

**Electro-Voice®**

a MARK IV company



FIGURE 1  
MTA-42 Summation Response

## Manifold Technology™ Model MTA-42 High-Frequency Summation Device

### SPECIFICATIONS

#### Useful Frequency Range:

200-30,000 Hz

#### Recommended Compression Drivers:

DH1506, DH2305, DH2mt

(can also be used with:

1824M, 1824S, 1828R,

1828T, 1829, 1829T)

#### Recommended Horns:

HP9040, HP6040, HP4020, HP1240

HP940, HP640, HP420, HP64, HP94

#### Physical Connections,

##### Entrances (4):

1 $\frac{3}{8}$ "-18 mounting threads

##### Exit:

Bolt-on, standard 2"-diameter throat, 5"-diameter mounting flange and four clearance holes for  $\frac{1}{4}$ " bolts on a 4"-diameter bolt circle. Bolt heads are captured by molded-in detail.

#### Mounting Hardware Included:

4 driver-entrance gaskets

4  $\frac{1}{4}$ "-20 mounting bolts

4  $\frac{1}{4}$ " washers

4  $\frac{1}{4}$ "-20 nuts

#### Dimensions:

12.7 cm (5.0 in.)

12.7 cm (5.0 in.)

9.2 cm (3.6 in.)

#### Weight:

1.4 kg (3.1 lb)

#### Shipping Weight:

1.9 kg (3.8 lb)

### DESCRIPTION

The Electro-Voice MTA-42 is a high-performance, high-frequency device for combining the outputs of four 1 $\frac{3}{8}$ "-18 threaded drivers into a single 2-inch-throat horn. The combination of extremely close driver packing, complementary positioning and a specially designed reflective insert results in the phase-coherent summation performance shown in Figure 1.<sup>1</sup>

High sound-pressure-level applications often require the use of multiple horn-and-driver combinations. This results in physically cumbersome arrays; and, when two or more horns cover the same area, it results in destructive interference, often referred to as comb-filtering. This results in a familiar "swishing" sound when moving through or "walking" a system with music being played. By combining the outputs of four drivers into a single horn, the MTA-42 allows extremely high sound pressure levels to be generated by compact, cost-effective arrays and without destructive interference.

### MECHANICAL CONNECTION:

Bolts, washers, and nuts are provided for connecting the MTA-42 to a standard 2-inch-throat horn. The flange of the MTA-42 is molded to capture the bolt head, so installation is possible with a single wrench. Four driver-entrance gaskets are also provided. These should be inserted into the driver entrances before installing the drivers.

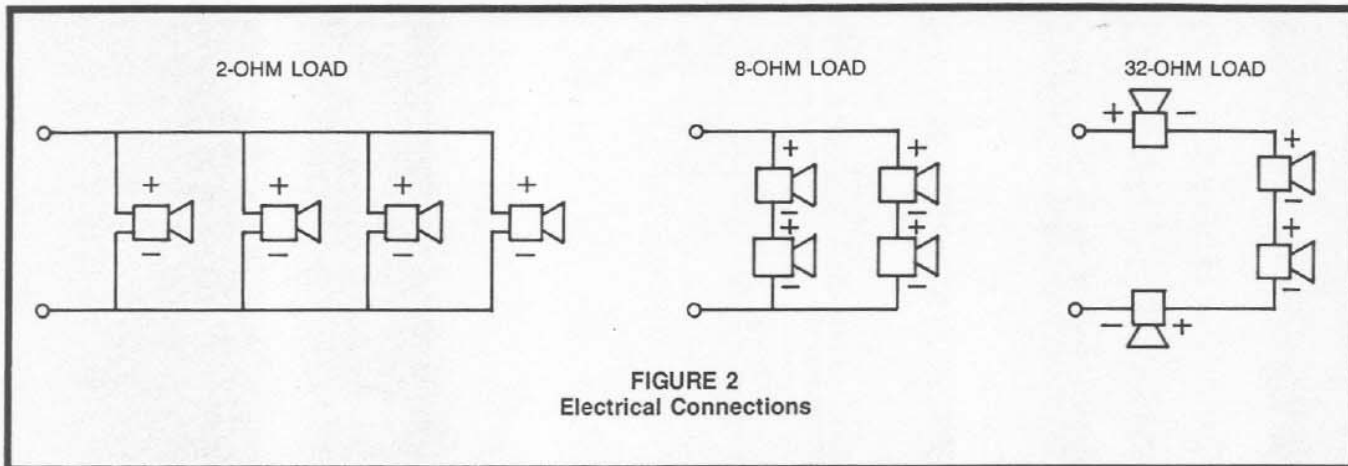
Loading four drivers on to a manifold can result in a very heavy assembly. When the MTA-42 is used in portable systems with large drivers, direct support for the rear of the horn is required.

### ELECTRICAL CONNECTION:

With four 8-ohm drivers and one amplifier 2-ohm, 8-ohm and 32-ohm systems are possible. The recommended electrical connections for these three systems are shown in Figure 2.

With more amplifiers, other wiring arrangements are possible. When using multiple amplifiers, care should be taken to ensure equal drive voltage across each driver.

1. Patent pending.



**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); Electro-Voice, Inc., 3810 148th Avenue N.E., Redmond, WA 98052 (AC/206-881-9555); and/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.

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

Specifications subject to change  
without notice.



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

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