dBu input voltage.
4. 120 V ac maintained at power input.
5. 0 dBu = 0.775 V rms.
6. 0 dBm = 1 mW.

Number of Channels:
Two

Front-Panel Controls and Indicators:
Input level (stereo rotary)
Low-frequency profile (stereo rotary)
Low-frequency profile in/out switch
Low-frequency profile in/out LED
Subwoofer level (rotary)
Power on/clip LED

Low-Frequency Profile:
Side-chain equalization circuit summed with direct signal, with up to 12 dB of enhancement at 70 Hz

Left and Right Main Inputs,
Type:
Electronically balanced differential
Impedance:
30 kilohms
Maximum Input Level:
+22 dBu (9.8 V)
Nominal Input Level:
0 dBu (0.775 V)
Connectors:
3-pin XLR (female)

Left and Right Outputs,
Type:
Electronically balanced, cross-coupled output topology
Source Impedance:
150 ohms
Load Impedance, Recommended/ Minimum:
>1,500 ohms/600 ohms
Bandwidth (40-Hz, 24-dB-per-octave high-pass filter for infrasonic speaker protection):
40-20,000 Hz
Maximum Output,
Power:
+19 dBm (79 mW)
Voltage (15,000-ohm load):
+22 dBu (9.8 V)
Nominal Output Power (low-frequency profile switched out):
0 dBm (1 mW)
Clipping Indication:
Green power-on LED interrupted by flashing red at outputs above +19 dBm
Connectors:
3-pin XLR (male)

Subwoofer Output (monaural, sum of left and right inputs),
Type:
Electronically balanced, cross-coupled output topology
Source Impedance:
150 ohms
Load Impedance, Recommended/ Minimum:
>1,500 ohms/600 ohms
Bandwidth, Typical (24-dB-per-octave filters, 37-Hz high pass for infrasonic speaker protection and 100-Hz low pass for crossover):
37-100 Hz
Maximum Output,
Power:
+19 dBm (79 mW)
Voltage (15,000-ohm load):
+22 dBu (9.8 V)
Nominal Output Power (low-frequency profile switched out),
0-dBu Signal Applied at 70 Hz to Left and Right Inputs:
+3 dBm (2 mW)
0-dBu Signal Applied at 70 Hz to Left or Right Input:
0 dBm (1 mW)
Clipping Indication:
Green power-on LED interrupted by flashing red at outputs above +19 dBm
Connectors:
Two paralleled 3-pin XLR (male)

Total Harmonic Distortion Plus Noise at 0-dBm Output (40-20,000 Hz):
<0.1%

Output Noise, A-Weighted:
<-90 dBm

Channel Separation (output on one channel when the other channel is driven at 0 dBu):
<-85 dBm

Power Requirements, Selectable:
100-120 Vac, 50/60 Hz, 10 W or
220-240 Vac, 50/60 Hz, 10 W

Supplied Items and Accessories:
Owner's manual; hardware kit (mounted); pad of rubber feet

Chassis Construction:
Painted steel

Colors,
Overall:
Gray
Nomenclature,
Front Panel:
Pearlized light gray
Top and Rear Panel:
White

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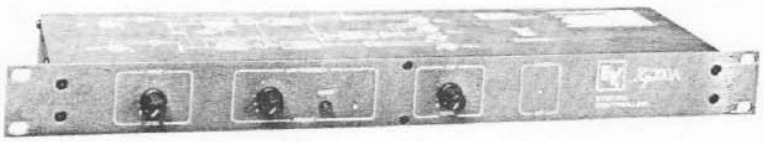

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Chassis Construction:
Painted steel

Colors,
Overall:
Gray
Nomenclature,
Front Panel:
Pearlized light gray
Top and Rear Panel:
White

FIGURE 1 — Xp200A Frequency Response, Left and Right Outputs, Profile Control Off (full counterclockwise)

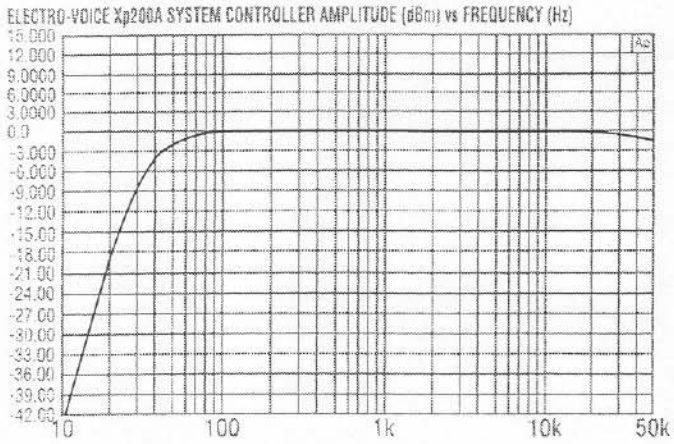


FIGURE 2 — Xp200A Frequency Response, Subwoofer Output, Profile Control Off (full counterclockwise)

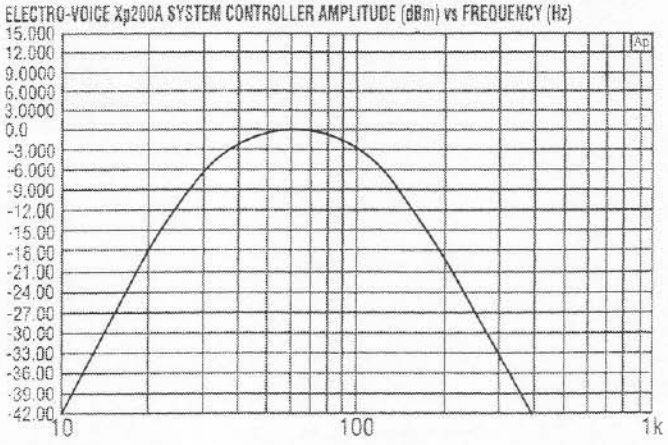


FIGURE 3 — Xp200A Frequency Response, Left and Right Outputs, Profile Control Advanced to Full Clockwise in 3-dB Steps

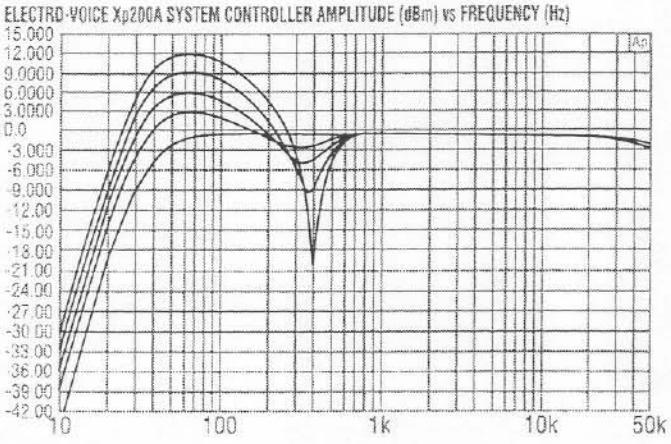
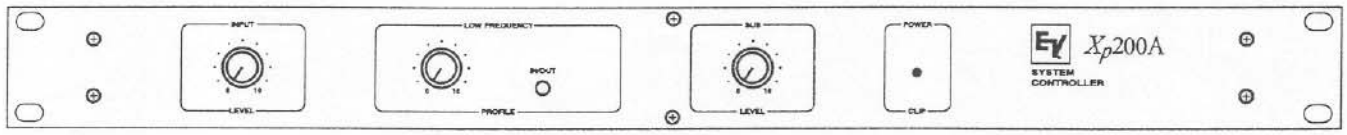


FIGURE 4 — Xp200A Front and Back Panel



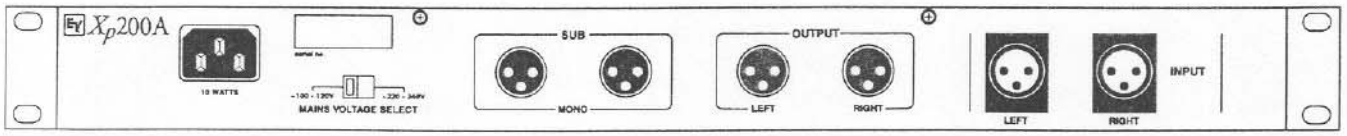


FIGURE 5 — Xp200A Block Diagram

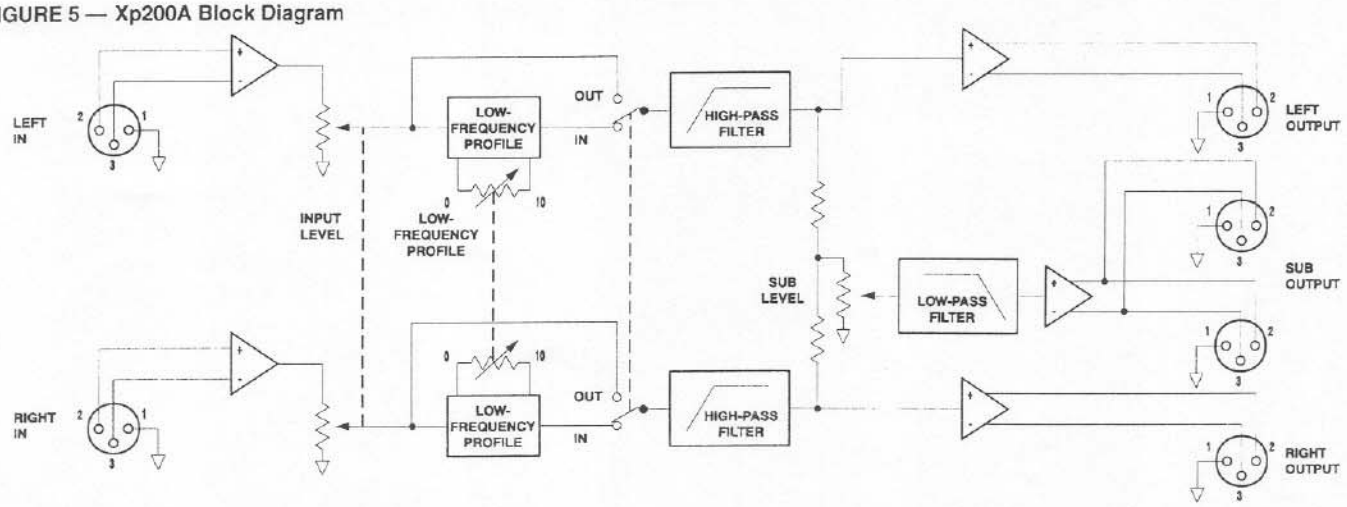
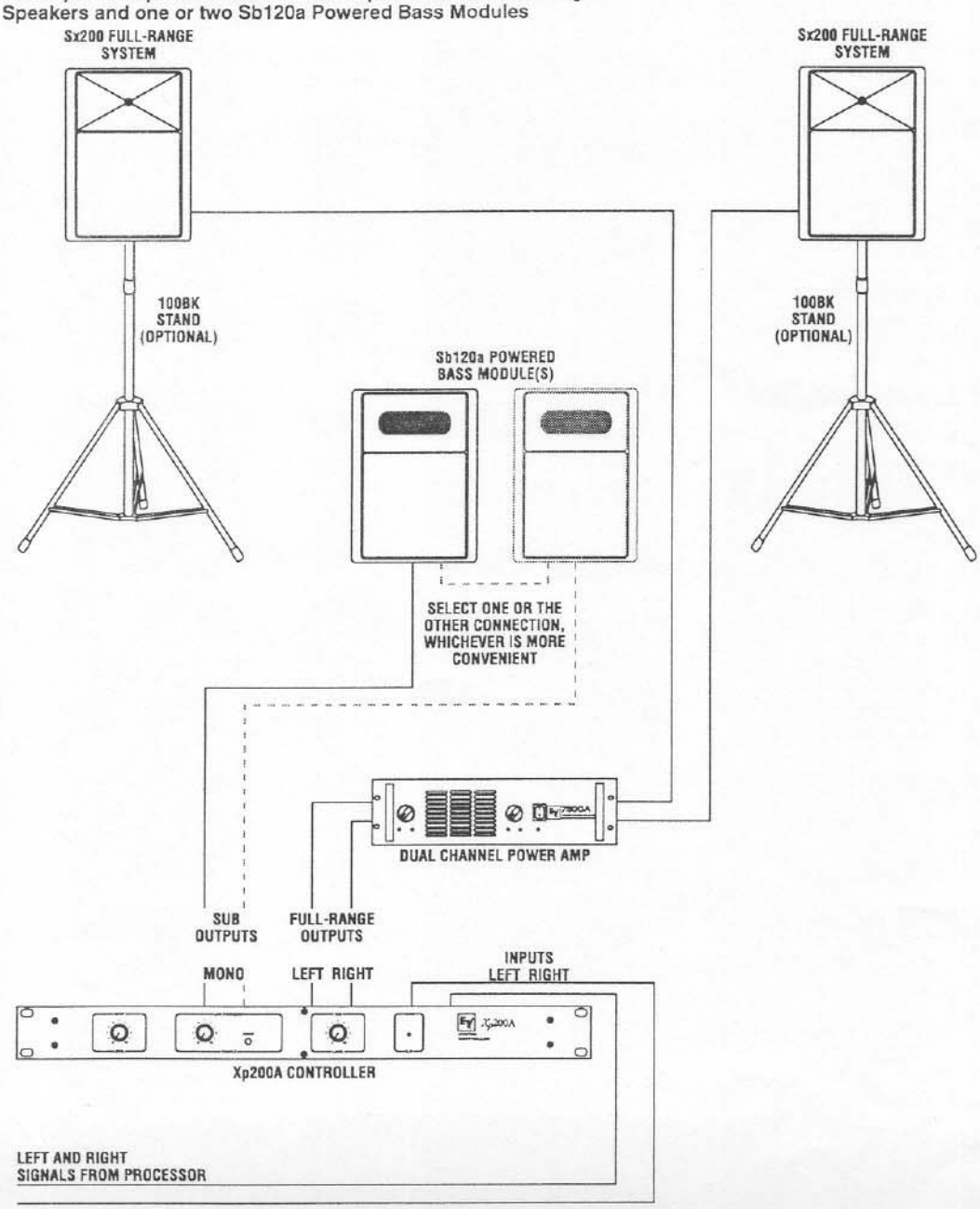


FIGURE 6 — Hookup of an Xp200A Controller with a pair of Sx200 Full-Range Speakers and one or two Sb120a Powered Bass Modules



Dimensions,
Height: 4.37 cm (1.72 in.)
Width: 48.3 cm (19.0 in.)
Depth: 12.3 cm (4.8 in.)
Net Weight:
1.73 kg (3.82 lb)
Shipping Weight:
2.43 kg (5.36 lb)

DESCRIPTION

General

The Xp200A controller is the electronic "heart" of the Electro-Voice System 200™ Modular Pro Audio, a multi-element sound reinforcement system that combines light weight and compact size with high acoustic output and excellent sound quality. The Xp200A links together and enhances the performance of one or more stereo pairs of the Sx100 or Sx200 full-range speaker systems and one or more Sb120a (powered) or Sb120 (nonpowered) bass modules. Full speaker system details may be obtained by requesting the individual engineering data sheets from Electro-Voice. A typical System 200™ Modular Pro Audio setup is shown in Figure 6. Other setups, overall system connection details and full operating instructions are described in the Xp200A Owner's Manual.

Xp200A frequency response curves are shown in Figures 1 through 3. Front and rear panel views are shown in Figure 4. The block diagram is shown in Figure 5.

Xp200A Feature Summary

- A unique, low-frequency profile circuit enhances low-frequency performance of both the Sx100 and Sx200 full-range systems, and the Sb120a or Sb120 bass modules.
- In a side-chain circuit, low frequencies are slightly delayed in time as they are boosted, then summed with the original direct signal. This combination of delayed and direct signals changes the relative levels of the musical fundamental and its harmonics, in an audibly attractive way. The resultant modification of timbre is as dynamic and continually changing as the musical input itself.
- A Low Frequency Profile control adjusts the degree of bass enhancement, up to a maximum of 12 dB. An in/out switch makes it easy to assess the degree of enhancement. An in/out LED indicates when the circuit is active.
- Input Level and Sub Level controls facilitate easy balancing of a complete System 200™.
- A power/clip LED shows constant green with power on. If clipping occurs, the green is interrupted by flashes of red.
- The full-range, left and right outputs of the Xp200A feature a 40-Hz, 24-dB-per-octave high-pass filter that keeps the bass output of the Sx100 and Sx200 speaker systems very tight and clean, by eliminating excessive cone excursion caused by very low, infrasonic frequencies.
- The mono-summed subwoofer output incorporates 24-dB-per-octave filters that roll off response above 100 Hz and below 37 Hz for a high degree of placement flexibility and infrasonic protection for the Sb120a and Sb120 bass modules.
- Inputs and outputs are electronically balanced, with XLR connectors. Two paralleled sub outputs are provided, for easy connection of two subwoofer amplifiers or Sb120a powered bass modules.
- Outputs are compatible with both balanced and unbalanced loads. A cross-coupled output circuit automatically senses an unbalanced signal connection and increases the gain of the circuit by 6 dB to maintain the same output voltage at the power amplifier input.

UNIFORM LIMITED WARRANTY

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). **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 Speakers and Speaker Systems are guaranteed against malfunction due to defects in materials or workmanship for a period of five (5) years from the date of original purchase. The Limited Warranty does not apply to burned voice coils or malfunctions such as cone and/or coil damage resulting from improperly designed enclosures. **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. **Electro-Voice Flying Hardware** (including enclosure-mounted hardware and rigging accessories) is guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year 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**
MANUFACTURING PLANTS AT ■ BUCHANAN, MI ■ NEWPORT, TN ■ SEVIERVILLE, TN ■ OKLAHOMA CITY, OK ■ GANANOQUE, ONT.

Part Number 532603 — 9508

maximum flexibility.

In continued high-powered applications, Electro-Voice recommends the use of the Speakon connector. However, to provide a high level of compatability, the 1/4-in. phone jacks are also provided. The Speakon NL4MP will mate to a NL4FC Speakon connector, which is a 4-pin connector. Figure 16 shows typical wiring configurations using banana plugs or 1/4-in. phone plugs (the banana plug provides the more reliable connection). Cable connections should be made to the 1+ and 1– terminals only. Cables utilizing the Speakon NL4FC connector are available from your local dealer or from the companies listed below.

Pro Co Sound, Inc.
135 E. Kalamazoo Ave.
Kalamazoo, MI 49007
616/388-9675

Whirlwind Music Distributors, Inc.
P.O. Box 1075
Rochester, NY 14603
716/663-8820

Neutrik USA, Inc.
195-S3 Lehigh Ave.
Lakewood, NJ 08701
908/901-9488

FIGURE 15 — Connecting the Xp200A Controller to Power Amplifiers and the Sb120a Powered Bass Modules Sx200 and Sb120 Speaker System Connections

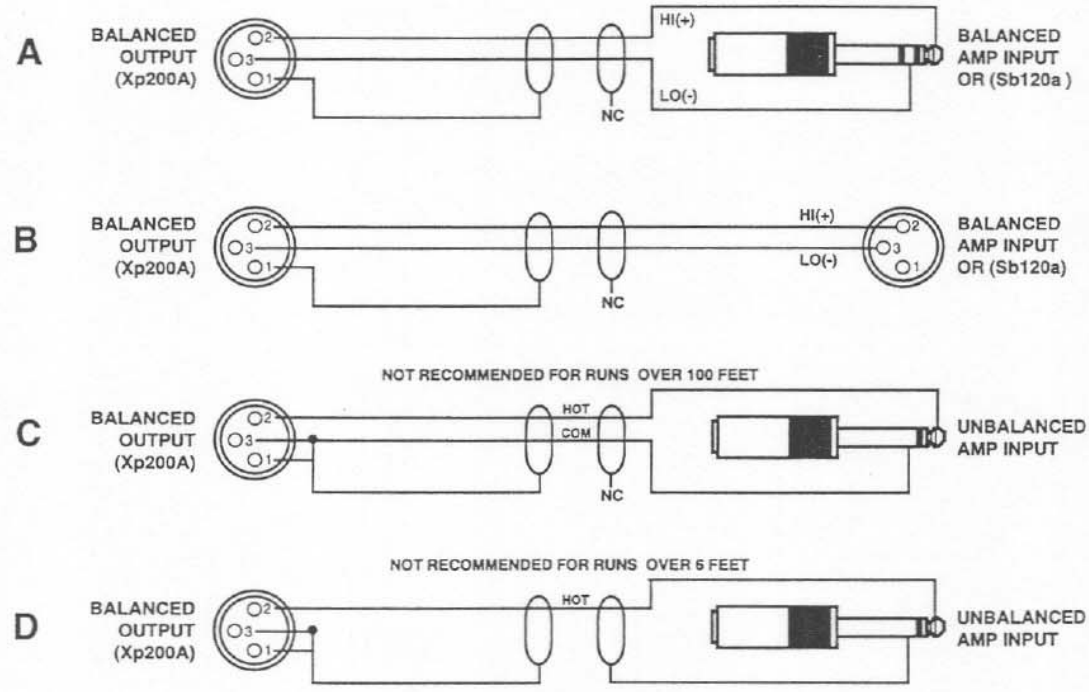


FIGURE 16 — Two-Conductor Cable Configurations for Sx200 and Sb120 Speaker Systems Using Neutrik Speakon® NL4FC Connector