

PROFESSIONAL SOUND SYSTEM



Constant Directivity Horn

Model LE-940
LE-640
LE-420

GENERAL 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 is an equiphase surface, permitting a sound wave to leave the horn open end at the same instant.

These combine together to make the geometry ideal for maintaining uniform directivity over the rated frequency range and high efficiency especially in the low frequency range.

Each horn is intended for use in systems with crossover at 500Hz or higher, and ensures uniform frequency response over the full frequency range from 630Hz to 16kHz at any point within the rated coverage angle. The horns have a controlled coverage angle of 90 degrees horizontally by 40 degrees vertically (LE-940), 60°x40° (LE-640), or 40°x20° (LE-420).

Each horn comes with a cast-aluminum throat with diameter of 2in (49mm) for mating with Toa HFD-651-8 or HFD-651-16 high-frequency compression driver through the YS-651 throat adaptor (optional). The horn bell is constructed of fiberglass reinforced plastic. The horn bell and throat, both having sufficient thickness, suppress resonance.

FEATURES

1. Toa's unique horn design.
2. Excellently controlled horizontal and vertical dispersion over the frequency range of 630Hz to 16kHz.
3. High efficiency and smooth frequency response.
4. 2in (49mm) throat diameter.
5. Resonance-free, rigid construction.
6. Mounting holes.

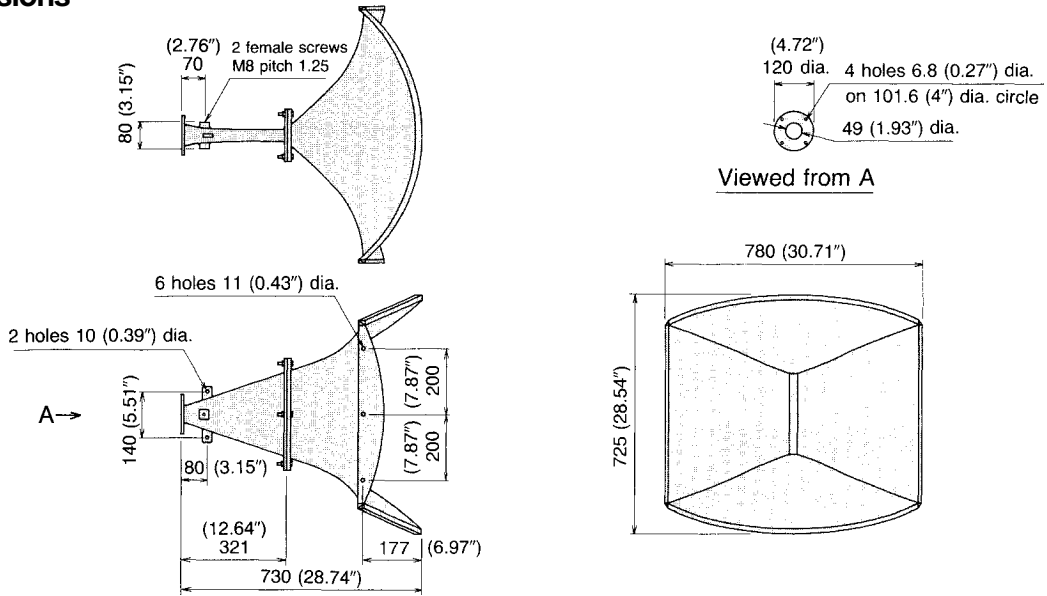
SPECIFICATIONS

Model	LE-940	LE-640	LE-420
Horizontal Coverage Angle	90° (+22°, -6°) (630 ~ 20kHz)	60° (+ 15°, -4°) (630 ~ 16kHz)	40° (+ 13°, -1°) (630 ~ 16kHz)
Vertical Coverage Angle	40° (+15°, -0°) (630 ~ 20kHz)	40° (+16°, -2°) (630 ~ 20kHz)	20° (+8°, -3°) (1k ~ 16kHz)
Recommended Crossover Frequency	500Hz or more		
Throat Diameter	49mm (1.93")		
Applicable Driver	HFD-651-8 (16), using throat adapter YS-651		
Construction	Horn Bell	Fiberglass reinforced plastic (FRP)	
	Horn Throat	Cast-Aluminum	
Dimensions (HxWxD)	725x780x730mm 28.54"x30.71"x28.74"	725 x 780 x 730mm 28.54"x30.71"x28.74"	725x780x1,378mm 28.54"x30.71"x54.25"
Weight	13kg (28.7 lbs)	12kg (26.5 lbs)	17kg (37.5 lbs)
Accessories	Hexagonal bolts M8x40...6, Hexagonal nuts M8...6 Flat washers 8 dia...12, Spring washers 8 dia...6		

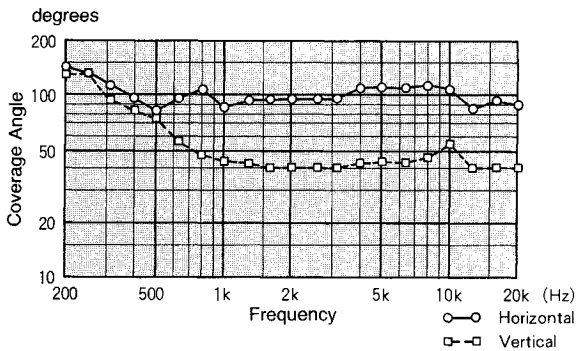
*Specifications are subject to change without notice.

[LE-940]

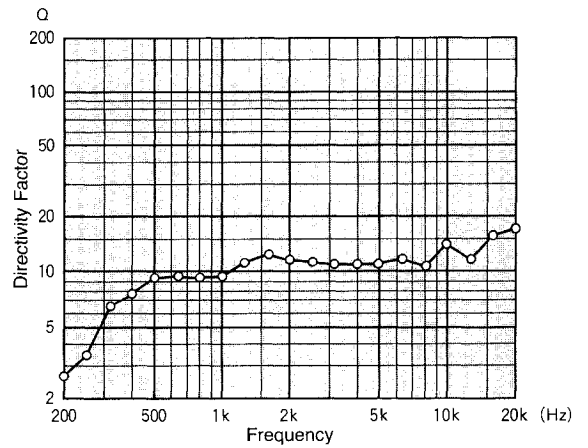
• Dimensions



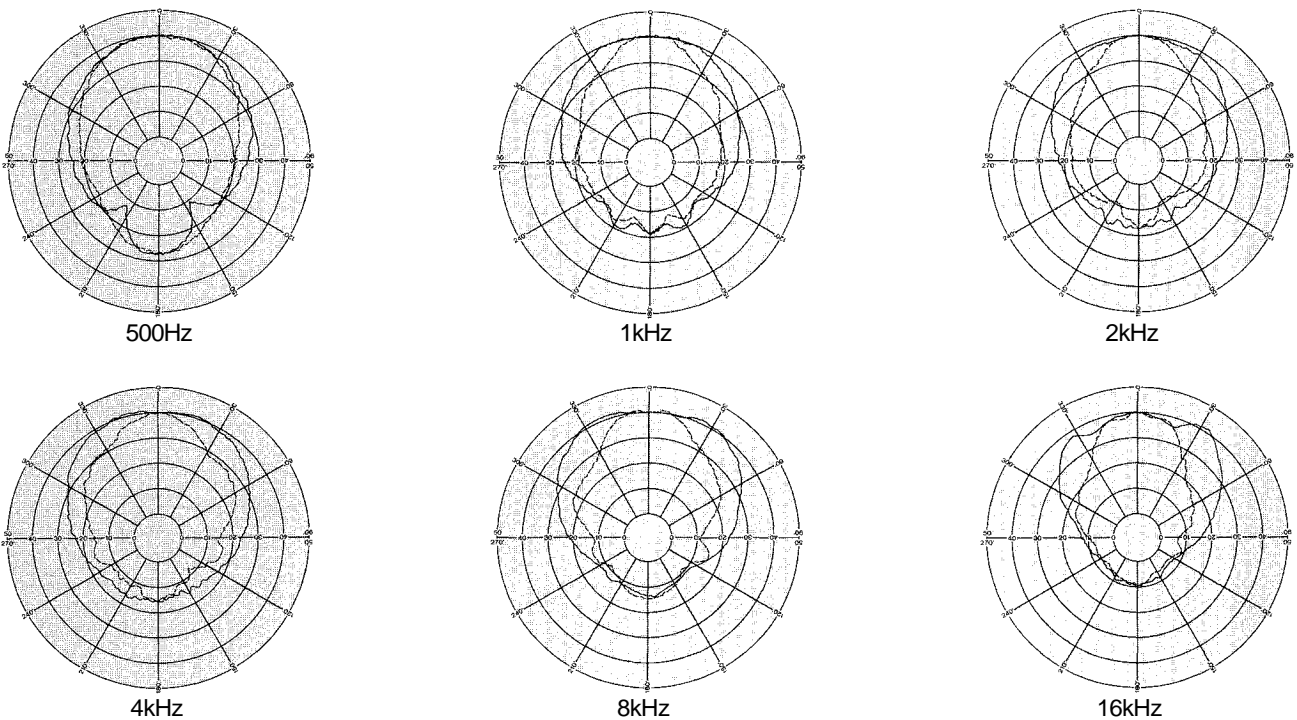
• Coverage Angle vs Frequency (-6dB)



• Directivity Factor vs Frequency (Q)

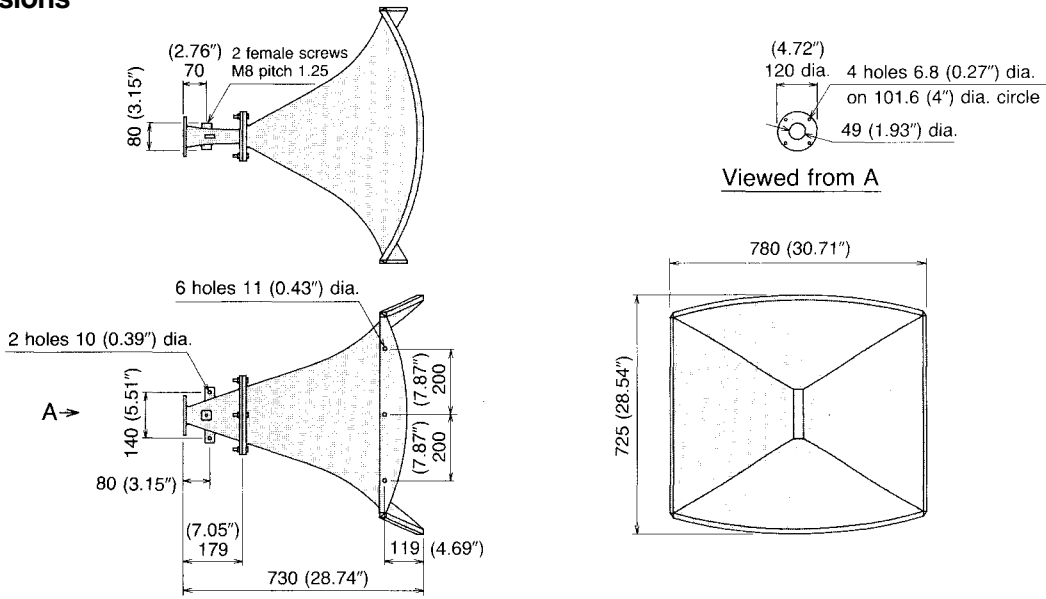


• Polar Response (1/3 Octave Pink Noise) — Horizontal --- Vertical

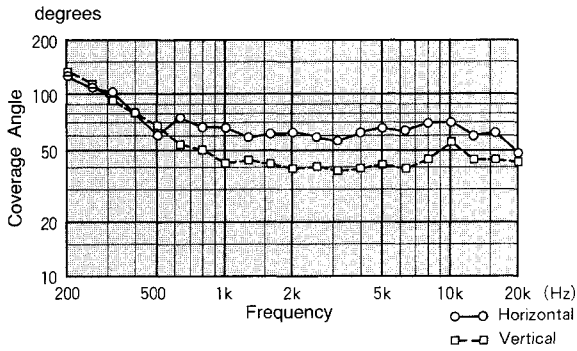


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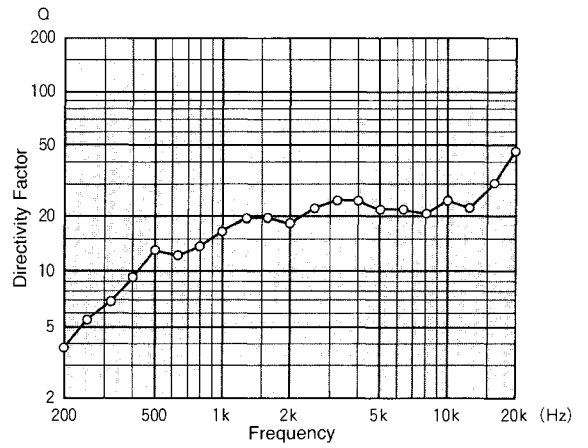
• Dimensions



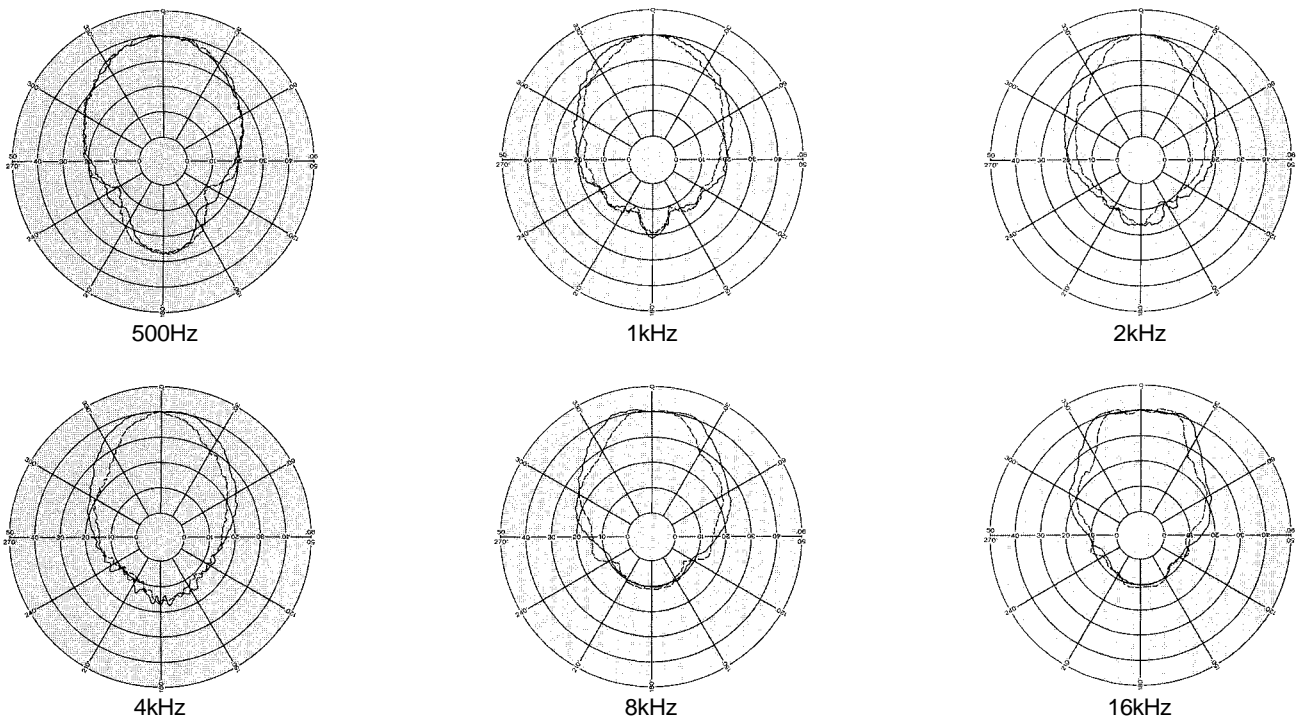
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• Directivity Factor vs Frequency (Q)

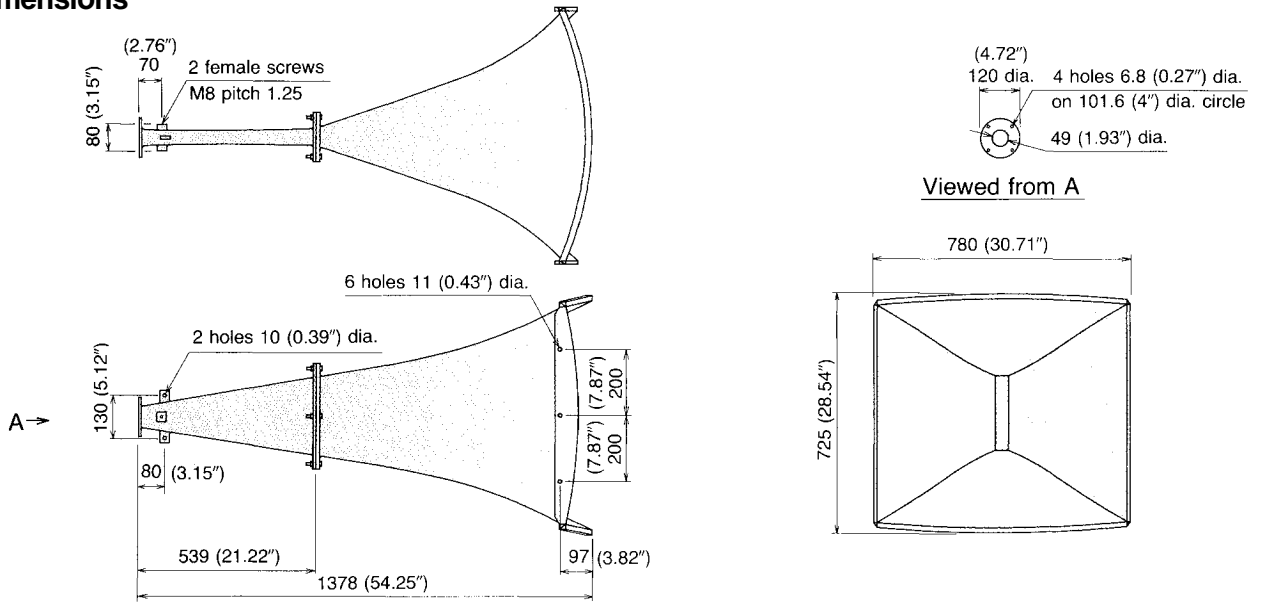


• Polar Response (1/3 Octave Pink Noise) — Horizontal --- Vertical

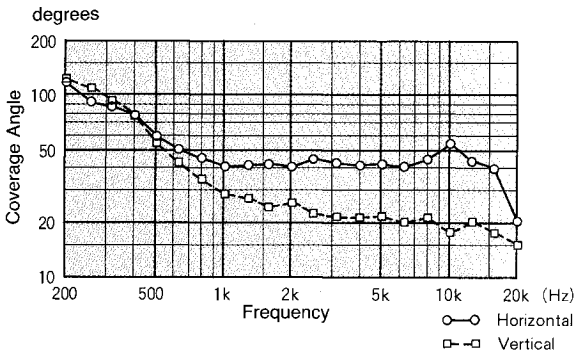


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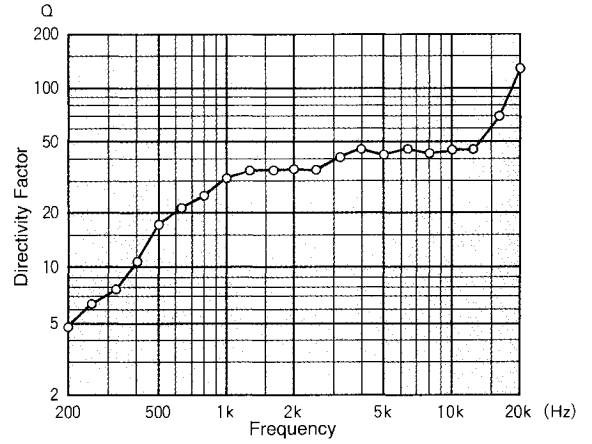
• Dimensions



• Coverage Angle vs Frequency (-6dB)



• Directivity Factor vs Frequency (Q)



• Polar Response (1/3 Octave Pink Noise) — Horizontal --- Vertical

