

METRIC

A-A-59002/5

31 May 1995

COMMERCIAL ITEM DESCRIPTION

LOUDSPEAKER, SHIPBOARD ANNOUNCING SYSTEMS
ENCASED, 70.7 VOLT, 10 VOLT-AMPERES

The General Services Administration has authorized the use of this commercial item description, by all federal agencies.

The requirements for acquiring the loudspeaker described herein shall consist of this specification and the latest issue of A-A-59002.

1. **Scope.** This Commercial Item Description covers requirements for a deck or platform mounted loudspeaker for use in high-temperature and high jet-blast areas.

2. **Salient characteristics.**

2.1 **Dimensions.** See figure 1.

2.2 **Enclosure.** All surfaces of the loudspeaker shall have drainage provision when the unit is mounted level. Loudspeaker shall meet the requirements of A-A-59002 degree of enclosure. Application is shipboard, unsheltered, flight deck, or shipboard, unsheltered, well deck, as required.

2.3 **Foreign object damage protection.** The speaker shall be protected so that any particle having any dimension greater than 7.5 mm will not penetrate to the operating components of the speaker when propelled by a 320 m/s air blast.

2.4 **Voltage selection.** The terminal block, and other electrical components as necessary, shall be capable of operation using a 95 volt input or a 70.7 volt input. The terminal block shall be marked so as to differentiate between the two connections (See figure 1).

2.5 **Peak input voltage.** Peak input shall be at least two times the maximum volt-ampere input specified in table I herein when tested as specified in A-A-59002

2.6 **Power output selection.** The loudspeaker shall have an internal power selection capability, so that peak power output can be selectable. The loudspeaker internal components shall be so constructed and interconnected that peak output power, with respect to the driver, can be either 10 watts or 7.5 watts. Both of these settings shall be attainable for either 70.7 volt or 95 volt inputs.

2.7 **Sound pressure output.** Minimum rms sound pressure output in dB re 20 micropascals at rated input shall be as specified in table I, when measured in accordance with A-A-59002.

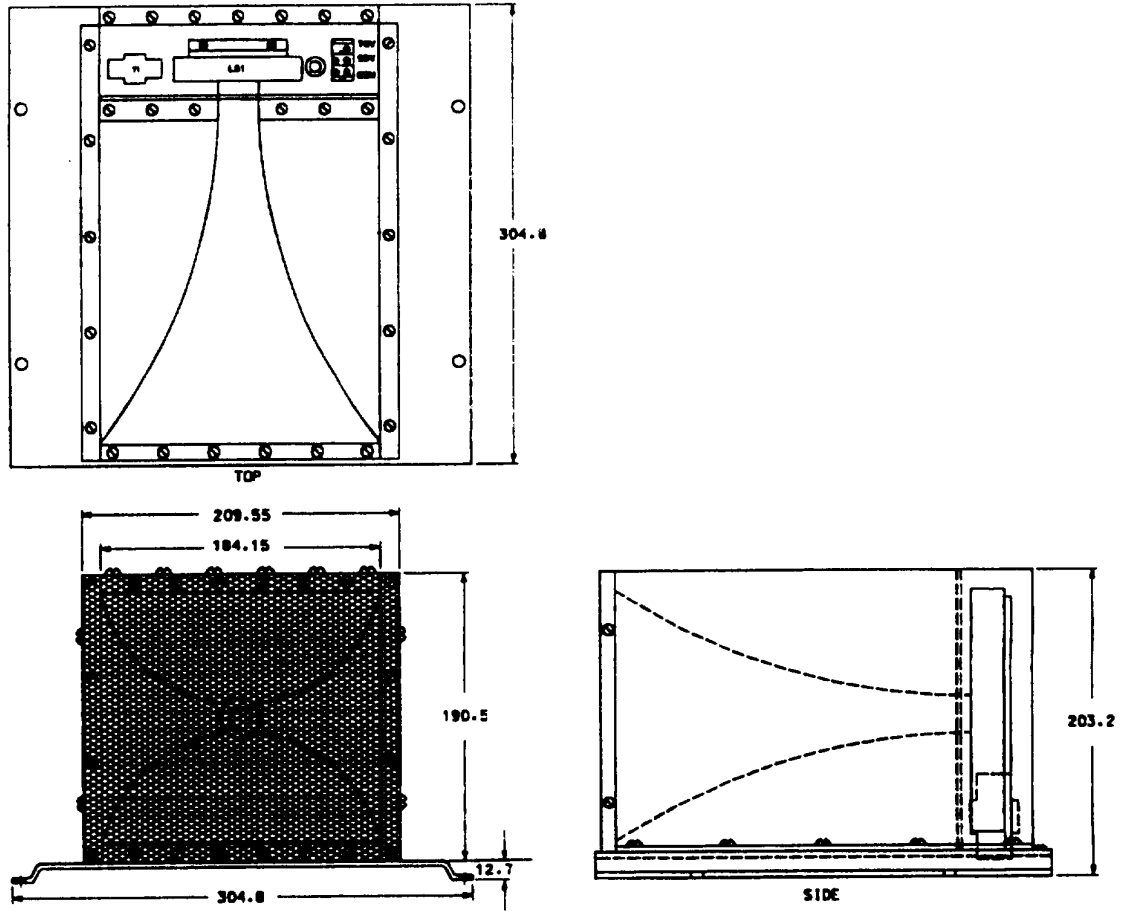
2.8 **Coverage angle.** At 30 degrees off the horizontal axis, decrease in sound pressure shall be less than 3 dB. At 30 degrees off the vertical axis, decrease in sound pressure shall be less than 6 dB.

AMSC N/A

FSC 6320

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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NOTE: All dimensions are in millimeters

FIGURE 1. Form, fit and function with maximum dimensions for NHPL.

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2.9 **Horn configuration.** The speaker horn shall follow a curve of shape meeting the form, fit, and function of Figure 2. This configuration optimizes the speaker response at the upper end of the output spectrum.

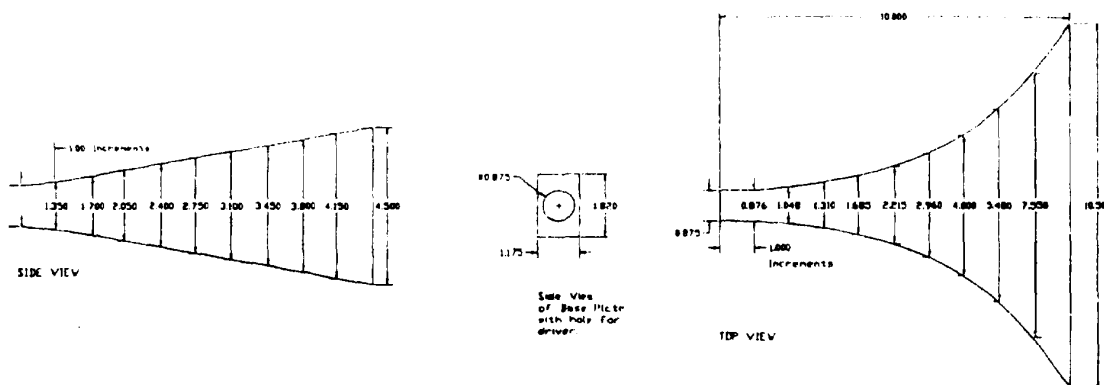


FIGURE 2. Form, fit, and function curve for horn configuration.

2.10 **Volume control.** None required.

TABLE I. Minimum on-axis sound pressure (rms dBp).

Nomenclature	Distance to test MIC (meters)	Volt-ampere input (max)	Warble bands - Hz					
			320 to 500	500 to 800	800 to 1250	1250 to 2000	2000 to 3200	3200 to 5000
NHPL	3.048	10	103	105	108	112	110	-

2.11 **Temperature.** The operating temperature limits shall be -25°C to $+65^{\circ}\text{C}$ for all applications. The non-operating temperature limits shall be -40°C to $+100^{\circ}\text{C}$.

2.12 **Thermal shock.** In addition to the thermal shock test of A-A-59002, NHPL assemblies shall meet all performance requirements after undergoing five cycles of the following procedure: The loudspeaker shall be placed in an environment of 100°C for 2 hours, then brought to a surface temperature of 175°C within 2 minutes, remaining at 175°C for 2 minutes, then returning to a room temperature environment within 10 minutes. The loudspeaker shall remain at room temperature for 1 hour.

Preparing Activity:
Navy - SH
(Project 6320-0046)