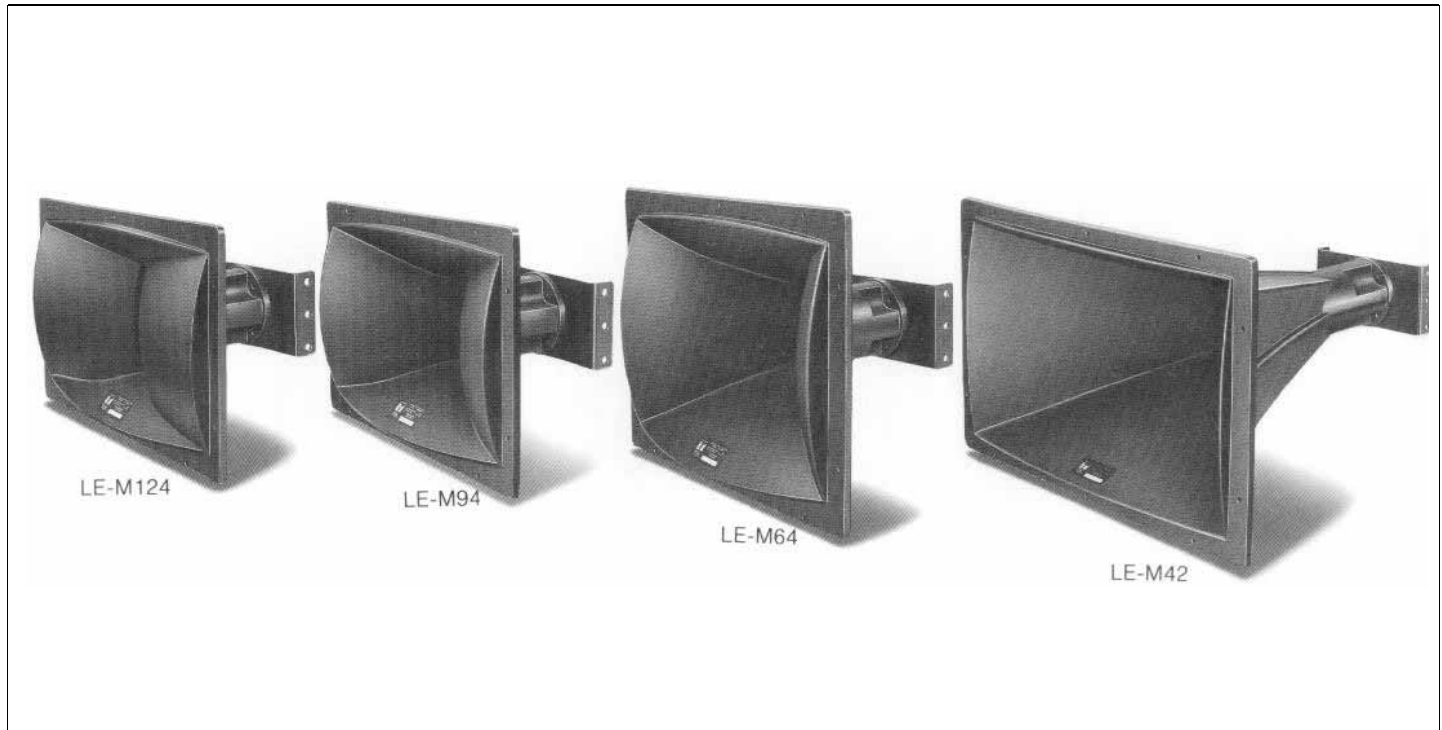

TOA SPEAKER SYSTEM

CONSTANT DIRECTIVITY HORN

LE-M124/LE-M94/LE-M64/LE-M42



DESCRIPTION

The LE Series constant directivity horns employ original TOA technology to meet stringent professional standards that always call for precise directivity control, high efficiency and excellent sound quality. They are ideally suited for such applications as theaters, concert halls, auditoriums, movie houses and churches.

The TOA LE Series constant directivity horns employ different formulas to optimize the horizontal and vertical side wall contours. Also, both side walls are so arranged as to allow the mouth to most closely approach an equiphase surface. These factors combine to make the horn's geometry ideal for maintaining uniform directivity over the rated frequency range.

Each horn has a crossover point of 500Hz and above when used as part of an HFD-260 system, or 800Hz and higher with the HFD-220 system. Frequency response is uniform over the full frequency range from 800Hz to 16kHz at any point (2kHz to 20kHz vertically) within the rated coverage angle. The horns have a horizontal by vertical controlled coverage angle of: LE-M124: 120 x 40 degrees; LE-M94: 90 x 40 degrees; LE-M64: 60 x 40 degrees, and LE-M42: 40 x 20 degrees.

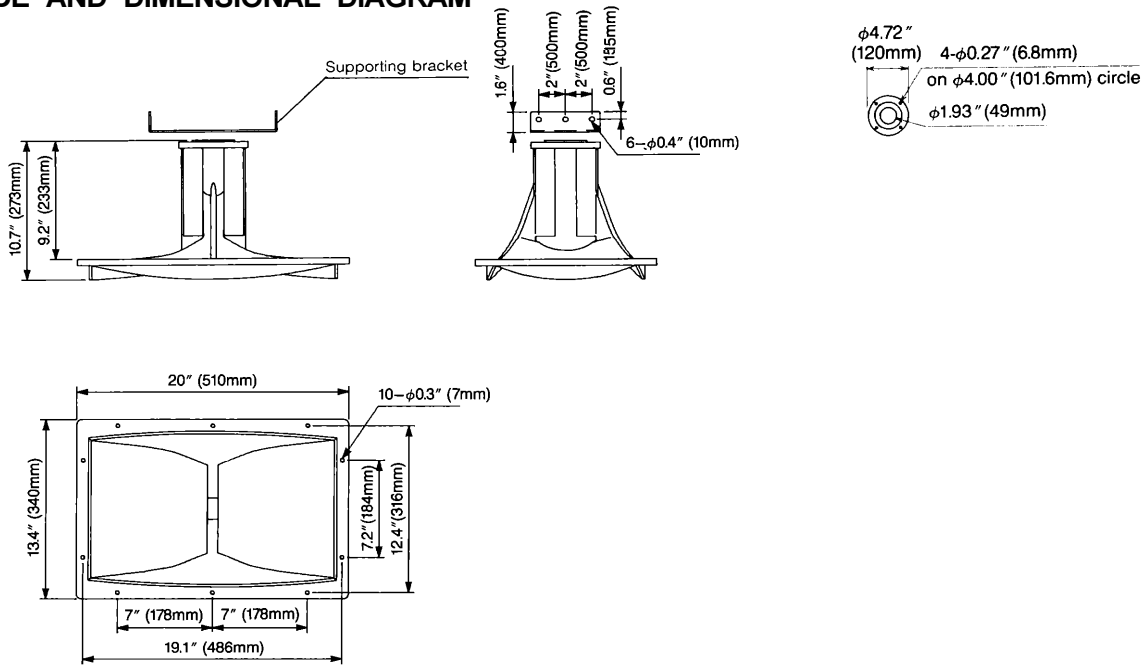
Each LE Series horn comes with a 2 in. (49mm) throat diameter for mating with a TOA HFD-280-8/16 or HFD-220-8/16 high-frequency compression driver. Horn construction is of solid polyurethane of sufficient thickness to suppress resonance.

FEATURES

1. Original TOA horn design ensures precise directivity and high sound quality.
2. Excellent horizontal and vertical dispersion control over a frequency range of 800Hz to 16kHz.
3. High efficiency and smooth frequency response.
4. 2 in. (49mm) throat diameter.
5. Resonance-free rigid construction.
6. Matching support bracket attached.

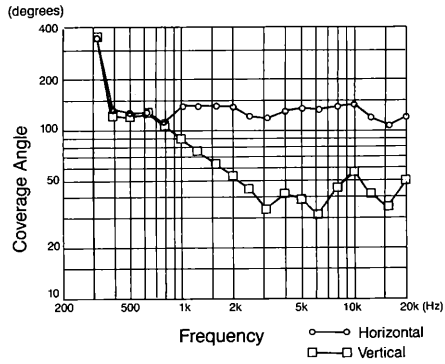
LE-M124

APPEARANCE AND DIMENSIONAL DIAGRAM

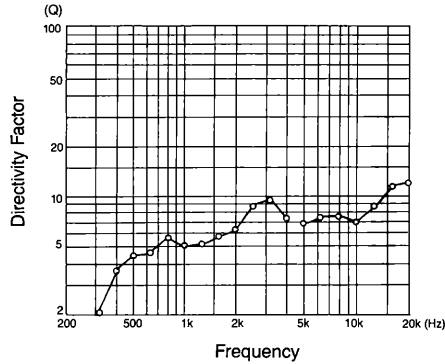


CHARACTERISTIC DIAGRAMS

● Coverage Angle vs Frequency (-6dB)

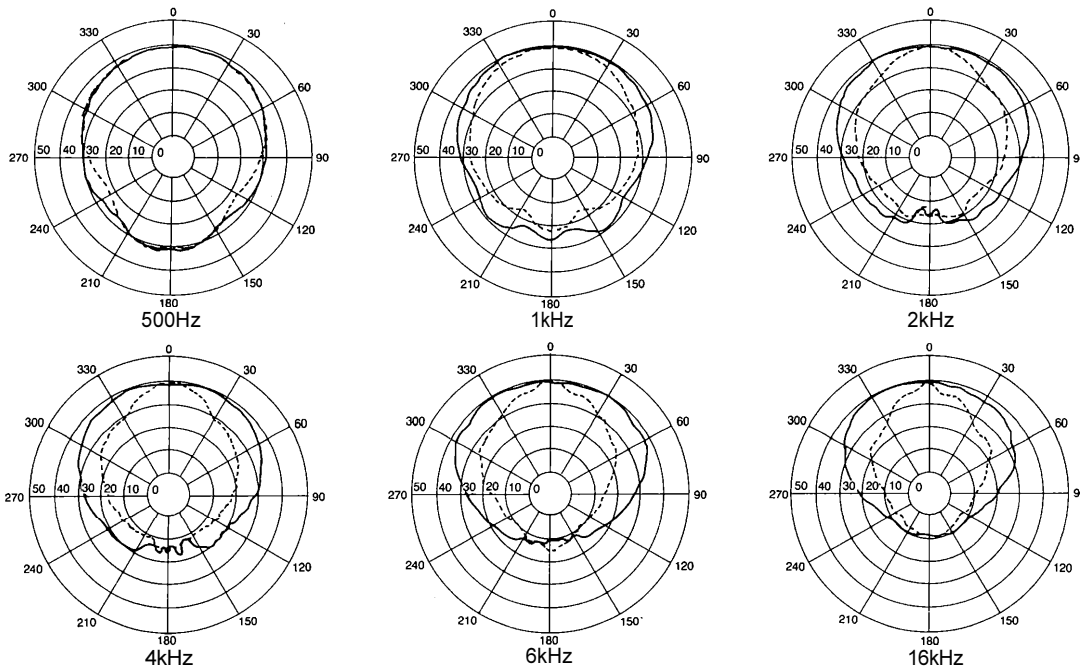


● Directivity Factor vs Frequency (Q)



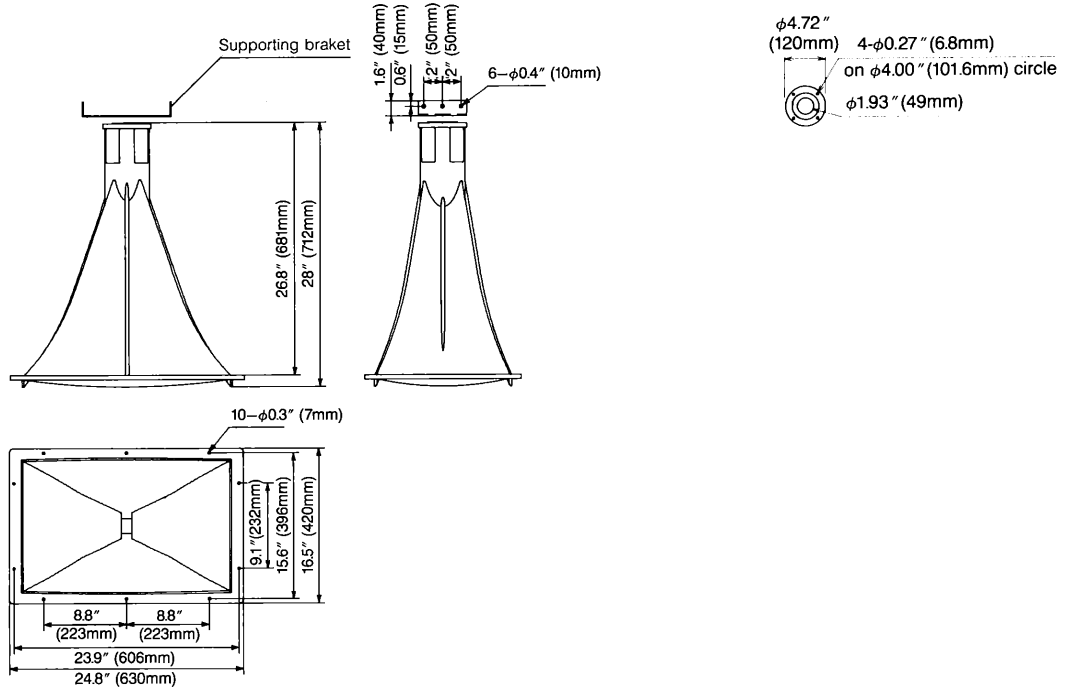
● Polar Response (1/3 Octave Pink Noise)

— Horizontal - - - - Vertical



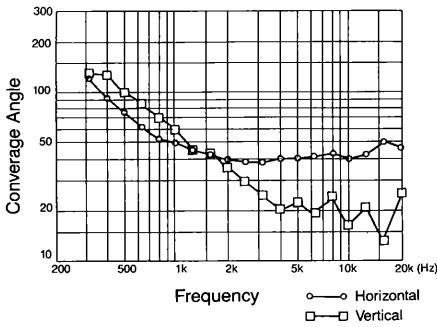
LE-M42

APPEARANCE AND DIMENSIONAL DIAGRAM

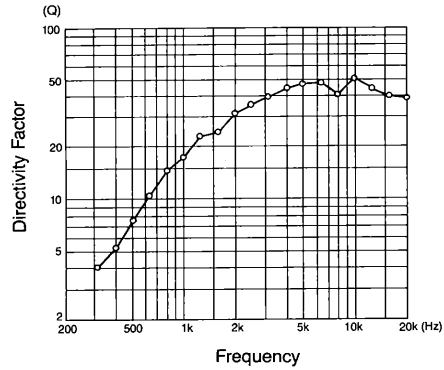


CHARACTERISTIC DIAGRAMS

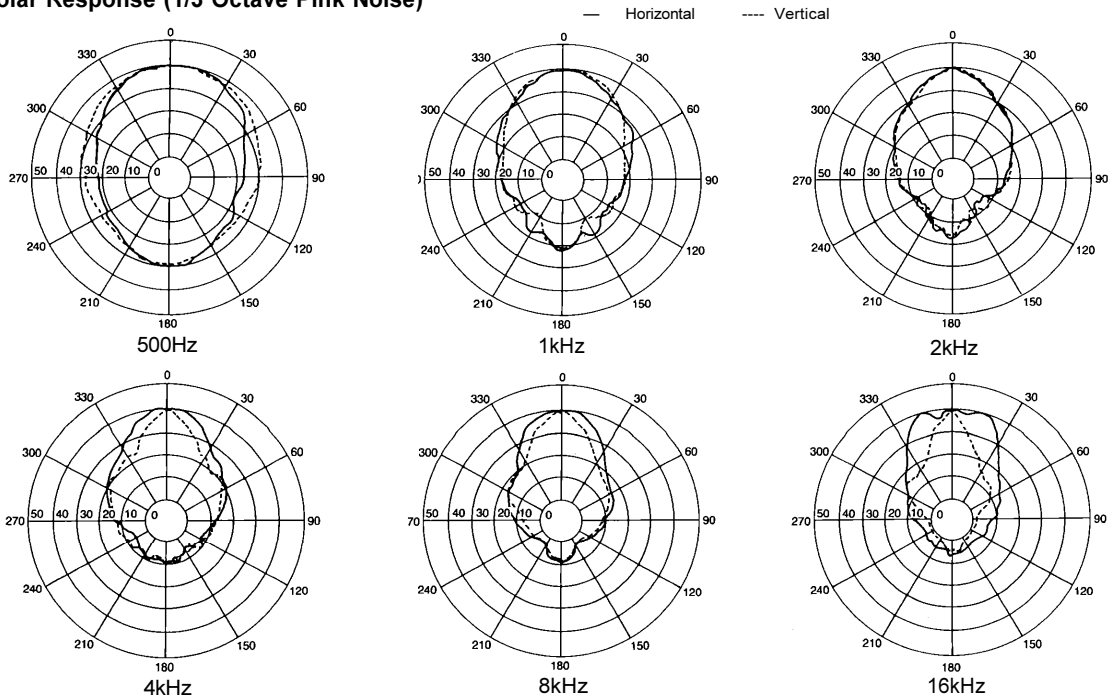
□ Coverage Angle vs Frequency (-6dB)



□ Directivity Factor vs Frequency (Q)

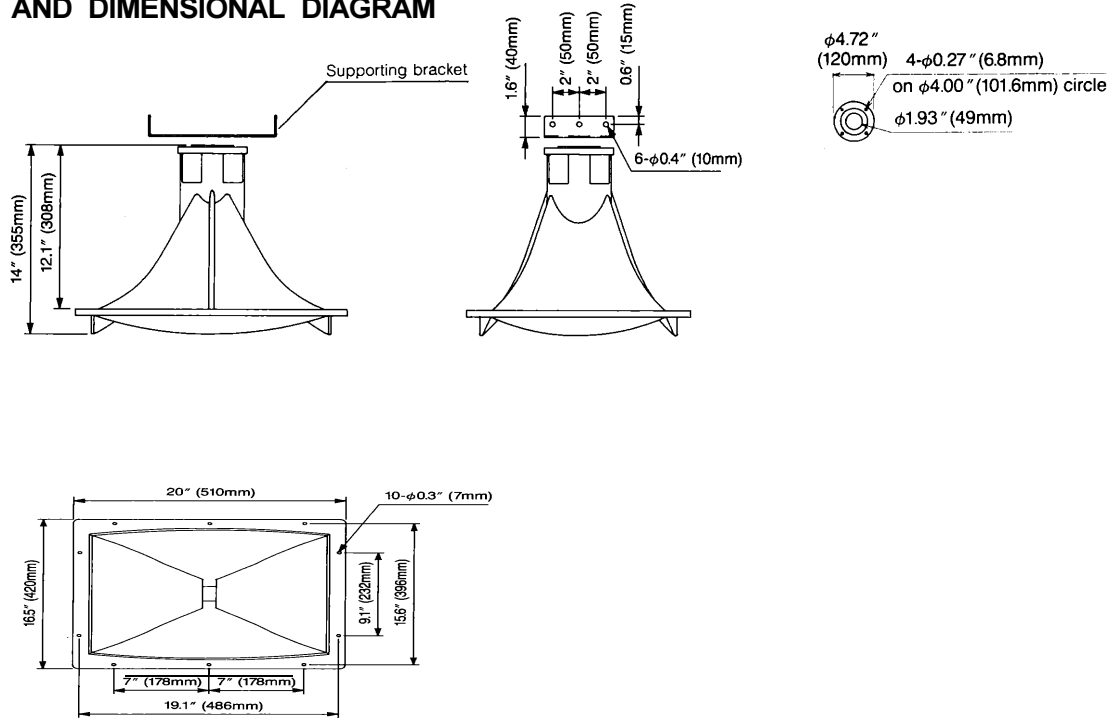


□ Polar Response (1/3 Octave Pink Noise)



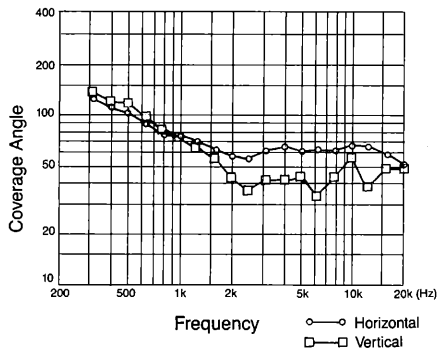
LE-M64

APPEARANCE AND DIMENSIONAL DIAGRAM

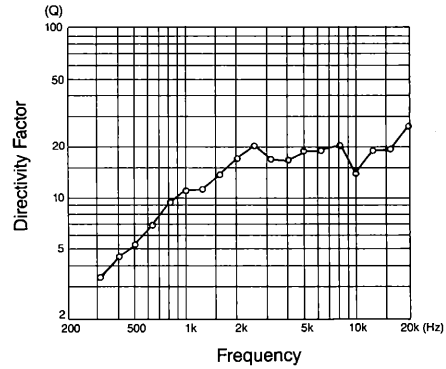


CHARACTERISTIC DIAGRAMS

□ Coverage Angle vs Frequency (-6dB)

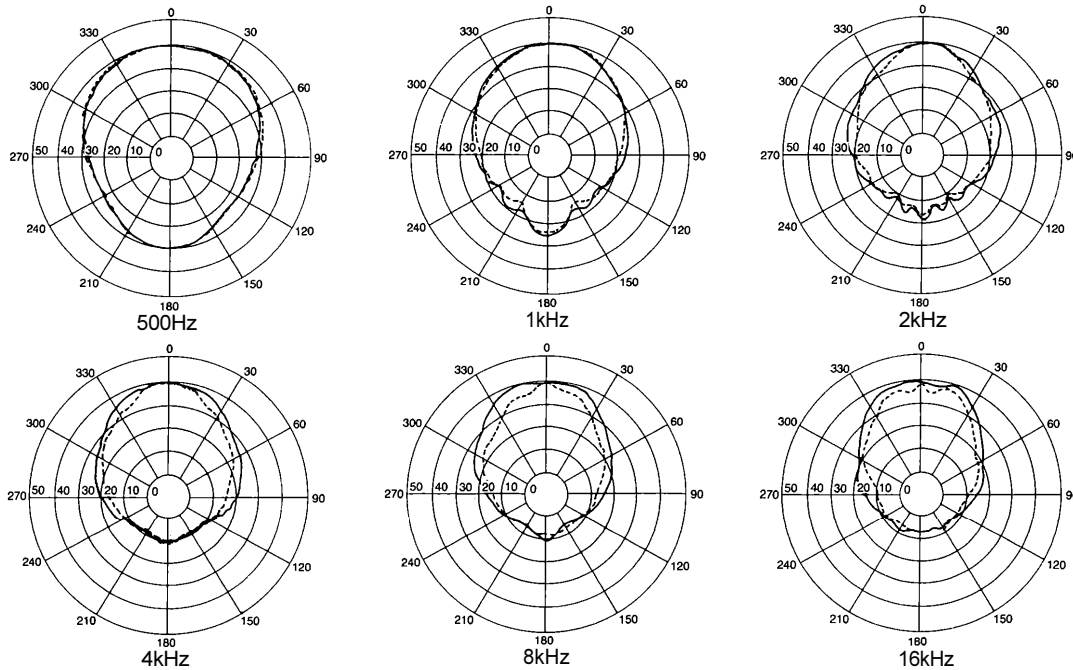


□ Directivity Factor vs Frequency (Q)



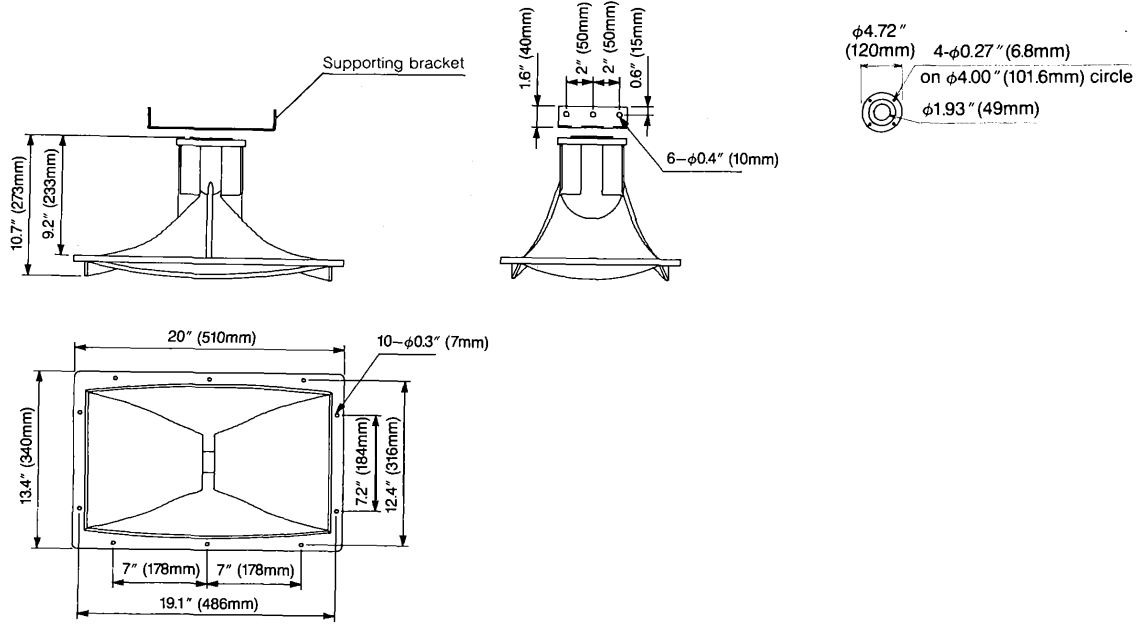
□ Polar Response (1/3 Octave Pink Noise)

--- Horizontal ----Vertical



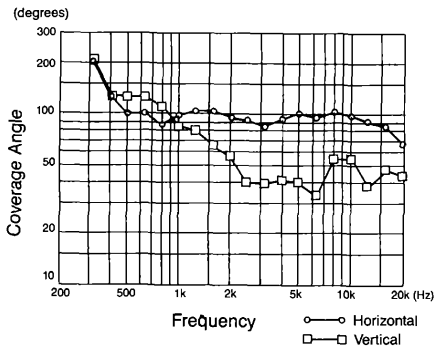
LE-M94

APPEARANCE AND DIMENSIONAL DIAGRAM

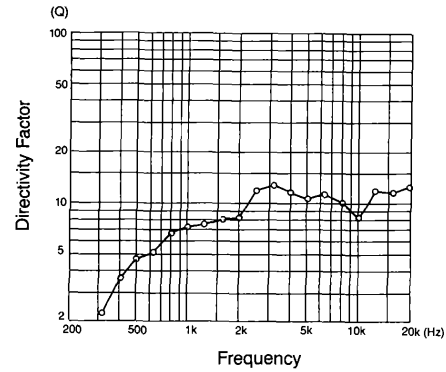


CHARACTERISTIC DIAGRAMS

□ Coverage Angle vs Frequency (-6dB)

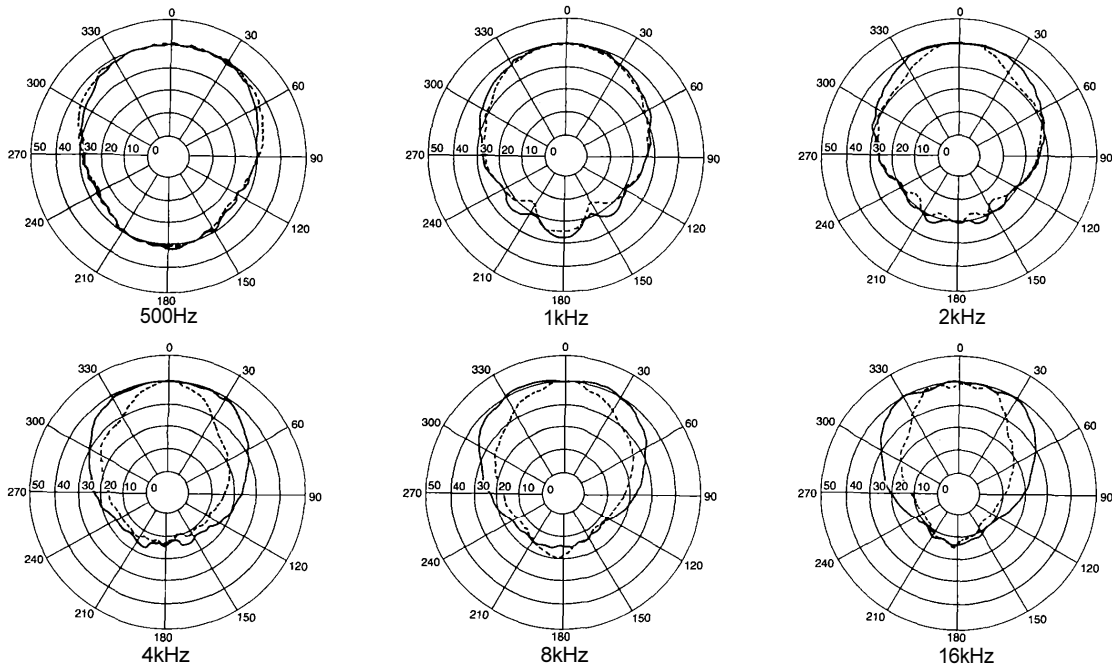


□ Directivity Factor vs Frequency (Q)



□ Polar Response (1/3 Octave Pink Noise)

— Horizontal - - - Vertical



SPECIFICATIONS

Model No.	LE-M124	LE-M94
Coverage Angle		
Horizontal (-6dB)	120° (+23°, -13°) (400Hz to 20kHz)	90° (+13°, -6°) (500Hz to 16kHz)
Vertical (-6dB)	40° (+17°, -10°) (2kHz to 20kHz)	40° (+16°, -7°) (2kHz to 20kHz)
Crossover Frequency	500Hz or more (HFD-260-8/16 is used.) 800Hz or more (HFD-220-8/16 is used.)	500Hz or more (HFD-260-8/16 is used.) 800Hz or more (HFD-220-8/16 is used.)
Throat Diameter	2" (49mm)	2" (49mm)
Applicable Drivers	HFD-260-8/16 HFD-220-8/16	HFD-260-8/16 HFD-220-8/16
Construction	Solid polyurethane	Solid polyurethane
Dimensions		
Mouth Height	13.39" (340mm)	13.39" (340mm)
Mouth Width	20.08" (510mm)	20.08" (510mm)
Length	10.75" (273mm)	10.75" (273mm)
Weight	13.2 lbs. (6kg)	11.0 lbs. (5kg)

Model No.	LE-M64	LE-M42
Coverage Angle		
Horizontal (-6dB)	60° (+17°, -8°) (800Hz to 20kHz)	40° (+12°, -2°) (800Hz to 20kHz)
Vertical (-6dB)	40° (+16°, -7°) (1.6kHz to 20kHz)	20° (+15°, -7°) (2kHz to 20kHz)
Crossover Frequency	500Hz or more (HFD-260-8/16 is used.) 800Hz or more (HFD-220-8/16 is used.)	500Hz or more (HFD-260-8/16 is used.) 800Hz or more (HFD-220-8/16 is used.)
Throat Diameter	2" (49mm)	2" (49mm)
Applicable Drivers	HFD-260-8/16 HFD-220-8/16	HFD-260-8/16 HFD-220-8/16
Construction	Solid polyurethane	Solid polyurethane
Dimensions		
Mouth Height	16.54" (420mm)	16.54" (420mm)
Mouth Width	20.08" (510mm)	24.80" (630mm)
Length	13.98" (355mm)	28.03" (712mm)
Weight	13.2 lbs. (6kg)	19.8 lbs. (9kg)

*Specifications are subject to change without notice.

EQUALIZATION

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

	LE-M124	LE-M94	LE-M64	LE-M42
HFD-260-8/16	TYPE 3	TYPE 2	TYPE 2	TYPE 5
HFD-220-8/16	TYPE 8	TYPE 8	TYPE 8	TYPE 9

ARCHITECTS AND ENGINEERS SPECIFICATIONS

The constant directivity horn shall be a TOA LE Series LE-M124, LE-M94, LE-M64, LE-M42 or equivalent. Construction shall be of solid polyurethane and throat diameter shall be 2 in. (49mm). Dimensions (mouth height, mouth width and speaker length) and weight shall be: LE-M124: 13.39 x 20.08 x 10.75 in. (340 x 510 x 273mm) at 13.2 lbs. (6kg); LE-M94: 13.39 x 20.08 x 10.75 in. (340 x 510 x 273mm) at 11.0 lbs. (5kg); LE-M64: 16.54 x 20.08 x 13.98 in. (420 x 510 x 355mm) at 13.2 lbs. (6kg); and LE-M42: 16.54 x 24.80 x 28.03 in. (420 x 630 x 712mm) at 19.8 lbs. (9kg). Applicable drivers shall be the TOA HFD-260-8/16 and HFD-220-8/16. Each horn shall have a crossover point of 500Hz and above when used as part of an HFD-260 system, or 800Hz and higher with the HFD-220 system. Frequency response shall be uniform over the full frequency range from 800Hz to 16kHz at any point (2kHz to 20kHz vertically) within the rated coverage angle. The horns shall have a horizontal by vertical controlled coverage angle at -6dB of: LE-M124: 120 x 40 degrees; LE-M94: 90 x 40 degrees; LE-M64: 60 x 40 degrees, and LE-M42: 40 x 20 degrees.

