

b u l l e t i n

MODEL  
537-512

Horn & Lens  
Assembly

Number B-4

- Index of refraction 1.5
- Sound pressure less than 3 db down at  $120^{\circ}$
- Eliminates phase interference and cancellations

This assembly is composed of a cast aluminum horn 12" in length with a circular throat 2" in diameter, tapering exponentially and with a smooth continuous transition to an elliptical mouth - the major and minor axis being 5-3/4" and 11-1/2", respectively. The flange on the throat end is drilled to match the 375 high frequency unit with four (4) holes 1/4" diameter on a 4" bolt circle.

To the mouth of the horn is fitted a hyperbolic curvature slant plate disbursing lens. This unit is 36" wide on the horizontal axis measured normal to the axis of the horn. The length is 7" along the axis of the horn and the vertical height is 12". The index of refraction of this lens is 1.5 and the curvature is such that the sound pressure is down less than 3 db in a  $120^{\circ}$  horizontal angle and a  $45^{\circ}$  vertical angle. By generally accepted practice this would be considered a  $65^{\circ}$  by  $130^{\circ}$  disbursing device. This lens is a broad band and will distribute all frequencies in the audio spectrum over this area. The usual phase interference and cancellation present in all multicellular and flat or distributed source horns has been eliminated. This equipment will provide smooth even distribution for all frequencies.

When used with the 375 high frequency driver, this unit will provide flat response and proper loading for a 500 c.p.s. crossover at 12 db per octave.

The distribution from this device is symmetrical around the projected axis of the horn feeding the Koustical Lens.

The over all dimensions and general configuration of the 537-512 is identical with Model 537-508. The only difference between these two models dimensionally is the change in the hyperbolic lens curvature cut outs.



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