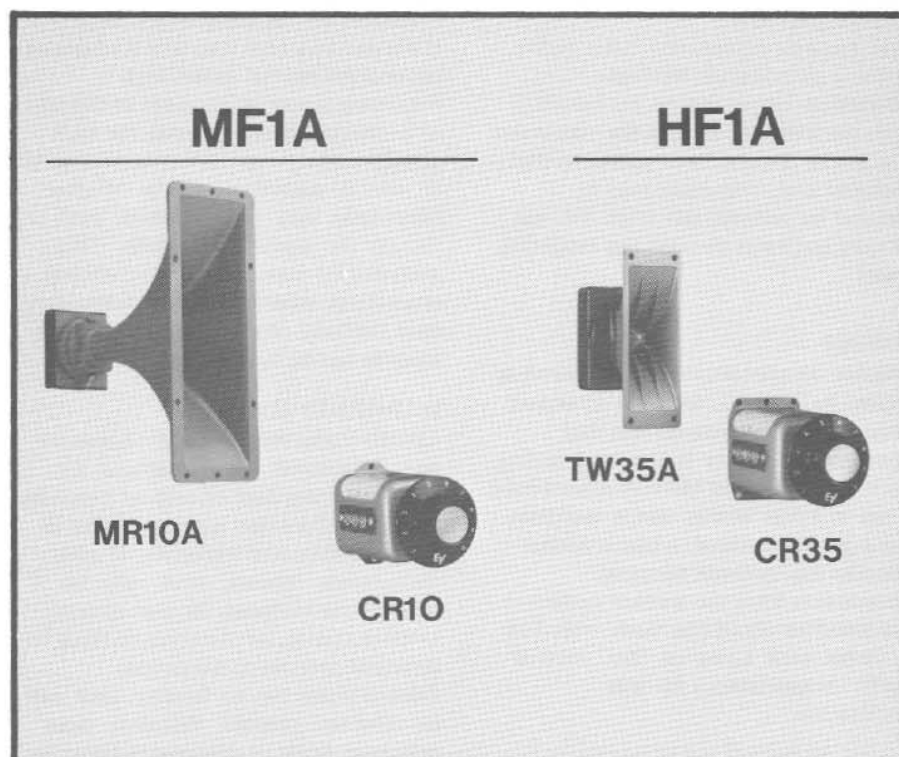




Model HF1A/MF1A Michigan® Step-Up Kits

SPECIFICATIONS — DRIVERS

Frequency Response,

TW35A:
3,500 to 15,000 Hz

MR10A:
1,000 to 3,500 Hz

Nominal Impedance,

TW35A:
8 ohms

MR10A:
8 ohms

Power Handling Capacity at 8 Ohms,

Long-Term Average:

TW35A — 5 watts

MR10A — 5 watts

Short-Term (10 Milliseconds):

TW35A — 50 watts

MR10A — 50 watts

Voice Coil Diameter,

TW35A:
25.4 mm (1 in.)

MR10A:
25.4 (1 in.)

Magnet Weight,

TW35A:
227 g (8.0 oz)

MR10A:
227 g (8.0 oz)

Magnet Material,

TW35A:
Ceramic

MR10A:
Ceramic

Sound Pressure Level at 1 Meter, 1 Watt into Nominal Impedance, Averaged over Effective Frequency Range, Anechoic Environment,

TW35A:
101 dB

MR10A:
103 dB

Dimensions, Overall,

TW35A:
66 mm (2.6 in.) wide
133.4 mm (5.25 in.) high
59.7 mm (2.35 in.) deep

MR10A:
102 mm (4.0 in.) wide
268 mm (10.56 in.) high
220 mm (8.66 in.) deep

Net Weight,

TW35A:
853 g (1.88 lbs)

MR10A:
1.56 kg (3.44 lbs)

SPECIFICATIONS — CROSSOVERS

Crossover Frequency,

CR35:
3,500 Hz

CR10:
1,000 Hz

Impedance,

CR35:
8 ohms

CR10:
8 ohms

Crossover Rate,

CR35:
6 dB/octave

CR10:
6 dB/octave

Dimensions,

CR35:
76.2 mm (3.0 in.) wide
82.6 mm (3.25 in.) high
63.5 mm (2.5 in.) deep

CR10:
76.2 mm (3.0 in.) wide
82.6 mm (3.25 in.) high
63.5 mm (2.5 in.) deep

DESCRIPTION

Michigan step-up kits provide a simple method for improving speaker system performance in stride with the budget. A single full-range loudspeaker may be expanded to a deluxe 3-way system without obsoleting existing components, and with the assurance of properly matched components.

Model HF1A high frequency step-up kit, comprising a TW35A driver and CR35 crossover, should be the first addition to a full-range speaker. In addition to extending high frequency response to beyond the limits of audibility, this step-up kit provides more precise definition of VHF waveforms and improves high frequency dispersion in the listening area.

Model MF1A mid-range step-up kit, comprising an MR10A driver and CR10 crossover, provides a further improvement in performance after the addition of a Model HF1A tweeter kit. The MF1A kit further reduces the frequency range which must be reproduced by the cone loudspeaker, thus reducing harmonic and intermodulation distortion in the system. Diffraction horn loading of the diaphragm improves dispersion in the listening area in addition to increasing efficiency. The improved mid-range performance provided by the MF1A is especially important because instrument and voice harmonics which determine the character of the sound are found in this frequency range.

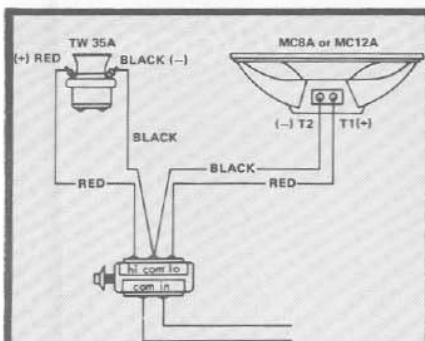


FIGURE 1A
Two-way System Wiring

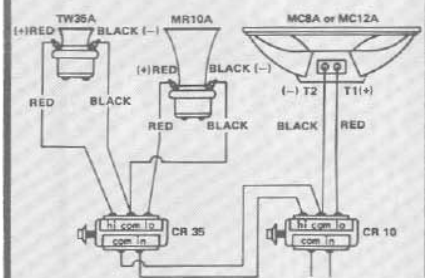


FIGURE 1B
Three-way System Wiring

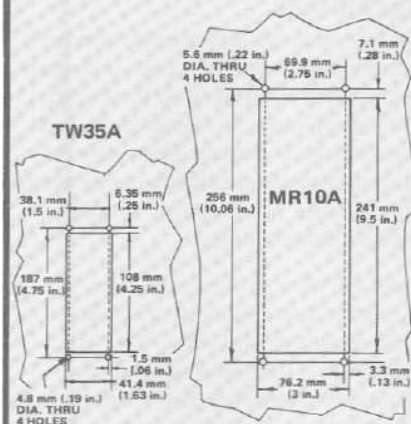


FIGURE 2
Mounting Dimensions

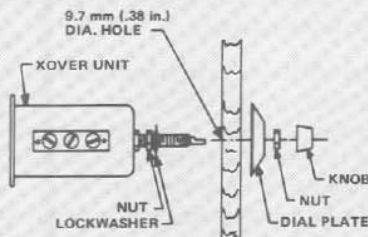


FIGURE 3
Crossover Mounting Dimensions

INSTALLATION

Drill mounting holes and cut a baffle opening as indicated. Michigan diffraction horns should be mounted with the long axis vertical for maximum horizontal dispersion of sound in the listening area. The driver may be secured by woodscrews from the rear, or nuts and bolts through the mounting panel.

WIRING

Speaker components should be wired as shown in Figure 1. In order to ensure proper phasing, make certain that component polarity is observed during wiring. TW35A and MR10A drivers have a red terminal washer which indicates the positive terminal; a black washer denotes the common terminal. Connection from the speaker system to the amplifier should be made with #18 or larger wire. Lamp or "zip" cord is perfectly satisfactory for this application.

LEVEL CONTROLS

The best guide to proper setting of the level control is a familiarity with the sound of live music. Most listeners will find it easy to balance the various components of the system to conform to their personal taste. Acoustically "hard" or "live" rooms normally will require an attenuated setting of the level control to compensate for the greater amount of high frequency reflection. In "soft" or "dead" rooms with carpeting, draperies and soft furniture, a more advanced setting of the level control normally will be required.

CAUTION NOTES

These components are intended for home playback of normal program material. They are not intended for high-level playback of program material, nor for reproduction of continuous test tones.

Precautions in tape machine operation: If a speed of a tape machine is advanced beyond the normal speed, high frequency power is increased at the rate of 6 dB/octave over normal for each doubling of tape speed. On fast forward or rewind, supersonic energy of great magnitude may be generated, even though the signal is inaudible. This is especially important in fast editing procedures, where the gate is frequently only partially opened so that the tape traverse can be cued audibly.

WARRANTY (Limited)

Electro-Voice High Fidelity Speakers and Accessories are guaranteed for five 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 cover finish or appearance items or malfunction due to abuse or operation at other than specified conditions. Repair by other than Electro-Voice or its authorized service agencies will void this warranty.

For correct shipping address, instructions on return of Electro-Voice products for repair, and locations of authorized service agencies, please write: Service Department, Electro-Voice, Inc., 600 Cecil Street Buchanan, Michigan 49107 (Phone: 616/695-6831) or Electro-Voice West, 8234 Doe Avenue, Visalia, California 93277 (Phone: 209/625-1330,-1).

Electro-Voice also maintains complete facilities for non-warranty service of E-V products.

Specifications subject to change without notice.