PROFESSIONAL SOUND SYSTEM

Instruction Manual

CONSTANT DIRECTIVITY HORN Model LE-M124, LE-M94 LE-M64, LE-M42

DESCRIPTION

Employing TOA's unique technology, the LE series constant directivity horns can meet even professional's stringent standards that always require precise directivity control, high efficiency and high quality sounds. Their ideal applications include theaters, concert halls, auditoriums, churches, and movie houses.

Different formulas are used to optimize the horizontal and vertical side wall contours. Also, both side walls are so arranged that a mouth may come near an equiphase surface as much as possible.

These combine together to make the geometry ideal for maintaining uniform directivity over the rated frequency range.

Each horn is intended for use in system with crossover at 500 Hz or higher in the HFD-260 use and at 800 Hz or higher in the HFD-220 use, and ensures uniform frequency response over the full frequency range from 800 Hz to 16 kHz at any point (2kHz~20kHz vertically) within the rated coverage angle. The horns have a controlled coverage angle of 120 degrees horizontally by 40 degrees vertically (LE-M124), 90° x 40° (LE-M94), 60° X 40° (LE-M64), 40° X 20° (LE-M42).

Each horn comes with 49 mm (2 in.) throat diameter for mating with TOA HFD-260-8(16) or HFD-220-8(16) high-frequency compression driver. The horn is constructed of solid polyurethane, and having sufficient thickness, suppress resonance.

FEATURES

- 1. TOA's unique horn design.
- 2. Excellently controlled horizontal and vertical dispersion over the frequency range of 800 Hz to 20 kHz.
- 3. High efficiency and smooth frequency response.
- 4. 49 mm (2 in.) throat diameter.
- 5. Resonance-free, rigid construction.
- 6. Attached an exclusive supporting bracket.

EQUALIZATION

When using the LE series constant directivity horns in combination with the HFD-260-8/16 and HFD-220-8/16 drivers and with TOA Integrated sound processor "SAORI", set the horn equalizer built in the digital channel divider module, long delay type (IS-110DL4, IS-110DL2) of the "SAORI" as shown the table below.

	LE-M124	LE-M94	LE-M64	LE-M42
HFD-260-8/16	TYPE 3	TYPE 2	TYPE 2	TYPE5
HFD-220-8/16	TYPE8	TYPE 8	TYPE 8	TYPE 9





-2-



- 3 -



-4-



- 5 -

PRECAUTIONS

1. Attaching the driver unit When attaching the driver unit to the horn, be sure to fix it after fastening the supplied supporting bracket between them.



2. Horn installation

When fixing the horn to an enclosure or a suspension metal, make sure to fix both the mouth frange and supporting bracket part (two positions) as shown in the figure. (Procure the mounting brackets at site according to installation places.)



Fixing at two positions.



Fixing only at the supporting bracket position.



Fixing only at the mouth frange position,

SPECIFICATIONS

	LE-M124	LE-M94	LE-M64	LE-M42	
Horizontal Coverage Angel (- 6 dB)	120° (4-23°, −13°) (400 Hz~20 kHz)	90° (+13°, –6°) (500Hz~16kHz)	60°(+17°, −8°) (800 Hz~20 kHz)	40°(+12°, −2°) (800 Hz~20 kHz)	
Vertical Coverage Angel (- 6 dB)	40°(+17°,–10°) (2 kHz~20 kHz)	40° (+16°, −7°) (2 kHz~20 kHz)	40°(+16°,-7°) (1.6 kHz~20 kHz)	20° (+15°, −7°) (2 kHz~20 kHz)	
Recommended Crossover Frequency	500 Hz or more (HFD-260-8 or HFD-260-16 is used.) 800 Hz or more (HFD-220-8 or HFD-220-16 is used.)				
Throat Diameter	49 mm (2 in.)				
Applicable Driver	HFD-260-8, HFD-260-16, HFD-220-8 or HFD-220-16				
Construction	Solid polyurethane				
Weight	6 kg (13.2 lbs.)	5 kg (11.0 lbs.)	6 kg (13.2 lbs.)	9 kg (19.8 lbs.)	
Accessories	supporting bracket •••1, Instruction manual •••1				

* Specifications are subject to change without notice.