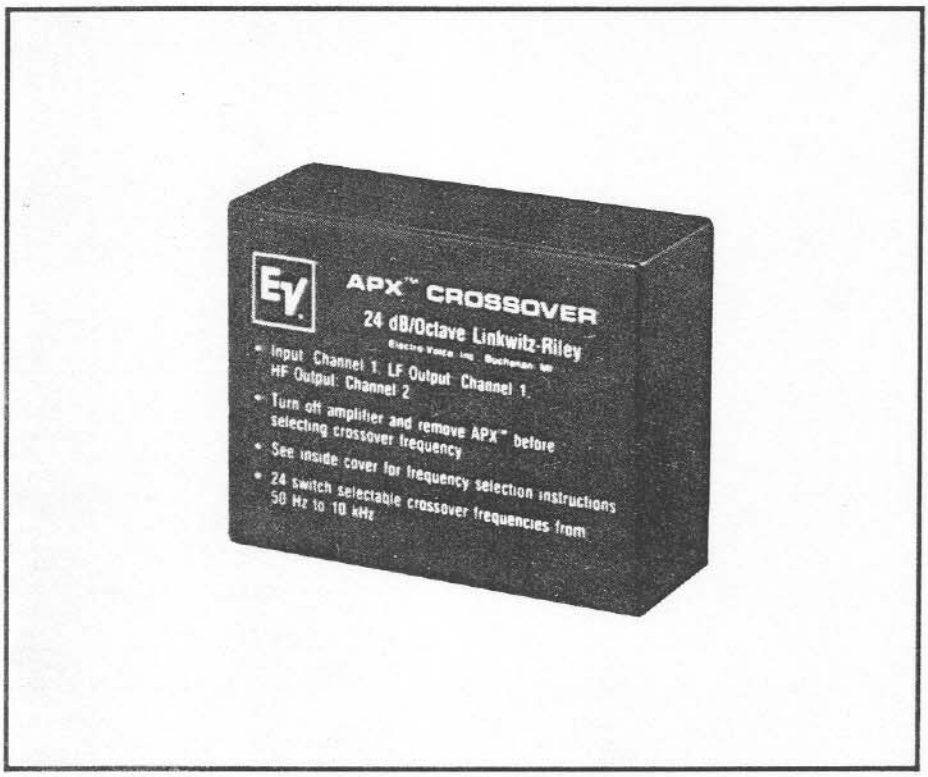

Electro-Voice®
a MARK IV company

Model APX Crossover Module

SPECIFICATIONS

Channel Configuration:
Monaural two-way

Filter Type:
Fourth-order Linkwitz-Riley
(24-dB-per-octave attenuation)

Crossover Frequencies, Switch Selectable:
50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1, 1.25, 1.6, 2, 2.5, 3.15, 4, 5, 6.3, 8, 10 kHz

Input,
Type:
Active differential
Maximum Level:
+18 dBu
Impedance:
30,000 ohms
Common-Mode Range:
±24 V (net of signal voltage)
Common-Mode Rejection Ratio, Typical:
−55 dB
Connector:*
Octal plug

Main Outputs,
Maximum Level:
+18 dBu
Impedance:
< 100 ohms
Protection:
Safe for short circuit or ±25 volts dc
Connector:
Octal plug

Gain:
Unity

Frequency Response, Sum of Outputs, 2,000-Ohm Loads:
20-20,000 Hz ±0.5 dB

Total Harmonic Distortion, 20-20,000 Hz,
Typical:
0.02%
Maximum:
0.05%

Noise, Each Output, 20-20,000 Hz Noise Bandwidth, Typical:
−90 dB

Channel Crosstalk, Typical:
−78 dB

Transient Performance:
Not limited by slew rate or power bandwidth under any normal operating condition, 20-20,000 Hz

Chassis Construction:
Cold rolled steel

Color:
Black

Mounting:
Dual octal plug

Power Requirements:
±15 V dc

Overall Dimensions (see Figure 1):
69 mm (2.75 in.) high
91 mm (3.58 in.) wide
32 mm (1.25 in.) deep

Net Weight:
0.25 kg (8.5 oz)

Shipping Weight:
0.40 kg (14 oz)

DESCRIPTION

The APX crossover module plugs into both eight-pin octal sockets, splitting the Channel 1 input signal into high- and low-frequency portions. The low-frequency output is in turn directed to the Channel 1 amplifier output; high frequencies appear on the Channel 2 output (see Figure 2). The APX provides 24 switch-selectable crossover frequencies on the ISO one-third-octave centers from 50 to 10,000 Hz. Filter response shape is fourth-order Linkwitz-Riley (24-dB-per-octave slopes) (see Figure 3).

CROSSOVER FREQUENCY SELECTION

CAUTION: Do not change the crossover frequency setting while the APX is mounted to the power amplifier. Turn the power amplifier off and remove the APX module before changing the crossover frequency.

1. Remove the four screws that secure the cover to the module.
2. Locate dip switch block "C". It is oriented 90° with respect to the other four switches.
3. See Table 1 for a list of crossover frequencies and associated switch positions (this table also appears inside the cover of the module).

NOTE: An example of a 500-Hz crossover setting is shown in Figure 5.

4. Move each switch in block "C" to the position ("on" or "off") that corresponds the desired crossover frequency.
5. There are four "R" switch blocks. For each "R" block move each of the eight switches to the position ("on" or "off") that corresponds to the desired crossover frequency.

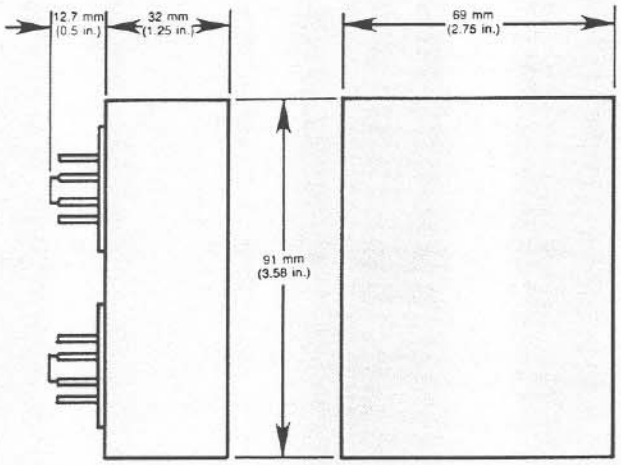

FIGURE 1 — Dimensions

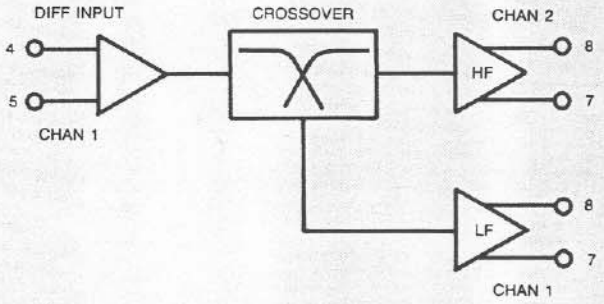

FIGURE 2 — Block Diagram

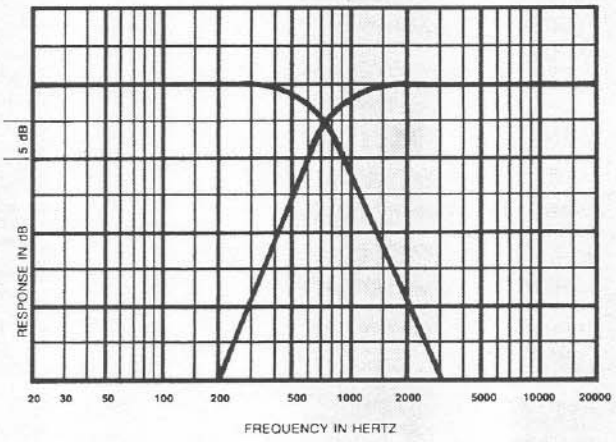

FIGURE 3 — Typical Crossover Curve

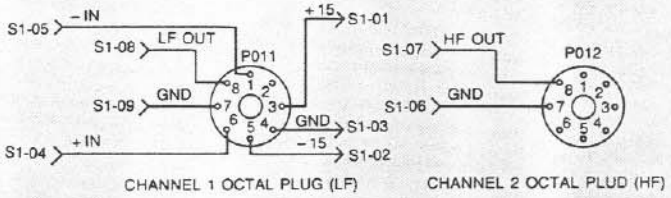

FIGURE 4 — Octal Plug Connections

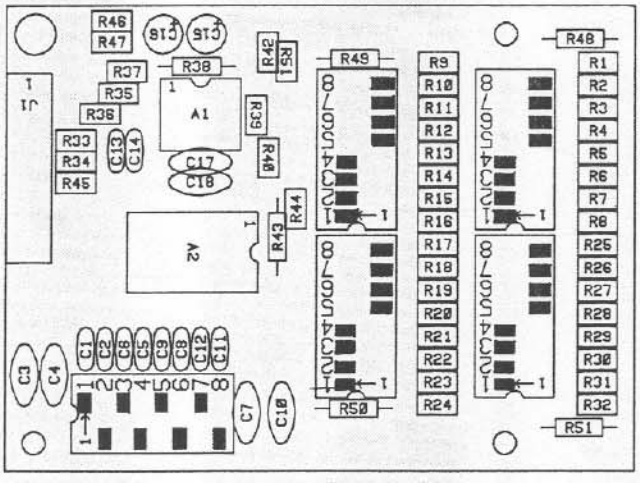

FIGURE 5 — Switch Settings for 500 Hz Crossover

CAUTION: Speaker damage may occur if switches are improperly set or changed while amplifier is on.

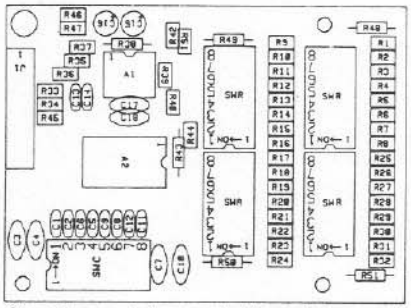

Chart shows switches on, all other switches are off

FREQ.	SWITCH C	SWITCH R	FREQ.	SWITCH C	SWITCH R
50	all on	1	800	all on	12345
63	1357	1	1k	1357	12345
80	all off	1	1.25k	all off	12345
100	all on	12	1.6k	all on	123456
125	1357	12	2k	1357	123456
160	all off	12	2.5k	all off	123456
200	all on	123	3.15k	all on	1234567
250	1357	123	4k	1357	1234567
315	all off	123	5k	all off	1234567
400	all on	1234	6.3k	all on	12345678
500	1357	1234	8k	1357	12345678
630	all off	1234	10k	all off	12345678

TABLE I

6. Reinstall the module cover with the four screws.

INSTALLATION

1. Turn the power amplifier off and turn the input attenuators down (full counterclockwise).
2. Remove the four jumper pins from the two octal sockets on the amplifier.
3. Orient the APX module so that the octal connector keys are aligned and plug it in.
4. Disconnect the speaker cables from the amplifier and turn the amp on.
5. Turn the volume controls up and check the clip indicators. If the clip indicators are on, STOP, turn the amplifier off and go back to the beginning of the "Crossover Frequency Selection" section. Check all of the switch settings. If the clip indicators are not on, there is a good chance that the crossover frequency was selected properly.
6. Turn the volume controls down.
7. Connect the low-frequency speaker to Channel 1 and the high-frequency driver to Channel 2.
8. Apply pink noise or a music signal to input 1.
9. Slowly increase (clockwise) Channel 2 attenuator to ascertain that a high-pass signal is coming from the high-frequency driver.
10. Rotate the Channel 1 attenuator clockwise until the low-end signal is balanced with the high-end signal.

Service and repair address for this product: Electro-Voice, Inc., 10500 W. Reno, Oklahoma City, OK 73128.

Specifications subject to change without notice.