

INCH-POUND

MIL-DTL-24223/4B(SH)

28 January 2014

SUPERSEDING

MIL-L-24223/4A(SH)

22 October 1986

## DETAIL SPECIFICATION SHEET

LOUDSPEAKER, SHIPBOARD ANNOUNCING SYSTEMS  
ENCASED, HIGH POWER, ROTATIONAL, 70 VOLT, 250 VOLT-AMPERES

Reinstated after 28 January 2014 and may be used for new and existing designs and acquisitions.
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This specification is approved for use within the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-24223.

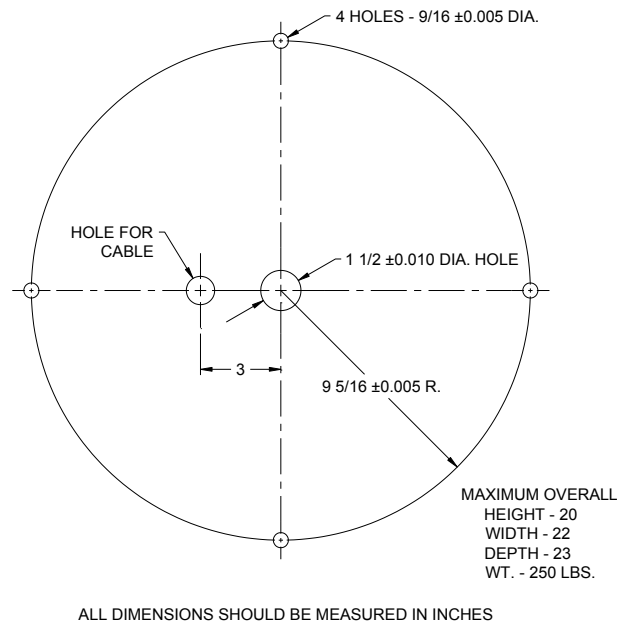


FIGURE 1. Mounting dimensions for LS 397()/SIC.

## PHYSICAL REQUIREMENTS:

Description: The type LS-397()/SIC loudspeaker shall be designed for mast or deck mounting. The loudspeaker shall have a rotatable base, enabling the sound to be transmitted in any direction in the horizontal plane.

Dimensions and weight: See FIGURE 1.

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**Degree of enclosure:** Except for the opening required for acoustic radiation, the enclosure shall conform with the totally enclosed requirements of MIL-STD-108. The opening for acoustic radiation shall be covered with mesh or perforated metal not less than 0.032 inch thick. Mesh openings or perforations shall not be larger than  $\frac{5}{64}$  inch. Where required for servicing internal assemblies, the mesh shall be removable.

**Enclosure construction:** Wire connections shall be closed lugs on a threaded terminal. For unsheltered, topside, shipboard application. The enclosure shall contain required driver(s) and terminal board (if required); the transformer enclosure shall contain the transformer assemblies and terminal board (if required). The enclosure shall be provided with a removable cover (or horn assembly) to give access to all interior parts and the enclosure mounting holes. The enclosure horn shall be secured by means of screws engaging in tapped holes provided in the enclosure. Removing the cover shall not involve disturbance of incoming cables and terminal tubes. Part mounting fasteners shall be secured so as not to require demounting of the enclosure for part replacement. Parts shall be mounted so that their terminal markings are visible with the enclosure cover removed.

**Coatings:** Aluminum and aluminum alloy parts shall be pretreated and painted. The pretreatment shall be either anodized in accordance with MIL-A-8625, or chemically pretreated in accordance with MIL-DTL-5541. It shall then be primed with a single coat of a material conforming to TT-P-645 and a single top coat of enamel conforming to MIL-DTL-15090 class 2, or coated with a polyester powder (equivalent to the weather and corrosion resistance of polyester triglycidyl isocyanurate (TGIC)) rated for use in marine environments, designed to last longer than the active loudspeaker element. The color shall be haze gray, color No. 26270, in accordance with Fed. Std. 595C.

**Cable entrance:** Entrance shall be as shown on FIGURE 1. The cable entrance hole shall accommodate a stuffing tube, size 2, of ASTM F1836M, which shall accommodate one cable of type DSGA-4 of MIL-DTL-24643/15.

**Transformer and terminal block:** The transformer and terminal block shall be enclosed in a watertight enclosure.

**Rotational base:** Loudspeaker shall be designed for mast or deck mounting. The loudspeaker shall have a rotatable base, enabling the sound to be transmitted in any direction in the horizontal plane.

**Speaker drivers:** The loudspeaker shall not exceed 16 driver units.

#### PERFORMANCE REQUIREMENTS:

**Power input:** Volt-ampere input specified in TABLE I shall provide at least sound pressure output, indicated in TABLE I.

**Sound pressure output:** Sound pressure output shall be measured at the distance identified in TABLE I.

TABLE I. On-axis sound pressure output.

Type 250 VA	Distance (FT)	Decibel (dB) <sup>1/</sup> Output in Warble Band (Hertz)					
		320 to 500	500 to 800	800 to 1,250	1,250 to 2,000	2,000 to 3,200	3,200 to 5,000
LS-397()/SIC	30	---	108	113	114	114	---
NOTE: <sup>1/</sup> dB re 0.0002 dynes/cm <sup>2</sup> at the distance specified.							

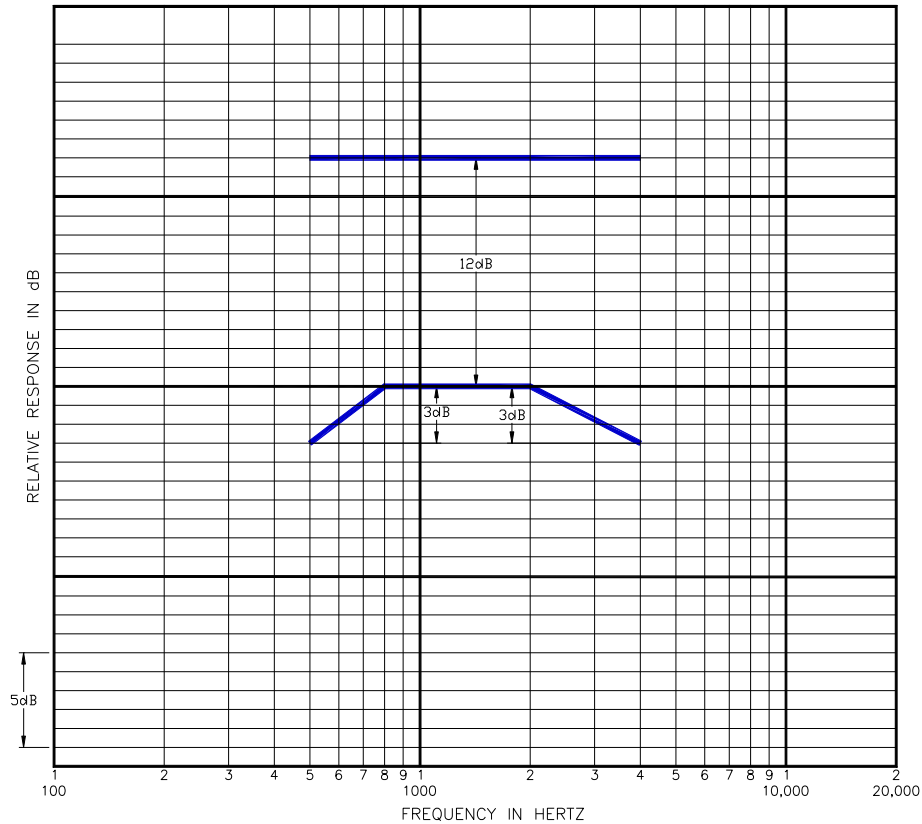
**Sound pressure distribution:**

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TABLE II. Off-axis sound pressure output.

Type 250 VA	Decibel (dB) Decrease in Relative Sound Pressure Output	
	30 Degrees Off-Axis (Horizontal Plane)	30 Degrees Off-Axis (Vertical Plane)
LS-397()/SIC	15	5

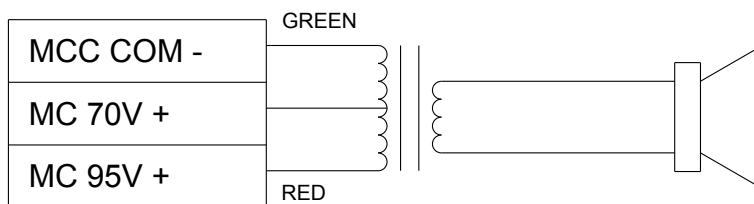
Frequency: Frequency response shall be within FIGURE 2 limits over the band shown.

FIGURE 2. Frequency response limits for LS-397(SIC).

Volume control: None required.

Marking: In accordance with FIGURE 3.

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FIGURE 3. Wiring diagram and terminal designations.

## ENVIRONMENTAL REQUIREMENTS:

Temperature: Temperature shall be from -20.2 to 149 °F (-29 to 65 °C).

Gun blast: After gun blast testing the equipment shall show no damage and meet the acoustic performance after salt spray, vibration, and shock tests requirements of MIL-DTL-24223, except the level shall be within 3 dB of the values measured before gun blast test. “Damage” is interpreted as evidence of rupture, fracture, tearing, or mechanical deformation that would impair the operation of the device.

CHANGES FROM PREVIOUS ISSUE: Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Preparing Activity:  
Navy – SH  
(Project 5965-2012-006)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.