

**MIL-HDBK-173A**  
**11 September 1973**

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**SUPERSEDING**

**MIL-HDBK-173**  
**24 June 1966**

**DEPARTMENT OF THE ARMY TECHNICAL MANUAL 11-487M**  
**MILITARY STANDARDIZATION HANDBOOK**

**AUDIO EQUIPMENT**



**FSC 5965**

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

DEPARTMENT OF DEFENSE  
Washington, D. C. 20301

MIL-HDBK-173A  
Audio Equipment

1. This standardization handbook was developed by the Department of Defense with the assistance of Industry in accordance with established procedures.

2. This publication was approved on 11 September 1973 for printing and inclusion in the military standardization handbook series.

3. This document provides basic and fundamental information on audio equipment including chest-sets, handsets, headsets, loudspeakers and microphones. It provides information and guidance to personnel concerned with selection of the above items used with audio amplifiers, intercommunication and radio receiving equipment. The handbook is not intended to be referenced in purchase specifications except for informational purposes, nor shall it supersede any specification requirements.

4. Every effort has been made to reflect the latest information on audio equipment. It is the intent to review this handbook periodically to insure its completeness and currency. Users of this document are encouraged to report any errors discovered and any recommendations for changes or inclusions to the U.S. Army Electronics Command (AMSEL-RD-ET-3), Ft. Monmouth, N.J. or to the Defense Electronics Supply Center (DESC-EMD), Dayton, Ohio 45444.



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## SECTION 1

### INTRODUCTION

#### 1. GENERAL INFORMATION

##### 1.1 Purpose.

- a. To provide a handbook, intended as a guide, to assist designers in the selection of parts and to furnish reference material that will serve to further the Standardization Program.
- b. To outline criteria pertaining to the use, choice, and application of audio equipment for military functions.

1.2 Scope. This handbook consists of audio equipment that is used by the Army, Navy, and Air Force.

1.3 Drawing configurations. The drawings used in this handbook are typical and are not necessarily the exact configuration for each item of equipment.

1.4 Data not available. Blank spaces have been left under appropriate headings to permit the user of this publication to enter any data that could not be determined during preparation.

1.5 Page numbering. The page-numbering sequence was established to make possible further additions or deletions to this handbook without disrupting the initial page-numbering sequence.

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## SECTION 2

### CHEST SETS

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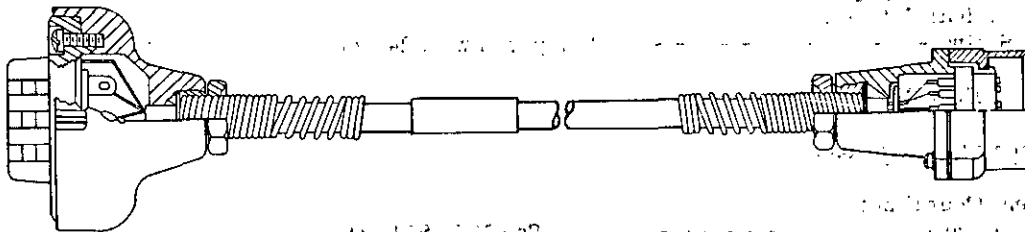
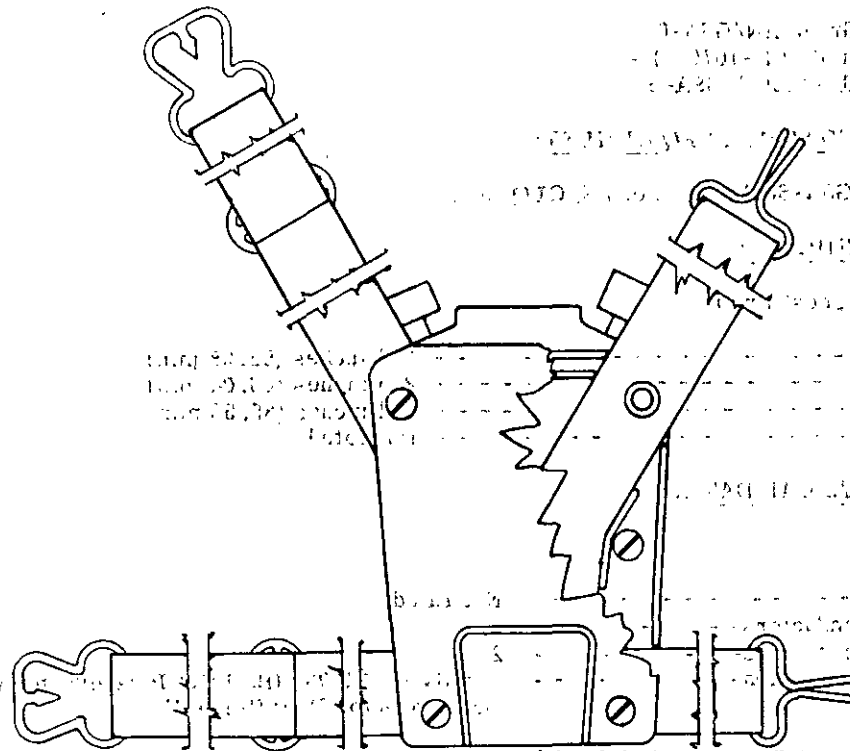


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ITEM NAME: CHEST SET

NOMENCLATURE: AN/GSA-6( )

FEDERAL STOCK NO: 5965-329-9085



#### FUNCTIONAL DESCRIPTION:

Chest Set Group AN/GSA-6( ) is an assembly of Switchbox SA-142( )/GSA-6 and Cord Assembly CX-1070( )/4. This equipment incorporates a means of selectively connecting a headset and microphone to radio or interphone equipment.

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ITEM NAME: CHEST SET  
 NOMENCLATURE: AN/GSA-6( ) (Cont)  
 FEDERAL STOCK NO: 5965-329-9085

CONSISTS OF:

- 1 Chest Set Group AN/GSA-6
- 1 Cord Assembly CX-1070( )/4
- 1 Switchbox SA-142( )/GSA-6

RELATIONSHIP TO SIMILAR EQUIPMENT:

Chest Set AN/GSA-6( ) is part of AN/GLQ-2( )

PHYSICAL DESCRIPTION:

Dimensions: (Chest Unit)

Height - - - - - 3.7 inches (93.98 mm)  
 Width - - - - - 2.5 inches (66.04 mm)  
 Depth - - - - - 1.4 inches (35.56 mm)  
 Weight - - - - - Not rated

ADDITIONAL PHYSICAL DATA:

Cord Data:

Length - - - - - Not rated  
 Number of Conductors - - - - - 8  
 Number of Connectors - - - - - 2  
 Connector Designation - - - - - Per SM-C-146931 (Bail Out Plug Assembly)  
 and Connector Plug U-161/U

TECHNICAL DESCRIPTION: (SWITCHBOX)

Switch Function: Selectively connecting a headset and microphone to radio or interphone equipment

Switch Electrical Ratings:

Current Rating - - - - - 2 amperes with 24 Vdc

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Equipment Operating:  
 Temperature - - - - - See MIL-STD-169  
 Elevation - - - - - Up to 10,000 feet above sea level  
 Moisture Resistance - - - - - See MIL-STD-170

REFERENCE DATA and LITERATURE

MIL-C-13113

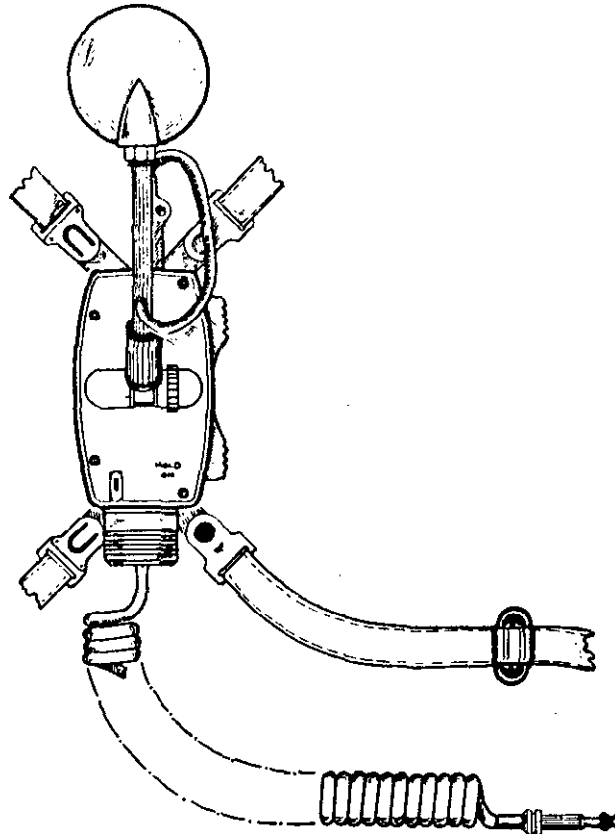
MANUFACTURER CODE	PART NUMBER
80058 /	AN/GSA-6( )

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ITEM NAME: CHEST SET

NOMENCLATURE: H-18/GT

FEDERAL STOCK NO: 5965-164-8076



FUNCTIONAL DESCRIPTION:

Chest Set, electrical, H-18/GT is a telephone type transmitter mounted on a chest plate by an adjustable steel arm. This equipment is used with Radio Set AN/CRD-2, Radio Set AN/TTG-1, Switchboard BD-71, Switchboard BD-72, Switchboard BD-91, Switchboard BD-101, Flash Range Set GR-4, Flash Range Set GR-8, Radio Set AN/TRL, Switchboard BD-110, Radar Set AN/FPG-2, Telephone Central Office Set TC-1, Telephone Central Office Set TC-2, and Telephone Central Set TC-4.



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ITEM NAME: CHEST SET

NOMENCLATURE: H-18/GT (Cont)

FEDERAL STOCK NO: 5965-164-8076

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Equipment Operating:

Temperature - - - - - -80° F to +160° F  
Elevation - - - - - Up to 10,000 feet above sea level  
Relative Humidity - - - - - Up to 100 percent including condensation caused by  
temperature changes  
Vibration - - - - - No mechanical resonance below 55 Hz

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REFERENCE DATA and LITERATURE

MIL-C-13064

MIL-M-13189

SC-D-17105

ARCS Research and Development Corp Standardization of Chest Sets Purification

Report Contract DA 36-039, SC66416, Final Report Technical Analysis Phase

Contract DA 36-039, SC66416

MSS 5965-2

MANUFACTURER CODE	PART NUMBER
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LOUDSPEAKERS

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ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-454/U (Cont)

PHYSICAL DESCRIPTION:

Cone diameter - - - - - 4 inches (101.60 mm)  
 Mounting dimensions - - - - - Adjustable mounting bracket with  
 two 9/32-inch (7.14 mm) diameter  
 holes spaced 1-1/2 inch (38.10 mm) center to  
 center

Overall dimensions:

Length - - - - - 7.031 inches (178.59 mm)  
 Width - - - - - 5.656 inches (143.66 mm)  
 Depth - - - - - 3.312 inches (84.12 mm)

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 8 ohms  
 Power handling rating - - - - - 2 watts (warble tones)  
 Frequency range - - - - - 300 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer data - - - - - 600 ohms primary impedance

Environmental data:

Operating conditions:

Temperature - - - - - From -65°F to +160°F  
 Elevation - - - - - 5,000 feet above sea level  
 Relative humidity - - - - - 95 percent

Nonoperating conditions:

Temperature - - - - - From -80°F to +160°F for 72 hours  
 Elevation - - - - - 50,000 feet above sea level  
 Relative humidity - - - - - 100 percent

REFERENCE DATA AND LITERATURE

MIL-L-12632; MIL-L-12606

MANUFACTURER CODE	PART NUMBER
80058	LS-454/U
80063	LS-454/U
87771	LS-454/U
04848	LS-454/U
32001	LS-454/U
74201	LS-454/U
87771	LS-454/U

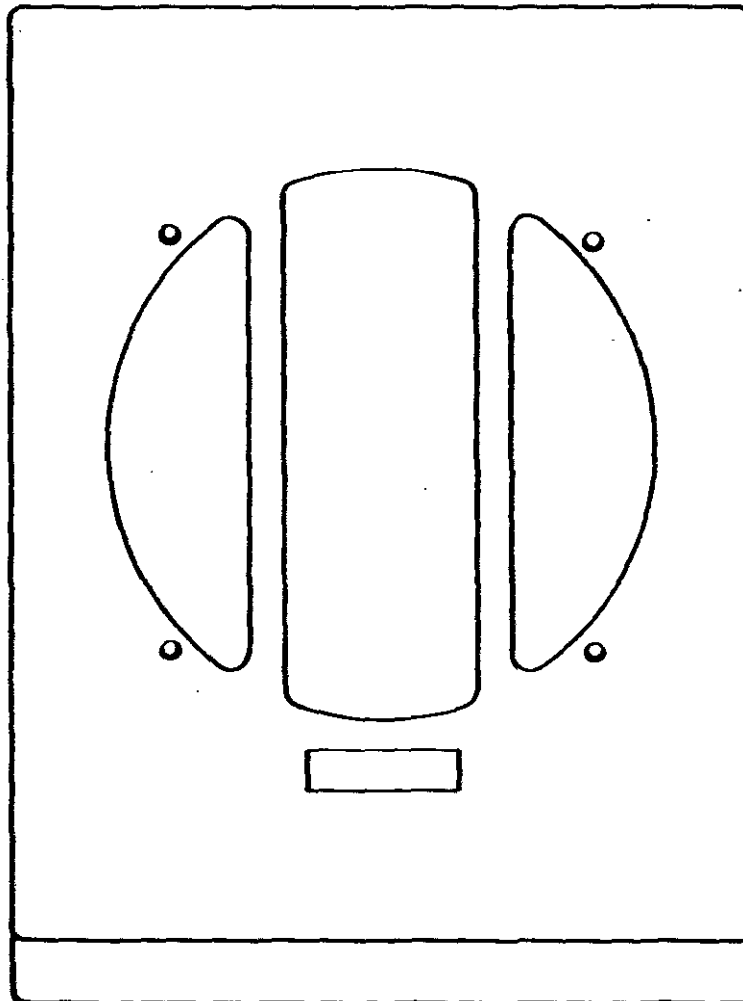


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ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-116/U

FEDERAL STOCK NO: 5965-280-8475



**FUNCTIONAL DESCRIPTION:**

The LS-116/U is a permanent magnet 12 inch loudspeaker mounted in a wooden cabinet. It is intended for use in the reproduction of speech or music from radio equipment, recorder-reproducers or public address systems.

**CONSISTS OF:**

- 1 Loudspeaker LS-448/U
- 1 12 Inch Loudspeaker
- 1 Output Transformer
- 1 Cable Assembly
- 1 Terminal Board and Cable Assembly
- 1 Cabinet

**RELATIONSHIP TO SIMILAR EQUIPMENT:**

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ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-116/U (Cont)

FEDERAL STOCK NO: 45965-280-8475

#### PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 12 inches (304.80 mm)  
Mounting Dimensions - - - - - 2 mounting brackets with 1/4 inch slotted hole located on the top spaced 8-3/16 inches center to center; 1 mounting bracket with 3/16 inch diameter hole located on the bottom

#### Over-all Dimensions:

Length - - - - - 17.312 inches (439.72 mm)  
Width - - - - - 9.75 inches (247.65 mm)  
Height - - - - - 14.625 inches (371.48 mm)

#### ADDITIONAL PHYSICAL DATA:

Cabinet Data - - - - - Completely inclosed in a "tilt-type" wall cabinet with the front opening covered with grille cloth

#### TECHNICAL DESCRIPTION:

##### INPUT

Voice coil impedance - - - - - 8 ohms  
Power handling rating - - - - - 14 watts normal; 20 watts peak (warble tones)  
Frequency range - - - - - 150 to 7,000 Hz.

#### ADDITIONAL TECHNICAL DATA:

Input Transformer Data - - - - - Primary winding is tapped to provide impedances of 500/1,000/1,500/2,000 ohms  $\pm 10$  percent at 1,000 cps when an 8 ohm loudspeaker is connected to the secondary winding and has a power handling capacity of 14 watts at 1,000 Hz.

#### ENVIRONMENTAL DATA:

##### Operating Conditions:

Temperature - - - - - From -65°F to +160°F  
Elevation - - - - - Up to 10,000 feet above sea level  
Relative Humidity - - - - - Up to 95 percent  
Salt-Laden Air - - - - - As encountered in coastal regions

##### Nonoperating Conditions:

Temperature - - - - - From -80°F to +160°F for 72 hours  
Elevation - - - - - Up to 50,000 feet above sea level  
Relative Humidity - - - - - Up to 100 percent

#### REFERENCE DATA and LITERATURE

MIL-L-13078

MIL-L-10911

Final Report-Standardization of Loudspeakers Prepared by Stromberg-Carlson

MANUFACTURER CODE	PART NUMBER
80063	LS-116/U

MIL-HDBK-173A/MT-11-487M  
MIL-HDBK-173A/MT-11-487M  
MIL-HDBK-173A/MT-11-487M  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: COMMERCIAL AP-11-ST592  
FEDERAL STOCK NO. 5965-221-5775  
FEDERAL STOCK NO. 5965-221-5775

#### CONSISTS OF:

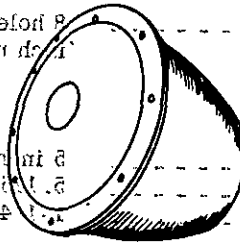
1 Loudspeaker, Permanent Magnet Jensen Mfg. Co., Part No. AP-11-ST592

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

This loudspeaker is similar to Jensen Mfg. Co. Loudspeaker Model AP-10-ST590 except that it does not have a mounting base.

#### PHYSICAL DESCRIPTION:

Over-all dimensions:  
Diameter 5 inches (127.00 mm)  
Depth 5.18 inches (130.18 mm)  
Weight 4 pounds  
Mounting dimensions: 8 holes 1/4 inch diameter equally spaced on 4-3/4 inch mounting diameter.  
Nominal diameter 5 inches (127.00 mm)



#### ADDITIONAL PHYSICAL DATA:

Case Finish Gray Hammer

#### TECHNICAL DESCRIPTION:

INPUT  
Voice coil impedance 3 to 4 ohms  
Power handling rating 2 watts maximum (warble tones)  
Frequency range Not Rated

#### FUNCTIONAL DESCRIPTION:

This unit is a cone type loudspeaker. It is designed for panel mounting and is fully enclosed by a streamline-shaped cover with protective front screen. Facilities are provided inside the cover to mount a transformer (which is not provided). The frequency response permits speech to be intelligible in the presence of electrical and acoustical extraneous noises.

This loudspeaker is used for paging and intercom functions and can be used for "talk-back" purposes. It is part of Control Unit C-65/CRC-2.

M2S 5965-8

MANUFACTURER CODE	PART NUMBER
35001	AP-11-ST592
3.4.1	

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL AP-11-ST592 (Cont)

FEDERAL STOCK NO: 5965-221-5775

CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet Jensen Mfg. Co., Part No. AP-11-ST592

RELATIONSHIP TO SIMILAR EQUIPMENT:

This loudspeaker is similar to Jensen Mfg. Co. Loudspeaker Model AP-10-ST590 except that it does not have a mounting base.

PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 5 inches (127.00 mm)  
 Mounting Dimensions - - - - - 8 holes 1/4 inch diameter equally spaced on 4-3/4 inch mounting diameter.

Over-all dimensions:

Diameter - - - - - 5 inches (127.00 mm)  
 Depth - - - - - 5.125 inches (130.18 mm)  
 Weight - - - - - 1-1/4 pounds

ADDITIONAL PHYSICAL DATA:

Case Finish - - - - - Gray Hammer

TECHNICAL DESCRIPTION:

INPUT  
 Voice coil impedance - - - - - 3 to 4 ohms  
 Power handling rating - - - - - 5 watts maximum (warble tones)  
 Frequency range - - - - - Not Rated

REFERENCE DATA and LITERATURE

Jensen Mfg. Company Catalog 1070-B and 1070  
 MSS 5965-6

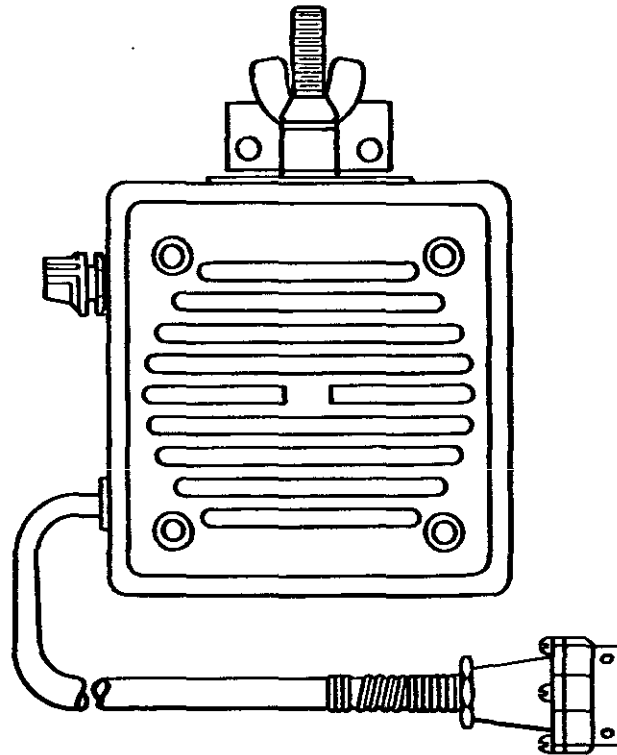
MANUFACTURER CODE	PART NUMBER
32001	AP-11-ST592

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-166/U

FEDERAL STOCK NO: 5965-243-6420



#### FUNCTIONAL DESCRIPTION:

This unit is a four inch, direct radiator, dynamic type loudspeaker. It is housed in a metal inclosure and is resistant to weather, gunblast, immersion, humidity, temperature extremes, and bounce. The unit is intended for use with ground service tactical equipments where resistance to gun-fire and immersion are requirements.

#### CONSISTS OF:

- 1 Permanent Magnet Loudspeaker LS-448/U
- 1 Cable CX-1576/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Cone Diameter	-----	4 inches (101.60 mm)
Mounting Dimensions	-----	Adjustable mounting bracket with two 9/32 inch diameter holes spaced 1-1/2 inch C to C
Plug	-----	U-77/U

#### Over-all Dimensions:

Length	-----	7.031 inches (178.59 mm)
Width	-----	5.656 inches (143.66 mm)
Depth	-----	3.312 inches (84.12 mm)

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-166/U (Cont)

FEDERAL STOCK NO: 5965-243-6420

## ADDITIONAL PHYSICAL DATA:

Case Material

Metal

## TECHNICAL DESCRIPTION:

## INPUT

Voice coil impedance 8 ohms  
 Power handling rating 2 watts (warble tones)  
 Frequency range 300 to 7,000 Hz

## ADDITIONAL TECHNICAL DATA:

Transformer Data 600-ohms primary impedance

## Environmental Data:

## Operating Conditions:

Temperature From -65° F to +160° F  
 Elevation 5,000 feet above sea level  
 Relative Humidity 95 percent

## Nonoperating Conditions:

Temperature From -80° F to +160° F for 72 hours  
 Elevation 50,000 feet above sea level  
 Relative Humidity 100 percent

## FUNCTIONAL DESCRIPTION:

This unit is a low level, direct radiator, dynamic type loudspeaker. It is housed in a metal enclosure and is resistant to weather, humidity, immersion, humidity, temperature extremes, and shock. The unit is intended for use with ground service tactical equipment where resistance to humidity and immersion are requirements.

## COMMENTS:

## REFERENCE DATA and LITERATURE

MIL-L-12632

MSS 5965-6

## RELATIONSHIP TO SIMILAR EQUIPMENT:

## PHYSICAL DESCRIPTION:

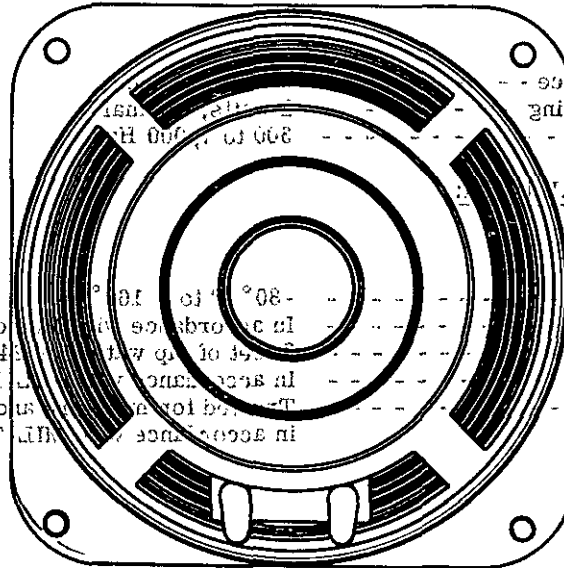
Mounting dimensions 4 inches (101.60 mm)  
 Adjustable mounting bracket with two 3/32 inch diameter holes spaced 1-1/2 inch

MANUFACTURER'S CODE	PART NUMBER
80058 U-37-U	LS-166/U
80063	LS-166/U
87771	LS-166/U

Overall dimensions 3.312 inches (84.12 mm)  
 Width 2.5 inches (63.50 mm)  
 Depth 1.5 inches (38.10 mm)

8008-S04-061 FEDERAL STOCK NO. 5965-892-3665

## TUMI



T-153  
of fungus resistance  
L-15006  
4 hours  
ed 100, of MIL-210-203

Frequency range -  
Power handling rating  
Voice coil impedance -

ADDITIONAL TECHNICAL

Interactive 2002

Temperature	- - -
Moisure	- - -
Immersion	- - -
Bonne	- - -
Fumée	- - -

Loudspeaker LS-445/U is an unencased, 2-watt, gunblast and immersion resistant permanent magnet type loudspeaker unit. It has a 4-inch diameter cone with a voice coil impedance of 8 ohms.

**1 Permanent Magnet Loudspeaker LS-445/U**

This is the loudspeaker unit of LS-454/U, LS-156/U and LS-590 ( )/U.

REFERENCE DATA and LITERATURE

Diameter - - - - - 4 inches (101.60 mm)

8-0002 22M

Four number 10 - 24 thd tapped holes on 3-5/16 inch by 3-5/16 inch mounting centers.

Terminal/Connector Designation - - - - Two Solder Type terminals

Over-all Dimensions:		PART NUMBER	MANUFACTURER CODE
Length - - - -	PS-412-A	4 inches	5 (101.60 mm)
Width - - - -	PS-412-B	4 inches	1 (101.60 mm)
Depth - - - -	PS-412-A	2.375 inches	(Maximum) (60.33 mm)
Weight - - - -	PS-412-A	1/2 pounds	

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-445/U (Cont)

FEDERAL STOCK NO: 5965-892-3665

TECHNICAL DESCRIPTION:INPUTVoice coil impedance - - - - - 8 ohms  $\pm$  1 ohm

Power handling rating - - - - - 2 watts, normal

Frequency range - - - - - 300 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:Environmental Service:

Temperature - - - - - -80° F to + 160° F

Moisture - - - - - In accordance with Method 106, of MIL-STD-202

Immersion - - - - - 3 feet of tap water for 24 hours

Bounce - - - - - In accordance with MIL-L-12606

Fungus - - - - - Treated for moisture and fungus resistance  
in accordance with MIL-T-152REFERENCE DATA and LITERATURE

MSS 5965-6

MIL-L-12606

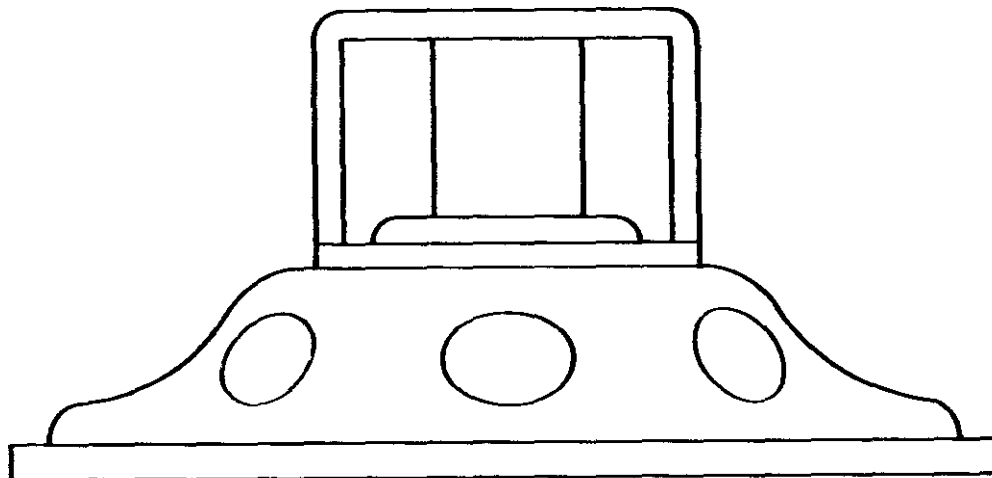
Pricing Guide for Signal Corps Equipment SIG 5-5

MANUFACTURER CODE	PART NUMBER
80063	LS-445/U
32001	P4-SB-2
87771	LS-445/U



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-455/U  
 FEDERAL STOCK NO: 5965-588-4870



#### FUNCTIONAL DESCRIPTION:

Loudspeaker LS-455/U is an unencased, 2-watt, permanent magnet type loudspeaker unit. It has a 4-inch diameter cone with a voice coil impedance of 3.2 ohms. It is suitable for use in announcing - equipment, shipboard.

#### CONSISTS OF:

- 1 Permanent Magnet Loudspeaker LS-455/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

This speaker, with appropriate transformer, is interchangeable with NT-49817.

#### PHYSICAL DESCRIPTION:

Diameter - - - - - 4 inches (101.60 mm)

#### Mounting Dimensions:

Four .187 dia. holes on 3.312 inch mounting centers and four .250 dia. holes on .687 x 4.562 inch mounting centers.

#### Over-all Dimensions:

Length - - - - - 4.062 inches (103.17 mm)  
 Width - - - - - 4.062 inches (103.17 mm)  
 Depth - - - - - 1.875 inches (maximum) (47.63 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-455/U (Cont)  
 FEDERAL STOCK NO: 5965-588-4870

# TECHNICAL DESCRIPTION:

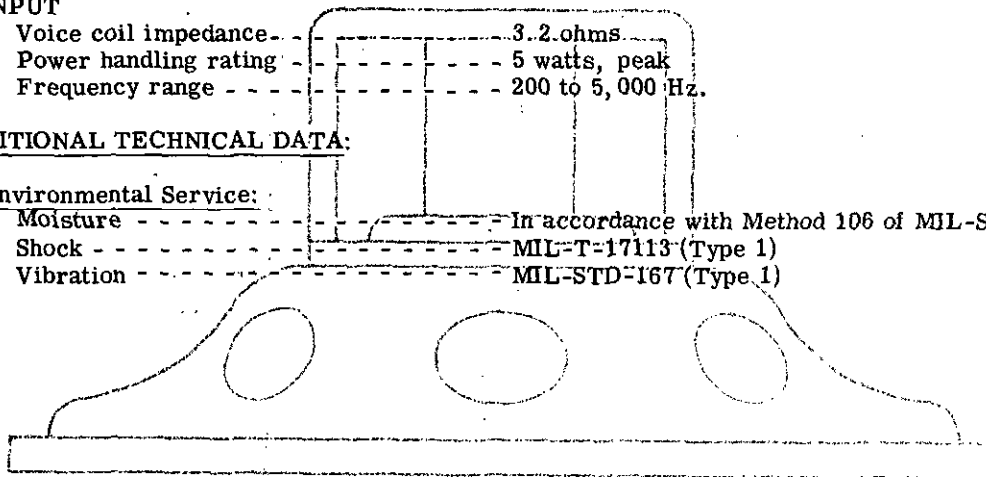
## INPUT

Voice coil impedance - 3.2 ohms  
 Power handling rating - 5 watts, peak  
 Frequency range - 200 to 5,000 Hz.

## ADDITIONAL TECHNICAL DATA:

### Environmental Service:

Moisture - In accordance with Method 106 of MIL-STD-202  
 Shock - MIL-T-17113 (Type 1)  
 Vibration - MIL-STD-167 (Type 1)



## REFERENCE DATA and LITERATURE

Navy (BuShips) Dwg. RE 49C724  
 MSS 5965-6 (min 00.101 inches)

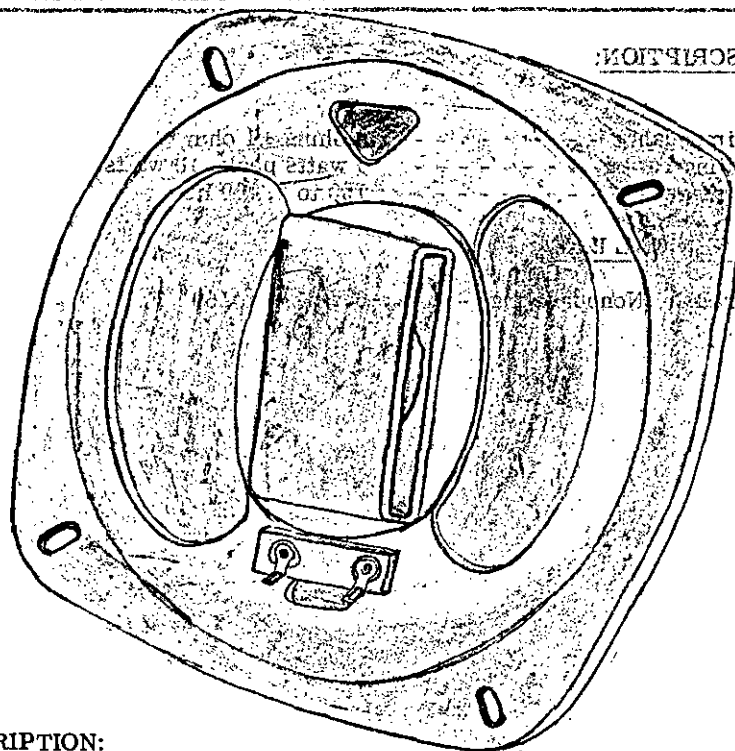
MANUFACTURER CODE	PART NUMBER
80063	LS-455/U
87771	C4BN06001

MIL-HDBK-173A/TM-11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-180/U  
 FEDERAL STOCK NO: 5965-280-3808



TECHNICAL DESCRIPTION

INPUT

Voice coil

Power handling

Frequency

Impedance

Sensitivity

Temperature

FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet unencased loudspeaker. It is capable of withstanding extreme temperature changes. The unit is rugged and light, and is designed for general purpose use. This speaker is moisture, vibration, and shock resistant.

CONSISTS OF:

1 Loudspeaker, Permanent Magnet LS-180/U

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:

Diameter ----- 8 inches (203.20 mm)  
 Mounting dimensions ----- Four 0.200 x 0.375 inch mounting slots spaced  
 90 degrees apart on 7.625 inch diameter.  
 Terminal/connector designation ----- Two solder lug type on terminal board

Overall dimensions:

Diameter ----- 8.44 inches maximum (214.38 mm)  
 Depth ----- 5 inches maximum (127.00 mm)

PART NUMBER	MANUFACTURER CODE
U-081-21	80008
U-180-U	81340
U-180-U	04048

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-180/U (Cont)

FEDERAL STOCK NO: 5965-280-3808

**TECHNICAL DESCRIPTION:**

**INPUT**

Voice coil impedance - - - - - 8 ohms  $\pm$  1 ohm  
 Power handling rating - - - - - 5 watts peak - 10 watts  
 Frequency range - - - - - 150 to 7,000 Hz

**ADDITIONAL TECHNICAL DATA:**

Temperature range (Nonoperating) - - - -65° F to + 160° F

**REFERENCE DATA and LITERATURE**

MIL-L-10911/3  
 SC-827-4698

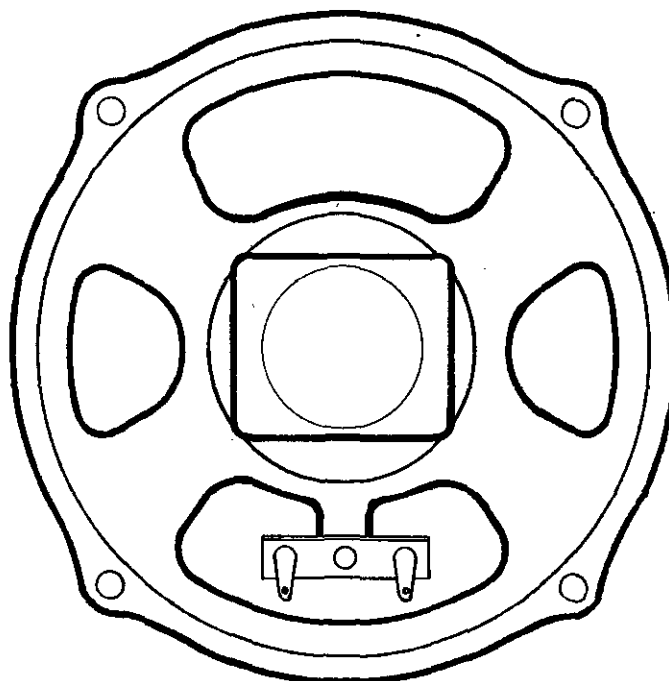
MANUFACTURER CODE	PART NUMBER
80058	LS-180/U
81349	LS-180/U
04848	LS-180/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL P5-V

FEDERAL STOCK NO: 5965-128-2974



FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet unencased loudspeaker. The nominal diameter is 5 inches. The unit is rugged and is designed for general purpose use. This speaker is moisture and fungus resistant.

CONSISTS OF:

1 Loudspeaker, Permanent Magnet P5V

RELATIONSHIP TO SIMILAR EQUIPMENT:

The loudspeaker is interchangeable with P5VSTT07.

PHYSICAL DESCRIPTION:

Diameter - - - - -	4.69 inches (119.13 mm)
Mounting Dimensions - - - - -	Four 0.200 inch diameter mounting holes spaced 90 degrees apart on 4.69 inch diameter.
Terminal/Connector Designation - - - -	2 solder lug type on terminal board

Over-all Dimensions:

Diameter - - - - -	5.06 inches maximum (128.52 mm)
Depth - - - - -	2.25 inches maximum (57.15 mm)

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: P5-V (Cont)

FEDERAL STOCK NO: 5965-128-2974

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 3.2 ohms  $\pm$  1 ohm.  
Power handling rating - - - - - 5.5 watts rms; peak 11 watts.

ADDITIONAL TECHNICAL DATA:

Magnet Material - - - - - Alnico V.  
Magnet Weight - - - - - 1.47 ounces.  
Voice Coil Diameter - - - - - 0.56 nominal.

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REFERENCE DATA and LITERATURE

Jensen Mfg. Company Dwg. No. 5401193  
MIL-P-3115 (terminal strip)  
QQ-P-416 Type II, Class A (steel parts)

MANUFACTURER CODE	PART NUMBER
32001	P5-V

MIL-HDBK-173A/TM 11-487M

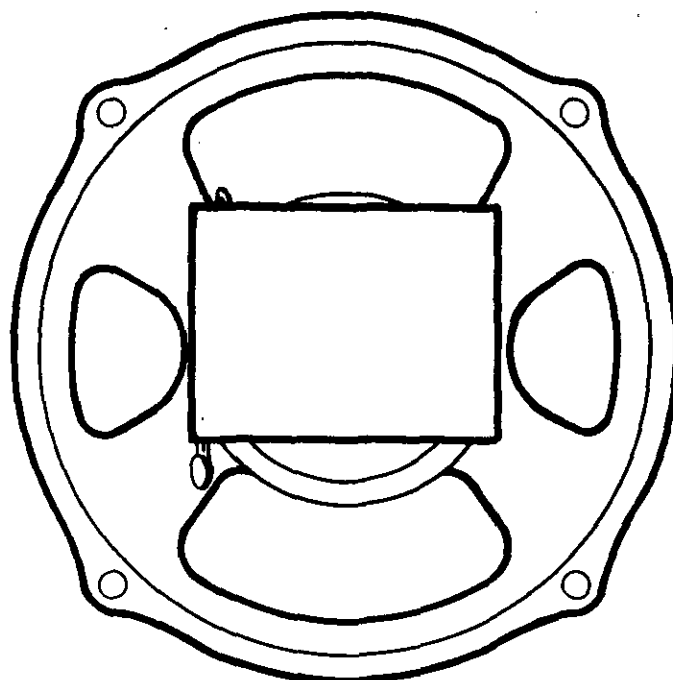
MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL P5T-C5696; 612833

FEDERAL STOCK NO: 5965-284-6708

FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet moving voice coil-type loudspeaker. It is designed to be used with 16 mm. sound motion picture projection sets suitable for use under the severe operating and handling conditions encountered in service in tropical temperature and arctic climates both ashore and afloat.

CONSISTS OF:

1 Permanent Magnet Loudspeaker P5T-C5696

RELATIONSHIP TO SIMILAR EQUIPMENT:

Used on Motion Picture Sound Projector AQ-2A(1)

PHYSICAL DESCRIPTION:

Diameter . . . . . 5 inches (127.00 mm)  
 Mounting Dimensions . . . . . Four holes 5/32 inches in diameter spaced 90  
 degrees apart on 2-11/32 inch radius  
 Terminal/Connector Designation . . . Solder Lug Type

Over-all Dimensions:

Diameter . . . . . 5 inches (127.00 mm)  
 Depth . . . . . 2.625 inches (66.68 mm)

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: COMMERCIAL P5T-C5696; 612833 (Cont)  
FEDERAL STOCK NO: 5965-284-6708

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ADDITIONAL PHYSICAL DATA:

Magnet Material- - - - - Alnico No. 5 or equal  
Cone Treatment- - - - - Fungus Resistant  
Air Gap Clearance- - - - - 0.009 inch either side of the voice coil

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 8 ohms  $\pm$  10 percent  
Power handling rating - - - - - 10 watts (warble tones)  
Frequency range- - - - - 80 to 8,000 Hz.

ADDITIONAL TECHNICAL DATA:

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REFERENCE DATA and LITERATURE

MIL-P-49  
Bell and Howell Drawing No. 612833  
MSS 5965-6

MANUFACTURER CODE	PART NUMBER
32001 06650	P5T-C5696 612833



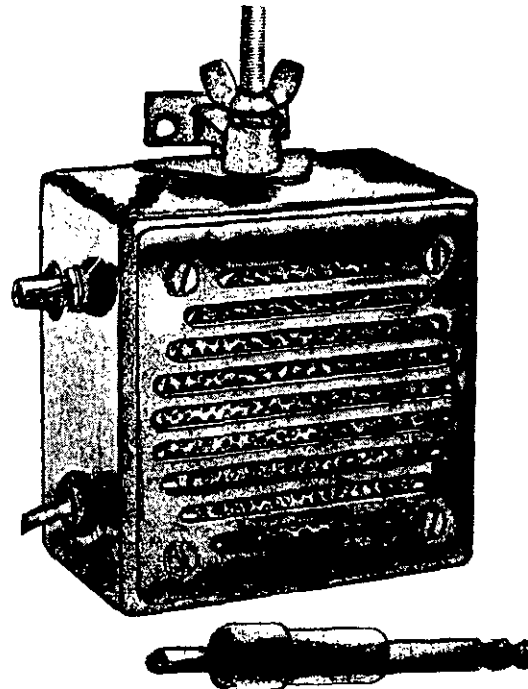
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-590( )/U

FEDERAL STOCK NO: 5965-011-3639

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FUNCTIONAL DESCRIPTION:

This unit is a 4-inch, direct radiator, dynamic type loudspeaker. It is housed in a metal inclosure and is resistant to weather, gun-blast, immersion, humidity, temperature extremes, and bounce. The unit is intended for use with ground service tactical equipments where resistance to gunfire and immersion are requirements. The loudspeaker is equipped with a switch. The switch is a two-position switch. One position connects to a 4,000 ohm impedance, and the other position connects to a 250 ohm position.

CONSISTS OF:

- 1 - Loudspeaker Unit - Type LS445/U
- 1 - Cabinet - Metal with Adjustable Clamp
- 1 - Cord - Type COS-2(18)
- 1 - Plug - Type - 055B

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-590( )/U (Con't)

FEDERAL STOCK NO: 5965-011-3639

RELATIONSHIP TO SIMILAR EQUIPMENT:

Type LS-590( )/U is a replacement for loudspeaker LS-11-A and LS-203/U. The LS-590( )/U is similar to the LS-166/U and the LS-454/U.

PHYSICAL DESCRIPTION:

Diameter - - - - - 4 inches (101.60 mm)  
 Mounting dimensions - - - - - Adjustable mounting bracket with two 9/32-inch  
 (7.14 mm) diameter holes spaced 1-1/2 inch  
 center to center.  
 Plug - - - - - PJ-055B

Overall dimensions:

Length - - - - - 7.031 inches (178.59 mm)  
 Width - - - - - 4.906 inches (124.61 mm)  
 Depth - - - - - 3.312 inches (84.12 mm)

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 8 ohms  
 Power handling rating - - - - - 2 watts (warble tones)  
 Frequency range - - - - - 300 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer data - - - - - Multi-stage - 4,000 ohms primary impedance and  
 250 ohms primary impedance  
 Resistant characteristics - - - - - Resistant to gun-blast, immersion, humidity,  
 temperature extremes, and bounce

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: LS-590( )/U (Con't)  
FEDERAL STOCK NO: 5965-011-3639

Environmental data:

Operating conditions:

Temperature - - - - - From -65°F to +160°F  
Elevation - - - - - 5,000 feet above sea level  
Relative humidity - - - - - 95 percent  
Salt-laden air - - - - - As encountered in coastal regions

Nonoperating conditions:

Temperature - - - - - From -80°F to +160°F for 72 hours  
Elevation - - - - - 50,000 feet above sea level  
Relative humidity - - - - - 100 percent

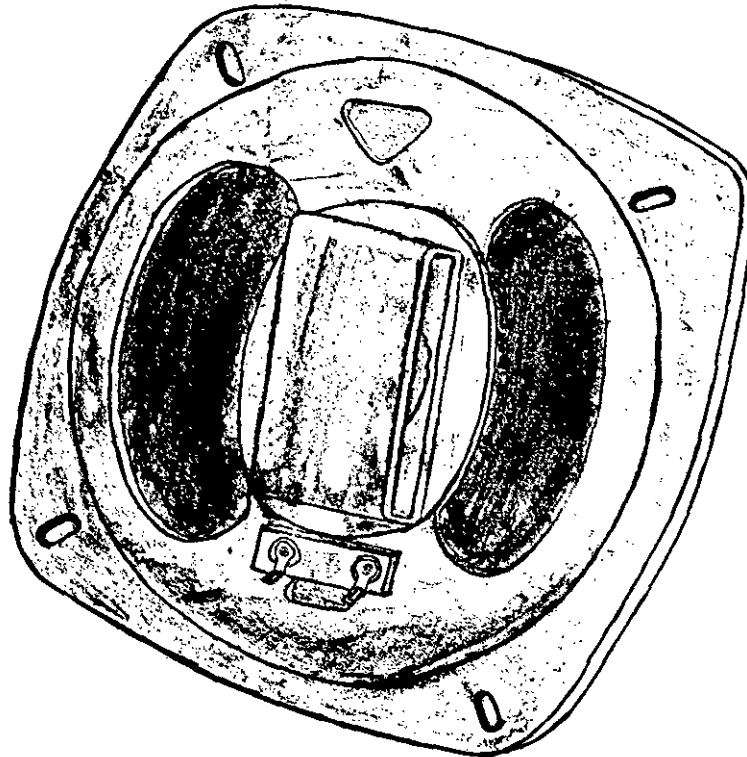
REFERENCE DATA and LITERATURE

MIL-L-12606  
MIL-L-12632

MANUFACTURER CODE	PART NUMBER
80058	LS-590( )/U
80063	LS-590( )/U
87771	LS-590( )/U
04848	LS-590( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: LS-446/U  
FEDERAL STOCK NO: 5965-879-1159



#### FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet unencased loudspeaker. It is capable of withstanding extreme temperature changes. The unit is rugged and light, and is designed for general purpose use. This speaker is moisture, vibration, and shock resistant.

#### CONSISTS OF:

1 Loudspeaker, Permanent Magnet LS-446/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Diameter - - - - - 6 inches (152.4 mm)  
Mounting dimensions - - - - - Four 0.200 x 0.375 inch mounting slots  
spaced 90 degrees apart on 6.125 inch  
(155.58 mm) diameter.  
Terminal/connector designation - - - - - Two solder lug type on terminal board

#### Overall dimensions:

Diameter - - - - - 6.94 inches maximum (176.28 mm)  
Depth - - - - - 3.38 inches maximum (85.85 mm)

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-446/U (Con't)

FEDERAL STOCK NO: 5965-879-1159

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TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 3 to 4.5 ohms (3.2 ohms nominal)  
Power handling rating - - - - - 5 watts rms; peak - 8 watts rms.  
Frequency range - - - - - 150 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Temperature range (nonoperating) - - - - - -65°F to +160°F

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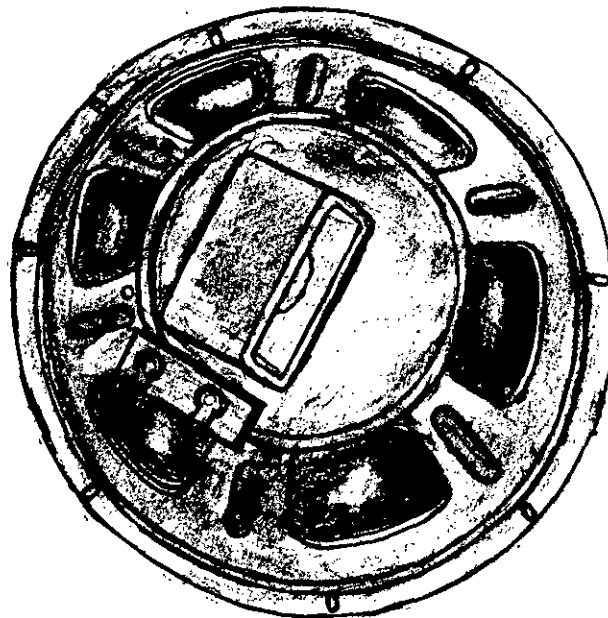
REFERENCE DATA and LITERATURE

MIL-L-10911/2

MANUFACTURER CODE	PART NUMBER
80058	LS-446/U
81349	LS-446/U
04848	LS-446/U

MIL-HDB K-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-447/U  
 FEDERAL STOCK NO: (NOT AVAILABLE)



#### FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet unencased loudspeaker. It is capable of withstanding extreme temperature changes. The unit is rugged and light, and is designed for general purpose use. This speaker is moisture, vibration, and shock resistant.

#### CONSISTS OF:

1 Loudspeaker, Permanent Magnet LS-447/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Diameter - - - - -	10 inches (254.0 mm)
Mounting dimensions - - - - -	Eight 0.218 x 0.375 inch mounting slots spaced 45 degrees apart on 9.625 inches (244.48) diameter.
Terminal/connector designation - - - - -	Two solder lug type on terminal board
<u>Overall dimensions:</u>	
Diameter - - - - -	10.25 inches maximum (260.35 mm)
Depth - - - - -	6 inches maximum (152.4 mm)

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-447/U (Cont)  
 FEDERAL STOCK NO: (NOT AVAILABLE)

TECHNICAL DESCRIPTION:

## INPUT

Voice coil impedance - - - - - 3 to 4.5 ohms (3.20 ohms nominal)  
 Power handling rating - - - - - 10 watts rms; peak - 20 watts  
 Frequency range - - - - - 150 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Temperature range (nonoperating) - - - -65° F to +160° F

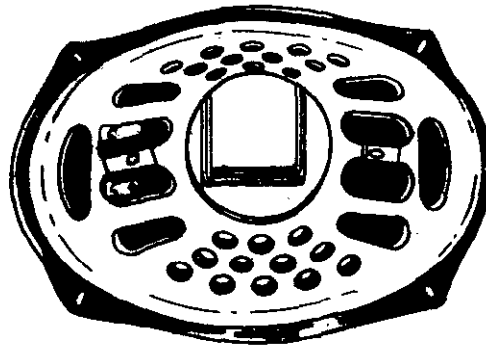
## REFERENCE DATA and LITERATURE

MIL-L-10911/4

MANUFACTURER CODE	PART NUMBER
80058	LS-447/U
81349	LS-447/U
04848	LS-447/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: COMMERCIAL PM-69E  
 FEDERAL STOCK NO: 5965-296-6052



#### FUNCTIONAL DESCRIPTION:

This loudspeaker is a permanent magnet, oval type speaker suitable for use with automotive radios, public address systems, and for general purpose use.

#### CONSISTS OF:

- 1 Loudspeaker Cleveland Electronics Type PM-69E

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 6 X 9 inches, oval

#### Over-all Dimensions:

Length	- - - - -	9.125 inches (231.78 mm)
Width	- - - - -	6.375 inches (161.93 mm)
Depth	- - - - -	3.375 inches (85.73 mm)

#### Mounting Dimensions:

Four mounting slots spaced 4-5/8 inches by 6-9/16 inches center to center.

Weight	- - - - -	3/4 pounds
Terminal/Connector Type	- - - - -	2 - Clip Type (Fahnestock)



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL PM-69E (Cont)

FEDERAL STOCK NO: 5965-296-6052

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ADDITIONAL PHYSICAL DATA:

Magnet Material - - - - - Alnico V  
Magnet Weight - - - - - 2.15 ounces

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 3.2 ohms  $\pm$  10 percent  
Power handling rating - - - - - 4 watts, normal; 10 watts, peak (warble tones)  
Frequency range - - - - - 60 to 8,000 Hz

ADDITIONAL TECHNICAL DATA:

Cone Resonant Frequency - - - - - 70 to 95 Hz

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REFERENCE DATA and LITERATURE

Cleveland Electronics Company Drawing PM69E  
Cleveland Electronics Company Catalog Form 562A  
MSS 5965-6

MANUFACTURER CODE	PART NUMBER
86194	PM-69E

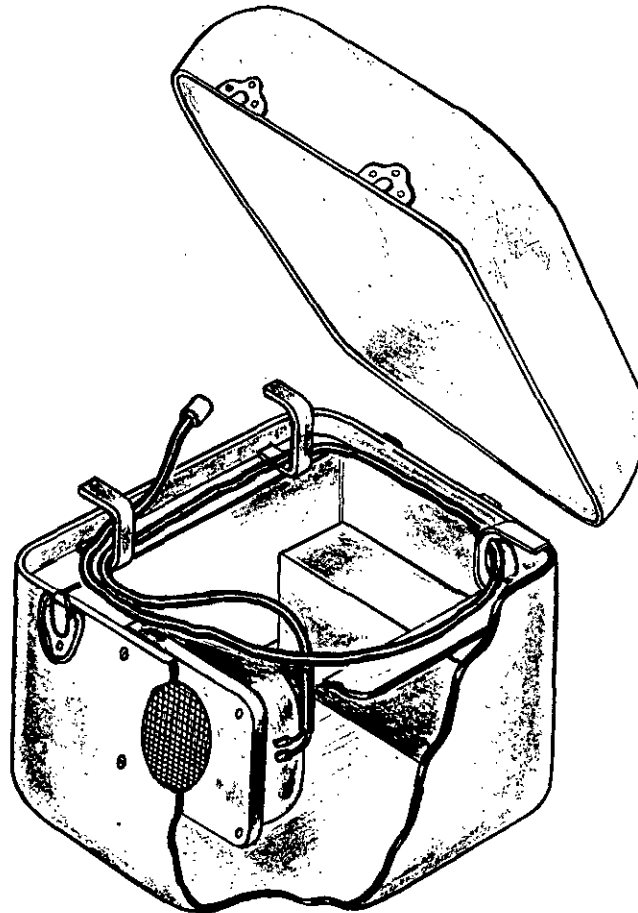
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-170 ( )/PFP-1

FEDERAL STOCK NO: 5965-518-4343

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FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet moving coil type loudspeaker. The loudspeaker is housed in a carrying case and is designed to be used with 16 mm sound motion picture projection sets suitable for use under severe operating and handling conditions encountered in service in tropical temperature and arctic climates both ashore and afloat.

CONSISTS OF:

- 1 Permanent Magnet Loudspeaker 620066

RELATIONSHIP TO SIMILAR EQUIPMENT:

This loudspeaker is the same as FSN 5965-518-4344 except it is without transformer. Used on Motion Picture Sound Projection Equipment IC/QEB-1D, AS-2(1), AS-7A

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-170 ( )/PFP-1 (Cont)  
 FEDERAL STOCK NO: 5965-518-4343

PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 8 inches (203.20 mm)  
 Mounting Dimensions - - - - - 4 mounting holes spaced 90 degrees apart on a  
 3-13/16 inch (96.84 mm) radius  
 Terminal/Connector Designation - - Solder Lug Type

Over-all Dimensions:

Diameter - - - - - 8.125 inches (206.38 mm)  
 Depth - - - - - 4.31 inches (109.47 mm)

ADDITIONAL PHYSICAL DATA:

Case Dimensions:

Length - - - - - 14 inches (355.60 mm)  
 Width - - - - - 9 inches (228.60 mm)  
 Height - - - - - 14 inches (355.60 mm)

Cable Data:

Length - - - - - 75 feet (22.86 m)  
 Connector - - - - - Cannon type XLR-3-12C

Magnet Material - - - - - Alnico No. 5 or equal

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 16 ohms  $\pm$  10 percent at 1,000 Hz.  
 Power handling rating - - - - - 25 watts, normal, 40 watts, peak (warble tones)  
 Frequency range - - - - - 100 to 10,000 Hz.

ADDITIONAL TECHNICAL DATA:

REFERENCE DATA and LITERATURE

DWG SC-DL-339163  
 MSS 5965-6

MANUFACTURER CODE	PART NUMBER
32001	P8Q-C6881
06650	620066
80063	LS-170 ( )/PFP-1

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL 12984

FEDERAL STOCK NO: 5965-518-4344

No illustration available

FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet moving coil type loudspeaker. The loudspeaker is housed in a carrying case and is designed to be used with 16 m. m. sound motion picture projection sets suitable for use under severe operating and handling conditions encountered in service in tropical temperature and arctic climates both ashore and afloat.

CONSISTS OF:

- 1 Permanent Magnet Loudspeaker 12984

RELATIONSHIP TO SIMILAR EQUIPMENT:

Part of, Navy Type IC/QEB-1D, Projector Set, Motion Picture Sound. This loudspeaker is the same as LS-170 ( )/PFP-1 except it has a transformer.

PHYSICAL DESCRIPTION:

Diameter - - - - - 8 inches (203.20 mm)  
 Mounting Dimensions - - - - - 8 mounting holes spaced 45 degrees apart on a  
 3-13/16 inch (96.84 mm) radius  
 Terminal/Connector Designation - - Solder Lug Type

Over-all Dimensions:

Diameter - - - - - 3.125 inches (206.38 mm)  
 Depth - - - - - 4.375 inches (111.13 mm)

ADDITIONAL PHYSICAL DATA:

Case Dimensions:

Length - - - - - 14 inches (355.60 mm)  
 Width - - - - - 9 inches (228.60 mm)  
 Height - - - - - 14 inches (355.60 mm)

Cable Data:

Length - - - - - 75 feet (22.86 m)  
 Connector - - - - - Cannon type XL-13-12SC  
 Magnet Material - - - - - Alnico No. 5 or equal

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 16 ohms  $\pm$  10 percent at 1,000 Hz  
 Power handling rating - - - - - 25 watts, normal; 40 watts, peak (5 minutes)  
 Frequency range - - - - - 100 to 10,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer Data:

Primary Impedance - - - - - 1000 ohms  
 Secondary Taps - - - - - Will permit the output power to be reduced from  
 20 watts to 0.31 watts in steps of 3 dB with a 70  
 volt input signal

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: COMMERCIAL 12984 (Cont)  
FEDERAL STOCK NO: 5965-518-4344

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REFERENCE DATA and LITERATURE

MSS 5965-6  
Final Report- "Standardization of Loudspeakers" Prepared by Stromberg-Carlson  
MIL-P-49

MANUFACTURER CODE	PART NUMBER
17462	12984

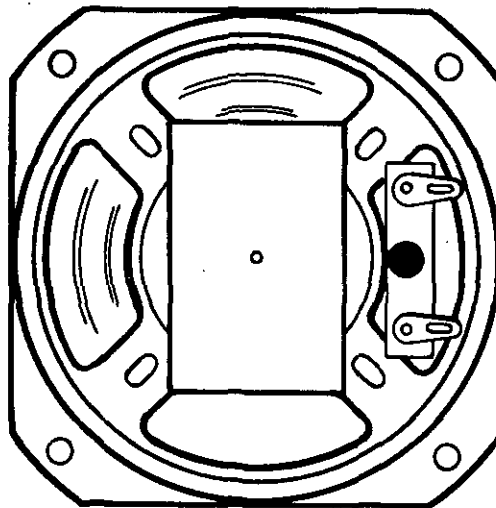
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL SK 8163

FEDERAL STOCK NO: 5965-519-6610

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FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet dynamic type loudspeaker capable of reproducing sounds in the frequency range of 400 to 4000 Hz. The unit is rugged and capable of operation under severe environmental conditions.

CONSISTS OF:

- 1 Permanent Magnet Loudspeaker SK 8163

RELATIONSHIP TO SIMILAR EQUIPMENT:

PHYSICAL DESCRIPTION:

Diameter	-----	3-1/2 inches (88.90 mm)
Mounting Dimensions	-----	Four mounting holes 3/16 inch in diameter spaced on 2-25/32 inch mounting centers.
Terminal/Connector Designation	--	Solder Lug Type

Over-all Dimensions:

Length	-----	3.438 inches (87.33 mm)
Width	-----	3.438 inches (87.33 mm)
Depth	-----	2 inches (50.80 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: COMMERCIAL SK 8163 (Cont)  
 FEDERAL STOCK NO: 5965-519-6610

ADDITIONAL PHYSICAL DATA:

Magnet Material . . . . . Alnico No. 5 (2.15 ounce)

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance . . . . . 3.2 ohms  $\pm$  10 percent  
 Power handling rating . . . . . 5 watts (warble tones)  
 Frequency range . . . . . 400 to 4,000 Hz.

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Operating Conditions:

Altitude . . . . . 10,000 feet above sea level  
 Temperature . . . . . From -54 to + 85 degrees C  
 Humidity . . . . . 100 percent

Nonoperating Conditions:

Altitude . . . . . 40,000 feet above sea level  
 Temperature . . . . . From -29 to + 71 degrees C  
 Humidity . . . . . 100 percent

REFERENCE DATA and LITERATURE

Olympic Radio Drawing No. SK 8163  
 MSS 5965-6

MANUFACTURER CODE	PART NUMBER
85995	SK 8163

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

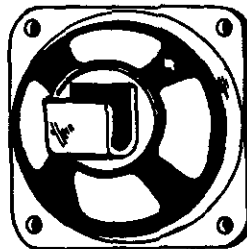
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL 3A070T

FEDERAL STOCK NO: 5965-543-0264

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FUNCTIONAL DESCRIPTION:

This unit is a 3-1/2 inch permanent magnet speaker utilizing a 0.65 ounce Alnico V magnet. A mylar plastic film on the cone provides a resistance to moisture, dirt, and sand abrasion. Air gap surfaces are cadmium plated and enameled. The unit is therefore suitable for use in outdoor service.

CONSISTS OF:

1 Loudspeaker Quam Nichols Model No. 3A070T

RELATIONSHIP TO SIMILAR EQUIPMENT:



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL 3A070T (Cont)

FEDERAL STOCK NO: 5965-543-0264

PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 3-1/2 inches (88.90 mm)

Overall Dimensions:

Length - - - - - 3.469 inches (88.11 mm)

Width - - - - - 3.469 inches (88.11 mm)

Depth - - - - - 1.516 inches (38.51 mm)

Mounting Dimensions:

Four 0.200 inch diameter holes located 90 degrees apart and 2-25/32 inches (70.64 mm) center to center.

Magnet Weight - - - - - 0.65 ounces

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - 3.2 ohms

Power handling rating - - - 2.5 watts, peak (warble tones)

Frequency range - - - - - 150 to 5,000 Hz

ADDITIONAL TECHNICAL DESCRIPTION:

REFERENCE DATA and LITERATURE

Quam Nichols Catalog 63  
 Military Supply Standard MSS 5965-6

MANUFACTURER CODE	PART NUMBER
74199	3A070T

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

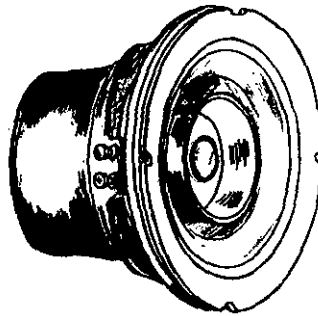
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL SP8B

FEDERAL STOCK NO: 5965-581-9978

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FUNCTIONAL DESCRIPTION:

This unit is a full range permanent magnet loudspeaker in which the mass of the bass cone and its voice coil coupling compliance are so proportioned as to decouple the bass cone mechanically, above the crossover frequency. It is free from phasing dips, and can be used for general purpose full range reproduction.

CONSISTS OF:

- 1 Loudspeaker, Electro-Voice, Model SP8B

RELATIONSHIP TO SIMILAR EQUIPMENT:

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL SP8B (Cont)

FEDERAL STOCK NO: 5965-581-9978

PHYSICAL DESCRIPTION:

Diameter - - - - - 8-3/8 Inches (212.73 mm)

Mounting Dimensions:

Four holes 9/32 inch diameter equally spaced on 7-5/8 inch (193.68 mm) mounting circle.

Terminal/Connector Designation - - - Two binding posts

Over-all Dimensions:

Diameter - - - - - 8.375 inches (212.73 mm)

Depth - - - - - 4.75 inches (120.65 mm)

Baffle Aperture - - - - - 7.125 inches diameter (180.98 mm)

Weight - - - - - 6 pounds 15 ounces

ADDITIONAL PHYSICAL DATA:Materials:

Frame - - - - - Die Cast Zinc

Magnet - - - - - Ceramic

TECHNICAL DESCRIPTION:INPUT

Voice coil impedance - - - - 16 ohms

Power handling rating - - - - 20 watts, normal; 40 watts, peak

Frequency range - - - - - 50 to 13,000 Hz

ADDITIONAL TECHNICAL DATA:SPECIAL FEATURES:

Incorporates mechanical tweeter

REFERENCE DATA and LITERATURE

MSS 5965-6

Electro-Voice Specification Sheet - - - - Part No. 53232

Electro-Voice Customer Spec Sheet - - - Part No. 808-1635C

MANUFACTURER CODE	PART NUMBER
81134	SP8B

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-450/B

FEDERAL STOCK NO: 5965-583-4106

No illustration availableFUNCTIONAL DESCRIPTION:

The LS-450/B is a permanent magnet dynamic loudspeaker for speech communication between the interior of a submarine and the bridge or escape hatch. It may also be used as a microphone in two-way conversation. The unit will operate under pressure conditions from atmospheric pressure to high pressure present at submarine operating depths. The unit is protected against normal sea exposure and freezing spray conditions by encapsulating the moving voice coil assembly in silicone rubber.

CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet, LS-450/B

RELATIONSHIP TO SIMILAR EQUIPMENT:

Electrically and dimensionally interchangeable with the IC/SHA-IR Loudspeaker (Per BuShips Dwg. 900-S 6502-73987 Rev. O). The output sound pressure level of the LS-450/B is about 8 dB lower than the IC-SHA-IR output level with the same input power.

PHYSICAL DESCRIPTION:

Diameter	-----	6 inches (152.40 mm)
Mounting Dimensions	-----	Four mounting holes 9/16 inch (14.29 mm) in diameter on 2-3/8 inch by 3-7/8 inch (60.33 by 98.43 mm) mounting centers
Terminal/Connector Designation	--	Two No. 8-32 binder head machine screws on terminal board.

Over-all Dimensions:

Diameter	-----	6 inches (152.40 mm)
Depth	-----	5 inches (127.00 mm)
Weight	-----	14 pounds

ADDITIONAL PHYSICAL DATA:TECHNICAL DESCRIPTION:INPUT

Voice coil impedance	-----	16 ohms
Power handling rating	-----	5 watts (25 watts, max) (warble tones)
Frequency range	-----	600 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Output as a Microphone	-----	.01 volts with 16 ohms load and 100 dB sound pressure level 775-1225 Hz.
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Environmental Data:

Pressure Proof  
Freeze Proof  
Submersible

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-450/B (Cont)

FEDERAL STOCK NO: 5965-583-4106

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REFERENCE DATA and LITERATURE

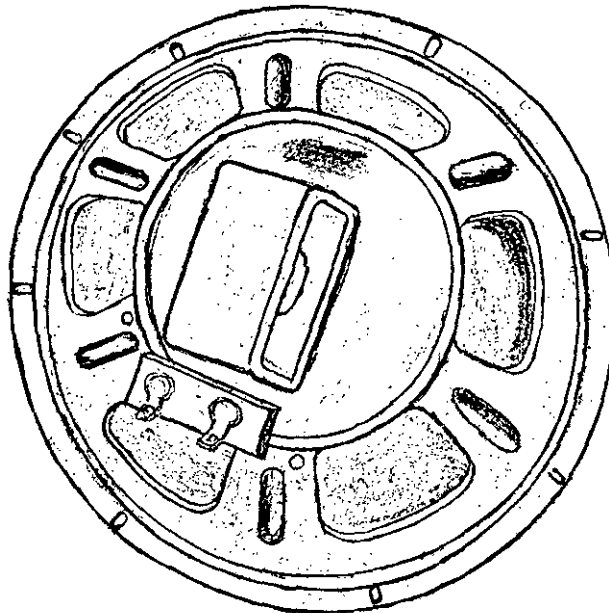
MIL-L-24296 (Ships)

MIL Drawing 815-185-3087

MANUFACTURER CODE	PART NUMBER
80058	LS-450/B
32001	LS-450/B

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: LS-448/U  
FEDERAL STOCK NO: (NOT AVAILABLE)



#### FUNCTIONAL DESCRIPTION:

This unit is a permanent magnet unencased loudspeaker. It is capable of withstanding extreme temperature changes. The unit is rugged and light, and is designed for general purpose use. The speaker is moisture, vibration, and shock resistant.

#### CONSISTS OF:

1 Loudspeaker, Permanent Magnet LS-448/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Diameter	- - - - -	12 inches (304.8 mm)
Mounting dimensions	- - - - -	Eight 0.250 x 0.375 inch mounting slots spaced 45 degrees apart on 11.562-inch (293.67 mm) diameter
Terminal/connector designation	- - - -	Two solder lug type on terminal board
<u>Overall dimensions:</u>		
Diameter	- - - - -	12.25 inches maximum (311.15 mm)
Depth	- - - - -	6.50 inches maximum (165.10 mm)

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-448/U (Cont)

FEDERAL STOCK NO: (NOT AVAILABLE)

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 7 to 9 ohms  
 Power handling rating - - - - - 14 watts rms; peak - 20 watts rms  
 Frequency range - - - - - 150 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Temperature range (nonoperating) - - - -65°F to +160°F

REFERENCE DATA and LITERATURE

MIL-L-10911/5

MANUFACTURER CODE	PART NUMBER
80058	LS-448/U
81349	LS-448/U
04848	LS-448/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: LS-444/WIH  
FEDERAL STOCK NO: 5965-615-0758

No illustration available

#### FUNCTIONAL DESCRIPTION:

The LS-444/WIH is a direct radiator, permanent magnet type loudspeaker. The unit is furnished with a matching transformer and controls within an enclosure. The loudspeaker is intended for use with Naval motion picture and entertainment installations.

#### CONSISTS OF:

- 1 Permanent Magnet Loudspeaker LS-444/WIH
- Including:
  - 1 Channel Selector
  - 1 Volume Control
  - 1 Transformer

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to LS-443/WIH

#### PHYSICAL DESCRIPTION:

Diameter - - - - - 8 inches (203.20 mm)  
Mounting Dimensions - - - - - Three 1/2 inch (12.70 mm) diameter mounting holes on isosceles triangle with 8-3/4 inch (222.25 mm) base and 8 inch (203.2 mm) altitude.

#### Over-all Dimensions:

Length - - - - - 15 inches (381.00 mm)  
Width - - - - - 9 inches (228.60 mm)  
Height - - - - - 15 inches (381.00 mm)

#### ADDITIONAL PHYSICAL DATA:

Material of Enclosure - - - - Metal or fibrous glass reinforced polyester plastic

#### TECHNICAL DESCRIPTION:

##### INPUT

Voice coil impedance - - - - - 8 ohms  
Power handling rating - - - - - 5 watts (warble tones)  
Frequency range - - - - - 120 to 7,000 Hz

#### ADDITIONAL TECHNICAL DATA:

Transformer Winding Data - - - - Primary winding tapped at; 5 volt-amperes, 2.5 VA, 1.25 VA, .63 VA, .31 VA, .15 VA with a 8 ohm resistive load and a 70.7 volt line. Secondary winding tapped at; 5 VA, 1.25 VA, and .31 VA with an 8 ohm resistive load and 70.7 V applied to the 5 VA Primary winding.

Channel Selector - - - - - 5 positions. It will be so connected that it will switch its two output leads to any one of 4 separate inputs. The unconnected position shall be at the CCW end and marked "OFF"



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-444/WIH (Cont)

FEDERAL STOCK NO: 5965-615-0758

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Volume Control - - - - - 6 Positions. It will connect one lead from the  
channel selector to the various taps of the  
line-to-voice coil transformer.

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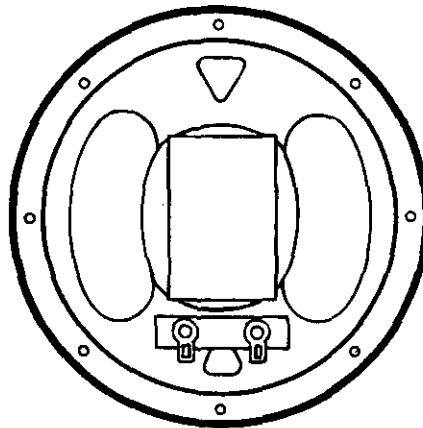
REFERENCE DATA and LITERATURE

MIL-L-17080  
MSS 5965-6

MANUFACTURER CODE	PART NUMBER
80064	LS-444/WIH
81349	LS-444/WIH

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-215 ( )/U  
 FEDERAL STOCK NO: 5965-636-1761



#### FUNCTIONAL DESCRIPTION:

The LS-215 ( )/U is a permanent magnet, direct radiator, dynamic type loudspeaker. It employs an input transformer and is housed in a metal inclosure. It is intended for general purpose use in radio, wire, and public address equipment which is generally sheltered.

#### CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet, LS-215 ( )/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Diameter - - - - - 6 inches (152.40 mm)  
 Mounting Dimensions (of housing) - - Four No. 1/4-20 screws on 6-1/4 inch by 6-1/4 inch (158.75 mm) mounting centers.  
 Mounting Dimensions (of speaker) - - Eight mounting holes 0.200 inch (5.08 mm) in diameter spaced 45 degrees apart on 3.062 inch (77.77 mm) radius.  
 Terminal/Connector Designation - - Three screw type on a connecting block.

#### Over-all Dimensions:

Length - - - - - 8 inches (203.20 mm)  
 Width - - - - - 8 inches (203.20 mm)  
 Depth - - - - - 4 inches (101.6 mm)  
 Weight (Speaker Only) - - - - - 2 pounds maximum

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-215 ( )/U (Cont)

FEDERAL STOCK NO: 5965-636-1761

ADDITIONAL PHYSICAL DATA:

Case Material - - - - - Metal  
 Terminal Markings - - - - - 1 - 3, 8000 ohms; 1 - 2, 600 ohms; 2 - 3, 4000 ohms

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 4 ohms  
 Power handling rating - - - - - 2 watts, nominal  
 Frequency range - - - - - 150 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Nonoperating Conditions:

Temperature - - - - - From -80°F (24 hr. max.) to +160°F  
 (4 hr. max.)  
 Relative Humidity - - - - - 97% indefinite, 100% for 4 hours.  
 Elevation - - - - - 25,000 feet above sea level.

Operating Conditions:

Temperature - - - - - From -65°F (72 hr. max.) to +150°F  
 (4 hr. max.)  
 Relative Humidity - - - - - 97% and 100% for 4 hours.  
 Elevation - - - - - 10,000 feet above sea level

Resistant Characteristics - - - - - Resistant to: dust, salt, air, vibration, bounce,  
 and shock

REFERENCE DATA and LITERATURE

MIL-L-10911  
 MIL-L-13073  
 MSS 5965  
 Final Report-"Standardization of Loudspeakers" Prepared by Stromberg-Carlson

MANUFACTURER CODE	PART NUMBER
80058	LS-215 ( )/U
81349	LS-215 ( )/U

MIL-HDBK-173A/TM 11-487M

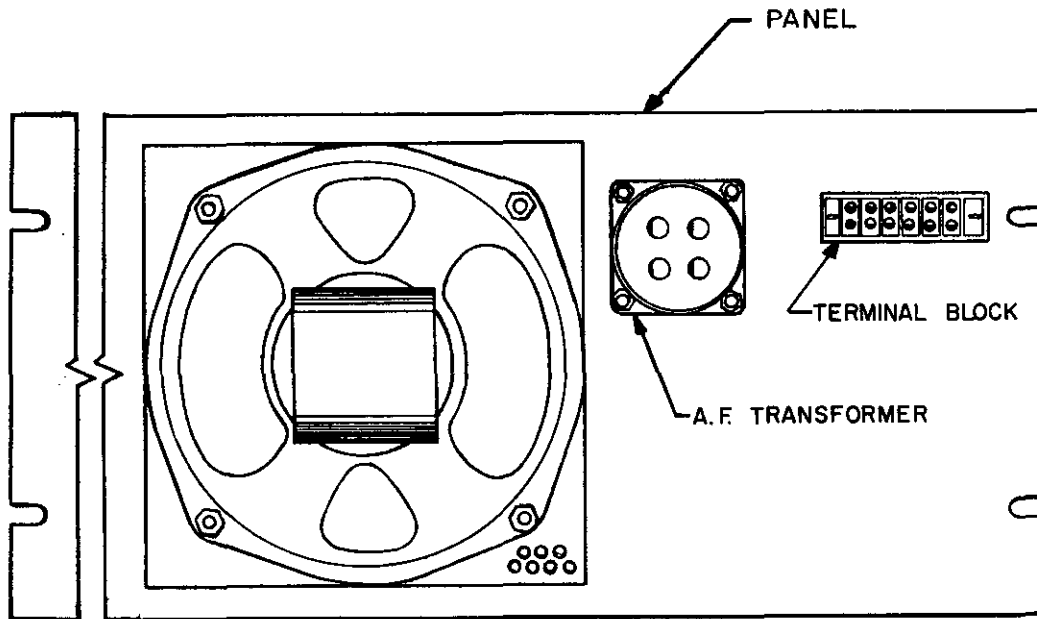
MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-169/G

FEDERAL STOCK NO: 5965-296-2547

FUNCTIONAL DESCRIPTION:

The LS-169G is a six-inch permanent magnet loudspeaker suitable for general use.

CONSISTS OF:

- |   |                               |           |
|---|-------------------------------|-----------|
| 1 | Loudspeaker, Permanent Magnet | NT491814  |
| 1 | Panel and Grill               |           |
| 1 | Attenuator                    |           |
| 1 | Terminal Block                | Type 8TB6 |

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Speaker Dimensions:

Nominal Diameter	- - - - -	6 inches (152.4 mm)
Depth	- - - - -	4-3/8 inches (111.13 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER  
 NOMENCLATURE: LS-169/G (Cont)  
 FEDERAL STOCK NO: 5965-296-2547

Panel Dimensions:

Length - - - - - 19 inches (482.6 mm)  
 Height - - - - - 6-1/2 inches (165.1 mm)

Mounting Dimensions:

Four mounting slots 7/16 x 1/4 inches are located at the corners of a 18-1/4 x 4 inches rectangle.

Weight - - - - - 6 pounds

ADDITIONAL PHYSICAL DATA:

Panel Material - - - - - Aluminum

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 4 ohms  
 Power handling rating - - - - - 2 watts, normal; 5 watts, peak  
 Frequency range - - - - - 200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Harmonic distortion - - - - - 7 percent maximum

Transformer Impedance at Primary - - - 600 ohms

REFERENCE DATA and LITERATURE

BuShips Drawing RE 49F 773  
 BuShips Drawing RE 49C 764

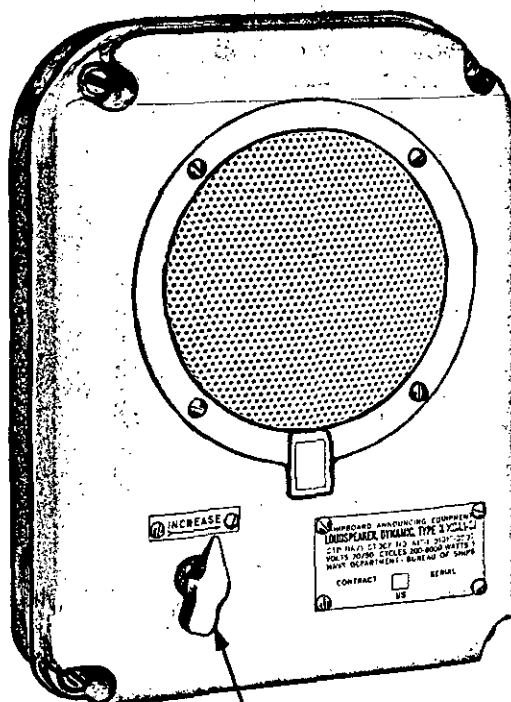
MANUFACTURER CODE	PART NUMBER
80058	LS-169/G

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-305( )/SIC; LS-306( )/SIC

FEDERAL STOCK NO: 5965-636-2462; 5965-284-6579



— KNOB FOR EXTERNAL VOLUME  
ADJUSTMENT ON LS-306( )/SIC ONLY

FUNCTIONAL DESCRIPTION:

The LS-305( )/SIC and LS-306( )/SIC are low power loudspeakers intended for reproduction of speech and alarm signals in sheltered areas of ships, such as living spaces, in which the noise level is comparatively low.

CONSISTS OF:

- 1 Loudspeaker, Dynamic LS-305( )/SIC or LS-306( )/SIC

RELATIONSHIP TO SIMILAR EQUIPMENT:

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-305( )/SIC; LS-306( )/SIC (Cont)

FEDERAL STOCK NO: 5965-636-2462; 5965-284-6579

PHYSICAL DESCRIPTION:

Nominal Diameter - - - - - 11 inches (279.4 mm)

Over-all Dimensions:

Length - - - - - 10.938 inches (277.83 mm)

Width - - - - - 8.25 inches (209.55 mm)

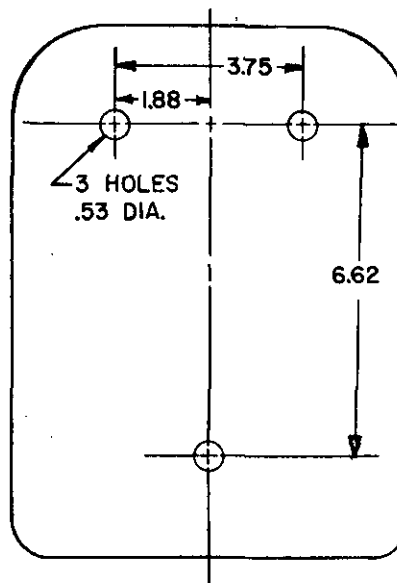
Depth - - - - - 4.438 inches (112.73 mm)

Mounting Dimensions:

Refer to the following figure, arrangement of mounting holes:

Weight - - - - - 6 lbs. est.

ARRANGEMENT OF  
 MOUNTING HOLES: ►



ADDITIONAL PHYSICAL DATA:

Case Material: Aluminum

Finish: Alkyd Resin Enamel, Light Navy Gray

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 7 ohms

Power handling rating - - - - - Not rated

Frequency range - - - - - 200 to 8,000 Hz

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-305( )/SIC; LS-306( )/SIC (Cont)

FEDERAL STOCK NO: 5965-636-2462; 5965-284-6579

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ADDITIONAL TECHNICAL DATA:

Transformer Data:

The line transformer is tapped to allow use with either a 50 to 70 volt audio line.  
The input impedances available at the 70 volt tap at one kilocycle per second are:  
5200; 16,900; 41,900; 59,200; 71,000 ohms.  
The input impedances at the 50 volt tap at one kilocycle are: 2600; 8200; 20,400;  
29,200; 35,500 ohms.

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REFERENCE DATA and LITERATURE

Jensen Manufacturing Company Instruction Note No. 171B.  
MIL-A-20222  
MIL-P-15328  
MIL-E-15090 (Type 3, Class 2)  
MIL-V-173A

MANUFACTURER CODE	PART NUMBER
32001	LS-305( )/SIC or LS-306( )/SIC



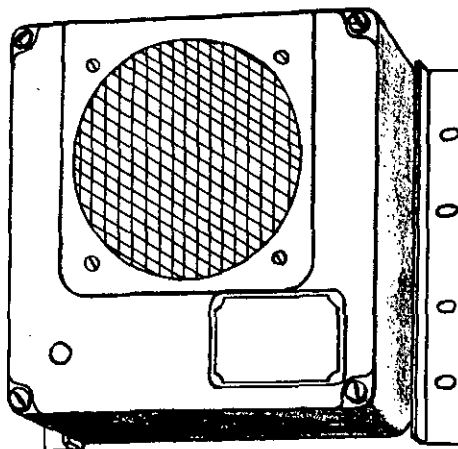
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-474/U

FEDERAL STOCK NO: 5965-892-3597

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FUNCTIONAL DESCRIPTION:

The LS-474/U Loudspeaker is designed as a general purpose unit having provision for mounting on a wall, rack panel, or table top.

CONSISTS OF:

- 1 Loudspeaker LS-474/U
- Including:
  - 1 Cabinet, Including Mounting Brackets
  - 1 Matching Transformer

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to LS-195/U except for the single primary impedance transformer and elimination of attenuator.

ACCESSORIES:

A volume control, FSN N5905-201-3680, can be mounted on the front panel by removing the hole plug.

Two loudspeakers may be mounted on relay rack CY-597A/G.

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-474/U (Cont)

FEDERAL STOCK NO: 5965-892-3597

PHYSICAL DESCRIPTION:

Weight \_ \_ \_ \_ \_ Not available

Dimensions:

Length \_ \_ \_ \_ \_ 8.562 inches (217.47 mm)  
 Width \_ \_ \_ \_ \_ 8.688 inches (220.68 mm)  
 Depth \_ \_ \_ \_ \_ 5 inches (127.0 mm)  
 Nominal Cone Diameter \_ \_ \_ \_ \_ 6 inches (152.4 mm)

Mounting Dimensions:

4-7/32 inch diameter mounting holes spaced 4.33 inches center to center.

4 mounting holes on flanges provide for installation on a bulkhead.

TECHNICAL DESCRIPTION:INPUT

Voice coil impedance \_ \_ \_ \_ \_ 3.2 ohms  
 Power handling rating \_ \_ \_ \_ \_ 4 watts, nominal  
 Frequency range \_ \_ \_ \_ \_ 200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer Primary Impedance \_ \_ \_ 600 ohms

REFERENCE DATA and LITERATURE

Fidelity Amplifier Company Instruction Sheet No. 100

MIL-L-17061

MANUFACTURER CODE	PART NUMBER
81349	LS-474/U

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

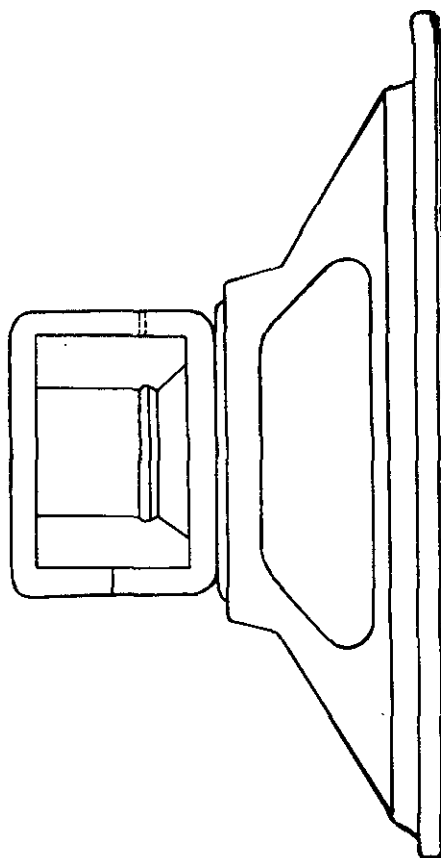
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: NT-491814

FEDERAL STOCK NO: 5965-252-0803

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FUNCTIONAL DESCRIPTION:

The NT-491814 is a six-inch low impedance loudspeaker resistant to shock, vibration, and salt spray, which is suitable for shipboard and general purpose use.

CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet NT-491814

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: NT-491814 (Cont)

FEDERAL STOCK NO: 5965-252-0803

RELATIONSHIP TO SIMILAR EQUIPMENT:

PHYSICAL DESCRIPTION:

Nominal Diameter - - - - -	6 inches (152.4 mm)
Diameter - - - - -	6-1/8 inches (155.58 mm)
Depth - - - - -	3-1/8 inches (79.38 mm)
Weight - - - - -	Not available

ADDITIONAL PHYSICAL DATA:

Mounting Dimensions:

Four slots .203 x .297 inches at the corners of a 4-1/4 inch square.

Finish:

All corrosive metal parts finished in gray enamel.

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - -	3.2 ohms at 400 Hz
Power handling rating - - - - -	4 watts
Frequency range - - - - -	200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

REFERENCE DATA and LITERATURE

RE49C764  
MIL-E-16400  
MIL-STD-202, Method 102A  
MIL-S-901, (Type 1, Grade 1)  
MIL-STD-167, (Type 1)

MANUFACTURER CODE	PART NUMBER
70215	B7240

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

## SECTION 4

### HEADSETS

<u>Nomenclature, model or part number</u>	<u>Page</u>
"A" #200 - - - - -	4.2.1
H-16 ( )/U - - - - -	4.3.1
H-32 ( )/U - - - - -	4.4.1
H-43B/U - - - - -	4.5.1
H-65 ( )/U - - - - -	4.6.1
H-113/U - - - - -	4.7.1
H-139 ( )/GR - - - - -	4.8.1
H-154/AIC - - - - -	4.9.1
H-158/AIC - - - - -	4.10.1
H-171 ( )/G - - - - -	4.11.1
H-183 ( )/U - - - - -	4.12.1
H-216 ( )/U - - - - -	4.13.1
H-226/PPS-5 - - - - -	4.14.1
H-227 ( )/U - - - - -	4.15.1
H-251/U - - - - -	4.16.1
HS-16A - - - - -	4.17.1
NT-49507B - - - - -	4.18.1
NT-49985A - - - - -	4.19.1
P-104J535-1 - - - - -	4.20.1
159 - - - - -	4.21.1
716D - - - - -	4.22.1
24076 - - - - -	4.23.1

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL "A" #200

FEDERAL STOCK NO: 5965-170-4815

FUNCTIONAL DESCRIPTION:

This headset contains two crystal type earphone receivers mounted in a metal double band headband. The headset is primarily intended for use with the recorder and reproducer type number TCB-2 made by Dictaphone Corporation. The headset has a relatively flat response and is suitable for general purpose, voice applications in the laboratory or studio.

CONSISTS OF:

- 2 Earphone Receivers Brush Development Co. Type B-2107
- 1 Headband

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions:(Earphone)

Depth - - - - - .938 inches (23.83 mm)  
 Diameter- - - - - 2.078 inches (52.78 mm)

Cord Data:

Length - - - - - 5 feet (1524.00 mm)  
 No. of Conductors- - - - - 2  
 No. of Connectors- - - - - 2  
 Connector Designation - - - - - Phone Tip, Brush Development Drawing No. B2024  
 Jacket Material - - - - - Cotton Braid

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL "A" #200 (Cont)

FEDERAL STOCK NO: 5965-170-4815

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Metal  
 Padding - - - - - Cloth  
 Type - - - - - Double Band Fixed

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 1 megohm  $\pm$  20 percent  
 Frequency Range - - - - - 100 to 8,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Pressure Cycling - - - - - 0 to 50,000 feet

REFERENCE DATA and LITERATURE

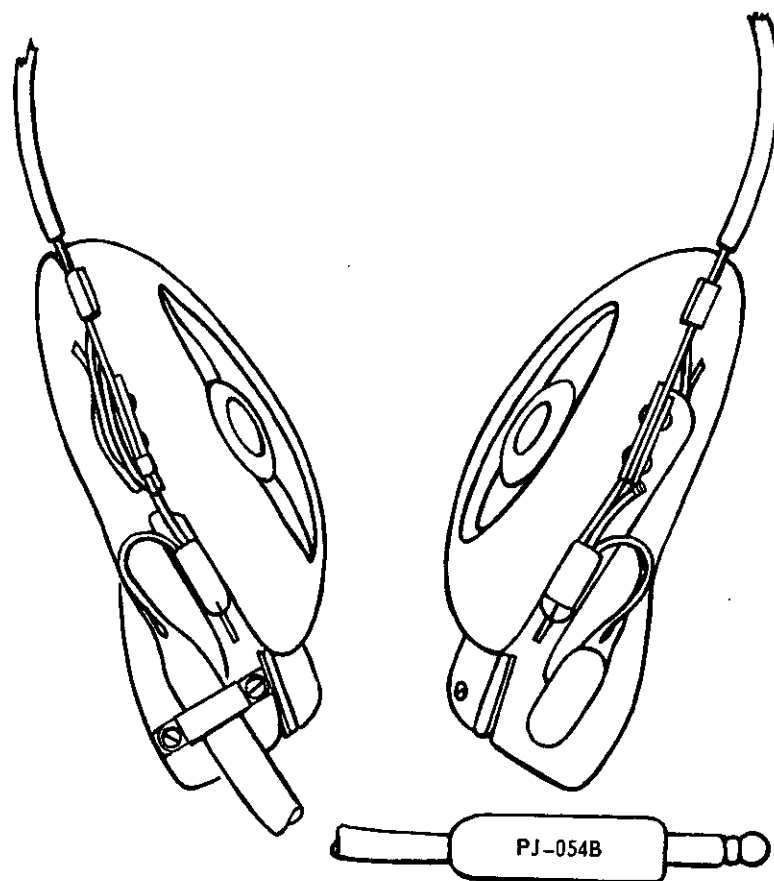
MANUFACTURER CODE	PART NUMBER
09215	"A" #200

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-16( )/U

FEDERAL STOCK NO: 5965-243-7782



FUNCTIONAL DESCRIPTION:

Headset H-16( )/U is intended to be used in noisy locations such as tanks, destroyers, etc. It consists of two magnetic receiver elements and two matching transformers. The earcups incorporate slide adjustment for attachment to the headband.

CONSISTS OF:

- 2 Magnesium Earcups, MX-239( )/U and MX-240( )/U
- 2 Magnetic Receiver Elements R-30-U
- 2 Matching Transformers
- 1 Headband MX-175( )/U
- 1 Cord
- 1 Plug PJ-054B

RELATIONSHIP TO SIMILAR EQUIPMENT:



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-16( )/U (Cont)

FEDERAL STOCK NO: 5965-243-7782

PHYSICAL DESCRIPTION:

Earphone Dimensions:

Over-all Diameter . . . . . .906 inches (23.02 mm)  
 Depth . . . . . .688 inches (17.46 mm)

Cord Data:

Length . . . . .65.125 inches (1,654.18 mm)  
 Jacket Material . . . . .Rubber  
 Number of Connectors . . . . .1  
 Connector Designation . . . . .PJ-054B

ADDITIONAL PHYSICAL DATA:

Headband Data:

Type . . . . .Single Band Adjustable  
 Material . . . . .Rubber-covered Metal

TECHNICAL DESCRIPTION:

INPUT

Quantity of Earphones . . . . .2  
 Nominal Impedance . . . . .8,000 ohms (in series)  
 Frequency Range . . . . .400 to 2,600 Hz

ADDITIONAL TECHNICAL DATA:

Transformer Data:

Primary Impedance . . . . .400 ohms  
 Secondary Impedance . . . . .20 ohms

ENVIRONMENTAL LIMITATIONS:

Temperature Range:

In Operation . . . . .-40° F to +125° F  
 In Transportation . . . . .-65° F to +183° F

Salt atmosphere . . . . .As in coastal regions and ocean transportation  
 Dust . . . . .Withstands particles between 10 and 50 microns in any reasonable distribution and concentration  
 Altitude . . . . .Sea level to 50,000 feet  
 Immersion . . . . .Withstands immersion in 6 inches of water for 10 minutes

REFERENCE DATA and LITERATURE

MIL-H-12487

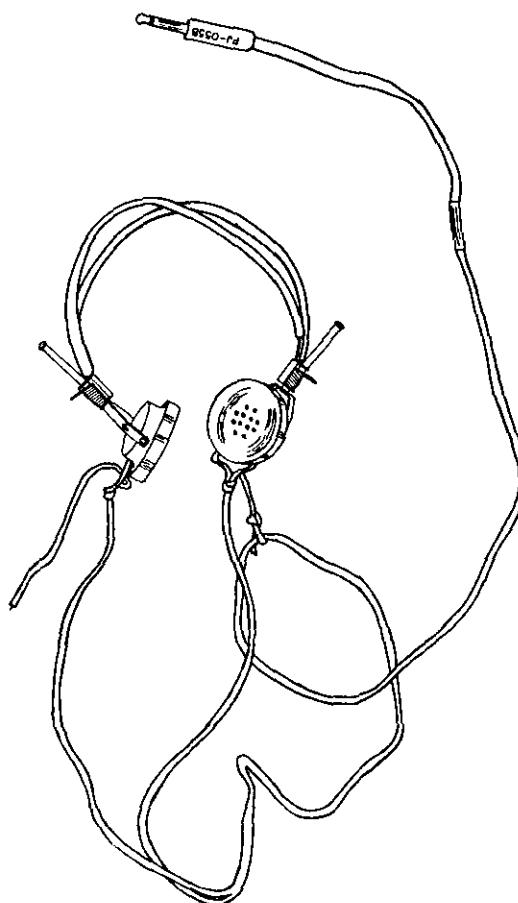
MANUFACTURER CODE	PART NUMBER
80063	H-16( )/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-32 ( )/U

FEDERAL STOCK NO: 5965-222-0282



#### FUNCTIONAL DESCRIPTION:

This headset contains two earphones with adjustable headband, cord, and a telephone plug. It is a special purpose unit.

#### CONSISTS OF:

- 1 Headset H-32 ( )/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Earphone)

Depth - - - - - .75 inches (19.05 mm)  
 Diameter - - - - - 2.62 inches (66.55 mm)

##### Headset Cord Data:

Length - - - - - 60 ± 2 inches (15.24 mm ± 50.8 mm) (from  
 earphones to plug)  
 No. of Conductors - - - - - 2  
 Covering - - - - - Rubber  
 Connector Designation - - - - - PJ-055B

4.4.1

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-32 ( )/U (Cont)

FEDERAL STOCK NO: 5965-222-0282

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ADDITIONAL PHYSICAL DATA:

Weight - - - - - 8 oz.

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2

Impedance - - - - - 8,500  $\pm$  20% per unit

ADDITIONAL TECHNICAL DATA:

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REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80058 81812	H-32 ( )/U H-157

MIL-HDBK-173A/TM 11-487M

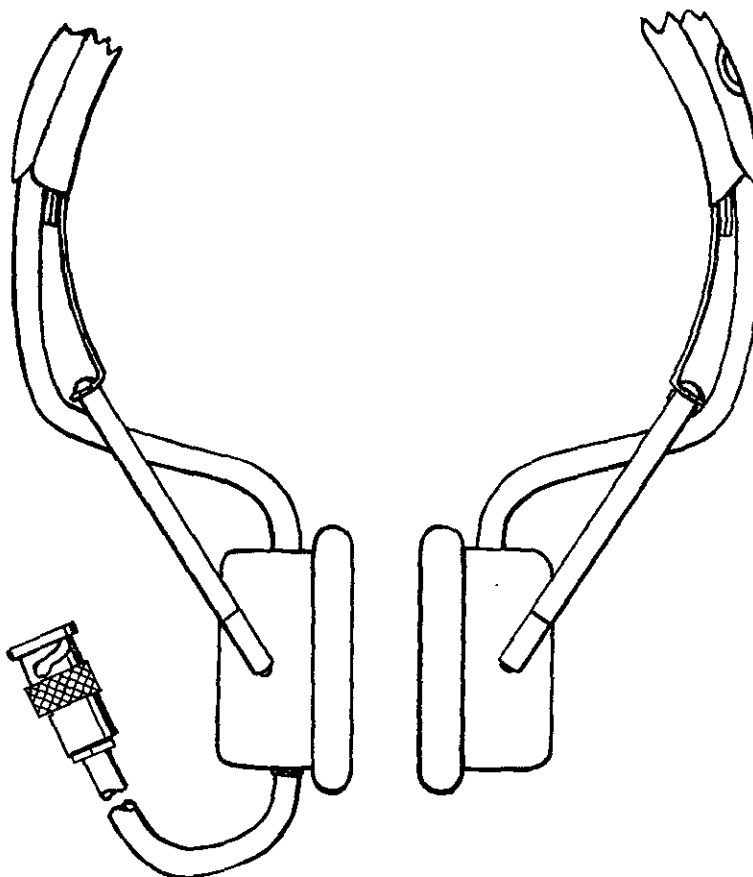
MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-43B/U

FEDERAL STOCK NO: 5965-651-7372

FUNCTIONAL DESCRIPTION:

The H-43B/U is a high impedance two-earphone headset suitable for use under the standard military metal helmet.

CONSISTS OF:

1	Earphone	Navy Type CTE-491964
1	Earphone	Navy Type CTE-491965
1	Headband	Type 14146-1
1	Cord Assembly	
1	Connector	UG-88( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to and interchangeable with headset H-43/U.

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-43B/U (Cont)

FEDERAL STOCK NO: 5965-651-7372

PHYSICAL DESCRIPTION:

Dimensions: (Earphone)

Depth - - - - - 1 inch (25.4 mm)  
Diameter - - - - - 2 inches (50.8 mm)

Cord Data:

Length - - - - - 34 inches (863.6 mm)  
No. of Conductors - - - - - 2  
Connector Designation - - - - - UG-88( )/U  
Jacket Material - - - - - Rubber

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Steel  
Padding - - - - - Cloth  
Type - - - - - Single Band, Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 20,000 ohms  $\pm$  20 percent (in series)  
Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

FREQUENCY OF MAXIMUM RESPONSE:

1,000 Hz  $\pm$  150 Hz

HARMONIC DISTORTION

15 percent maximum at 1,000 Hz and an input level of one milliwatt

ENVIRONMENTAL LIMITATIONS

Temperature range - - - - -  $-40^{\circ}\text{C}$  to  $+55^{\circ}\text{C}$

REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80058	H-43B/U

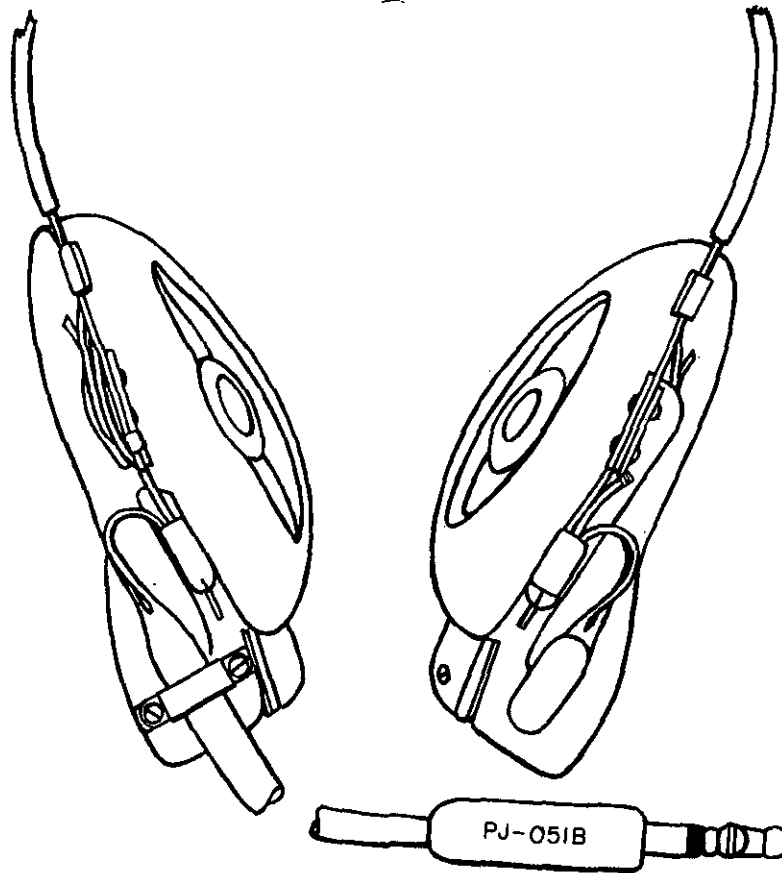
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-65 ( )/U

FEDERAL STOCK NO: 5965-223-4572

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FUNCTIONAL DESCRIPTION:

Headset H-65 ( )/U is designed to be used with radar equipment where the operator is required to monitor two channels at the same time.

CONSISTS OF:

- 2 Magnesium Earcups, MX-239 ( )/U and MX-240 ( )/U
- 2 Magnetic Receiver Elements R-30-U
- 2 Matching Transformers
- 1 Headband MX-175 ( )/U
- 1 Cord
- 1 Plug PJ-051B

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-65 ( )/U (Cont)

FEDERAL STOCK NO: 5965-223-4572

RELATIONSHIP TO SIMILAR EQUIPMENT:

Headset, Elect. H-65 ( )/U magnetic is similar to Headset, Elect. H-16 ( )/U, except that the connecting cord is approximately 4 feet long and terminates in Plug PJ-051, connected in a manner that an operator can monitor two separate channels at the same time.

PHYSICAL DESCRIPTION:

Earphone Dimensions:

Overall Diameter - - - - - .91 inches (23.11 mm)  
 Depth - - - - - .69 inches (17.53 mm)

Cord Data:

Length - - - - - 48 inches (approx) (1,235.2 mm)  
 Jacket Material - - - - - Rubber  
 Number of Connectors - - - - - 1  
 Connector Designation - - - - - PJ-051B

ADDITIONAL PHYSICAL DATA:

Headband Data:

Type - - - - - Single Band Adjustable  
 Material - - - - - Rubber-covered Metal

TECHNICAL DESCRIPTION:

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 4,000 ohms (each earphone)  
 Frequency Range - - - - - 400 to 2,600 Hz

ADDITIONAL TECHNICAL DATA:

Transformer Data:

Primary Impedance - - - - - 4,000 to 6,000 ohms  
 Secondary Impedance - - - - - 125 ohms

ENVIRONMENTAL LIMITATIONS:

Temperature Range:

In Operation - - - - - -40° F to +125° F  
 In Transportation - - - - - -65° F to +183° F  
 Salt atmosphere - - - - - As in coastal regions and ocean transportation  
 Dust - - - - - Withstands particles between 10 and 50 microns in any reasonable distribution and concentration  
 Altitude - - - - - Sea level to 50,000 feet  
 Immersion - - - - - Withstands immersion in 6 inches of water for 10 minutes

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-65 ( )/U (Cont)

FEDERAL STOCK NO: 5965-223-4572

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REFERENCE DATA and LITERATURE

MIL-H-12487  
SC-DL-19426  
SC-DL-24222

MANUFACTURER CODE	PART NUMBER
80063	H-65 ( )/U



MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-113/U

FEDERAL STOCK NO: 5965-504-6370

FUNCTIONAL DESCRIPTION:

This Electrical Headset, H-113/U, is a general purpose headset used as a receiver for radio and wire equipment. It contains two magnetic earphone receivers suspended on a single band steel headband.

CONSISTS OF:

- 1 Electrical Headset H-113/U

Consisting of:

- 2 Earphone Receivers Connecticut Telephone and Electric Corp. Part Number G-14225
- 1 Headband
- 2 Earphone Cushions Connecticut Telephone and Electric Corp. Part Number G-14205

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions: (Earphone)

Depth - - - - -	0.603 inch (15.32 mm)
Diameter - - - - -	1.984 inches (50.39 mm)

Cord Data:

Length - - - - -	16 inches (351.60 mm)
Number of Conductors - - - - -	2
Number of Connectors - - - - -	1
Connector Designation - - - - -	PJ-054B
Jacket Material - - - - -	Rubber

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-113/U (Cont)

FEDERAL STOCK NO: 5965-504-6370

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Steel  
Padding - - - - - Plastic  
Type - - - - - Single Band, Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 600 ohms  
Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Nonoperating:

Temperature Range - - - - - -80° F to +160° F (High temperature extreme not more than 4 hours, and low temperature extreme not more than 24 hours at any one time.)  
Relative Humidity - - - - - Up to 97 percent for indefinite period. Exposure at 100 percent with condensation for 4 hours.  
Elevation - - - - - Up to 50,000 feet above sea level.  
Orientation - - - - - Indefinite storage in any orientation.  
Salt Spray - - - - - Withstands 20 percent salt spray test, Method 101, Condition A, MIL-STD-202.  
Vibration - - - - - Withstands Vibration test of MIL-H-11190.  
Bounce - - - - - Withstands Bounce test of MIL-H-11190.  
Shock - - - - - Withstands 3 foot drops on each corner, edge, and face onto a 2 inch tin floor backed by concrete or rigid steel frame.  
Blast - - - - - Withstands gunblast test of MIL-STD-108, degree 2.

Equipment Operating:

Temperature Range - - - - - -40° F to +150° F (High temperature extreme not more than 4 hours and low extreme not more than 72 hours.)  
Relative Humidity - - - - - Up to 97 percent indefinitely 100% with condensation for 4 hours.  
Elevation - - - - - Up to 15,000 feet above sea level.

REFERENCE DATA and LITERATURE

MIL-H-11190

MSS 5965-1

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization Studies and Surveys of Headsets and Headset-Microphones

MANUFACTURER CODE	PART NUMBER
80058	H-113/U

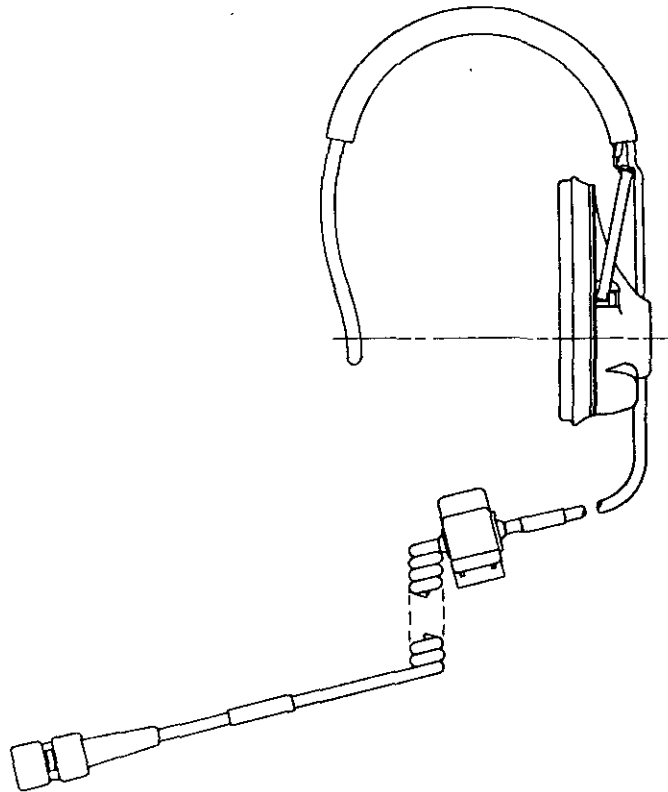
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-139 ( )/GR

FEDERAL STOCK NO: 5965-084-0531

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FUNCTIONAL DESCRIPTION:

The headset has a single earphone with a flexible headband and a fold-away earphone intended for use in low and medium ambient noise areas.

CONSISTS OF:

- 1 Attenuation Plate
- 1 Impedance Matching Transformer
- 1 Earphone Receiver, Dynamic
- 1 Ear cushion
- 1 Headband
- 1 Connector - U-182
- 1 Toggle Switch

RELATIONSHIP TO SIMILAR EQUIPMENT:

The H-139 ( )/GR, H-141 ( )/GR, and H-161 ( )/GR have identical earphone assemblies.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-139 ( )/GR (Cont)

FEDERAL STOCK NO: 5965-084-0531

PHYSICAL DESCRIPTION:

Dimensions: (Earphone)

Depth - - - - - 1.225 inches  
 Width - - - - - 3.270 inches  
 Length - - - - - 4.225 inches

Cord Data:

Length (contracted) - - - - - 20 ± 2 inches (508.0 ± 50.8 mm)  
 Length (extended) - - - - - 72 ± 2 inches (1829 ± 50.8 mm)  
 Quantity of Conductors - - - - - 5  
 Quantity of Connectors - - - - - 1  
 Connector Designation - - - - - U-182 ( )/U

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Steel  
 Type - - - - - Double Band, Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 1,000 ohms at terminal  
 Frequency Range - - - - - 300 to 3,500 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Elevation (nonoperating) - - - - - 0 to 50,000 feet  
 Elevation (operating) - - - - - 0 to 15,000 feet  
 Immersion - - - - - 3 feet water, 2 hours  
 Salt Spray - - - - - 20% at 96° F for 48 hours  
 Blast - - - - - SK-N-864  
 Vibration - - - - - Method 201 of MIL-STD-202  
 Bounce - - - - - Package tester  
 Shock, Drop - - - - - 6 feet, 12 times concrete floor

REFERENCE DATA and LITERATURE

MIL-E-55119

Drawing SC-DL-436200 covering Headset Electrical H-140 ( )/U shall apply, except the headband is a single earphone type.

MANUFACTURER CODE	PART NUMBER
80063	H-139 ( )/U

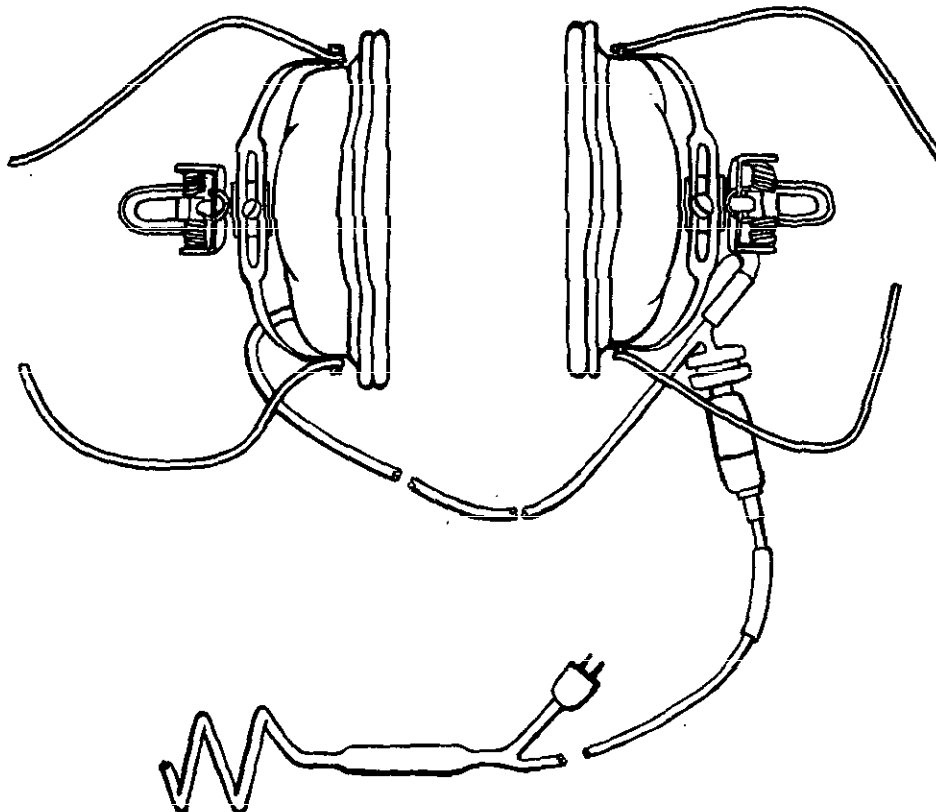
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-154/AIC

FEDERAL STOCK NO: 5965-856-0552

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FUNCTIONAL DESCRIPTION:

The H-154/AIC is intended for use with Flying Helmet HGU-2A/P. The headset includes a plug connector to plug in a low-impedance dynamic microphone which is mounted in an oxygen mask. The headset is intended for use with Intercommunication Sets AN/AIC-10 and AN/AIC-18 to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

CONSISTS OF:

- 2 Earphones H-143/AIC
- 2 Earphone Shells MX-3678/AIC and MX-3679/AIC
- 2 Cord Assemblies CX4707A/AIC and CX4708A/AIC

RELATIONSHIP TO SIMILAR EQUIPMENT:

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-154/AIC (Cont)

FEDERAL STOCK NO: 5965-856-0552

# PHYSICAL DESCRIPTION:

## Earphone Dimensions:

Nominal Diameter - - - - - 2 inches (50.8 mm)  
 Depth - - - - - 0.45 inches (11.43 mm)

## Cable Data: (CX-4707A/AIC)

Length - - - - - 1 foot 7 inches (482.6 mm)  
 Jacket Material - - - - - Nylon Braid

## Cable Data: (CX-4708/AIC)

Length - - - - - 2 feet 3 inches (685.8 mm)  
 Jacket Material - - - - - Nylon Braid

# ADDITIONAL PHYSICAL DATA:

## Headband Data:

Type - - - - - Single band, adjustable  
 Material - - - - - Plastic covered steel  
 Connector type - - - - - Phone plug

# TECHNICAL DESCRIPTION:

## INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 10 ohms (in parallel)  
 Frequency Range - - - - - 100 to 5,500 Hz

# ADDITIONAL TECHNICAL DATA:

# ENVIRONMENTAL LIMITATIONS:

Temperature - - - - - -55° C to +85° C  
 Altitude - - - - - Sea level to 25,000 feet

# REFERENCE DATA and LITERATURE

MIL-H-27467

MIL-E-25670

AF Drawing 60D4292

MANUFACTURER CODE	PART NUMBER
82872	10557
80058	H-154/AIC

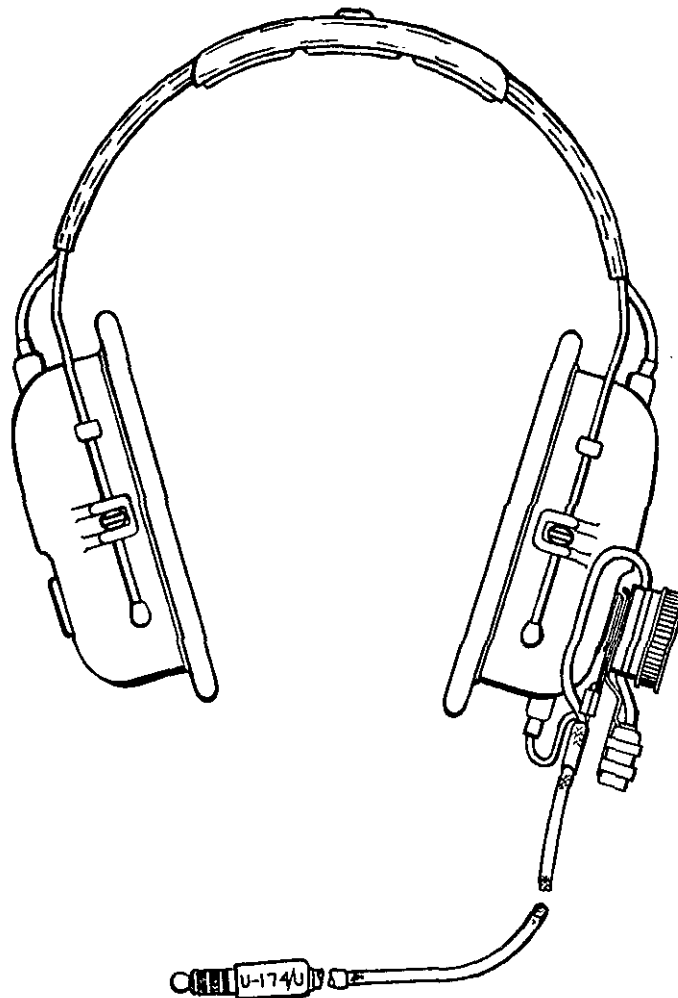
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-158/AIC

FEDERAL STOCK NO: 5965-841-1372

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FUNCTIONAL DESCRIPTION:

The H-158/AIC is a headband type headset intended for use at low altitudes as part of Intercommunication Set AN/AIC-10( ) to provide communication of high intelligibility under the extreme noise conditions encountered in Military Aircraft.

CONSISTS OF:

- 2 Earphones H-143/AIC
- 2 Earphone Shells MX-2508/AIC and MX-3473/AIC
- 1 Headband MX-2506/AIC
- 2 Cord Assemblies CX-4434/U and CX-4435/U
- 1 Microphone Bracket MT-2007/AIC
- 1 Connector Telephone plug type U-174/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-158/AIC (Cont)

FEDERAL STOCK NO: 5965-841-1372

#### RELATIONSHIP TO SIMILAR EQUIPMENT

Headset H-158/AIC is similar to headset-microphone H-157/AIC, except for the microphone.

#### PHYSICAL DESCRIPTION:

##### Earphone Dimensions:

Nominal Diameter - - - - - 2 inches (50.8 mm)  
 Depth - - - - - 0.45 inches (11.43 mm)

##### Cord Data: (CX-4434/U)

Length - - - - - 1 foot 4 inches (406.4 mm)  
 Jacket Material - - - - - Nylon braid

##### Cord Data: (CX-4435/U)

Length - - - - - 2 feet 4.50 inches (723.9 mm)  
 Jacket Material - - - - - Nylon braid

#### ADDITIONAL PHYSICAL DATA:

##### Headband Data:

Type - - - - - Single Band  
 Construction - - - - - Extruded plastic webbing over two steel wires

##### Connector Data:

Number of Connectors - - - - - 1  
 Connector Type - - - - - Telephone Plug  
 Earphone Weight - - - - - 35 Grams Max.

#### TECHNICAL DESCRIPTION: (EARPHONE)

##### INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 10 ohms (in parallel)  
 Frequency Range - - - - - 100 to 5,500 Hz

#### ADDITIONAL TECHNICAL DATA:

##### ENVIRONMENTAL LIMITATIONS:

Temperature - - - - - -55° C to +85° C  
 Altitude (Operation) - - - - - 25,000 feet  
 Altitude (Transportation) - - - - - 50,000 feet

#### REFERENCE DATA and LITERATURE

MIL-H-26541  
 Air Force Drawing 58C 12682

MANUFACTURER CODE	PART NUMBER
80058	H-158/AIC
82872	10558



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-171 ( )/G

FEDERAL STOCK NO: 5965-542-7125

NO ILLUSTRATION AVAILABLE

FUNCTIONAL DESCRIPTION:

This headset contains two dynamic earphones with a headband that is adjustable, double, and plastic covered steel. The cord has a telephone plug.

CONSISTS OF:

1 Headset H-171 ( )/G

RELATIONSHIP TO SIMILAR EQUIPMENT:

PHYSICAL DESCRIPTION:

Dimensions: (Headset)

Length	- - - - -	4.688 inches (119.08 mm)
Width	- - - - -	3.625 inches (92.08 mm)
Depth	- - - - -	1.594 inches (40.49 mm)

Headset Cord Data:

Length	- - - - -	73 ± 3 inches (1854.2 mm ± 76.2 mm)
No. of Conductors	- - - - -	2
Covering	- - - - -	Nylon braid with latex
Connector Designation	- - - - -	PJ-055B

ADDITIONAL PHYSICAL DATA:

Weight - - - - - 8 oz.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-171 ( )/G, (Cont)

FEDERAL STOCK NO: 5965-542-7125

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
 Impedance - - - - - 11 ohms  
 Frequency Range - - - - - (Not available)

ADDITIONAL TECHNICAL DATA:

Earphones are Connected in Parallel.

REFERENCE DATA and LITERATURE

MSS 5965-1A

MANUFACTURER CODE	PART NUMBER
80063	H-171 ( )/G

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-183 ( )/U

FEDERAL STOCK NO: 5965-682-2575

NO ILLUSTRATION AVAILABLEFUNCTIONAL DESCRIPTION:

This headset contains two dynamic earphones with a single adjustable copper headband, cord, telephone plug, and clip for holding cord assembly to clothing.

CONSISTS OF:

1 Headset H-183 ( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions: (Earphone)

Depth - - - - - .75 inches (19.05 mm)  
 Diameter - - - - - 2.0 inches (50.8 mm)

Cable Data:

Length - - - - - 72 inches (1829 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - PJ-055B  
 Jacket Material - - - - - Rubber

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-183 ( )/U (Cont)

FEDERAL STOCK NO: 5965-682-2575

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TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 2 ohms  
Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

Earphones are Connected in Parallel

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REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80063	H-183/PP-4

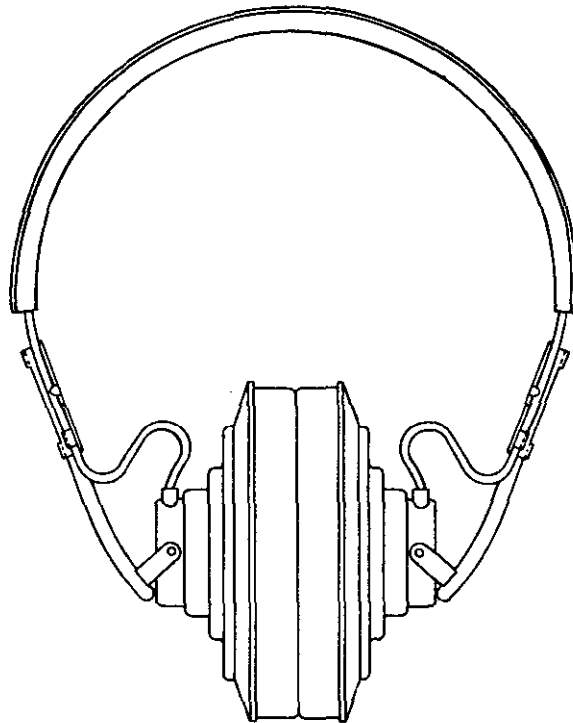
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-216 ( )/U

FEDERAL STOCK NO: 5965-892-3353

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FUNCTIONAL DESCRIPTION:

This headset has an extended frequency range of 100 to 7,000 Hz. This range makes the headset useful for such applications sonar.

CONSISTS OF:

- 2 Earphones - H-301/U
- 1 Headband and Cover - HB-7
- 1 Plug - PJ-054R
- 2 Earphone Cushions - MS75127

RELATIONSHIP TO SIMILAR EQUIPMENT:

PHYSICAL DESCRIPTION:

Dimensions:

Width - - - - -	6.25 inches (158.75 mm)
Length (Extended) - - - - -	9.06 inches (230.12 mm)
Earphone Cushion:	
Height - - - - -	4.38 inches (111.25 mm)
Depth - - - - -	3.44 inches (87.38 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-216 ( )/U (Cont)

FEDERAL STOCK NO: 5965-892-3353

PHYSICAL DESCRIPTION: (Cont)

Cable Data:

Length - - - - - 72 inches (1829 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - PJ-054R  
 Jacket Material - - - - - Cloth

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Stainless Steel  
 Cover - - - - - Black Vinyl  
 Type - - - - - Double Band Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 600 ohms  
 Frequency Range - - - - - 100 to 7,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Pressure Cycling - - - - - 0 to 50,000 feet  
 Shock - - - - - Six-foot drops onto concrete surface with minimal electrical and physical damage.  
 Salt Spray - - - - - 5% Salt Solution, Method 101 of MIL-STD-202

REFERENCE DATA and LITERATURE

MIL-H-55353  
 MS-75105 thru MS-75130

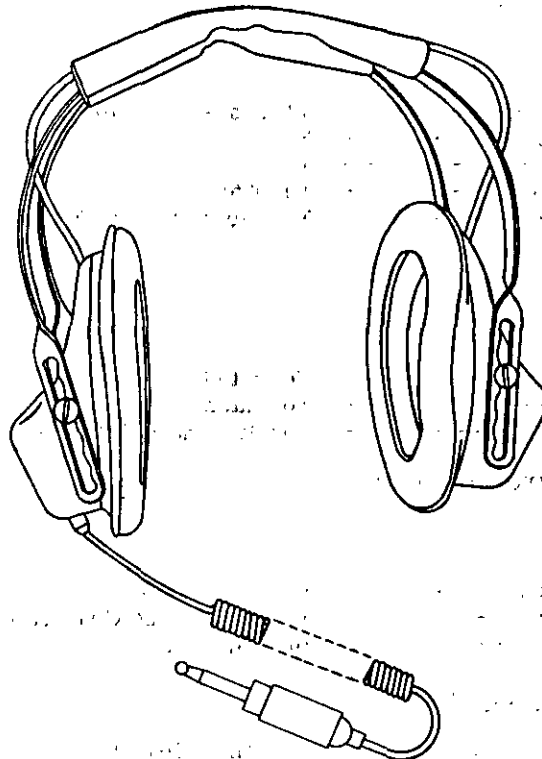
MANUFACTURER CODE	PART NUMBER
800635	H-216 ( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-226/PPS-5

FEDERAL STOCK NO: 5965-116-5363



FUNCTIONAL DESCRIPTION:

This headset contains two earphones with adjustable headband, retractile cord and a telephone plug.

CONSISTS OF:

- 1 Left-hand Receiver
- 1 Right-hand Receiver
- 1 Cord Assembly - Miniature Coil per MIL-C-55668
- 1 Plug PJ-055B

RELATIONSHIP TO SIMILAR EQUIPMENT:

Used as Part of AN/PPS-5 System.

PHYSICAL DESCRIPTION:

Dimensions: (Overall)

Height - - - - - 8 inches (approx) (203.2 mm)  
Width - - - - - 5.5 inches (approx) (128.27 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-226/PPS-5 (Cont)

FEDERAL STOCK NO: 5965-116-5363

PHYSICAL DESCRIPTION: (Cont)

Cable Data:

Length (Extended) - - - - - 72 inches (1829 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - PJ-055B  
 Cord - - - - - Miniature Coil per MIL-C-55668

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Not rated  
 Padding - - - - - Not rated  
 Type - - - - - Double Band Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 500 ohms at the Connector  
 Frequency Range - - - - - 20 to 3,500 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations (Procedure I of MIL-STD-810):

Altitude - - - - - Method 500  
 High Temperature - - - - - Method 501  
 Low Temperature - - - - - Method 502  
 Rain - - - - - Method 506  
 Humidity - - - - - Method 507  
 Fungus - - - - - Method 508  
 Salt Fog - - - - - Method 509  
 Sand and Dust - - - - - Method 510  
 Immersion - - - - - Method 512  
 Vibration - - - - - Method 514  
 Shock - - - - - Drop - 12 times at 6 feet

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REFERENCE DATA and LITERATURE

SM-C-610346  
 SC DL-SMA 610085

MANUFACTURER CODE	PART NUMBER
80063	H-226A/PPS-5
81134	994-7471



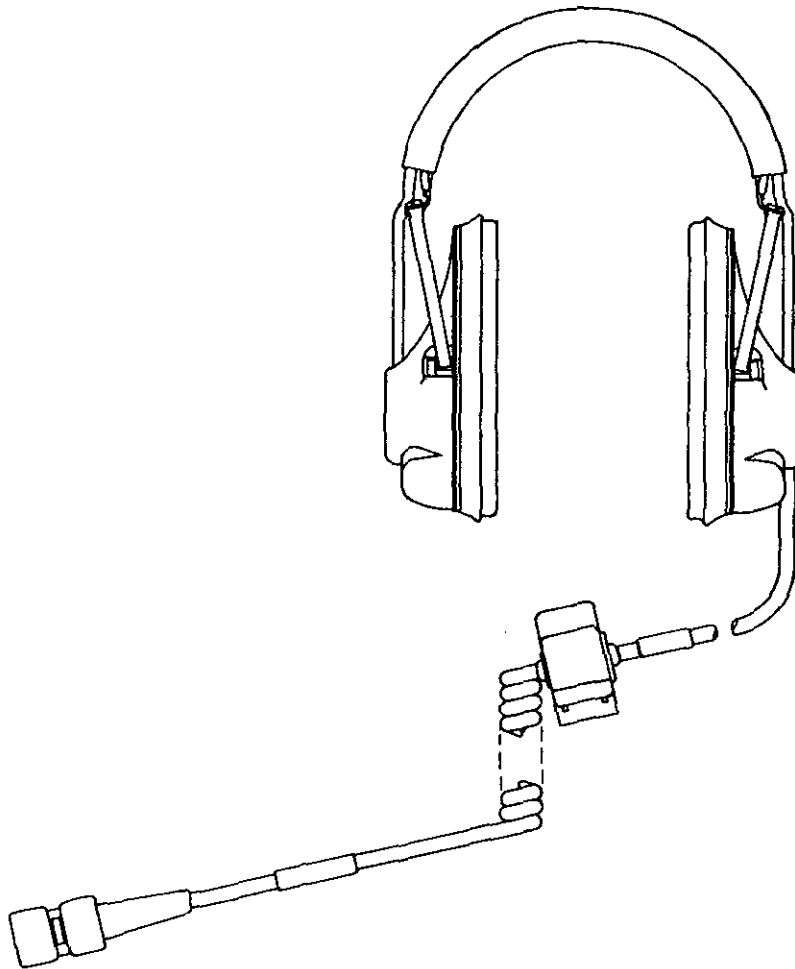
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-227 ( )/U

FEDERAL STOCK NO: 5965-226-2915

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FUNCTIONAL DESCRIPTION:

This headset is a double earphone headset with a flexible headband. The headset is intended for use in medium and high ambient noise areas.

CONSISTS OF:

- 2 Earphone and Cup Assemblies - SM-D-436220
- 1 Headband Assembly - SM-C-436228
- 1 Clothing Clip on Cord - SM-B-436240
- 1 Retractable Cord Assembly - SM-B-436226
- 1 Plug - U161

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-227 ( )/U (Cont)

FEDERAL STOCK NO: 5965-226-2915

RELATIONSHIP TO SIMILAR EQUIPMENT:

This headset is identical to headset H-140 ( )/GR, except plug U-161 replaces plug U-182/U. The earphone assemblies of H-139 ( )/GR, H-140 ( )/GR, H-141 ( )/GR, and H-161 ( )/GR are identical.

PHYSICAL DESCRIPTION:

Dimensions: (Earphone)

Depth - - - - - 1.219 inches (30.96 mm)  
 Diameter - - - - - 2.375 inches (60.33 mm)

Cable Data:

Length (Retracted) - - - - - 10.5 inches (266.70 mm)  
 Length (Extended) - - - - - 48 inches (1,036.32 mm)  
 No. of Conductors - - - - - 3  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - U-161

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Cotton Web  
 Padding - - - - - Cotton Web  
 Type - - - - - Single Band Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 250 ohms  
 Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Pressure Cycling - - - - - 0 to 50,000 feet  
 Shock - - - - - 12 five-foot drops onto concrete surface with minimal electrical and physical damage.

REFERENCE DATA and LITERATURE

MIL-E-55119  
 SC-DL-436200

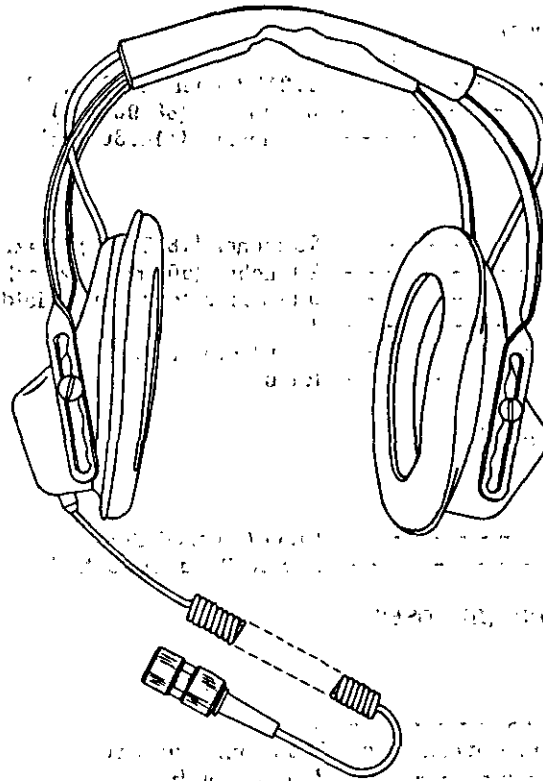
MANUFACTURER CODE	PART NUMBER
80063	H-227 ( )/U

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-251/U-

FEDERAL STOCK NO: 5965-043-3460



#### FUNCTIONAL DESCRIPTION:

This headset is suitable for outdoor use with manpack radio sets and fits under the infantryman helmet M-1 and provides maximum comfort consistent with the electrical and acoustical requirements.

#### CONSISTS OF:

- 1 Adjustable Headband
- 2 Plastic Earcups
- 2 Dynamic Moving Coil Earphones
- 1 Retractable Cord - MIL-C-55668
- 1 Plug - U-182BU

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

This headset was designed for a replacement (electrical, mechanical, and performance) of the H-140/GR headset, with a lighter weight acoustic accessory.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-251/U (Cont)

FEDERAL STOCK NO: 5965-043-3460

PHYSICAL DESCRIPTION:

Dimensions: (Earphone)

Depth - - - - -	1.219 inches (30.96 mm)
Width - - - - -	3.5 inches (88.90 mm)
Height - - - - -	4.5 inches (114.30 mm)

Cable Data:

Length (extended) - - - - -	72 inches (1829 mm) (maximum)
Length (retracted) - - - - -	20 inches (508 mm) ±2 inches (50.8 mm)
No. of Conductors - - - - -	5 (4 conductors, one shield)
No. of Connectors - - - - -	1
Connector Designation - - - - -	Plug U-182 B/U
Jacket Material - - - - -	Rubber

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - -	Vinyl Covered Cloth
Type - - - - -	Double Band, Adjustable

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - -	2
Terminating impedance at connector	500 ohms ± 20 percent
Frequency Range - - - - -	20 to 3,500 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Altitude, operating - - - - -	0 to 10,000 feet
Altitude, nonoperating - - - - -	0 to 50,000 feet
Shock - - - - -	12 five-foot drops onto concrete surface faced with 1/8 inch asphalt tile, with minimal electrical and physical damage. Height of drop - 6 feet and temperature of -40°F.
Dust - - - - -	MIL-STD-810, Method 510, Procedure 1
Immersion - - - - -	MIL-STD-810, Method 512, Procedure 1
Blast - - - - -	SKN-B-864
Temperature, operating - - - - -	-40°F to +120°F with solar radiation
Temperature, nonoperating - - - - -	-65°F to +155°F
Moisture Resistance - - - - -	MIL-STD-810, Method 507
Vibration - - - - -	MIL-STD-202, Method 201
Bounce (Loose Cargo) - - - - -	MIL-STD-810, Method 514, Procedure X1, Part 2
Salt Fog - - - - -	MIL-STD-810, Test Method 509, Procedure 1
Fungus - - - - -	MIL-STD-810, Method 508, Procedure 1

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: H-251/U (Cont)

FEDERAL STOCK NO: 5965-043-3460

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REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80063	H-251/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: HS-16A

FEDERAL STOCK NO: 5965-160-1055



#### FUNCTIONAL DESCRIPTION:

Headset HS-16A contains two magnetic earphone receivers mounted in an adjustable, double band steel headband. The headset, for maximum performance, is peaked at 1000 Hz and it is primarily intended for use with Code Practice Equipment Type Number EE-81. However, it is suitable for other code applications.

#### CONSISTS OF:

1	Electrical Headset	HS-16A
2	Earphone Receiver	Murdock Corp. Type B
1	Headband	HB-1
1	Connecting Cord	CC-338

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Earphone)

Depth -	1.25 inches (31.75 mm)
Diameter -	2.375 inches (60.33 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: HS-16A (Cont)

FEDERAL STOCK NO: 5965-160-1055

PHYSICAL DESCRIPTION: (Cont)

Cord Data:

Length - - - - - 54 inches (1371.60 mm)  
 Quantity of Conductors - - - - - 2  
 Quantity of Connectors - - - - - 2  
 Connector Designation - - - - - Pin Plugs  
 Jacket Material - - - - - Cotton Braid

ADDITIONAL PHYSICAL DATA:

Headband Data

Material - - - - - Steel  
 Padding - - - - - Cloth  
 Type - - - - - Double Band Fixed

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedances - - - - - 320 ohms (in series)  
 Frequency Range - - - - - 100 to 1,400 Hz

ADDITIONAL TECHNICAL DATA:

Receiver Resonant Frequency - - - - - 1050  $\pm$  100 cycles per second  
 Receiver D-C Resistance - - - - - 56 ohms  $\pm$  10%

Environmental Limitations:

Equipment Nonoperating:

Temperature Range - - - - - -80° F to +160° F (High temperature extreme not more than 4 hours; low temperature extreme not more than 24 hours at any one time.)  
 Relative Humidity - - - - - Up to 97 percent indefinitely; exposure at 100 percent with condensation for four hours.  
 Elevation - - - - - Up to 25,000 feet above sea level

Equipment Operating:

Temperature Range - - - - - -65° F to +150° F (High temperature extreme not more than 4 hours; low extreme not more than 72 hours at any one time)  
 Relative Humidity - - - - - Up to 97 percent indefinitely; 100% with condensation for 4 hours  
 Elevation - - - - - Up to 10,000 feet above sea level

REFERENCE DATA and LITERATURE

MIL-H-12993  
 Telephonics Corporation Final Report of Technical Analysis Phase of Standardization  
 Studies and Surveys of Headsets and Headset Microphones  
 MSS 5965-1

MANUFACTURER CODE	PART NUMBER
80063	HS-16A
76596	HS-16A

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: NT-49507B

FEDERAL STOCK NO: 5965-285-0745



#### FUNCTIONAL DESCRIPTION:

This electrical headset contains two magnetic receivers mounted on an adjustable, single band, steel headband. The unit is designed for use under combat helmets and for rugged field conditions. It is salt-spray resistant.

#### CONSISTS OF:

- 2 Earphone Receiver NT-49505 (A)
- 2 Earphone Cushion NT-49506A
- 1 Headband NT-49504
- 1 Cord NT-49503B
- 1 Plug PJ-054B
- 1 Extension cord (when specified)

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Earphone)

Depth - - - - - .625 inch(including screw) (15.88 mm)  
 Diameter - - - - - 1.9375 inches (49.21 mm)

##### Cord Data:

Length - - - - - 9 inches (228.6 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Jacket Material - - - - - Polychloroprene



MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: NT-49507B (Cont)

FEDERAL STOCK NO: 5965-285-0745

#### ADDITIONAL PHYSICAL DATA:

##### Headband Data:

Material ----- Steel  
 Cover ----- Vinyl  
 Type ----- Single Band, Adjustable

##### Extension Cord data:

Length ----- 65 inches  
 No. of Conductors ----- 2

##### Connector Data:

One jack ----- JJ-026  
 One plug ----- PJ-055B  
 Jack and plug ----- Waterproof sheath  
 Cable ----- Tinsel insulated class SP of MIL-C-3849

#### TECHNICAL DESCRIPTION:

##### INPUT

Quantity of Earphones ----- 2  
 Nominal Impedance ----- 600 ohms (series)  
 Frequency Range ----- 300 to 4,000 Hz

#### ADDITIONAL TECHNICAL DATA:

##### Environmental Limitations:

Impact ----- Headset withstands 12 drops from 10 feet to concrete floor  
 Temperature Range ----- -67° F to +149° F  
 (storage)

#### REFERENCE DATA and LITERATURE

MSS 5965-1  
 Headset MIL-H-3679  
 Earphone MIL-E-17884  
 NAVY Drawing, RE51D123, Rev B  
 Plug PJ-054B, MIL-P-642  
 Extension Cord, MIL-C-3849  
 Extension Cord Jack, MIL-J-641  
 Extension Cord Plug, MIL-P-642

MANUFACTURER CODE	PART NUMBER
78711	20013
82872	---
81812	---

MIL-HDBK-173A/TM 11-487M  
 11 September 1973  
 11 September 1973

ITEM NAME: HEADSET  
 (Cont) NOMENCLATURE: NT-49985A  
 FEDERAL STOCK NO: 5965-280-3629



#### FUNCTIONAL DESCRIPTION:

This headset contains two magnetic earphone receivers mounted on a fixed, double band, metal headband. The headset has a relatively flat response and is suitable for general purpose voice communications. It is also used with Sonic Equipment SPEC-6C (Surface Special Radar).

#### CONSISTS OF:

2	Earphone Receivers	Type Number 49016
1	Headband	
1	Cord	Type Number 49101

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Earphone)

Depth	0.750 inch (19.05 mm)
Diameter	1.750 inches (44.45 mm)

Cord Data:

Length	5 feet (1524.00 mm)
Quantity of Conductors	2
Connector Designation	PJ-055B
Jacket Material	Rubber

#### ADDITIONAL PHYSICAL DATA:

Headband Data:	MANUFACTURER CODE
Material	Metal
Padding	Leather
Type	Double Band, Fixed

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: NT-49985A (Cont)

FEDERAL STOCK NO: 5965-280-3629

---

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphone - - - - - 2  
Nominal Impedance - - - - - 600 ohms (series connected)  
Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Pressure Cycling - - - - - 0 to 50,000 feet

---

REFERENCE DATA and LITERATURE

MIL-STD-242

MSS 5965-1

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization Studies and Surveys of Headsets and Headset-Microphones

MANUFACTURER CODE	PART NUMBER
80064	NT-49985A

MIL-HDBK-173A/TM 11-487M

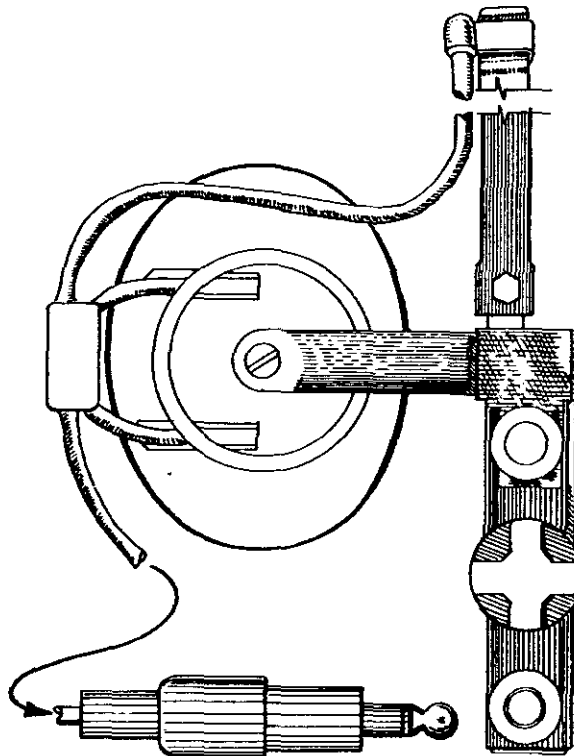
MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL P-104J535-1

FEDERAL STOCK NO: 5965-253-1302

**FUNCTIONAL DESCRIPTION:**

*This electrical headset contains two magnetic type earphone receivers suspended from an adjustable, single band, steel headband. The unit is primarily intended for use with Mine Detector DT-44/PRS-3.*

**CONSISTS OF:**

2	Earphone Receivers	SCL-1249
1	Headband	
1	Clothing Clip	
1	Cord Assembly	
1	Plug	PJ-054B

**RELATIONSHIP TO SIMILAR EQUIPMENT:**

This item is the same as the H-62/U Headset - Microphone, but it is without the microphone.

MT8A-11 MT\AETI-XRCH-JIM  
 MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

TERBAGH ITEM NAME

1-283L901-P-1A10CMMOC ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL P-104J535-1 (Cont)

8988-283-1302

FEDERAL STOCK NO: 5965-253-1302

# PHYSICAL DESCRIPTION:

## Dimensions: (Earphone)

Depth - .50 inch (12.70 mm)  
 Diameter - 3 inches vertical (76.20 mm)  
 2.50 inches horizontal (63.50 mm)

## Cord Data:

Length - 5 feet (1524.00 mm)  
 No. of Conductors - 2  
 No. of Connectors - 2  
 Connector Designation - Solder Lug  
 Jacket Material - Rubber

# ADDITIONAL PHYSICAL DATA:

## Headband Data:

Material - Steel  
 Padding - Plastic  
 Type - Single

# TECHNICAL DESCRIPTION: (HEADSET)

## INPUT

Quantity of Earphones - 2  
 Nominal Impedance - 600 ohms  
 Frequency range - Not rated

# ADDITIONAL TECHNICAL DATA:

## Environmental Limitations:

Pressure Cycling - 0 to 50,000 feet

This headset is designed for use with a telephone receiver. It is not intended for use with a telephone transmitter. The unit is primarily intended for use with a telephone receiver. It is not intended for use with a telephone transmitter.

# REFERENCE DATA and LITERATURE

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization Studies and Surveys of Headsets and Headset - Microphones. MSS 5965-1

NO INFORMATION TO SIMILAR EQUIPMENT

This unit is the same as the P-104J535-1 Headset - Microphone, but it is without the microphone.

MANUFACTURER CODE	PART NUMBER
24446	P-104J535-1

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL 159

FEDERAL STOCK NO: 5965-284-8925

No illustration available

# FUNCTIONAL DESCRIPTION:

This electrical headset contains two magnetic type earphone receivers mounted on an adjustable, double band, steel headband. The headset is suitable for heavy duty radio service where a peaked response at 1,000 cycles per second is required.

## CONSISTS OF:

- 2 Earphone Receivers, Trimm Inc. Part Number 160-4
- 1 Headband

## RELATIONSHIP TO SIMILAR EQUIPMENT:

## PHYSICAL DESCRIPTION:

### Dimensions (Earphone):

Depth - .750 inch (19.05 mm)  
Diameter - 2.125 inches (53.98 mm)

### Cord Data:

Length - 5 feet (1524.00 mm)  
Number of Conductors - 2  
Number of Connectors - 1  
Connector Designation - Trimm Inc. Part Number 0870  
Jacket Material - Cotton Braid

## ADDITIONAL PHYSICAL DATA:

### Headband Data:

Material - Steel  
Padding - Cloth  
Type - Double Band, Adjustable

## TECHNICAL DESCRIPTION:

### INPUT

Quantity of Earphones - 2  
Nominal Impedance - 600 ohms (series connected)  
Frequency Range - Peaked at 1,000 Hz

## ADDITIONAL TECHNICAL DATA:

PART NUMBER	MANUFACTURER CODE
160	1618

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL 159 (Cont)

FEDERAL STOCK NO: 5965-284-8925

---

ENVIRONMENTAL LIMITATIONS:

Pressure Cycling - - - - - 0 to 50,000 feet  
Moisture and Fungus - - - - - Moisture Resistant and Fungus Proof

---

REFERENCE DATA and LITERATURE

MSS 5965-1

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization  
Studies and Surveys of Headsets and Headset-Microphones.

MANUFACTURER CODE	PART NUMBER
81812	159

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL 716D

FEDERAL STOCK NO: 5965-160-2451

FUNCTIONAL DESCRIPTION:

This headset consists of a single magnetic type earphone receiver mounted on a single steel headband. The headset has a relatively flat response and is suitable for general purpose voice applications.

CONSISTS OF:

- 1 Earphone Receiver Western Electric Type Number 716A
- 1 Headband

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions: (Earphone)

Depth . . . . . 1.188 inches (30.16 mm)  
 Diameter . . . . . 2.422 inches (61.52 mm)

Cord Data:

Length . . . . . 6 feet (1828.80 mm)  
 No. of Conductors . . . . . 2  
 No. of Connectors . . . . . 1  
 Connector Designation . . . . . PJ-068  
 Jacket Material . . . . . Cotton Braid



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET  
NOMENCLATURE: COMMERCIAL 716D (Cont)

FEDERAL STOCK NO: 5965-160-2451

#### ADDITIONAL PHYSICAL DATA:

##### Headband Data:

Material - Steel  
Padding - Cardboard  
Type - Single Band Fixed

#### TECHNICAL DESCRIPTION: (HEADSET)

##### INPUT

Quantity of Earphones - 1  
Nominal Impedance - 130 ohms  $\pm$  15 percent  
Frequency Range - 100 to 2,900 Hz

#### ADDITIONAL TECHNICAL DATA:

##### Environmental Limitations:

Pressure Cycling (nonoperating) - 0 to 50,000 feet



This headset is a single magnetic type earphone receiver mounted on a single band. The band has a relatively flat response and is suitable for general use.

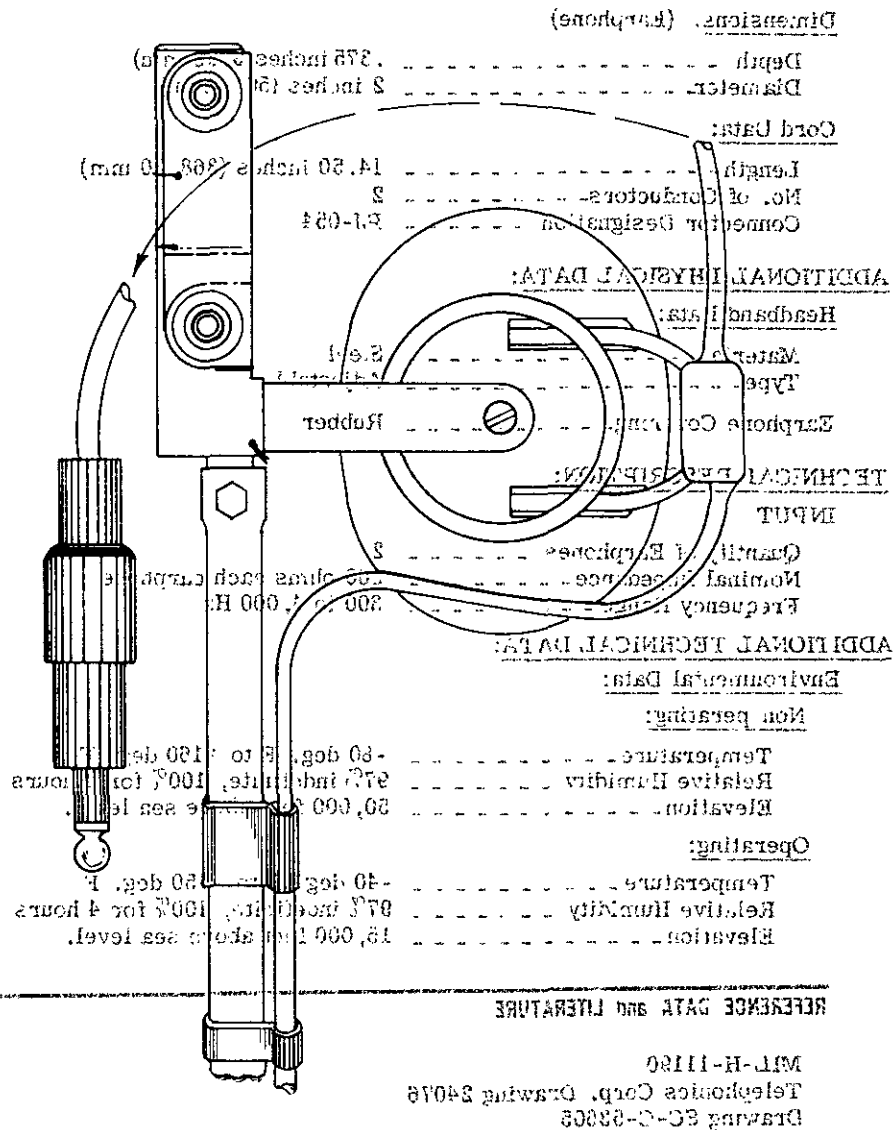
#### REFERENCE DATA and LITERATURE

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization Studies and Surveys of Headsets and Headset - Microphones  
MSS 5965-1

(mm)	(mm)	MANUFACTURER CODE	PART-NUMBER
		64959	716D

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET  
NOMENCLATURE: COMMERCIAL 24076  
FEDERAL STOCK NO: 5965-256-8887



#### FUNCTIONAL DESCRIPTION:

This unit contains two magnetic type earphone receivers mounted on an adjustable steel headband. This unit is used as a maintenance item for Headset-Microphone H-62/U.

CONSISTS OF:	PART NUMBER	MANUFACTURER CODE
1 Headset, Electrical	24076	11781

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

This is a maintenance item for H-62/U Headset-Microphone.

4.23.1

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET

NOMENCLATURE: COMMERCIAL 24076 (Cont)

FEDERAL STOCK NO: 5965-256-8687

PHYSICAL DESCRIPTION:

Dimensions: (Earphone)

Depth - - - - - .375 inches (9.53 mm)  
 Diameter - - - - - 2 inches (50.8 mm)

Cord Data:

Length - - - - - 14.50 inches (368.30 mm)  
 No. of Conductors - - - - - 2  
 Connector Designation - - - - - PJ-054

ADDITIONAL PHYSICAL DATA:

Headband Data:

Material - - - - - Steel  
 Type - - - - - Adjustable  
 Earphone Covering - - - - - Rubber

TECHNICAL DESCRIPTION:

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 300 ohms each earphone  
 Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Nonoperating:

Temperature - - - - - -80 deg. F to +160 deg. F  
 Relative Humidity - - - - - 97% indefinite, 100% for 4 hours  
 Elevation - - - - - 50,000 feet above sea level.

Operating:

Temperature - - - - - -40 deg. F to +150 deg. F  
 Relative Humidity - - - - - 97% indefinite, 100% for 4 hours  
 Elevation - - - - - 15,000 feet above sea level.

REFERENCE DATA and LITERATURE

MIL-H-11190  
 Telephonics Corp. Drawing 24076  
 Drawing SC-C-53605

MANUFACTURER CODE	PART NUMBER
78711	24076

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

## SECTION 5

### HEADSET - MICROPHONES

<u>Nomenclature, model or part number</u>	<u>Page</u>
H-62/U - - - - -	5.2.1
H-63/U - - - - -	5.3.1
H-66/U - - - - -	5.4.1
H-91A/U - - - - -	5.5.1
H-101A/U - - - - -	5.6.1
H-108B/U - - - - -	5.7.1
H-144C/U - - - - -	5.8.1
H-157/AIC - - - - -	5.9.1
H-161C/GR - - - - -	5.10.1
H-163/U - - - - -	5.11.1
H-172/U - - - - -	5.12.1
H-182( )/PT- - - - -	5.13.1
H-210/G - - - - -	5.14.1

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11-September-1973

ITEM NAME: HEADSET MICROPHONE

NOMENCLATURE: H-62/U

FEDERAL STOCK NO: 5965-237-8048

# FUNCTIONAL DESCRIPTION:

Headset-Microphone H-62/U is a combination headset and microphone assembly which contains two magnetic earphone receivers suspended from an adjustable steel headband and a carbon type boom microphone mounted on the right side of the headband. The headset is suitable for most general purpose headset microphone applications relating to land communications equipment.

## CONSISTS OF:

2	Earphone Receivers WT-40303
1	Carbon Microphone M-21/UR
1	Plug P-9-034
1	Plug P-1-202

## RELATIONSHIP TO SIMILAR EQUIPMENT:

## PHYSICAL DESCRIPTION:

Microphone Cord Data:

Length -  
 Quantity of Connectors  
 Quantity of Connectors  
 Connector Identification

Headset Cord Data:

Length  
 Quantity of Connectors  
 Quantity of Connectors  
 Connector Identification

## ADDITIONAL PHYSICAL DATA:

Headset Data:

Material  
 Plating  
 Type

Mounting and Spacing Data:

Cartridge  
 Mounted on adapter fastened to right side of  
 Headset

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-62/U (Cont)

FEDERAL STOCK NO: 5965-237-8048

#### FUNCTIONAL DESCRIPTION:

Headset-Microphone H-62/U is a combination headset and microphone assembly which contains two magnetic earphone receivers suspended from an adjustable steel headband and a carbon type boom microphone mounted on the right side of the headband. The headset is suitable for most general purpose headset-microphone applications relating to ground communications equipment.

#### CONSISTS OF:

2	Earphone Receivers	NT-49505
1	Carbon Microphone	M-51/UR
1	Plug	PJ-054
1	Plug	PJ-292

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Microphone Cord Data:

Length - - - - -	14 inches (355.60 mm)
Quantity of Conductors - - - - -	2
Quantity of Connectors - - - - -	1
Connector Designation - - - - -	PJ-292

##### Headset Cord Data:

Length - - - - -	16 inches (406.40 mm)
Quantity of Conductors - - - - -	2
Quantity of Connectors - - - - -	1
Connector Designation - - - - -	PJ-054

#### ADDITIONAL PHYSICAL DATA:

##### Headset Data:

Material - - - - -	Steel
Padding - - - - -	Synthetic rubber
Type - - - - -	Single, adjustable

##### Mounting and Suspension Data:

Earphones - - - - -	Suspended on headband
Microphone - - - - -	Mounted on adapter fastened to right side of headband

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-62/U (Cont)

FEDERAL STOCK NO: 5965-237-8048

TECHNICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 600 ohms  
Frequency Range - - - - - 300 to 4,000 Hz

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 50 milliamperes

OUTPUT

Nominal Impedance - - - - - 100 ohms  
Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Headset-Microphone Environmental Limitations:

Equipment Nonoperating:

Temperature Range - - - - - -80° F to +160° F (High temperature extreme not more than 4 hours, and low temperature extreme not more than 24 hours at any one time.)  
Relative Humidity - - - - - Up to 97 percent for indefinite period  
Exposure at 100 percent with condensation for four hours  
Elevation - - - - - Up to 50,000 feet above sea level  
Orientation - - - - - Indefinite storage in any orientation  
Salt spray - - - - - Withstands 20 percent salt spray test, method 101, condition A, MIL-STD-202  
Vibration - - - - - Withstands vibration test of MIL-H-11190  
Bounce - - - - - Withstands bounce test of MIL-H-11190  
Shock - - - - - Withstands 3-foot drops on each corner edge and face onto a 2 inch fir floor backed by concrete or rigid steel frame  
Blast - - - - - Withstands gunblast test of MIL-STD-108 (degree 2)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-62/U (Cont)

FEDERAL STOCK NO: 5965-237-8048

Equipment Operating:

Temperature Range - - - - - -40° F to +150° F (High temperature extreme not  
 more than 4 hours and low temperature extreme  
 not more than 72 hours.)  
 Relative Humidity - - - - - Up to 97 percent indefinitely; 100 percent with  
 condensation 4 hours  
 Elevation- - - - - Up to 15,000 feet above sea level

REFERENCE DATA and LITERATURE

MIL-E-17884 - Earphone  
 MIL-H-11190 - Headset  
 MIL-M-5794 - Microphone  
 Telephones Corporation Drawing Number 20016  
 MSS 5965-1  
 Pricing Guide for Signal Corps Equipment SIG5-5

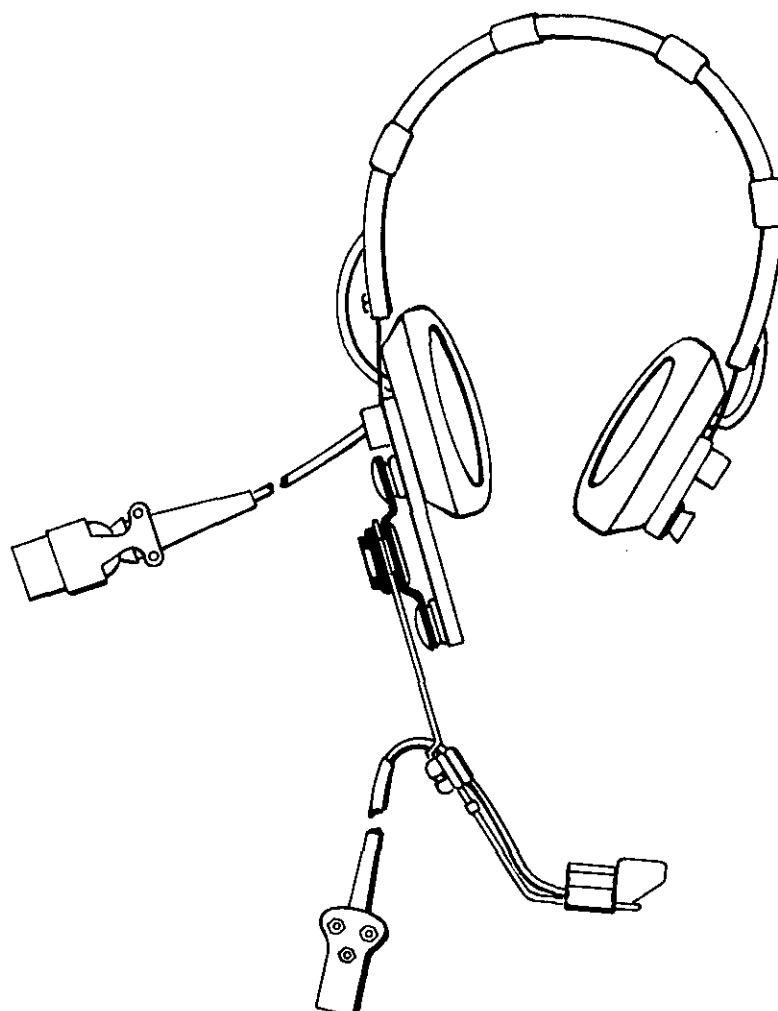
MANUFACTURER CODE	PART NUMBER
80058	H-62/U
78711	TC-209



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE  
NOMENCLATURE: H-63/U  
FEDERAL STOCK NO: 5965-237-8049

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-63/U (Cont)

FEDERAL STOCK NO: 5965-237-8049

#### FUNCTIONAL DESCRIPTION:

Headset-Microphone H-63/U is a combination headset and microphone assembly which contains two magnetic earphone receivers suspended on a fixed steel headband, and a carbon type boom microphone mounted on the right side of the headband. The headset is intended primarily for use with Ground Radio Communications Equipment AN/MRG-20 and as a receiver for other radio and wire equipment.

#### CONSISTS OF:

2	Earphone Receivers	Roanwell Part Number 9869
1	Microphone Unit	M-51/UR
1	Headband	
1	Cord Assembly	

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Microphone Cord Data:

Length - - - - -	14 inches (355.60 mm)
No. of Conductors - - - - -	2
No. of Connectors - - - - -	1
Connector Designation - - - - -	JJ-055

##### Headset Cord Data:

Length - - - - -	16 inches (406.40 mm)
No. of Conductors - - - - -	2
No. of Connectors - - - - -	1
Connector Designation - - - - -	Lionel Corporation part number 7511-18

#### ADDITIONAL PHYSICAL DATA:

##### Headband Data:

Material - - - - -	Steel
Padding - - - - -	Rubber
Type - - - - -	Single band, fixed

##### Mounting and Suspension Data:

Earphones - - - - -	Suspended on headband
Microphone - - - - -	Mounted on adapter fastened to right side of headband

#### TECHNICAL DESCRIPTION: (HEADSET)

##### INPUT

Quantity of Earphones - - - - -	2
Nominal Impedance - - - - -	600 ohms
Frequency Range - - - - -	300 to 4,000 Hz

#### TECHNICAL DESCRIPTION: (MICROPHONE)

##### INPUT

Operating Current - - - - -	50 milliamperes
-----------------------------	-----------------

##### OUTPUT

Nominal Impedance - - - - -	100 ohms
Frequency Range - - - - -	300 to 4,000 Hz

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-63/U (Cont)

FEDERAL STOCK NO: 5965-237-8049

ADDITIONAL TECHNICAL DATA:Headset-Microphone Environmental Limitations:Equipment Nonoperating

Temperature Range - - - - - -80° F to +160° F (High temperature extreme not more than 4 hours, and low temperature extreme not more than 24 hours at any one time.)

Relative Humidity - - - - - Up to 97 percent for indefinite period. Exposure at 100 percent with condensation for 4 hours.

Elevation - - - - - Up to 50,000 feet above sea level

Orientation - - - - - Indefinite storage in any orientation

Salt Spray - - - - - Withstands 20 percent salt spray test, method 101, condition A, MIL-STD-202

Vibration - - - - - Withstands vibration test of MIL-H-11190

Bounce - - - - - Withstands bounce test of MIL-H-11190

Shock - - - - - Withstands 3 foot drops on each corner edge and face onto a 2-inch fir floor backed by concrete or rigid steel frame

Blast - - - - - Withstands gunblast test of standard MIL-STD-108 degree 2

Equipment Operating:

Temperature Range - - - - - -40° F to +150° F (High temperature extreme not more than 4 hours and low extreme not more than 72 hours)

Relative Humidity - - - - - Up to 97 percent indefinitely; 100 percent with condensation for 4 hours

Elevation - - - - - Up to 15,000 feet above sea level

REFERENCE DATA and LITERATURE

MIL-H-11190 for Headset

MIL-M-5794 for Microphone

MSS 5965-1

Telephonics Corporation Final Report of Technical Analysis Phase of Standardization Studies and Surveys of Headsets and Headset-Microphones Pricing Guide for Signal Corps Equipment Sig 5-5

MANUFACTURER CODE	PART NUMBER
80058	H-63/U

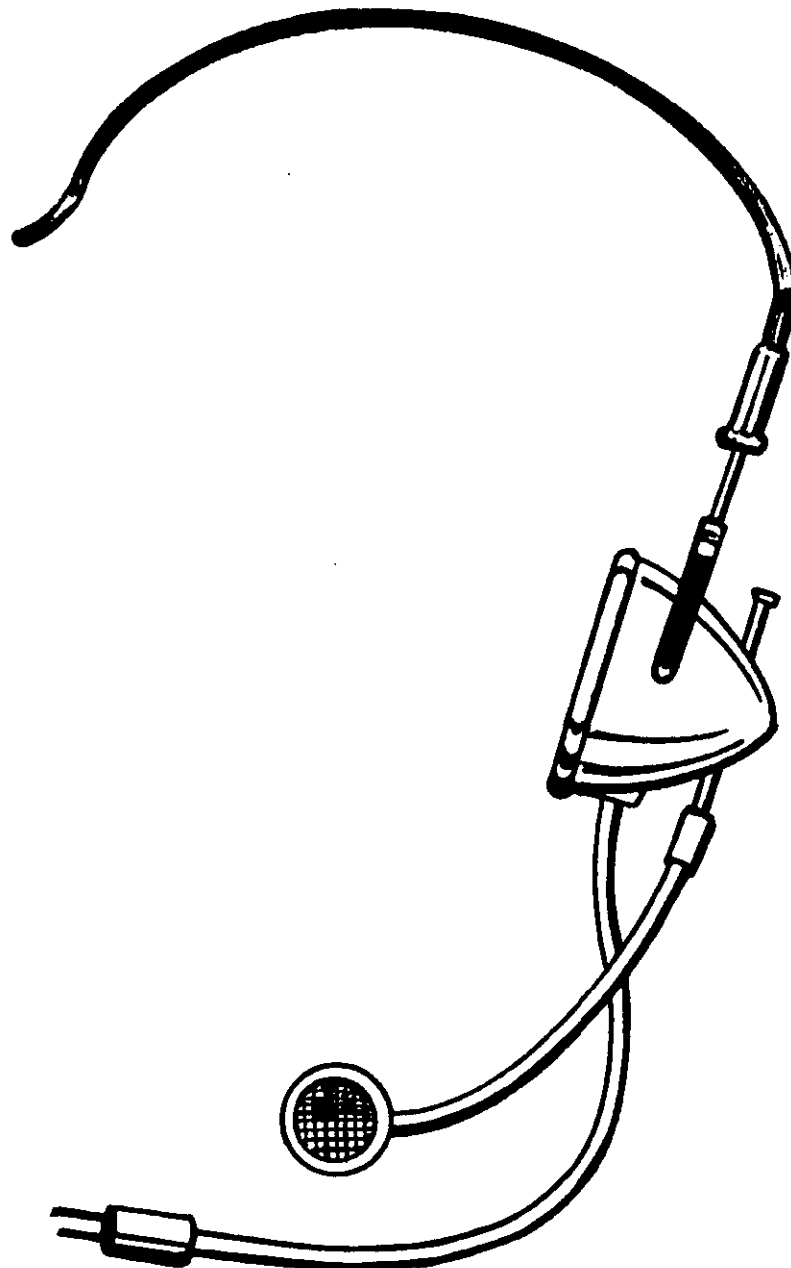
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-66/U

FEDERAL STOCK NO: 5965-221-0999

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11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-66/U (Cont)

FEDERAL STOCK NO: 5965-221-0999

**FUNCTIONAL DESCRIPTION:**

Headset-Microphone H-66/U is a combination headset and carbon type microphone assembly which contains one magnetic earphone receiver suspended on a steel headband, and a carbon type boom microphone mounted on the right side of the headband. The headset is a telephone operator's headset.

**CONSISTS OF:**

1 Earphone Receiver (including cushion)  
1 Microphone Unit  
1 Headband  
1 Switch  
1 Cord Assembly

**RELATIONSHIP TO SIMILAR EQUIPMENT:**

**PHYSICAL DESCRIPTION:**

Headset Cord Data:

Length	60 inches (1524 mm)
No. of Conductors	2
No. of Connectors	None
Plug-	W. E. Co. type No. 289B cotton braid-water repellent type.

ADDITIONAL PHYSICAL DATA:

**Headband Data:**

Material - - - - - Steel

### Mounting and Suspension Data:

Earphones - - - - - Suspended on headband

Microphone- - - - - Mounted on adapter fastened to right side of headband

**TECHNICAL DESCRIPTION: (HEADSET)**

## INPUT

Quantity of Earphone-	1
Nominal Impedance	300 ohms
Frequency Range-	Not rated

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-66/U (Cont)

FEDERAL STOCK NO: 5965-221-0999

TECHNICAL DESCRIPTION: (MICROPHONE)OUTPUT

Nominal impedance - - - - - 40 ohms

Frequency range- - - - - 200 to 3,000 Hz

ADDITIONAL TECHNICAL DATA:REFERENCE DATA and LITERATURE

MSS 5965-1A

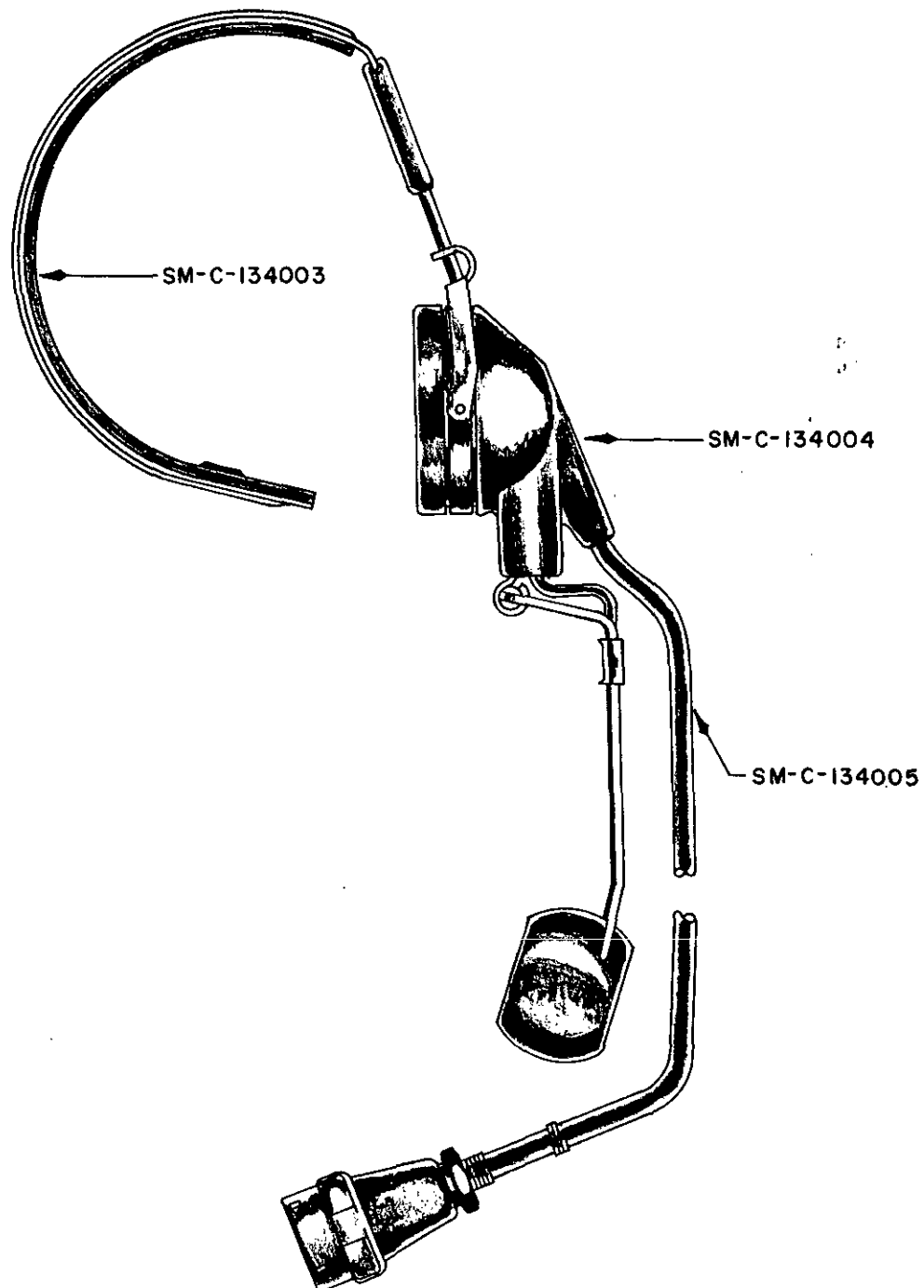
MANUFACTURER CODE	PART NUMBER
80058	H-66/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-91A/U

FEDERAL STOCK NO: 5965-669-6871



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-91A/U (Cont)

FEDERAL STOCK NO: 5965-669-6871

**FUNCTIONAL DESCRIPTION:**

The Headset-Microphone is a battery powered magnetic type and is suitable for field or tactical use. The item may be used as a handset when the headband is removed. The H-91A/U is the same as the H-144C/U, except the H-91A/U does not have a switch.

**CONSISTS OF:**

1	Earphones, Magnetic
1	Earphone Shell, Hard Surface
1	Headband, Single
1	Cord
1	Microphone Bracket
1	Microphone, Carbon Type
1	Cord Assembly
1	Connector

**RELATIONSHIP TO SIMILAR EQUIPMENT:**

Similar to H-92( )/U and H-144( )/U. The H-91A/U replaces H-91/U (plain model). The H-91A/U is P/O SB-86( )/U, AN/TIC-7( ), and AN/MTC-3( ).

**PHYSICAL DESCRIPTION:**

Earphone Dimensions - - - - - Not available

Microphone Dimensions - - - - - Not available

**CORD DATA:**

Length - - - - - 5 feet (1,524 mm)

**ADDITIONAL PHYSICAL DATA:**

**Connector Data:**

Connector Type - - - - - Telephone plug  
 Connector Designation - - - - - U-161/U

**Headband Data:**

Type - - - - - Single band  
 Construction - - - - - Extruded plastic web between two headband wires

**Mounting and Suspension Data:**

Microphone - - - - - Mounted on bracket which fits either earcup and  
 locks when bracket thumbscrew is tightened.



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-91A/U (Cont)

FEDERAL STOCK NO: 5965-669-6871

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 85 mA

OUTPUT

Nominal Impedance - - - - - 25 ohms

Frequency Range - - - - - 300 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1

Nominal Impedance - - - - - 275 ohms

Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Relative Humidity - - - - - 100 percent

Temperature, Nonoperating - - - - - -80° to +160° F

Temperature, Operating - - - - - -40° to +131° F

Altitude, Nonoperating - - - - - 50,000 feet

Altitude, Operating - - - - - Up to 10,000 feet

REFERENCE DATA and LITERATURE

MIL-H-12576

SC-DL-134001-J

MANUFACTURER CODE	PART NUMBER
80058	H-91A/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-101A/U

FEDERAL STOCK NO: 5965-627-8382

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(NOT RECOMMENDED FOR NEW EQUIPMENT)

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5.6.1

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-101A/U

FEDERAL STOCK NO: 5965-627-8382

#### FUNCTIONAL DESCRIPTION:

This unit has two dynamic earphones and a dynamic noise canceling microphone. The Headset-Microphone is used in aircraft communication below 14,000 feet.

#### CONSISTS OF:

2	Earphones - H-143/AIC (MIL-E-25670)
2	Earphone Cushions - MX2088/U
1	Headband
2	Cord Assemblies - CX-2555/U
1	Microphone Bracket - M-33A/AIC
1	Microphone - M-33A/AIC
1	Cord Assembly - CX-2556/U
4	Connectors - U93A/U, JJ-055, U-173/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Headset-Microphone is used with AN/ARC 131. H-157/U is the preferred item by the Air Force.

#### PHYSICAL DESCRIPTION:

##### Earphone Dimensions:

Nominal Diameter of Element - - - - -	1 inch (25.4 mm)
Depth of Element - - - - -	0.45 inch (11.43 mm)

Microphone Dimensions - - - - -	Not available
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#### CORD DATA, HEADSET:

Lengths- - - - -	24 inches long cord from U-93A/U to junction. 1 inch long cord from JJ-055 to junction.
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#### CORD DATA, MICROPHONE:

Length - - - - -	12 inches long from first U-173/U to second U-173/U.
------------------	--

#### ADDITIONAL PHYSICAL DATA:

##### Connector Data:

Connector Types - - - - -	Telephone plugs and jack
Connector Designations - - - - -	U-93A/U, JJ-055 modified, and U-173/U.

##### Headband Data:

Type- - - - -	Double band
Construction - - - - -	Covered mesh cloth

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-101A/U (Cont)

FEDERAL STOCK NO: 5965-627-8382

ADDITIONAL PHYSICAL DATA: (Cont)

Mounting and Suspension Data:

Microphone - - - - - Suspended on adjustable wire loop which mounts to  
 swivel bracket of headset.  
 Earphones - - - - - Suspended on adjustable headband.

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 2 ohms  
 Frequency Range - - - - - 100 to 5,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 9.5 ohms (in parallel)  
 Frequency Range - - - - - 200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Altitude- - - - - Up to 14,000 feet

REFERENCE DATA and LITERATURE

SC-DL-176556      MIL-T-9177  
 SM-C-19365      MIL-J-641  
 SM-D-176673      MIL-H-9234

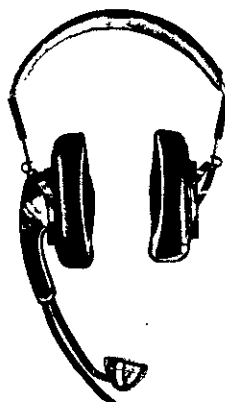
MANUFACTURER CODE	PART NUMBER
80063	H-101A/U
82872	10207

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-108B/U

FEDERAL STOCK NO: 5965-583-4865



#### FUNCTIONAL DESCRIPTION:

Headset-Microphone H-108B/U provides communication and monitoring facilities for an operator's use at switchboards, desks, and PBX (Private Branch Exchange) positions. It is a part of Telephone Central Officer Group, Manual AN/GTA-6( ) and various other telephone equipments. Cord CX-1245( )/U or Cord CX-4396( )/U is required for use with Headset-Microphone H-108B/U but is not supplied as part of the equipment.

#### CONSISTS OF:

- 1 Headset-Microphone H-108B/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Receiver Element)

Diameter- - - - - 1.64 inches (41.66 mm)  
 Thickness - - - - - 0.72 inch (18.29 mm)

##### Dimensions: (Microphone Element)

Diameter- - - - - 1.28 inches (35.51 mm)  
 Thickness - - - - - 0.41 inch (10.41 mm)

##### Headband Data:

Type - - - - - Single band, adjustable  
 Material - - - - - Stainless steel  
 Padding - - - - - Vinylite

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-108B/U (Cont)

FEDERAL STOCK NO: 5965-583-4865

MOUNTING AND SUSPENSION DATA:

Earphone - - - - - Mounted on bracket attached to headband.  
 Microphone - - - - - Mounted in a plastic case at one end of a square  
 aluminum boom which is attached at the other end  
 to the earphone housing.

CORD DATA:

Length - - - - - 32-1/2 inches (81.28 mm)  
 Type - - - - - Tinsel  
 Jacket Material - - - - - Rubber  
 Number of Conductors - - - - - 3  
 Connector Type - - - - - Polarized plug

MECHANICAL DESCRIPTION: (HEADSET)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 300 ohms at 1,000 cycles  
 Frequency Range - - - - - 300 to 3,000 Hz

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 60 milliamperes

OUTPUT

Nominal Impedance - - - - - 25 ohms  
 Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Resistance Properties: The H-108B/U resists the effects of sand and dust, fungus, and salt spray.

Temperature:

Operating - - - - - -54°C to +52°C  
 Nonoperating - - - - - -62°C to +71°C

Power Supply: The equipment is designed to be operated from a 24 ± 4 volt dc power source.

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-108B/U

FEDERAL STOCK NO: 5965-583-4865

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REFERENCE DATA and LITERATURE

MIL-H-26827

MIL-E-5272

MANUFACTURER CODE	PART NUMBER
80058	H-108B/U
82872	10336

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-144C/U

FEDERAL STOCK NO: 5965-682-2769

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NO ILLUSTRATION AVAILABLE  
 NOT RECOMMENDED FOR NEW EQUIPMENT

FUNCTIONAL DESCRIPTION:

The headset-Microphone is battery powered. It may be used as a handset when the headband is removed. The earphone is suspended on the headband. The microphone is mounted to end of folding boom attached to receiver housing.

CONSISTS OF:

1	Earphones
1	Earphone Shell
1	Headband
1	Cord, Headset to Switch
1	Microphone Bracket
1	Microphone, Carbon Type
1	Cord, Switch to Plug
1	Connector, U-161/U
1	Switch, Push to Talk or Lock to Talk

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to headset H-91( )/U and H-92( )/U. Used with telephone set TA-312/PT. This is being replaced by the H-182( )/PT.

PHYSICAL DESCRIPTION:

Earphone Dimensions-	- - - - -	Not available
Microphone Dimensions	- - - - -	Not available

CORD DATA: (HEADSET TO SWITCH)

Length-	- - - - -	35 inches (approx) (889 mm)
Jacket Material-	- - - - -	Rubber
No. of Conductors	- - - - -	4

CORD DATA:

Length-	- - - - -	36 inches (914.4 mm) approx.
Jacket Material-	- - - - -	Rubber
No. of Conductors	- - - - -	7



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-144C/U (Cont)

FEDERAL STOCK NO: 5965-682-2769

ADDITIONAL PHYSICAL DATA:

Connector Data:

Connector Type - - - - - Telephone plug  
 Connector Designation - - - - - U-161/U

Headband Data:

Type - - - - - Adjustable and detachable. Folds for storage.

Mounting and Suspension Data:

Microphone - - - - - Mounted to end of folding boom attached to receiver housing

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 60 to 85 mA

OUTPUT

Nominal Impedance - - - - - 25 ohms  
 Frequency Range - - - - - 300 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 275 ohms  
 Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA: May be used as a handset with headband removed.

ENVIRONMENTAL LIMITATIONS:

REFERENCE DATA and LITERATURE

MIL-H-12576  
 SC-DL-95540

MANUFACTURER CODE	PART NUMBER
80058	H-144C/U
05062	1308

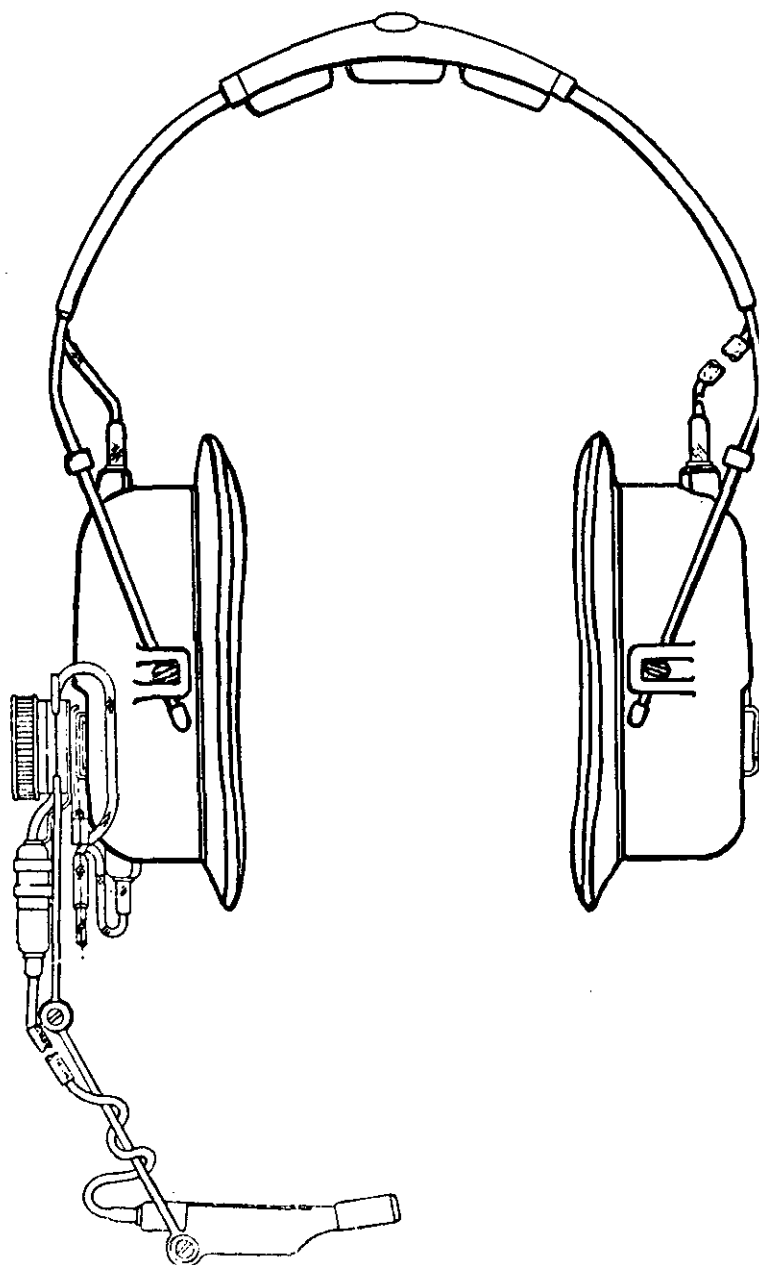
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-157/AIC

FEDERAL STOCK NO: 5965-755-4656

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-157/AIC (Cont)

FEDERAL STOCK NO: 5965-755-4656

#### FUNCTIONAL DESCRIPTION:

The H-157/AIC headset-microphone is used as part of Intercommunications Set AN/AIC-10( ) at low altitudes to provide high-intelligibility communication under the extreme noise conditions encountered in military aircraft and to provide maximum comfort and minimum fatigue compatible with optimum intelligibility.

#### CONSISTS OF:

2	Earphones	H-143/AIC
2	Earphone Shells	MX-2508/AIC and MX-3473/AIC
1	Headband	MX-2506/AIC
2	Cord Assemblies	CX-4434/U and CX-4435/U
1	Microphone Bracket	MT-2007/AIC
1	Microphone	M-87/AIC
1	Cord Assembly	CX-4434/U
1	Connector	U-174/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to headset H-158/AIC except for the microphone.

#### PHYSICAL DESCRIPTION:

##### Earphone Dimensions:

Nominal diameter- - - - - 2 inches (50.8 mm)  
 Depth - - - - - 0.45 inches (11.43 mm)

Microphone Dimensions- - - - - Not available

#### CORD DATA: (CX-4434/AIC)

Length- - - - - 1 foot 4 inches (406.4 mm)  
 -- Jacket Material - - - - - Nylon braid

#### CORD DATA: (CX-4435/AIC)

Length- - - - - 2 feet 4-1/2 inches (723.9 mm)  
 Jacket Material - - - - - Nylon braid

#### ADDITIONAL PHYSICAL DATA:

##### Connector Data:

Connector Type- - - - - Telephone plug  
 Connector Designation - - - - - U-174/U

##### Headband Data:

Type- - - - - Single band  
 Construction - - - - - Extruded plastic web between two headband wires

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-157/AIC (Cont)

FEDERAL STOCK NO: 5965-755-4656

ADDITIONAL PHYSICAL DATA: (Cont)

Mounting and Suspension Data:

Microphone - - - - - Mounted on bracket which fits either earcup and  
locks when bracket thumbscrew is tightened.

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 3.5 ohms  
Frequency Range - - - - - 200 to 5,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 10 ohms (in parallel)  
Frequency Range - - - - - 100 to 5,500 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Temperature - - - - - -55° C to +85° C  
Altitude - - - - - Up to 35,000 feet

REFERENCE DATA and LITERATURE

MIL-H-26312  
MIL-H-26541  
MIL-M-26542

MANUFACTURER CODE	PART NUMBER
80058 82872	H-157/AIC 10057

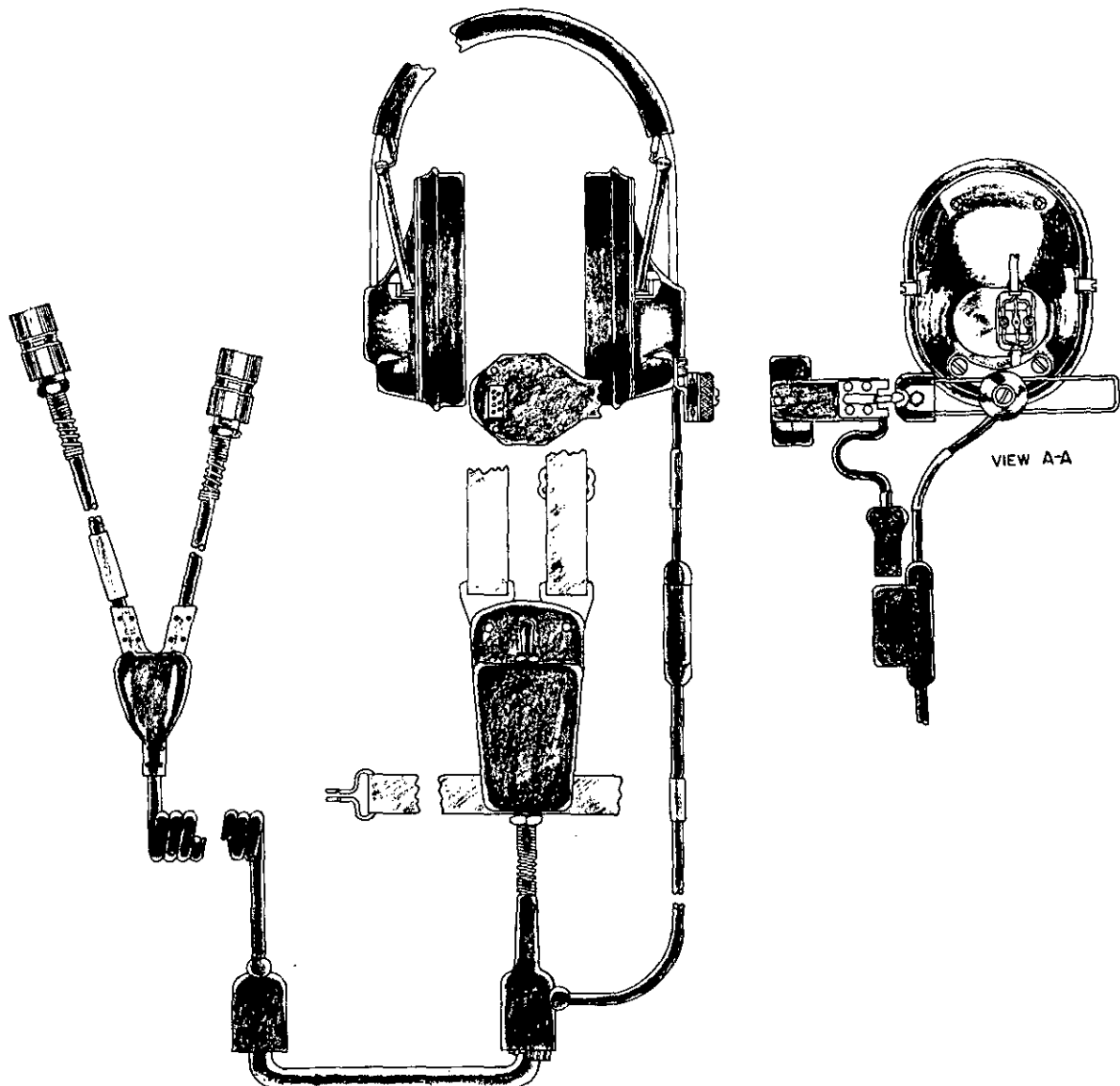
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-161C/GR

FEDERAL STOCK NO: 5965-082-4037

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-161C/GR (Cont)

FEDERAL STOCK NO: 5965-082-4037

#### FUNCTIONAL DESCRIPTION:

The item is a headset-microphone with a switch chest-plate. It provides facilities for transmission and reception of voice-frequency speech signals. It can be used with portable and vehicular radio sets where background noise is medium to high. It can be worn under the M1 infantry helmet, and is used where free hand operation is required.

#### CONSISTS OF:

- 2 Earphones, Dynamic Type, H-269/G
- 2 Cords, Connector to Bailout
- 1 Microphone, Dynamic Type, M-138/U
- 1 Cord, Retractable
- 1 Connector, Bailout Plug
- 1 Switch, Push to Talk, Lock on for Interphone, and Hold Position for Radio Operation

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Handset H-138( )/GR  
 Headset, electrical H-139( )/GR  
 Headset, electrical H-140( )/GR  
 Headset-chestset, electrical H-141( )/GR  
 Headset-microphone H-161( )/GR  
 Handset H-207( )/VRC  
 Headset, electrical H-227( )/U  
 Microphone, dynamic M-80( )/GR  
 Microphone, dynamic M-81( )/GR  
 Modification kit, electronic equipment MK-567/G  
 Headset-microphone kit MK-525( )/G  
 Headset-microphone kit MK-526( )/G

This equipment is used as audio accessories for radio set AN/VRC-12.

#### PHYSICAL DESCRIPTION:

Earphone Dimensions- - - - - Not available  
 Microphone Dimensions - - - - - Not available

#### CORD DATA: (CONNECTOR TO BAILOUT)

Length- - - - - 18 inches (457.2 mm)

#### CORD DATA: (RETRACTILE, BAILOUT PLUG TO JUNCTION)

Length (Retracted) - - - - - 12 inches (304.8 mm)  
 Length (Extended)- - - - - 6.5 feet (1,981.2 mm)

#### ADDITIONAL PHYSICAL DATA:

##### Connector Data:

Connector Type- - - - - TBS

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-161/GR (Cont)

FEDERAL STOCK NO: 5965-082-4037

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ADDITIONAL PHYSICAL DATA: (Cont)

Mounting and Suspension Data:

Microphone - - - - - Mounted on adapter fastened to left side of headband  
Earphone - - - - - Suspended on headband

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 150 ohms (with transformer)  
Frequency Range - - - - - 300 to 3,500 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 2  
Nominal Impedance - - - - - 1,000 ohms  
Frequency Range - - - - - Not available

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

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REFERENCE DATA and LITERATURE

SC-DL-436100  
MIL-E-55119  
DL-640182  
DL-SM-B-317820

MANUFACTURER CODE	PART NUMBER
80058	H-161/GR

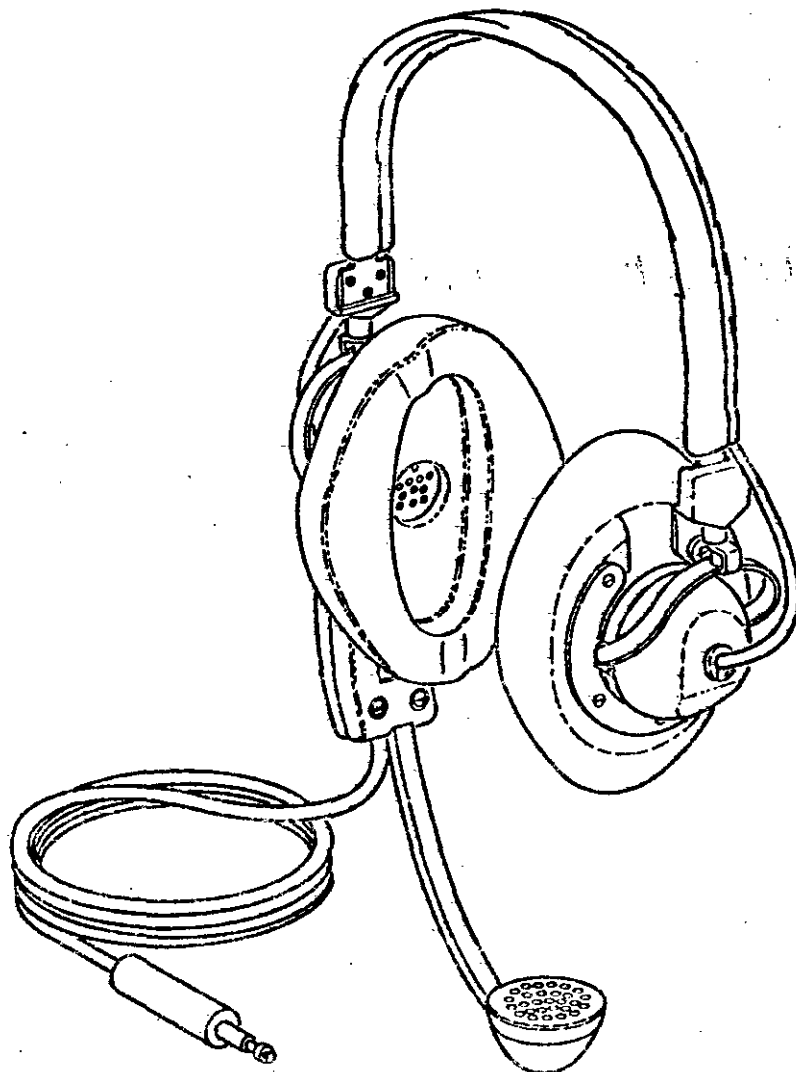
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-163/U

FEDERAL STOCK NO: 5965-670-2931

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-163/U

FEDERAL STOCK NO: 5965-670-2931

# FUNCTIONAL DESCRIPTION:

The H-163/U is a headset-microphone intended for use in good communications.

## CONSISTS OF:

2	Receiver Assemblies	FSN 5965-296-4044
1	Microphone Assembly	FSN 5965-296-9456
1	Headband Assembly	
1	Cord	
1	Connector	PJ-068

## PHYSICAL DESCRIPTION:

Earphone and Microphone Dimensions: Not available

### Connector Data:

Connector Type - - - - -	Telephone plug
Connector Designation - - - - -	PJ-068

### Cord Data:

Length - - - - -	5 feet (1,524.0 mm)
Number of Conductors - - - - -	3
Type - - - - -	Tinsel

## ADDITIONAL PHYSICAL DATA:

### Suspension Data:

Earphones mounted in housings suspended from headband.

Microphone mounted in housing on square boom anchored inside left earphone housing.

## HEADBAND TYPE:

Single band covered with a material providing a maximum degree of traction.

## TECHNICAL DESCRIPTION: (HEADSET)

### INPUT

Quantity of Earphones - - - - -	2
Nominal Impedance - - - - -	300 ohms
Frequency Range - - - - -	300 to 2,600 Hz

## TECHNICAL DESCRIPTION: (MICROPHONE)

### INPUT

Operating Current - - - - -	75 mA
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MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-163/U (Cont)

FEDERAL STOCK NO: 5965-670-2931

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TECHNICAL DESCRIPTION: (MICROPHONE) (Cont)

OUTPUT

Nominal Impedance - - - - - 20 ohms  
Frequency Range - - - - - 300 to 2,600 Hz

ADDITIONAL TECHNICAL DATA:

Earphone Type - - - - - Magnetic  
Microphone Type - - - - - Carbon  
Power Requirement - - - - - 24  $\pm$  4 volts, dc

ENVIRONMENTAL LIMITATIONS:

Temperature - - - - - Up to 70° C  
Altitude (Transportation) - - - - - Up to 40,000 feet

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REFERENCE DATA and LITERATURE

MIL-H-9697

MANUFACTURER CODE	PART NUMBER
82872	11046
88243	226
80058	H-163/U

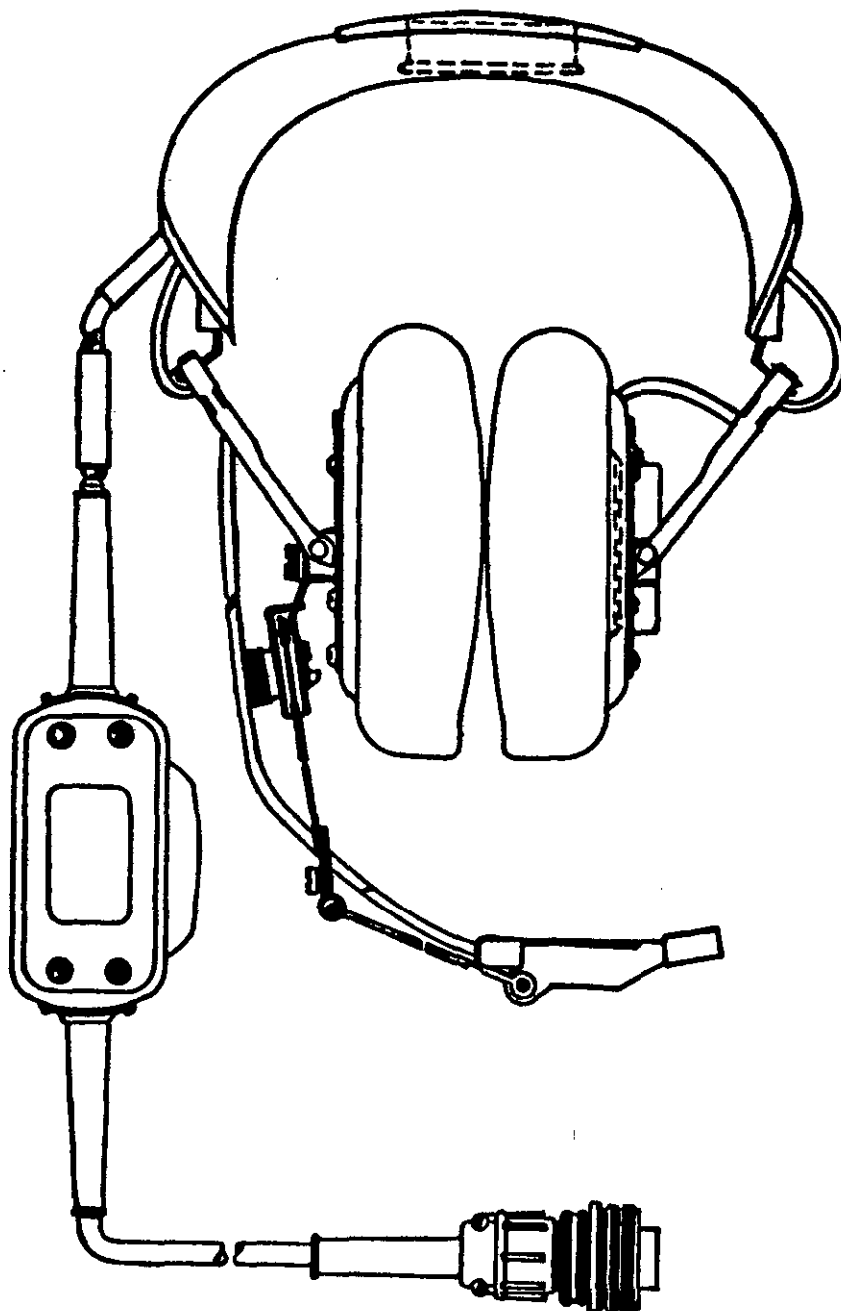
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-172/U

FEDERAL STOCK NO: 5965-715-4031

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-172/U (Cont)

FEDERAL STOCK NO: 5965-715-4031

#### FUNCTIONAL DESCRIPTION:

The H-172/U is an extremely low-distortion, dynamic, noise-canceling headset-microphone which contains a transistor preamplifier in the headband.

#### CONSISTS OF:

- 1 Dynamic receiver element
- 2 Earphone cushions
- 1 Headband assembly, PC-16
- 1 Microphone, M-87/AIC
- 1 Cord (Microphone), MMOP-5
- 1 Cord assembly
- 1 Cord and plug assembly, Plug U-173/U
- 1 Connector 10-109614S-5P
- 1 Transistor preamplifier
- 1 In-line switch, D. P. S. T.

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions:

Headband width (unextended) - - - - - 6-1/2 inches (165.1 mm)  
 Earphone face (with cushion) - - - - - 4-3/4 x 5-3/8 inches (120.65 mm x 136.53 mm) oval  
 Earphone depth (with cushion) - - - - - 2-1/4 inches (57.15 mm)

##### Cord Data:

Length (headband to switch) - - - - - 24 inches (609.6 mm)  
 Length (switch to connector) - - - - - 51 inches (1,295.4 mm)  
 Number of conductors - - - - - 5  
 Insulation - - - - - Synthetic rubber

#### TECHNICAL DESCRIPTION:

##### Earphone:

Impedance (at 1,000 Hz) - - - - - 600 ohms  
 Frequency range - - - - - 100 to 4,500 Hz

##### Microphone:

Impedance - - - - - 3 ohms  
 Frequency range - - - - - 300 to 4,500 Hz

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-172/U (Cont)

FEDERAL STOCK NO: 5965-715-4031

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ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Temperature (nonoperating) - - - - -60° C to +75° C  
Temperature (operating)- - - - -0° C to +50° C  
Resistance to salt spray and humidity.

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REFERENCE DATA and LITERATURE

MIL-M-26542  
BuShips Drawing RE51 127E

MANUFACTURER CODE	PART NUMBER
82872	H-172/U

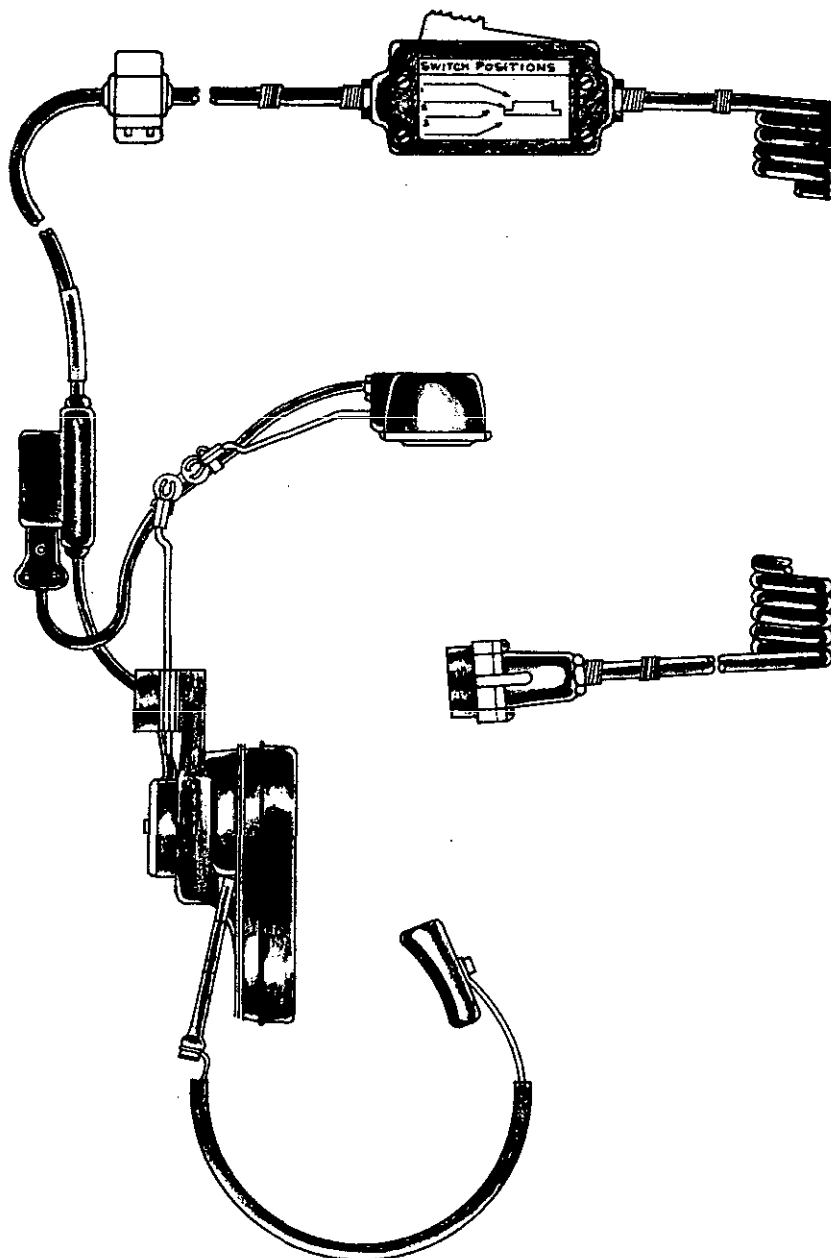
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-182( )/PT

FEDERAL STOCK NO: 5965-069-8885

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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-182( )/PT (Cont)

FEDERAL STOCK NO: 5965-069-8885

#### FUNCTIONAL DESCRIPTION:

The H-182( )/PT has a single earphone and an adjustable, boom mounted microphone. The headset-microphone is intended to be used with telephone TA-312 and switchboard SB-22, and it is made to be worn under the combat helmet M-1.

#### CONSISTS OF:

- 1 Earphone element, magnetic type, TA-235( )PT
- 1 Earcup, with cushion
- 1 Headband, single type
- 3 Cord assemblies, no type number
- 1 Microphone bracket, wire type
- 1 Microphone, per MIL-H-12576
- 2 Connectors, U-161/U and U-055
- 1 Clothing clip, no type number
- 1 Switch box, no type number

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

The H-182( )/PT replaces the H-144( )/U and is a part of SB-22/PT and SB-22A/PT.

#### PHYSICAL DESCRIPTION:

Earphone Dimensions - - - - - Not available  
 Microphone Dimensions - - - - - Not available

#### CORD DATA: (RETRACTILE)

Length (retracted) - - - - - 12 inches (304.8 mm)

#### ADDITIONAL PHYSICAL DATA:

##### Connector Data:

Connector Type - - - - - Plug  
 Connector Designation - - - - - U-161/U

##### Headband Data:

Type - - - - - Single band  
 Construction - - - - - Vinyl covered with a vinyl head pad

##### Mounting and Suspension Data:

Microphone - - - - - Mounted on bracket which fits earcup and locks for optimum tacking position.

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
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ITEM NAME: HEADSET - MICROPHONE  
NOMENCLATURE: H-182( )/PT (Cont)  
FEDERAL STOCK NO: 5965-069-8885

**TECHNICAL DESCRIPTION: (MICROPHONE)**

Input Operating Resistance - - - - -	125 mA
Resistance - - - - -	35 ohms dc
Frequency Range - - - - -	800 to 4,000 Hz

**TECHNICAL DESCRIPTION: (EARPHONE)**

### INPUT

Quantity of Earphones - - - - -	1
Nominal Impedance - - - - -	150 ohms
Frequency Range - - - - -	100 to 5.500 Hz

**ADDITIONAL TECHNICAL DATA:**

**Switch:**

Position 1	-----	For monitoring telephone or radio
Position 2	-----	For "lock-on" telephone operation
Position 3	-----	Nonlocking, for radio
Position 4	-----	Push to talk for radio

Microphone connector pins molded into cable assembly. Clothing clip provided on cable assembly.

**ENVIRONMENTAL LIMITATIONS:**

Fungus	28 days, method 508, MIL-STD-810
Salt Fog	48 hours, method 509, MIL-STD-810
Blast	SKN-N-864
Sand and Dust	MIL-C-9436 and method 110, MIL-STD-202
Elevation	
Operating	Up to 15,000 feet
Nonoperating	Up to 50,000 feet
Humidity	5 continuous 48-hour cycles per MIL-STD-170
Immersion	3 feet water
Bounce	Package tester model 1,000SC and SC-A-46439 or equal
Vibration	5 hours, amplitude 0.03 inch .10 to 55 Hz
Drop	6 feet (1,828.8 mm) on concrete
Endurance	100 hours, 0.02 volt at 60 Hz ac
Temperature	
Operating	+125° F to -40° F
Nonoperating	+160° F to -80° F



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ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-182( )/PT (Cont)

FEDERAL STOCK NO: 5965-069-8885

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REFERENCE DATA and LITERATURE

Data List DL-SM-A-114883

MIL-H-55460

MIL-H-11996

MIL-H-12576

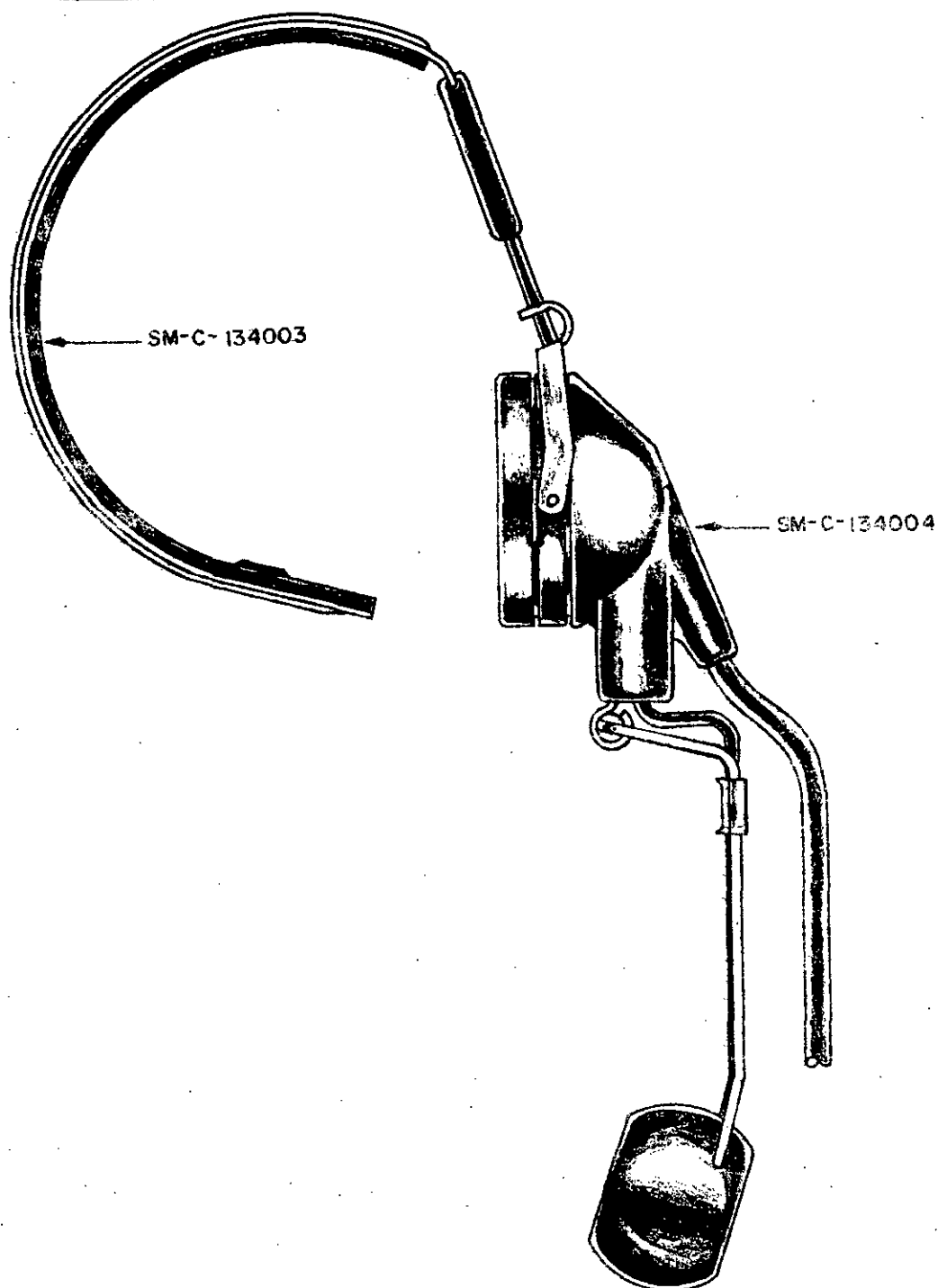
MANUFACTURER CODE	PART NUMBER
80058 18068	H-182( )/PT 21954

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-210/G

FEDERAL STOCK NO: 5965-892-1068



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-210/G (Cont)

FEDERAL STOCK NO: 5965-892-1068

FUNCTIONAL DESCRIPTION:

This headset-microphone has one dynamic earphone and a carbon microphone.

CONSISTS OF:

1	Earphone
1	Earphone Shell
1	Headband
2	Cord Assemblies
1	Microphone Bracket
1	Microphone
1	Cord Assembly
1	Connector, U-163/U
1	Switch

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to headset H-91, except it has a right angle connector type U-163/U instead of U-161/U.

PHYSICAL DESCRIPTION:

Earphone Dimensions - - - - -	Not available
Microphone Dimensions - - - - -	Not available

CORD DATA:

Length - - - - -	62 inches (1,574.8 mm)
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ADDITIONAL PHYSICAL DATA:

Connector Data:

Connector Type - - - - -	Plug
Connector Designation - - - - -	U-163/U (right angle type)

Headband Data:

Type - - - - -	Single band
Construction - - - - -	Extruded plastic web between two headband wires

Mounting and Suspension Data:

Microphone - - - - -	Mounted on bracket which fits either earcup and locks when bracket thumbscrew is tightened
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MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - MICROPHONE

NOMENCLATURE: H-210/G (Cont)

FEDERAL STOCK NO: 5965-892-1068

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 30 ohms

Frequency Range - - - - - 200 to 5,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 2

Nominal Impedance - - - - - 300 ohms

Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Temperature - - - - - -55° C to +85° C

Altitude - - - - - Up to 35,000 feet

REFERENCE DATA and LITERATURE

SC-DL-134001, except connector U-163/U instead of U-161/U  
 MIL-H-12576

MANUFACTURER CODE	PART NUMBER
80058	H-210/G

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

## SECTION 6

### HEADSET - CHEST SETS

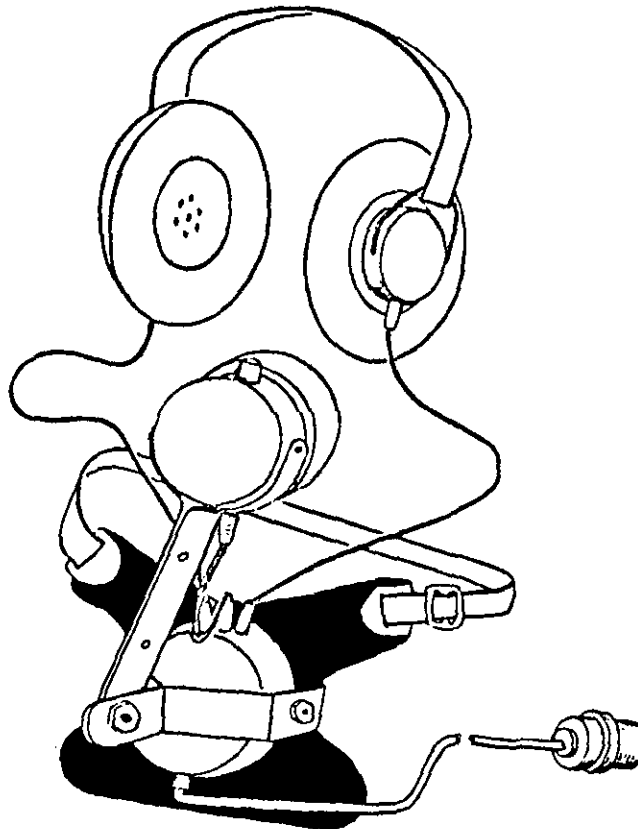
<u>Nomenclature, model or part number</u>	<u>Page</u>
H-200/U, H-202/U - - - - -	6.2.1
H-25/GT- - - - -	6.3.1
H-44/U - - - - -	6.4.1
H-36/U - - - - -	6.5.1

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-200/U; H-202/U

FEDERAL STOCK NO: 5965-900-6401; 5965-940-8699



FUNCTIONAL DESCRIPTION:

The H-200/U is a sound powered headset-chest set specially designed for shipboard use. The complete set will withstand immersion and heavy salt spray.

CONSISTS OF:

- 1 Headband
- 1 Transmitter Assembly
- 2 Receiver Assemblies
- 1 Chestplate
- 1 Junction Box
- 1 Receiver Cable
- 1 Transmitter Cable
- 1 Jack Plug
- 1 Cable Assembly

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-200/U, H-202/U (Cont)

FEDERAL STOCK NO: 5965-900-6401, 5965-940-8699

RELATIONSHIP TO SIMILAR EQUIPMENT:

H-202/U similar to H-200/U except equipped with cushioned hard shell ear cups.

PHYSICAL DESCRIPTION:

HEADSET DIMENSIONS:

Earphone diameter (with cushion) - 4-1/2 inches (114.3 mm)  
 Earphone depth (with cushion) - - - 2 inches (50.8 mm)

CHEST SET DIMENSIONS:

Nominal height - - - - - 6-1/2 inches (165.1 mm)  
 Nominal width - - - - - 5-1/2 inches (139.7 mm)  
 Nominal depth - - - - - 4-1/2 inches (114.3 mm)  
 Cord length - - - - - 20 feet (609.60 mm)  
 Weight - - - - - 4-1/2 pounds

ADDITIONAL PHYSICAL DATA:

Ear Cushion Material - - - - - Nylon-covered Neoprene  
 Chestplate Material - - - - - Aluminum  
 Junction Box Material - - - - - Rubber  
 Cordset Composition - - - - - Tinsel  
 Connector Designation - - - - - Navy Type S-74211  
 Chestplate Suspension - - - - - Neck Strap

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 60 ohms  
 Frequency range - - - - - 500 to 2,600 Hz

TECHNICAL DESCRIPTION: (EARPHONES)

INPUT

Quantity of Earphones - - - - - 2  
 Nominal Impedance - - - - - 1,200 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz

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MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-200/U, H-202/U (Cont)

FEDERAL STOCK NO: 5965-900-6401, 5965-940-8699

REFERENCE DATA and LITERATURE

MIL-T-15514

MANUFACTURER CODE	PART NUMBER
78957	702019-375, type H-200/U
	702020-230, type H-202/U
78957	701005-379
78957	702003-278
78957	702003-277
78957	701004-327
78957	702001-918
78957	702003-551
78957	702003-552
78957	702004-232
78957	702011-551

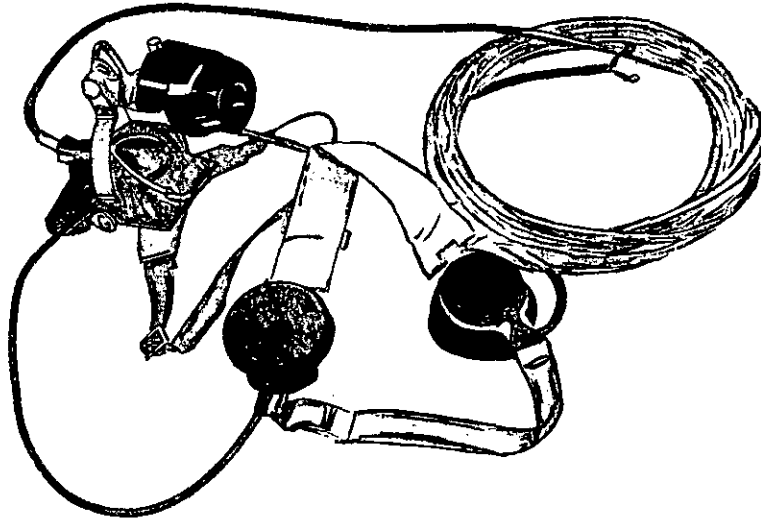


MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-25/GT

FEDERAL STOCK NO: 5965-587-0767



FUNCTIONAL DESCRIPTION:

Headset-Chest Set, Electrical H-25/GT is a sound powered telephone set capable of operation as a complete unit without use of a power source. The set is not designed for use in the same installation with battery powered telephones, but in an emergency can be used in the same system without damage to the sound powered set.

The H-25/GT is portable, light and easily handled.

CONSISTS OF:

- 1 Cable Assembly, Special Purpose, Electrical
- 1 Cord Assembly, Electrical (coil)
- 2 Cord Assemblies, Electrical
- 2 Earphones
- 1 Headband, Headset
- 1 Junction Box
- 1 Plate
- 2 Straps, Webbing, Adjusting
- 1 Strap, Webbing, Chin
- 1 Transmitter Unit
- 2 Yoke Assemblies, Oval-Shaped
- 1 Yoke Assembly

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-25/GT (Cont)

FEDERAL STOCK NO: 5965-587-0767

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to H-44/U Headset-Chest Set, Electrical.

PHYSICAL DESCRIPTION:

CRATED:

Weight - - - - -	8.5 pounds
Volume - - - - -	1.1 cubic feet

CABLE DATA:

Length - - - - -	16 inches (406.4 mm)
Wire Size - - - - -	19 AWG
Jacket - - - - -	Rubber
Diameter - - - - -	0.260 inches (6.60 mm)

COIL CORD ASSEMBLY DATA:

Length - - - - -	21.8 feet
Insulation - - - - -	Rubber

CORD ASSEMBLIES DATA:

Length - - - - -	19 inches (482.6 mm)
Insulation - - - - -	Rubber

HEADBAND DATA:

Material - - - - -	Cotton webbing
Color - - - - -	Tan
Length - - - - -	7.5 (190.50 mm) to 12.5 inches (317.50 mm) (adjustable)
Width - - - - -	1.5 inches (38.10 mm)

JUNCTION BOX DATA:

Material - - - - -	Fiber
Finish - - - - -	Red lacquer
Length - - - - -	3.5 inches (88.90 mm)
Width - - - - -	2.5 inches (63.50 mm)
Depth - - - - -	0.437 inches (11.10 mm)

PLATE DATA:

Material - - - - -	Brass
Length - - - - -	5.25 inches (133.35 mm)
Width - - - - -	4.312 inches (109.52 mm)
Thickness - - - - -	0.062 inches (1.57 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-25/GT (Cont)

FEDERAL STOCK NO: 5965-587-0767

PHYSICAL DESCRIPTION: (Cont)

STRAP DATA:

Material - - - - -	Cotton webbing
Length - - - - -	7.5 (190.50 mm) to 12.5 inches (317.50 mm) (adjustable)
Width - - - - -	1.5 inches (38.10 mm)

CHIN STRAP DATA:

Material - - - - -	Cotton webbing
Length - - - - -	12 inches (304.8 mm) (adjustable)
Width - - - - -	0.75 inches (19.05 mm)

STRAP DATA:

Material - - - - -	Cotton webbing
Color - - - - -	Black
Length - - - - -	10.25 (260.35 mm) to 18.62 inches (472.95 mm) (adjustable)
Width - - - - -	0.75 inches (19.05 mm)

OVAL-SHAPED YOKE ASSEMBLY DATA: (Receiver to headband)

Length - - - - -	2.875 inches (73.03 mm)
Width - - - - -	1.188 inches (30.18 mm)
Depth - - - - -	0.375 inches (9.53 mm)

YOKE ASSEMBLY DATA:

(Connection transmitter unit to chest plate)

Material - - - - -	Brass
Length - - - - -	7.125 inches (180.98 mm)
Width - - - - -	5.125 inches (130.18 mm)

TECHNICAL DESCRIPTION:

HEADSET:

Impedance - - - - -	900 ohms
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TRANSMITTER UNIT:

Impedance - - - - -	45 ohms
Length - - - - -	1.312 inches (33.32 mm)

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-25/GT (Cont)

FEDERAL STOCK NO: 5965-587-0767

REFERENCE DATA and LITERATURE

Marine Corps SL-1-2, Index of Authorized Supply and Maintenance Publication, Prefix Control  
121 000002, Components List SL-3-00353A; Headset - Chest Set, Electrical H-25/GT Prefix Control  
123 003530.

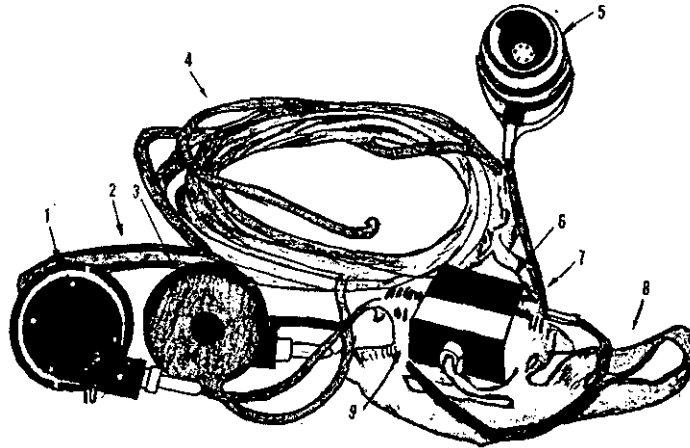
MANUFACTURER CODE	PART NUMBER
04773	H-25/GT

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-44/U (MODIFIED)

FEDERAL STOCK NO: 5965-501-2938



#### FUNCTIONAL DESCRIPTION:

Headset - Chest Set, Electrical, H-44/U (Modified) is a sound-powered telephone set, which receives its operating power from voice-sound waves striking the transmitter diaphragm. An audio-frequency voltage is generated and transmitted to the receiver which converts the signal back to sound. The removal of the telephone plug from the cable makes it possible to use other plugs as required.

The high-impedance of this sound-powered telephone set produces maximum efficiency when speaking directly into the transmitting element. It is also used where line losses are relatively low (approx. 15 dB) for point-to-point communication.

The set is not designed for use in the same installation, with battery-powered telephones, but may be used in an emergency without damage to the sound-powered set.

#### CONSISTS OF:

##### HEADSET:

- 1 Cord Assembly, Electrical (Coded black and white)
- 1 Cord Assembly, Electrical (Coded red, white, and black)
- 2 Earphones
- 2 Guards (0.5 inches (12.70 mm) long), nickel-plated
- 1 Guard (0.688 inches (17.48 mm) long), nickel-plated
- 1 Headband, Headset
- 1 Housing (For left-hand receiver element)
- 1 Housing (For right-hand receiver element)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET  
 NOMENCLATURE: H-44/U (MODIFIED) (Cont)  
 FEDERAL STOCK NO: 5965-501-2938

CONSISTS OF: (Cont)

MICROPHONE:

- 1 Microphone, Dynamic
- 1 Chest Plate
- 1 Strap, Webbing
- 1 Terminal Box

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to headset H-25/GT.

PHYSICAL DESCRIPTION:

CRATED:

Weight - - - - -	8.5 pounds
Volume - - - - -	1.1 cubic feet

CORD DATA:

Coded Black - White

Length - - - - -	20.5 feet
Wire Type - - - - -	Tinsel
Wire Size - - - - -	19 AWG
Insulation - - - - -	Plastic with rubber jacket
Termination - - - - -	Terminal lug one end
	Terminal fittings other end
No. of Conductors - - - - -	2

Coded Red - White - Black

Length - - - - -	15.5 inches (393.70 mm)
Wire Type - - - - -	Tinsel
Wire Size - - - - -	19 AWG
Insulation - - - - -	Rubber with rubber jacket
Termination - - - - -	Terminal lugs on each end
No. of Conductors - - - - -	3

GUARDS:

Quantity:

2 - - - - -	{	Diameter 0.5 inches (12.70 mm)
		Length 1.312 inches (33.32 mm)
1 - - - - -		Diameter 0.688 inches (17.48 mm)
Material - - - - -		Brass
Finish - - - - -		Nickel plated
Further description - - - - -		Spring with brass coupling

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-44/U (MODIFIED) (Cont)

FEDERAL STOCK NO: 5965-501-2938

PHYSICAL DESCRIPTION: (Cont)

HEADBAND DATA:

Material - - - - -	Steel
Type - - - - -	Single-flat adjustable band
Band Covering - - - - -	Leather

HOUSING DATA (1 for left-hand  
and 1 for right-hand receiver):

Length - - - - -	3 inches (76.2 mm)
Width - - - - -	2.219 inches (56.36 mm)
Depth - - - - -	0.594 inches (15.09 mm)
Further Description - - - - -	2 connection wires, 2 contacts
Wire Size - - - - -	20 AWG
Quantity - - - - -	1

CHEST PLATE DATA:

Material - - - - -	Brass
Finish - - - - -	Enamel
Shape - - - - -	Irregular
Further Description - - - - -	Collapsible and adjustable; held on chest by neck straps
Length - - - - -	9.5 inches (241.30 mm)
Width - - - - -	5.25 inches (133.35 mm)
Diameter - - - - -	1.375 inches (34.93 mm)

STRAP (WEBBING) DATA:

Material - - - - -	Cotton webbing
Length - - - - -	20.5 inches (520.70 mm)
Width - - - - -	0.75 inches (19.05 mm)
Thickness - - - - -	0.125 inches (3.18 mm)
Further Description - - - - -	Brass clip on one end, with sliding tongue- less brass buckle

TERMINAL BOX DATA:

Shape - - - - -	Rectangular
Length - - - - -	3.703 inches (94.06 mm)
Width - - - - -	2.891 inches (73.43 mm)
Depth - - - - -	1.062 inches (41.15 mm)

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-44/U (MODIFIED) (Cont)

FEDERAL STOCK NO: 5965-501-2938

PHYSICAL DESCRIPTION: (Cont)

EARPHONE DATA:

Material:	
Cap - - - - -	Rubber
Shell- - - - -	Plastic
Length (over-all) - - - - -	2.844 inches (72.24 mm)
Width (over-all) - - - - -	1.312 inches (33.32 mm)
Diameter - - - - -	3.875 inches (98.43 mm)

MICROPHONE DATA:

Length - - - - -	2.625 inches (66.68 mm)
Width - - - - -	2.25 inches (57.15 mm)
Diameter - - - - -	2.50 inches (63.5 mm)

TECHNICAL DESCRIPTION: (HEADSET)

Quantity of Earphones - - - - -	2
Frequency Range - - - - -	500 to 2,500 Hz
Type - - - - -	Magnetic
Impedance - - - - -	1,380 ohms

TECHNICAL DESCRIPTION: (MICROPHONE)

Frequency Range - - - - -	500 to 2,500 Hz
Impedance - - - - -	150 ohms
Type - - - - -	Magnetic
Further Description- - - - -	With mouthpiece, transmitter element, and cover

REFERENCE DATA and LITERATURE

Marine Corps Stock List: Components List SL-3-00357A for Headset - Chest Set, Electrical,  
 H-44/U Prefix Control No. 123 003570

MANUFACTURER CODE	PART NUMBER
3E684	UA 636
3E684	UA 772
3E684	UA 823
3E684	UA 845
3E684	UA 846-1
3E684	UA 846-2
3E684	UA 848
3E684	UA 849
3E684	UA 1559
3E684	UA 1629
3E684	UA 1710



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-36/U

FEDERAL STOCK NO: 5965-243-0146

NO ILLUSTRATION AVAILABLE

FUNCTIONAL DESCRIPTION:

Headset-Chest Set, H-36/U is a lightweight earphone set with a noise cancelling, lip type microphone and a control unit which mounts on the operator's chest. The components which make up Headset-Chest Set, H-36/U are particularly well insulated from external noises. The earphone of H-36/U are especially designed to be worn under an infantry or crash type helmet with or without a gas mask.

CONSISTS OF:

- 1 Chestplate Assembly
- 1 Microphone Assembly
- 1 Headset Assembly

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar in function to the H-161( )/U Headset-Microphone.

PHYSICAL DESCRIPTION:

Weight - - - - - 12 pounds  
Cube - - - - - 1 cubic feet  
Dimensions - - - - - 1.5 square feet

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-36/U (Cont)

FEDERAL STOCK NO: 5965-243-0146

PHYSICAL DESCRIPTION: (Cont)

CHESTPLATE ASSEMBLY:

Material of Chestplate - - - - -	Brass
Finish - - - - -	Black enamel
Chest Unit - - - - -	2 cords and straps
Connectors - - - - -	On line end and to the microphone
Signal Chest Set - - - - -	TD-3, incl.

HARNESS CHEST SET:

Strap Material- - - - -	Cotton webbing
Length of Strap - - - - -	60 inches (1,524 mm)
Width of Strap - - - - -	0.75 inches (19.05 mm)
Ends - - - - -	Clip and clip spring on one end, tip and slide on other end
Environmental- - - - -	Water resistant
Environmental - - - - -	Mildew resistant
Signal Strap - - - - -	ST-25 (used to carry chest unit)

HARNESS CHEST SET:

Material, Strap - - - - -	Cotton webbing
Length of Strap - - - - -	36 inches (1,024.4 mm)
Width of Strap - - - - -	0.75 inches (19.05 mm)
Ends - - - - -	"S" clip assembly one end, tip type other end
Environmental- - - - -	Water repellent
Environmental - - - - -	Mildew resistant
Signal Strap - - - - -	ST-24 (used to carry chest unit)

HEADSET, ELECTRICAL: - - - - - HS-30 (see MIL-H-13109/2)

Type Headband - - - - -	Single
Length of Headband - - - - -	7.5 inches (190.5 mm)
Cord Insulation - - - - -	Rubber
Clip - - - - -	Clothing clip on cord

CUSHIONS: - - - - - Rubber, ear-insert type

Length - - - - -	0.580 inches (14.73 mm)
Diameter - - - - -	0.656 inches (16.66 mm)
Mounting - - - - -	Slip over end of earphone
Quantity - - - - -	10 (8 spares)
Signal Insert- - - - -	M-300

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-36/U (Cont)

FEDERAL STOCK NO: 5965-243-0146

PHYSICAL DESCRIPTION: (Cont)

<u>EARPHONES:</u>	R-30-U (see MIL-H-13109)
Material, Shell	Plastic
Cap Material	Plastic
Diameter	0.9 inches (22.86 mm)
Length	0.688 inches (17.48 mm)
Quantity	2
Terminals	2 internal screw type

TECHNICAL DESCRIPTION: (MICROPHONE)

Mounting	Face strap
Type	Noise cancelling, carbon
Resistance	40 to 100 ohms, dc
Frequency Range	200 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Power	6 microwatts
Quantity of Earphones	2
Nominal Impedance	128 ohms (series connected)
Frequency Range	400 to 3,500 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Limitations:

Equipment Operating:

Temperature	-40° F to +131° F
Elevation	Up to 10,000 feet above sea level
Relative Humidity	Up to 98 percent

Equipment Nonoperating:

Temperature	-80° F to +160° F
Elevation	Up to 50,000 feet above sea level
Relative Humidity	Up to 100 percent including condensation caused by temperature changes
Immersion	Resistant

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HEADSET - CHEST SET

NOMENCLATURE: H-36/U (Cont)

FEDERAL STOCK NO: 5965-243-0146

REFERENCE DATA and LITERATURE

MIL-M-11703  
TM 11-5965-228-12P  
MIL-H-13109

MANUFACTURER CODE	PART NUMBER
80064	H-36/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

## SECTION 7

### HANDSETS

<u>Nomenclature, model or part number</u>	<u>Page</u>
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H-250/U - - - - -	7.18.1
TS-9( ) - - - - -	7.19.1
NT-51007A- - - - -	7.20.1

MIL-HDBK-173A/TM 11-487M

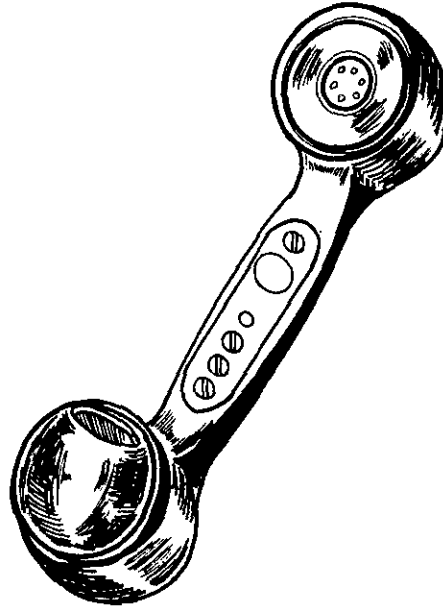
MIL-HDBK-173A

11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A257-2

FEDERAL STOCK NO: 5965-249-8157

FUNCTIONAL DESCRIPTION:

This handset is a sound powered type containing a dynamic receiver element and a dynamic microphone element. This handset is rugged and weather proof and may therefore be used for outdoor applications. The unit has a built-in press-to-operate switch. Transmitter and receiver units are plug-in type. It is suitable for most general purpose handset applications.

CONSISTS OF:

- 1 Receiver Unit U.S. Instrument Part No. UA1614-3
- 1 Switch U.S. Instrument Part No. UA781-2
- 1 Handset Handle U.S. Instrument Part No. UA1525
- 1 Mouthpiece U.S. Instrument Part No. UA976-1
- 1 Transmitter Unit U.S. Instrument Part No. UA1614-4
- 1 Cable U.S. Instrument Part No. 1678

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions: (Over-all)

Length	-----	9 inches (228.60 mm)
Width	-----	2.31 inches (58.67 mm)
Depth (Transmitter End)	-----	4.13 inches (104.90 mm)
Weight	-----	22 ounces without cord.

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 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A257-2 (Cont)

FEDERAL STOCK NO: 5965-249-8157

PHYSICAL DESCRIPTION: (Cont)

Cord Data:

Length - - - - - 4.50 feet (1371.60 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 2  
 Type Connector - - - - - Lug Type

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

Nominal Impedance - - - - - 1,600 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 1,150 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz

ADDITIONAL TECHNICAL DATA:

REFERENCE DATA and LITERATURE

United States Instrument Corporation Data Sheet D464  
 United States Instrument Corporation Catalog 500B TRE. C4R. 5-62 10M  
 MSS 5965-4

MANUFACTURER CODE	PART NUMBER
78957	A257-2

MIL-HDBK-173A/TM 11-487M

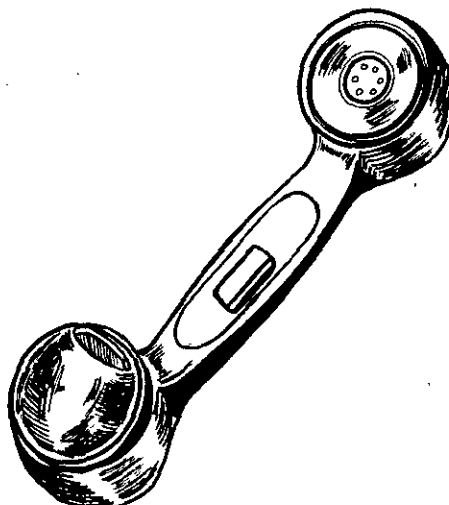
MIL-HDBK-173A

11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A555

FEDERAL STOCK NO: 5965-294-6113

FUNCTIONAL DESCRIPTION:

This handset is a sound powered type containing a magnetic receiver element and a magnetic microphone element. This handset is rugged and weatherproof and may therefore be used for outdoor applications. The unit is useful for most general purpose telephone applications.

CONSISTS OF:

1	Receiver Unit	U. S. Instrument Corp. Part No. UA1614-15
1	Receiver Ear Cap	U. S. Instrument Corp. Part No. 1055
1	Handset Handle	U. S. Instrument Corp. Part No. 1980
1	Transmitter Unit	U. S. Instrument Corp. Part No. UA1614-15
1	Mouthpiece	U. S. Instrument Corp. Part No. 976-1
1	Cable Assembly	U. S. Instrument Corp. Part No. 2467-7

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to the A-560 handset except that the A-560 is equipped with a push-to-talk switch.

PHYSICAL DESCRIPTION:Dimensions (Over-all):

Length	-----	9 inches (228.60 mm)
Width	-----	2.31 inches (58.67 mm)
Depth	-----	4.13 inches (104.90 mm)
Weight	-----	20 ounces (approximate)



MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: A555 (Cont)

FEDERAL STOCK NO: 5965-294-6113

PHYSICAL DESCRIPTION: (Cont)Cord Data:

Length - - - - - 4 feet (1219.20 mm)  
 No. of Conductors - - - - - 2  
 Jacket Material - - - - - Rubber

TECHNICAL DESCRIPTION: (MICROPHONE)

## OUTPUT

DC Resistance - - - - - 60 ohms  
 AC Impedance (Warble frequency  
 test, 500 to 2,500 cps) - - - - - 1,400 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz  
 Frequency of Maximum Response - Approximately 1,700 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

## INPUT

DC Resistance - - - - - 60 ohms  
 AC Impedance (Warble frequency  
 test, 500 to 2,500 Hz) - - - - - 1,140 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz

REFERENCE DATA and LITERATURE

U. S. Instrument Corp. Drawing No. A555  
 U. S. Instrument Corp. Data Sheet No. D857-1  
 U. S. Instrument Corp. Catalog 500B

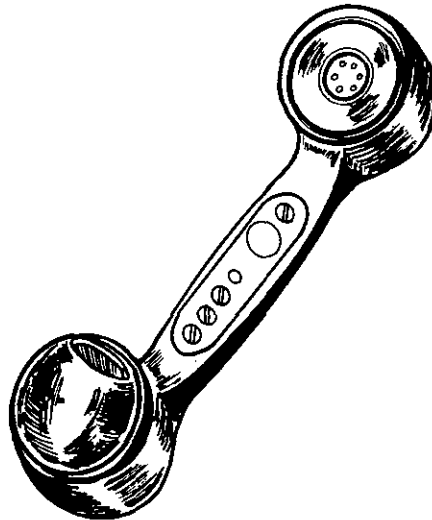
MANUFACTURER CODE	PART NUMBER
78957	A555

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A560/S10

FEDERAL STOCK NO: 5965-816-7984



#### FUNCTIONAL DESCRIPTION:

The A560/S10 is a rugged, weatherproof, sound powered handset employing magnetic receiver and transmitter elements. It is applicable to most general telephone purposes.

#### CONSISTS OF:

- 1 Receiving and transmitting instrument U.S. Inst. Corp. Part No. UA1614-15
- 1 Receiver Ear Cap U.S.I.C. 1055
- 1 Telephone Handle U.S.I.C. 974-1
- 1 Mouthpiece U.S.I.C. 976-1
- 1 Cable Assy U.S.I.C. UA2467-7
- 1 Connector Plug

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to the A555 except for the press-to-talk switch. Identical to the A560/S50 except for the plug.

#### PHYSICAL DESCRIPTION:

Length - - - - -	9 inches (228.6 mm)
Width - - - - -	2.31 inches (58.67 mm)
Depth (Transmitter End) - - - - -	4.13 inches (104.90 mm)
Weight (Without Cord) - - - - -	22 ounces

#### ADDITIONAL PHYSICAL DATA:

##### Cord Data:

Length - - - - -	4 feet (1,219.2 mm)
Number of Conductors - - - - -	2
Jacket Material - - - - -	Rubber

##### Connector Data:

Telephone Type	
Shank Length (Including Tip) - - -	938 inches
Shank Diameter - - - - -	875 inches

7.4.1

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MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A560/S10 (Cont)

FEDERAL STOCK NO: 5965-816-7984

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

DC Impedance - - - - - 60 ohms

AC Impedance (Warble

frequency test,

500 to 2,500 Hz) - - - - - 1,400 ohms

Frequency Range - - - - - 500 to 2,500 Hz

Frequency of Maximum

Response - - - - - Approximately 1,700 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

DC Impedance - - - - - 60 ohms

AC Impedance (Warble

frequency test,

500 to 2,500 Hz) - - - - - 1,140 ohms

Frequency Range - - - - - 500 to 2,500 Hz

ADDITIONAL TECHNICAL DATA:

REFERENCE DATA and LITERATURE

U.S. Instrument Corp. Drawing No. A560K  
U.S. Instrument Corp. Data Sheet No. D657-1  
U.S. Instrument Corp. Catalog 500B

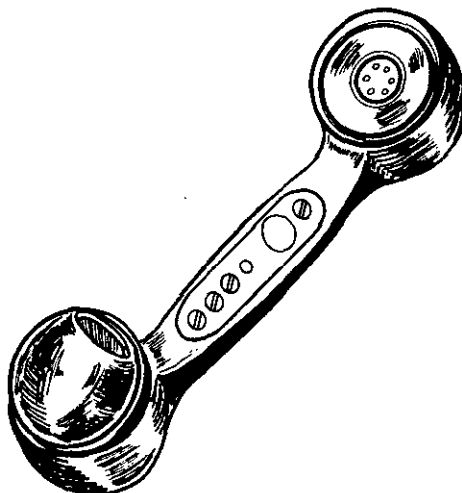
MANUFACTURER CODE	PART NUMBER
78957	A560/S10

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A560/S50

FEDERAL STOCK NO: 5965-808-6261



#### FUNCTIONAL DESCRIPTION:

The A560/S50 is a rugged, weatherproof, sound powered handset employing magnetic receiver and transmitter elements. It is applicable to most general telephone purposes.

#### CONSISTS OF:

- 1 Receiving and Transmitting Instrument U.S. Instrument Corporation Part No. UA-1614-15
- 1 Receiver Ear cap U.S.I.C. 1055
- 1 Telephone Handle U.S.I.C. 974-1
- 1 Mouthpiece U.S.I.C. 976-1
- 1 Connector Plug

#### RELATIONSHIP TO SIMILAR EQUIPMENT

Similar to the A555 except for the press-to-talk switch. Identical to the A560/S10 except for the plug.

#### PHYSICAL DESCRIPTION:

Length - - - - -	9 inches (228.6 mm)
Width - - - - -	2.31 inches (58.67 mm)
Depth (Transmitter End) - - - - -	4.13 inches (104.90 mm)
Weight (without cord) - - - - -	22 ounces

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: COMMERCIAL A560/S50 (Cont)

FEDERAL STOCK NO: 5965-808-6261

ADDITIONAL PHYSICAL DATA:

Cord Data:

Length - - - - - 4 feet (1,219.2 mm)  
 Number of Conductors - - - - - 2  
 Jacket Material - - - - - Rubber

Connector Data:

Telephone Type  
 Shank length (Including tip) - - - - - 1.25 inches (31.75 mm)  
 Shank Diameter - - - - - 2.50 inches (63.50 mm)

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not applicable

OUTPUT

DC Impedance - - - - - 60 ohms  
 AC Impedance (Warble frequency test,  
 500 to 2,500 Hz) - - - - - 1,400 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz  
 Frequency of Maximum Response - - - - - Approximately 1,700 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

DC Impedance - - - - - 60 ohms  
 AC Impedance (Warble frequency test,  
 500 to 2,500 Hz) - - - - - 1,140 ohms  
 Frequency Range - - - - - 500 to 2,500 Hz

ADDITIONAL TECHNICAL DATA:

REFERENCE DATA and LITERATURE

U.S. Instrument Corp. Drawing No. A560K  
 U.S. Instrument Corp. Data Sheet No. D657-1  
 U.S. Instrument Corp. Catalog 500B

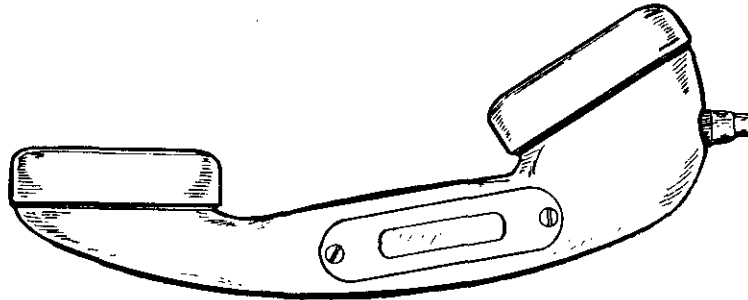
MANUFACTURER CODE	PART NUMBER
78957	A560/S50

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-33F/PT

FEDERAL STOCK NO: 5965-163-9947



#### FUNCTIONAL DESCRIPTION:

Handset H-33F/PT is a battery powered type handset intended for use with radio equipment. The unit is waterproof and withstands severe environmental conditions. This handset is therefore suitable for outdoor use. It is used as part of Control Group AN/GRA-6, and AN/GRC-106( ) P/O AN/PRC-41( ).

#### CONSISTS OF:

- 1 Handset H-33F/PT
  - Including:
    - 1 Microphone Element M-35/U
    - 1 Receiver Element Signal Corps Drawing No. SC-C-105379
    - 1 Switch Assembly 104-B-23
    - 1 Handle Assembly Drawing No. SC-D-76326
    - 1 Cable Assembly U-161/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - - - - - 7.44 inches (188.98 mm)  
 Depth - - - - - 3.06 inches (77.72 mm)

##### Dimensions: (Receiver)

Depth - - - - - .88 inch (22.23 mm)  
 Diameter - - - - - 2.06 inches (52.32 mm)

##### Dimensions: (Microphone)

Diameter - - - - - 1-5/8 inches (41.28 mm)  
 Depth - - - - - 0.390 inch (9.91 mm)

##### Cord Data:

Length (Retracted) - - - - - 11 inches (279.4 mm)  
 Length (Extended) - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 7  
 Connector Designation - - - - - Pin type  
 Weight - - - - - Not Rated

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-33F/PT (Cont)

FEDERAL STOCK NO: 5965-163-9947

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 100 mA

OUTPUT

Nominal Impedance - - - - - 40 ohms

Frequency Range - - - - - 300 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1

Nominal Impedance - - - - - 300 ohms

Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40° F to +150° F

Elevation - - - - - Up to 10,000 feet

Equipment Nonoperating:

Temperature - - - - - -80° F to +160° F

Relative Humidity - - - - - Up to 98%

Elevation - - - - - 10,000 to 50,000 feet above sea level

Immersion - - - - - 3 feet of water for 2 hours

Blast - - - - - In accordance with MIL-H-11134

REFERENCE DATA and LITERATURE

MIL-H-11134  
 Telephonics Corporation Drawing 10056  
 MSS 5965-4

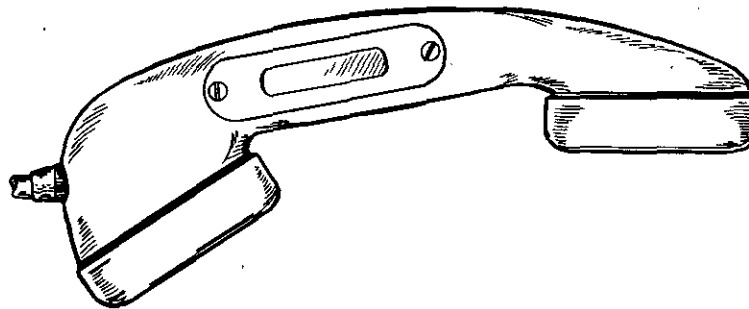
MANUFACTURER CODE	PART NUMBER
78711	6461
80058	H-33F/PT
82872	8Z872

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-60( )/PT

FEDERAL STOCK NO: 5965-669-9145



#### FUNCTIONAL DESCRIPTION:

Handset H-60( )/PT is intended for use with wire communication equipment. The unit is waterproof and withstands severe environmental conditions. This handset is therefore suitable for outdoor use. It is used as part of Intercom Station AN/VIA-4, AN/MTC-3( ).

#### CONSISTS OF:

- 1 Handset H-60( )/PT
- Including:
  - 1 Transmitter Element - TA-117( )/PT
  - 1 Receiver Element Telephone TA-235( )/PT
  - 1 Switch Assembly SA-129/PT
  - 1 Handle See SC-DL-207906
  - 1 Electrical Cord Assembly - CX2151( )/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Handsets H-60( )/PT, H-156( )/U, and H-165( )/U have the same electrical and mechanical construction except the cord assemblies are different.

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - - - - -	8.44 inches (214.38 mm)
Depth - - - - -	2.80 inches (71.12 mm)
Receiver Diameter - - - - -	2.56 inches (65.02 mm)
Transmitter Diameter - - - - -	2.59 inches (65.79 mm)



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-60( )/PT (Cont)

FEDERAL STOCK NO: 5965-669-9145

Cord Data:

Length (Retracted) - - - - - 9 inches (228.6 mm)  
 Length (Extended) - - - - - 36 inches (914.4 mm approximately)  
 No. of Conductors - - - - - 7  
 Connector Designation - - - - - Pin type  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 125 mA (maximum)

OUTPUT

Nominal Resistance - - - - - 35 ohms  
 Frequency Range - - - - - 500 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 500 to 3,200 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - Per MIL-STD-169  
 Elevation - - - - - Up to 10,000 feet

Equipment Nonoperating:

Temperature - - - - - Per MIL-STD-169  
 Relative Humidity - - - - - Up to 98%  
 Elevation - - - - - 10,000 to 50,000 feet above sea level  
 Immersion - - - - - 3 feet of water for 2 hours  
 Blast - - - - - In accordance with SK-N-864

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REFERENCE DATA and LITERATURE

MIL-H-11996 (Sig. C).  
 SC-DL-207906

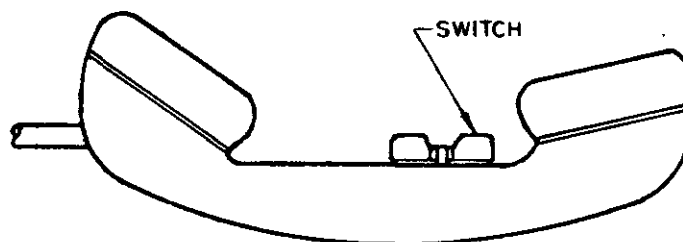
MANUFACTURER CODE	PART NUMBER
80058	H-60( )/PT

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-90( )/U

FEDERAL STOCK NO: 5965-644-0334



#### FUNCTIONAL DESCRIPTION:

The H-90( )/U handset is for general use and consists of a standard handset handle complete with a magnetic type earphone element, a carbon type microphone element, receiver and transmitter caps, a push-to-talk switch, and a retractile cord with a U-161 connector. This handset is used with wire and radio communication equipment.

#### CONSISTS OF:

Handset type: H-90( )/U includes the following:

- Switch Assembly, Drawing SC-C-105975
- Handle, Handset Assembly, Drawing SC-D-22545
- Cord Assembly, Drawing SC-D-60464
- Terminal (2) (Brass), Drawing SC-B-105977
- Receiver, Drawing SC-B-105976
- Transmitter, Drawing SC-B-22556
- Cap, Transmitter (Plastic), Drawing SC-C-22547
- Cap, Receiver (Plastic), Drawing SC-C-22546
- Screw, 100-3 and 100-7
- Plug, Connector U-161( )/U, Drawing SC-DL-34036

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - - - - -	9 inches (228.6 mm)
Depth - - - - -	3.12 inches (79.25 mm)
Diameter (Receiver and Microphone)	2.61 inches (66.29 mm)

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-90( )/U(Cont)

FEDERAL STOCK NO: 5965-644-0334

Cord Data:

Length (Retracted) - - - - - 11 inches (279.4 mm)  
 Length (Extended) - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 2  
 Connector Designation - - - - - U-161  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Resistance - - - - - 28 ohms  
 Frequency Range - - - - - Not rated

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 256 ohms  
 Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40°F to +150°F  
 Relative Humidity - - - - - Up to 98%

Equipment Nonoperating:

Temperature - - - - - -80°F to +160°F  
 Relative Humidity - - - - - Up to 98%  
 Shock - - - - - Impact resistance at 4-foot drop  
 Vibration - - - - - In accordance with Method 201 of MIL-STD-202.

REFERENCE DATA and LITERATURE

MIL-H-13253/5

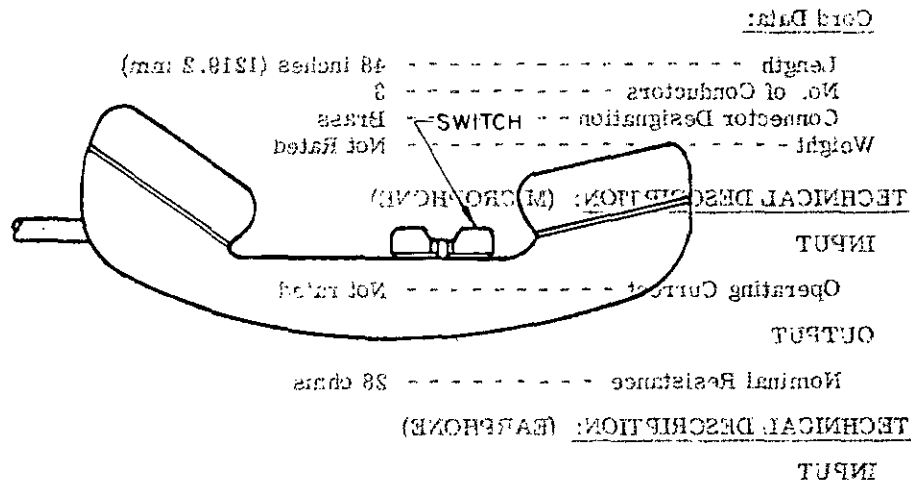
MANUFACTURER CODE	PART NUMBER
80058	H-90( )/U

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-94( )/U

FEDERAL STOCK NO: 5965-164-6632



#### FUNCTIONAL DESCRIPTION:

The H-94( )/U handset is for general use and consists of a standard handset handle with a magnetic type earphone element, a carbon type microphone element, receiver and transmitter caps, a switch, and a straight cord with brass terminals. This handset is used with wire and radio communication equipment.

#### CONSISTS OF:

Handset type: H-94( )/U

Switch Assembly, Drawing SC-C-105975, Group II  
Handle, Handset Assembly, Drawing SC-D-105992  
Cord Assembly, CD-494, Drawing SC-DL-76644  
Terminal (3) (Brass), Drawing SC-B-105977  
Receiver, Drawing SC-B-105976-3  
Transmitter, Drawing SC-B-22556  
Cap, Transmitter (Plastic), Drawing SC-C-22547  
Cap, Receiver (Plastic), Drawing SC-C-22546  
Screw (2), 100-3B4-4  
Wire, Drawing SC-D-60466-1  
Plugs (2) PJ-068 and PJ-055B

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - 9 inches (228.6 mm)  
Depth - 3.12 inches (79.25 mm)  
Diameter (Receiver and Microphone) 2.61 inches (66.29 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-94( )/U (Cont)

FEDERAL STOCK NO: 5965-164-6632

Cord Data:

Length - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 3  
 Connector Designation - - - - - Brass  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Resistance - - - - - 28 ohms

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 3,000 ohms

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40° F to +150° F  
 Relative Humidity - - - - - 98%

Equipment Nonoperating:

Temperature - - - - - -80° F to +160° F  
 Relative Humidity - - - - - Up to 100%  
 Shock - - - - - Impact resistance at 4-foot drop  
 Vibration - - - - - In accordance with Method 201 of MIL-STD-202.

---

REFERENCE DATA and LITERATURE

MIL-H-13253/6

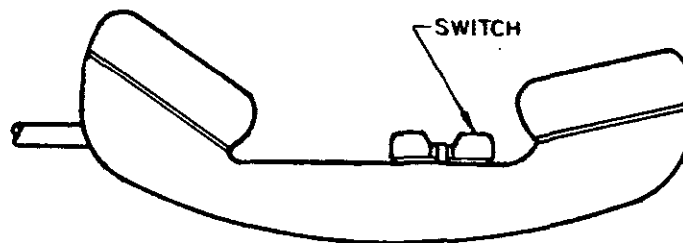
MANUFACTURER CODE	PART NUMBER
80058	H-94( )/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-111( )/U

FEDERAL STOCK NO: 5965-644-0333



#### FUNCTIONAL DESCRIPTION:

The H-111( )/U handset is for general use and consists of a standard handset handle with a magnetic type earphone element, a carbon type microphone element, receiver and transmitter caps, a switch and a rectile cord with terminals. This handset is used with wire and radio communication equipment.

#### CONSISTS OF:

Handset type: H-111( )/U includes the following:

- Switch Assembly, Drawing SC-C-105975, Group III
- Handle, Handset Assembly, Drawing SC-D-105992, Group I
- Cord Assembly, Tinsel, Retractable, Drawing SC-C-101109, Group I
- Terminal (2) (Brass), Drawing SC-B-105977
- Receiver, Drawing SC-B-105976-2
- Transmitter, Drawing SC-B-22556
- Cap, Transmitter (Plastic), Drawing SC-C-22547
- Cap, Receiver (Plastic), Drawing SC-C-22546
- Screw (2), MS-35245-20
- Wire, LW22-C-J, Drawing SC-D-16996-1
- S-Hook Assembly, Drawing SC-B-14423

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - - - - -	9 inches (228.6 mm)
Depth - - - - -	3.12 inches (79.25 mm)
Diameter (Receiver and Microphone)	2.61 inches (66.29 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-111( )/U (Cont)

FEDERAL STOCK NO: 5965-644-0333

Cord Data:

Length (Retracted) - - - - - 11 inches (279.4 mm)  
 Length (Extended) - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 3  
 Connector Designation - - - - - Terminal type  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Resistance - - - - - 28 ohms  
 Frequency Range - - - - - Not rated

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 256 ohms  
 Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40°F to +150°F  
 Relative Humidity - - - - - Up to 98%

Equipment Nonoperating:

Temperature - - - - - -80°F to +160°F  
 Relative Humidity - - - - - Up to 98%  
 Shock - - - - - Impact resistance at 4-foot drop  
 Vibration - - - - - in accordance with Method 201 of MIL-STD-202.

REFERENCE DATA and LITERATURE

MIL-H-13253/7

MANUFACTURER CODE	PART NUMBER
80058	H-111( )/U

MIL-HDBK-173A/TM-11-487M

MIL-HDBK-173A

11 September 1973

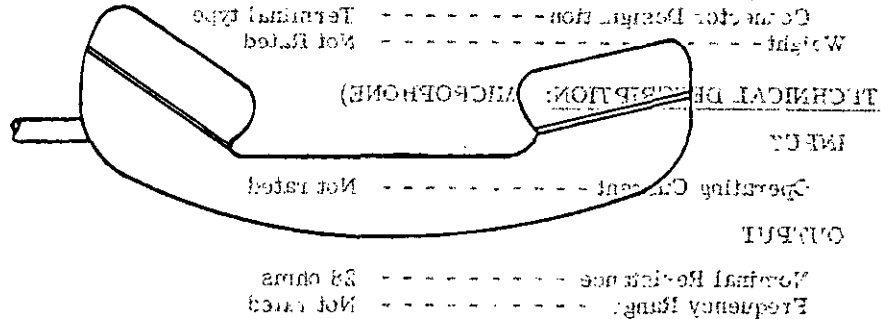
ITEM NAME: HANDSET

(MIL) NOMENCLATURE: H-121(U)/U

FEDERAL STOCK NO: 5965-642-8997

Cord Data:

Length (Retracted) 11 inches (279.4 mm) - - - - -  
 Length (Extended) 48 inches (1219.2 mm) - - - - -  
 No. of Conductors 3 - - - - -  
 Connector Description Not fitted - - - - -  
 Weight - - - - -



TECHNICAL DESCRIPTION: (REARPHONE)

TABLE

FUNCTIONAL DESCRIPTION:

The H-121(U)/U handset is for general use and consists of a standard handset handle with a magnetic type earphone element, a carbon type microphone element, receiver and transmitter caps, and a rectile cord with terminals. This handset is used with wire and radio communication equipment.

CONSISTS OF:

Handset type: H-121(U)/U includes the following:

Handle, Handset Assembly, Drawing SC-D-105992, Group I  
 Cord Assembly, Drawing SC-C-101109, Group I  
 Terminal, Drawing SC-B-105977  
 Receiver, Drawing SC-B-105976  
 Transmitter, Drawing SC-B-22556  
 Cap, Transmitter (Plastic), Drawing SC-C-22547  
 Cap, Receiver (Plastic), Drawing SC-C-22546  
 Screw (2) (100-3B4-3)  
 S-Hook Assembly, Drawing SC-B-14423

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:

Dimensions (Over-all):	
	MANUFACTURER CODE
Length	9 inches (228.6 mm)
Depth	3.12 inches (79.25 mm)
Diameter (Receiver and Microphone)	2.61 inches (66.29 mm)



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-121( )/U (Cont)

FEDERAL STOCK NO: 5965-642-8997

Cord Data:

Length (Retracted) - - - - - 11 inches (279.4 mm)  
 Length (Extended) - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 3  
 Connector Designation - - - - - Terminal type  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Resistance - - - - - 28 ohms  
 Frequency Range - - - - - Not rated

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 128 ohms  
 Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40° F to +150° F  
 Relative Humidity - - - - - 98%

Equipment Nonoperating:

Temperature - - - - - -80° F to +160° F  
 Relative Humidity - - - - - Up to 100%  
 Shock - - - - - Impact resistance at 4-foot drop  
 Vibration - - - - - In accordance with Method 201 of MIL-STD-202.

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REFERENCE DATA and LITERATURE

MIL-H-13253/8

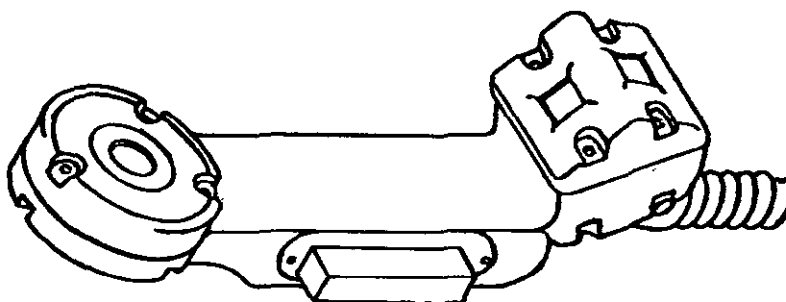
MANUFACTURER CODE	PART NUMBER
80058	H-121( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-138( )/U

FEDERAL STOCK NO: 5965-892-0972



**FUNCTIONAL DESCRIPTION:**

Handset H-138( )/U is for general purpose use. It is an operating component of AN/PRC-25( ) and AN/GRC-125. The handset has a noise cancelling microphone.

**CONSISTS OF:**

- 1 Handset H-138/U
- Handset Assembly - SM-D-448301
- Including
  - 1 Plug Connector - U-182( )/U
  - 1 Telephone Receiver Element - Earphone Assembly - SM-B-448332
  - 1 Telephone Transmitter - SM-C-448366
  - 1 Switch Assembly SM-C-448305
  - 1 Cable and Connector Assembly - SM-C-448460
  - 1 Transformer Assembly - SM-B-448318

**RELATIONSHIP TO SIMILAR EQUIPMENT:**

H-207( )/VRC and H-138( )/U are similar.

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-138( )/U (Cont)

FEDERAL STOCK NO: 5965-892-0972

# PHYSICAL DESCRIPTION:

## Dimensions: (Over-all)

Length - - - - -	8.5 inches (204.47 mm) approximately
Depth - - - - -	2.3 inches (51.56 mm) approximately
Width - - - - -	2.4 inches (51.82 mm)
Weight - - - - -	Not rated

## Cord Data:

Length (Retracted) - - - - -	14 inches
No. of Conductors - - - - -	5
Connector Type - - - - -	Plug

## TECHNICAL DESCRIPTION: (MICROPHONE)

Nominal Impedance - - - - -	150 ohms
Frequency Range - - - - -	300 to 3,500 Hz

## TECHNICAL DESCRIPTION: (EARPHONE)

Quantity of Earphones - - - - -	1
Nominal Impedance - - - - -	1,000 ohms
Frequency Range - - - - -	500 to 3,500 Hz

## ENVIRONMENTAL LIMITATIONS:

### Equipment Operating:

Elevation - - - - -	Up to 15,000 feet above sea level.
Relative Humidity - - - - -	Up to 97 percent.

### Equipment Nonoperating:

Temperature - - - - -	Up to 15,000 feet above sea level.
Elevation - - - - -	Up to 50,000 feet above sea level.
Relative Humidity - - - - -	Up to 100 percent including condensation resulting from temperature changes.
Immersion - - - - -	3 feet of water for 2 hours.
Salt Spray - - - - -	Method 101, MIL-STD-202.
Drop, Shock - - - - -	Withstands at least 6 drops from 6-foot height onto a concrete floor.
Blast - - - - -	SK-N-864 (5 inch Naval gun).
Vibration - - - - -	In accordance with Method 201, MIL-STD-202.
Bounce - - - - -	3 hours on package tester.

## REFERENCE DATA and LITERATURE

MIL-E-55119  
 SC-DL-448-301

MANUFACTURER CODE	PART NUMBER
80058	H-138( )/U

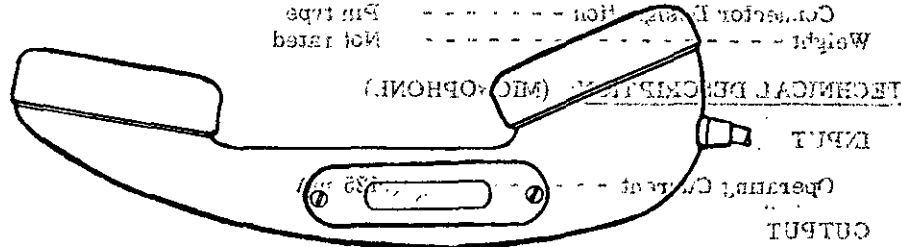
MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-156( )/U

FEDERAL STOCK NO: 5965-892-3850

Weight - - - - - Not rated  
Connector - - - - - Pin type  
No. of Connectors - - - - - 4  
Length (Extended) - - - - - 48 inches (1219.2 mm) (approximately)  
Length (Retracted) - - - - - 15 inches (381.3 mm)



Frequency Range - - - - - 300 to 4,000 Hz  
Nominal Resistance - - - - - 50 ohms

TECHNICAL DESCRIPTION: (EARSPEAKER)

INPUT

#### FUNCTIONAL DESCRIPTION:

Handset H-156( )/U is intended for use with wire communication equipment. The unit is waterproof and withstands severe environmental conditions. This handset is therefore suitable for outdoor use. It is used as part of AN/GRC-50-A(V)1 through 5, AN/TRC-143, part of AN/GRC-67( ) and -68.

#### CONSISTS OF:

- 1 Handset H-156( )/U
- Including:
- 1 Transmitter Element TA-117( )/PT
- 1 Receiver Element TA-235( )/PT
- 1 Switch Assembly SA-129( )/PT
- 1 Handle Assembly Drawing SC-D-76454
- 1 Cord Assembly Drawing SC-D-76457

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Handsets H-60( )/PT, H-156( )/U, and H-165( )/U have the same electrical and mechanical construction except the cord assemblies are different.

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length	8.44 inches (214.38 mm)
Depth	2.80 inches (71.12 mm)
Receiver Diameter	2.56 inches (65.02 mm)
Transmitter Diameter	2.59 inches (65.79 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-156( )/U (Cont)

FEDERAL STOCK NO: 5965-892-3850

Cord Data:

Length (Retracted) - - - - - 12 inches (304.8 mm)  
 Length (Extended) - - - - - 48 inches (1219.2 mm) (approximately)  
 No. of Conductors - - - - - 4  
 Connector Designation - - - - - Pin type  
 Weight - - - - - Not rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 125 mA

OUTPUT

Nominal Resistance - - - - - 35 ohms  
 Frequency Range - - - - - 500 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 500 to 3,200 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - Per MIL-STD-169  
 Elevation - - - - - Up to 10,000 feet

Equipment Nonoperating:

Temperature - - - - - Per MIL-STD-169  
 Relative Humidity - - - - - Up to 98%  
 Elevation - - - - - 10,000 to 50,000 feet above sea level  
 Immersion - - - - - 3 feet of water for 2 hours  
 Blast - - - - - In accordance with SK-N-864

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REFERENCE DATA and LITERATURE

MIL-H-11996  
 SC-DL-76453

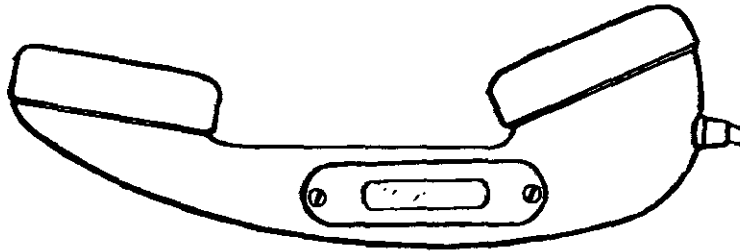
MANUFACTURER CODE	PART NUMBER
80058	H-156( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-165( )/U

FEDERAL STOCK NO: 5965-543-1837



#### FUNCTIONAL DESCRIPTION:

Handset H-165( )/U is intended for use with wire communication equipment. The unit is waterproof and withstands severe environmental conditions. This handset is therefore suitable for outdoor use. It is used as part of C-1632/VIA-4 which is a component of AN/VIA-4, AN/MTC-3( ).

#### CONSISTS OF:

- 1 Handset H-165( )/U
- Including:
  - 1 Transmitter - TA-117( )/PT
  - 1 Receiver Element TA-235( )/PT
  - 1 Switch Assembly SA129( )/PT
  - 1 Handle Assembly Drawing No. SC-D-55380
  - 1 Cord Assembly CX4533( )/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Handsets H-60( )/PT, H-156( )/U, and H-165( )/U have the same electrical and mechanical construction except the cord assemblies are different.

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length - - - - -	8.47 inches (215.14 mm)
Depth - - - - -	2.73 inches (69.34 mm)
Receiver Diameter - - - - -	2.56 inches (65.02 mm)
Transmitter Diameter - - - - -	2.59 inches (65.79 mm)

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-165( )/U (Cont)

FEDERAL STOCK NO: 5965-543-1837

Cord Data:

Length (Retracted) - - - - - 11 inches (279.4 mm) (approximately)  
 Length (Extended) - - - - - 48 inches (1219.2 mm) (approximately)  
 No. of Conductors - - - - - 4  
 Connector Designation - - - - - Pin type  
 Weight - - - - - Not rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - 125 mA (maximum)

OUTPUT

Nominal Resistance - - - - - 35 ohms  
 Frequency Range - - - - - 500 to 4,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 500 to 3,200 Hz

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - Per MIL-STD-169  
 Elevation - - - - - Up to 10,000 feet

Equipment Nonoperating:

Temperature - - - - - Per MIL-STD-169  
 Relative Humidity - - - - - Up to 98%  
 Elevation - - - - - 10,000 to 50,000 feet above sea level  
 Immersion - - - - - 3 feet of water for 2 hours  
 Blast - - - - - In accordance with SK-N-864

REFERENCE DATA and LITERATURE

MIL-E-11996A (max 12.00) 87.8  
 SC-DL-55379 (max 20.00) 87.8

MANUFACTURER CODE	PART NUMBER
80058	H-165( )/U

MIL-HDBK-173A/TM-11-487M

MIL-HDBK-173A

11 September 1973

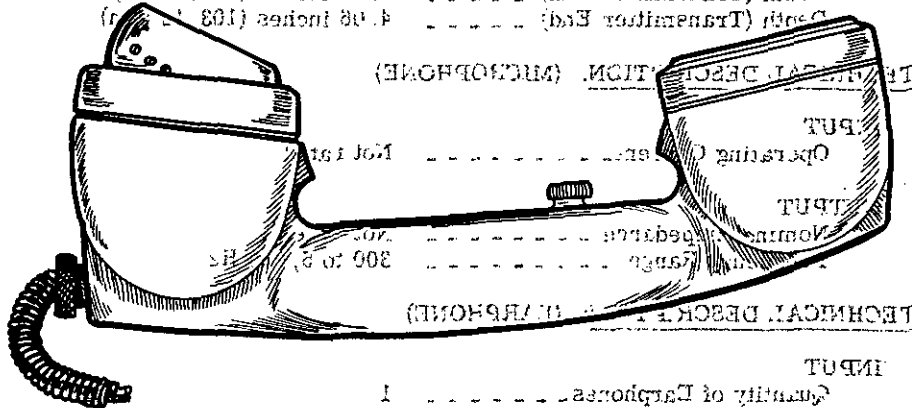
ITEM NAME: HANDSET  
 NOMENCLATURE: H-169/U  
 (Cont) U-169/U

FEDERAL STOCK NO: 5965-679-9501  
 1055-679-9501

## PHYSICAL DESCRIPTION

## Dimensions (Overall):

Length (Transmitter End) 9.02 inches (228.37 mm)  
 Width (Transmitter End) 3.02 inches (76.93 mm)  
 Depth (Transmitter End) 4.08 inches (103.78 mm)



Frequency Range 300 to 3,000 Hz  
 Nominal Impedance 600 ohms  
 Quantity of Telephones 1

## ADDITIONAL TECHNICAL DATA

Microphone Amplifier Type Magnetic  
 Receiver Element Type Magnetic  
 Switch Type Soft Action 3 Pole Shorting

**FUNCTIONAL DESCRIPTION:**  
 This unit is a noise cancelling type handset containing a magnetic earphone element and a microphone with a transistorized amplifier. The handset is suitable for general use in telephone circuits.

The handset is battery powered.

## CONSISTS OF:

- |   |   |   |
|---|---|---|
| 1 | Microphone Amplifier N5965-624-4134                         |   |
| 1 | Mouthpiece  |   |
| 1 | Receiver Element N5965-678-5305                             | REFERENCE DATA and LITERATURE             |
| 1 | Receiver Cap N5965-683-2075                                 |   |
| 1 | Handset Handle (MIL-M-19833, GDI-30 or MIL-M-22544, Type 4) | NEW, Dwg. 11-11881                        |
| 1 | Cord Protector Assembly                                     | Cord Protector, MIL-M-11881               |
| 1 | Cord Assembly CX-1846( )/U                                  | Receiver, MIL-M-11881                     |
| 1 | Switch Soft Action 3 Pole Shorting                          | Attch. phone, MIL-M-22544 and MIL-M-11881 |

## RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to NT-51007A

PART NUMBER	MANUFACTURER CODE
H-169/U	88008



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-169/U (Cont)

FEDERAL STOCK NO: 5965-679-9501

PHYSICAL DESCRIPTION:

Dimensions (Overall):

Length - - - - -	9.05 inches (229.87 mm)
Width (Transmitter End) - - - - -	2.72 inches (69.09 mm)
Depth (Transmitter End) - - - - -	4.06 inches (103.12 mm)

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - -	Not rated
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OUTPUT

Nominal Impedance - - - - -	Not rated
Frequency Range - - - - -	300 to 5,000 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - -	1
Nominal Impedance - - - - -	600 ohms
Frequency Range - - - - -	200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Microphone Amplifier Type - - - - -	Dynamic Noise Cancelling
Receiver Element Type - - - - -	Magnetic
Switch Type - - - - -	Push-to-talk

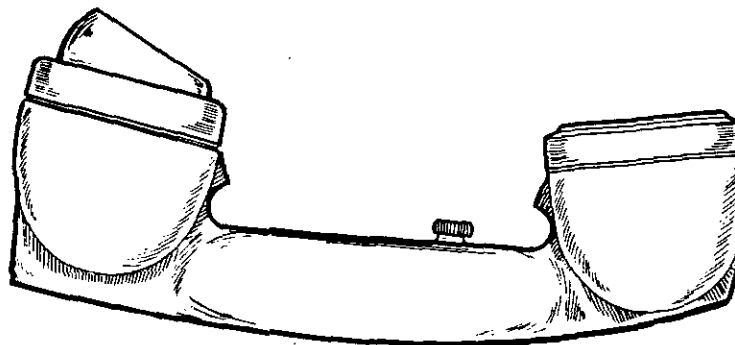
REFERENCE DATA and LITERATURE

Navy Dwg RE-51 128E  
 Cable Assembly, Drawing Navy RE-49C 605  
 Receiver, MIL-E-17884  
 Microphone, MIL-M-23813 and MIL-M-5794

MANUFACTURER CODE	PART NUMBER
80058	H-169/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET  
 NOMENCLATURE: H-203/U  
 FEDERAL STOCK NO: 5965-840-8849



#### FUNCTIONAL DESCRIPTION:

The H-203/U is a sound powered receiver-transmitter employing magnet earphone and microphone elements. This handset is suitable for general use in telephone circuits.

#### CONSISTS OF:

1	Microphone Element	U. S. Instrument Corp. Part No. UA1614-1
1	Receiver Element	U. S. Instrument Corp. Part No. UA1614-1
1	Handset Handle	U.S.I. C. Part No. 974-2
1	Cord	U.S.I. C. Part No. UA2467-2
1	Pushbutton Switch	U.S.I. C. Part No. UA2175-1

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Weight - - - - - Not available

#### Dimensions:

Length - - - - -	9 inches (228.6 mm)
Width - - - - -	2.31 inches (58.67 mm)
Depth - - - - -	4.13 inches (104.90 mm)

#### ADDITIONAL PHYSICAL DATA:

#### Cord Data:

Length, Retracted - - - - -	1 foot (304.8 mm)
Length, Extended (Approximate) - - - - -	6 feet (1,228.8 mm)
No. of Conductors - - - - -	2
No. of Connectors - - - - -	2
Connector Type - - - - -	Lug type

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

TEST NAME: HANDSET

U-203-H NOMENCLATURE H-203/U (Cont)

FEDERAL STOCK NUMBER 5965-840-8849

# TECHNICAL DESCRIPTION: (MICROPHONE)

## OUTPUT

DC Resistance ----- 90 ohms  
 AC Impedance ----- 1,690 ohms  
 Frequency Range ----- 500 to 2,500 Hz  
 Frequency of Maximum Response ----- Approximately 1,700 Hz

# TECHNICAL DESCRIPTION: (EARPHONE)

## INPUT

DC Resistance ----- 60 ohms  
 AC Impedance ----- 1,150 ohms  
 Frequency Range ----- 500 to 2,500 Hz

This handset is suitable for general use in telephone circuits and is a sound powered receiver-transmitter employing a sound powered microphone and earphone.

U. S. Instrument Corp. Part No. UA1814-1  
 U. S. Instrument Corp. Part No. UA1814-1  
 U. S. Instrument Corp. Part No. UA1814-1  
 U. S. Instrument Corp. Part No. UA1814-1  
 U. S. Instrument Corp. Part No. UA1814-1  
 U. S. Instrument Corp. Part No. UA1814-1

## REFERENCE DATA and LITERATURE

U. S. Instrument Corp. Drawing, Sound Powered Handset Type H-203/U  
 U. S. Instrument Corp. Data Sheet D657-1

MANUFACTURER CODE	PART NUMBER
80058	H-203/U

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-207( )/VRC

FEDERAL STOCK NO: 5965-686-7067

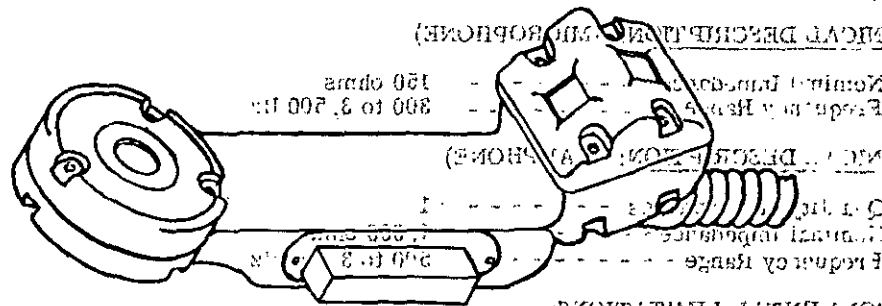
General Data:

Length (Extended) - - - - -	28 inches (711.2 mm)
Length (Retracted) - - - - -	20 inches (508.0 mm)
No. of Connectors - - - - -	2
Connector Designation - - - - -	Not listed
Weight - - - - -	Not listed

TECHNICAL DESCRIPTION (MICROPHONE)

Operating Frequency - - - - -	300 to 3,700 Hz
Impedance - - - - -	150 ohms

TECHNICAL DESCRIPTION (HANDSET)



ENVIRONMENTAL LIMITATIONS

Equipment Operating:

Relative Humidity - - - - -	Up to 95 percent
Vibration - - - - -	Up to 10 gms/sec above sea level

Equipment Storing:

Relative Humidity - - - - -	Up to 95 percent
Vibration - - - - -	Up to 10 gms/sec above sea level
Temperature - - - - -	Up to 50°C (122°F)

FUNCTIONAL DESCRIPTION:

Handset H-207( )/VRC is a part of AN/VRC-12 and AN/VRC-43( ) through 49( ). The microphone is dynamic and noise cancelling.

CONSISTS OF:

1 Handset H-207( )/VRC

Including:

- 1 Microphone Element SM-B-415649
- 1 Receiver Element SM-B-415588
- 1 Switch Assembly SM-C-448305
- 1 Handle Assembly Drawing No. See SC-DL-415575
- 1 Cable Assembly SM-D-415653

RELATIONSHIP TO SIMILAR EQUIPMENT:

PHYSICAL DESCRIPTION:

Dimensions (Over-all):

Length - - - - -	8.4 inches (204.22 mm)
Depth - - - - -	2.7 inches (52.58 mm)
Width - - - - -	2.4 inches (51.82 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-207( )/VRC (Cont)

FEDERAL STOCK NO: 5965-686-7067

Cord Data:

Length (Retracted) - - - - - 53 inches (1,346.2 mm)  
 Length (Extended) - - - - - 20 feet (3,657.6 mm)  
 No. of Conductors - - - - - 5  
 Connector Designation - - - - - Terminal type  
 Weight - - - - - Not rated

TECHNICAL DESCRIPTION: (MICROPHONE)

Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 300 to 3,500 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 1,000 ohms  
 Frequency Range - - - - - 500 to 3,500 Hz

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Elevation - - - - - Up to 15,000 feet above sea level.  
 Relative Humidity - - - - - Up to 97 percent.

Equipment Nonoperating:

Temperature - - - - - MIL-STD-169.  
 Elevation - - - - - Up to 50,000 feet above sea level.  
 Relative Humidity - - - - - Up to 100 percent including condensation resulting  
 from temperature changes.  
 Immersion - - - - - 3 feet of water for 2 hours.  
 Salt Spray - - - - - Method 101, MIL-STD-202.  
 Drop, Shock - - - - - Withstands at least 6 drops from 6-foot height  
 onto a concrete floor.  
 Vibration - - - - - In accordance with Method 201, MIL-STD-202.  
 Blast - - - - - In accordance with SK-N-864 (5-inch Naval gun)  
 Bounce - - - - - 3 hours on package tester.

---

REFERENCE DATA and LITERATURE

SC-DL-415575  
 MIL-E-55119

MANUFACTURER CODE	PART NUMBER
80058	H-207( )/VRC

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: H-250/U

FEDERAL STOCK NO: 5965-043-3463

FUNCTIONAL DESCRIPTION:

Handset H-250( )/U is a miniature light-weight handset consisting of a dynamic moving-coil microphone and earphone, a push-to-talk switch, a 6-foot long retractile cord terminated with Connector, Plug U-182B/U and handle. The assembled handset is blast proof and immersion proof. The earphone end of the assembled handset when in use does not interfere with the wearing of Infantryman Helmet M-1. A clip molded integrally with the handle is provided for securing the unit to the carrying harness straps, or to the operator's pocket.

CONSISTS OF:

1 Handset H-250/U

Including:

SEE FUNCTIONAL DESCRIPTION

RELATIONSHIP TO SIMILAR EQUIPMENT:PHYSICAL DESCRIPTION:Dimensions: (Over-all)

Length - - - - -	7.5 inches (179.07 mm)
Depth - - - - -	Not rated
Width - - - - -	Not rated
Weight - - - - -	235 grams (maximum)

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

TERMINAL: HANSET  
 ITEM NAME: HANSET  
 NOMENCLATURE: H-250/U (Cont)  
 FEDERAL STOCK NO: 5965-043-3463

Cord Data:

SEE FUNCTIONAL DESCRIPTION

TECHNICAL DESCRIPTION: (MICROPHONE)

OUTPUT

Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 300 to 3,500 Hz

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 1,000 ohms  
 Frequency Range - - - - - 20 to 3,500 Hz

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40°F to +120°F plus solar radiation.  
 Elevation - - - - - Up to 10,000 feet above sea level.  
 Relative Humidity - - - - - Up to 95 percent.  
 Sand and dust - - - - - As encountered in the desert.

Equipment Nonoperating:

Temperature - - - - - -65°F to +155°F  
 Elevation - - - - - Up to 50,000 feet above sea level.  
 Relative Humidity - - - - - 94 ±4% at 86°F.  
 Immersion - - - - - 3 feet of water for 2 hours.  
 Salt fog - - - - - 5% solution  
 Droplet - - - - - Withstands at least 12 drops from 6-foot height  
 onto a concrete floor faced with 1/8" asphalt tile.  
 Blast - - - - - SK-N-864 (Naval 5" Gun).  
 Vibration - - - - - Method 201, MIL-STD-202.  
 Bounce - - - - - Method 514, Procedure XI, Part 2 of MIL-STD-810.  
 Fungus - - - - - Method 508, Procedure I of MIL-STD-810.

REFERENCE DATA and LITERATURE

MIL-H-55692(EL)

MANUFACTURER CODE	PART NUMBER
80058	H-250/U

(mm 70.871) 1.7  
 Not rated  
 Not rated  
 235 ft/min (maximum)

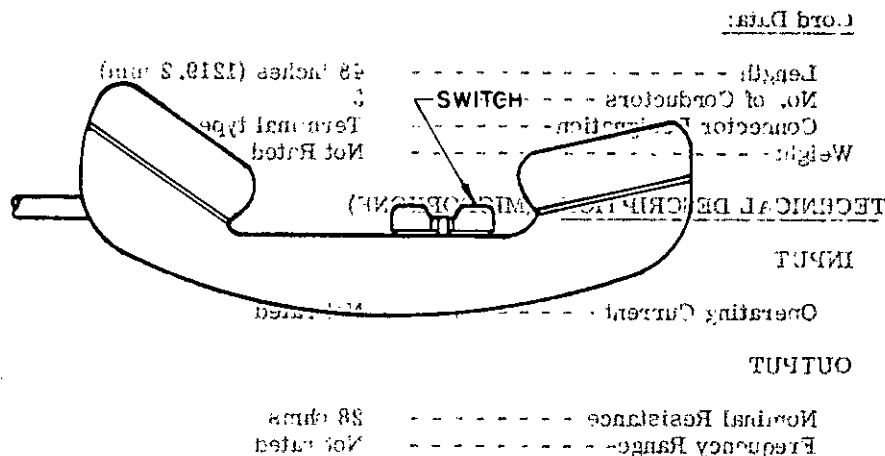
7.18.2

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

ITEM NAME: HANDSET  
 NOMENCLATURE: TS-9( )  
 FEDERAL STOCK NO: 5965-170-6473



#### FUNCTIONAL DESCRIPTION:

The TS-9( ) handset is for general use. It consists of a standard handset handle complete with a magnetic type earphone element, a carbon type microphone element, receiver and transmitter caps, a switch, and a straight cord with terminals. This handset is used with wire and radio communication equipment.

#### CONSISTS OF:

Handset type: TS-9( ) includes the following:

Switch Assembly, Drawing SC-C-105975, Group III	
Handle, Handset Assembly, Drawing SC-D-105992	
Cord Assembly CC-333, Drawing SC-D-1041	
Terminal (2) (Brass), Drawing SC-B-105977	
Receiver, Drawing SC-B-105976-2	
Transmitter, Drawing SC-B-22556	
Cap, Transmitter (Plastic), Drawing SC-C-22547	
Cap, Receiver (Plastic), Drawing SC-C-22546	
Screw (2), 100-3B4-4	
Wire, LW22-C-J, Drawing SC-D-1054-1	

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

##### Dimensions (Over-all):

Length	9 inches (228.6 mm)
Depth	3.12 inches (79.25 mm)
Diameter (Receiver and Microphone)	2.61 inches (66.29 mm)



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: HANDSET

NOMENCLATURE: TS-9( ) (Cont)

FEDERAL STOCK NO: 5965-170-6473

Cord Data:

Length - - - - - 48 inches (1219.2 mm)  
 No. of Conductors - - - - - 3  
 Connector Designation - - - - - Terminal type  
 Weight - - - - - Not Rated

TECHNICAL DESCRIPTION: (MICROPHONE)

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Resistance - - - - - 28 ohms  
 Frequency Range - - - - - Not rated

TECHNICAL DESCRIPTION: (EARPHONE)

INPUT

Quantity of Earphones - - - - - 1  
 Nominal Impedance - - - - - 256 ohms  
 Frequency Range - - - - - Not rated

ADDITIONAL TECHNICAL DATA:

ENVIRONMENTAL LIMITATIONS:

Equipment Operating:

Temperature - - - - - -40° F to +150° F  
 Relative Humidity - - - - - Up to 98%

Equipment Nonoperating:

Temperature - - - - - -80° F to +160° F  
 Relative Humidity - - - - - Up to 98%  
 Shock - - - - - Impact resistance at 4-foot drop  
 Vibration - - - - - In accordance with Method 201 of MIL-STD-202.

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REFERENCE DATA and LITERATURE

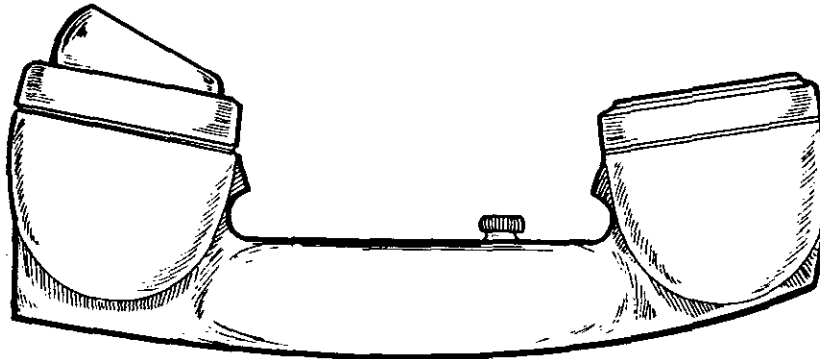
MIL-H-13253/1

MANUFACTURER CODE	PART NUMBER
80058	TS-9( )

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: HANDSET  
NOMENCLATURE: NT-51007A  
FEDERAL STOCK NO: 5965-665-3480

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#### FUNCTIONAL DESCRIPTION:

Handset NT-51007A is a heavy duty, battery powered handset intended for general purpose use. The handset contains a carbon microphone and a magnetic type earphone receiver housed in a phenolic case.

#### CONSISTS OF:

- 1 Handset Body
- 1 Transmitter Unit Roanwell No. 10118 or equal
- 1 Receiver Unit Roanwell No. 10088 or equal
- 1 Switch Roanwell No. 10060 or equal
- 1 Cord Protector Assembly Roanwell No. 17290 or equal

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

This handset is similar to Roanwell Part No. 10230 handset, except that the Roanwell handset has a 5 conductor rubber covered coil cord terminated in AN-3106-14S-5P Plug.

This is H-169 handset with a carbon microphone and a different cord.

#### PHYSICAL DESCRIPTION:

##### Dimensions: (Over-all)

Length - - - - -	9.05 inches (229.87 mm)
Depth - - - - -	4.06 inches (103.12 mm)
Diameter (Transmitter and Receiver) - - - - -	2.50 inches (63.50 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11-September 1973

ITEM NAME: HANDSET  
 NOMENCLATURE: NT-51007A (Cont)  
 FEDERAL STOCK NO: 5965-665-3480

# TECHNICAL DESCRIPTION: (MICROPHONE)

## INPUT

Operating Current . . . . . Not rated

## OUTPUT

Nominal Impedance . . . . . 35 ohms  
 Frequency Range . . . . . Not rated

# TECHNICAL DESCRIPTION: (EARPHONE)

## INPUT

Quantity of Earphones . . . . . 1  
 Nominal Impedance . . . . . 600 ohms  
 Frequency Range . . . . . Not rated

# ADDITIONAL TECHNICAL DATA:

Handset is a heavy duty, battery powered handset intended for general use. It is a push-to-talk type handset with a carbon microphone and a magnetic type earphone.

Roanwell Corporation Data Sheet DS-38  
 Roanwell Corporation Drawing 10044/SPEC  
 NAVY Drawing RE 51D 121G

# REFERENCE DATA and LITERATURE

Roanwell Corporation Data Sheet DS-38  
 Roanwell Corporation Drawing 10044/SPEC  
 NAVY Drawing RE 51D 121G

MANUFACTURER CODE	PART NUMBER
80064 82872	NT-51007A 10044

MIL-HDBK-173A/TM 11-487M

MIL-HDBK-173A

11 September 1973

SECTION 8  
MICROPHONES

<u>Nomenclature, model or part number</u>	<u>Page</u>
M-11( )/U - - - - -	8.2.1
M-23( )/U - - - - -	8.3.1
M-24( )/U - - - - -	8.4.1
M-31( )/U - - - - -	8.5.1
M-35( )/U - - - - -	8.6.1
M-56( )/G - - - - -	8.7.1
M-65( )/U - - - - -	8.8.1
M-80C/U - - - - -	8.9.1
M-87/AIC - - - - -	8.10.1
M-92C/U - - - - -	8.11.1
M-94A/A - - - - -	8.12.1
M-100/AIC - - - - -	8.13.1
M-101/AIC - - - - -	8.14.1
M-102/AIC - - - - -	8.15.1
M-103/AIC - - - - -	8.16.1
M-110/U - - - - -	8.17.1
M-133( )/U - - - - -	8.18.1

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-11( )/U

FEDERAL STOCK NO: 5965-170-4832

---

NO ILLUSTRATION AVAILABLE  
NOT RECOMMENDED FOR NEW EQUIPMENT

FUNCTIONAL DESCRIPTION:

Dynamic, semi-directional, bushing-mounted, stand type with cable and connector. This microphone for fixed plant use. The stand is adjustable.

CONSISTS OF:

1 Microphone M-11( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to Army-Navy microphone M-10/FI A-1 except it is a floor stand type.

PHYSICAL DESCRIPTION:

Weight - - - - - Not rated.

Dimensions (Over-all):

Length - - - - -	4.0 inches (101.6 mm)
Diameter (Base) - - - - -	2.0 inches (50.8 mm)
Height - - - - -	70.0 inches (1,778 mm)
Stand - - - - -	5.5 feet (1,676.4 mm)

Cable Data:

Length - - - - -	2.5 feet (635 mm)
Termination - - - - -	Hubbelock #23005 Plug Cap.

ADDITIONAL PHYSICAL DATA:

TECHNICAL DESCRIPTION:

OUTPUT

Nominal Impedance - - - - -	20 ohms
Frequency Range - - - - -	40 to 10,000 Hz.

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-11( )/U (Cont)

FEDERAL STOCK NO: 5965-170-4832

#### ADDITIONAL TECHNICAL DATA:

Stand - - - - - Telescopic to approx. 5.5 feet high  
 Stand mounting - - - - - .625-27 UNS-2A thread swivel joint.

NO INSTALLATION AVAILABLE  
 NOT RECOMMENDED FOR NEW EQUIPMENT

#### REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80058000	M-11( )/U
64294	S6459
05614	41550-1

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE  
NOMENCLATURE: M-23( )/U

FEDERAL STOCK NO: 5965-170-4794

# TECHNICAL DESCRIPTION

NO ILLUSTRATION AVAILABLE  
NOT RECOMMENDED FOR NEW EQUIPMENT

## ADDITIONAL TECHNICAL DATA

### FUNCTIONAL DESCRIPTION:

Picks up sound waves when reproducing equipment MC-364-D is used as a public address system or as a mixer for superimposing speech or music on a recorded background. The microphone is unidirectional, bushing mounted stand type with cable and connector.

### CONSISTS OF:

- 1 Microphone, M-23( )/U

### RELATIONSHIP TO SIMILAR EQUIPMENT:

P/O Sig C reproducing equipment MC-364-D. Microphone is used with but not a part of turntable MX-932( )/U.

### PHYSICAL DESCRIPTION:

Microphone Type - - - - - Dynamic  
Dimensions (Over-all):  
Length - - - - - 4 inches (101.6 mm) (Encl Microphone MTG)  
Diameter - - - - - 2.0 inches (50.8 mm)  
Height - - - - - 4.0 inches (101.6 mm)  
Weight - - - - - 2-1/2 ounces maximum.

### ADDITIONAL PHYSICAL DATA:

Cable Data:  
Length (Extended) - - - - - 12.5 feet (3,810 mm)  
Termination - - - - - Amphenol #80 PC2M  
Bushing Mounted - - - - - .625-27 UNS-2A thread

REMARKS	REMARKS
UN( )CS-M	REMARKS

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-23( )/U (Cont)

FEDERAL STOCK NO: 5965-170-4794

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TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable  
Polarizing Voltage - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - 40 ohms  
Frequency Range - - - - - 70 to 9,000 Hz

ADDITIONAL TECHNICAL DATA:

-88 dB below -1 volt per bar output

---

REFERENCE DATA and LITERATURE

US Army 71-2431  
MIL-P-12953

MANUFACTURER CODE	PART NUMBER
80058	M-23( )/U



MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-24( )/U

FEDERAL STOCK NO: 5965-162-8287

---

NO ILLUSTRATION AVAILABLE

FUNCTIONAL DESCRIPTION:

The M-24( )/U is a desk type microphone that is used with stand public address systems.

CONSISTS OF:

- 1 Microphone, M-24( )/U
- 1 Desk Stand
- 1 Cord W/Connector

RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone is used with but is not a part of amplifier AM-92( )/TL.

PHYSICAL DESCRIPTION:

Microphone Type	Dynamic
<u>Dimensions (Over-all):</u>	
Length	5.0 inches (127.0 mm)
Width	3.5 inches (88.90 mm)
Height	2.5 inches (63.50 mm)
Weight	2-1/2 ounces maximum

ADDITIONAL PHYSICAL DATA:

<u>Cable Data:</u>	
Length (Extended)	25 feet (7,620 mm)
Number of Conductors	2
Shielding	Shielded
Impedance	3 ohms
Termination	Amphenol #75-MC1F (connector at each end)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-24( )/U (Cont)

FEDERAL STOCK NO: 5965-162-8287

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable  
 Polarizing Voltage - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - 50,000 to 100,000 ohms  
 Frequency Range - - - - - 40 to 8,000 Hz

ADDITIONAL TECHNICAL DATA:

Microphone unit mounts on stand.  
 Stand threads - - - - - .625-27 UNS-2A thread  
 Microphone has locking slide which shorts microphone in "off" position.

REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80058	M-24( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-31( )/U

FEDERAL STOCK NO: 5965-013-7560

---

NO ILLUSTRATION AVAILABLE

FUNCTIONAL DESCRIPTION:

This microphone is for field or tactical use. This is a capacitor type, Hi-Fi microphone which is used with an amplifier for high quality sound transmission.

CONSISTS OF:

1 Microphone, M-31( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone is used with but not a part of Western Electric amplifier RA-1095.

PHYSICAL DESCRIPTION:

Microphone Type - - - - - Dynamic

Dimensions (Over-all):

Length - - - - - 1 inch (25.4 mm)

Width - - - - - 1 inch diameter (25.4 mm)

Height - - - - - 1 inch (25.4 mm)

ADDITIONAL PHYSICAL DATA:

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable

Polarizing Voltage - - - - - 200 volts

OUTPUT

Nominal Impedance - - - - - Not rated

Frequency Range - - - - - 50 to 6,000 Hz

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-31( )/U (Cont)

FEDERAL STOCK NO: 5965-013-7560

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ADDITIONAL TECHNICAL DATA:

Microphone is omni-directional when the diaphragm is located in a horizontal plane.

---

REFERENCE DATA and LITERATURE

MANUFACTURER CODE	PART NUMBER
80058	M-31( )/U

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-35( )/U

FEDERAL STOCK NO: 5965-296-2686



FUNCTIONAL DESCRIPTION:

Carbon microphone element used in handsets

CONSISTS OF:

- 1 Microphone element, M-35( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Used in handset M-33( )/PT

PHYSICAL DESCRIPTION:

Dimensions:

Diameter - - - - -	1.2 inches (25.91 mm)
Depth - - - - -	0.375 inch (9.53 mm)

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - -	0.075 amperes
Polarizing Voltage - - - - -	1.2 volts

OUTPUT

Nominal Impedance - - - - -	40 ohms
Frequency Range - - - - -	300 to 4,000 Hz

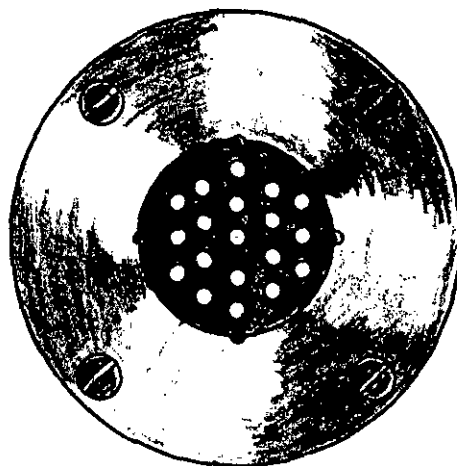


MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-56( )/G

FEDERAL STOCK NO: 5965-524-5520



FUNCTIONAL DESCRIPTION:

Microphone element is used to pick up speech from launcher section for transmission to its associated launcher loaders. Microphone is unidirectional dynamic type.

CONSISTS OF:

- 1 Microphone, M-56( )/G.

RELATIONSHIP TO SIMILAR EQUIPMENT:

Part of launcher section control cabinet of NIKE I Guided Missile Battery.

PHYSICAL DESCRIPTION:

Microphone Type - - - - - Dynamic  
Dimensions (Over-all):  
 Diameter - - - - - 3.25 inches (82.55 mm)  
 Height - - - - - 1.4 inches (35.56 mm)  
 Weight - - - - - 2-1/2 ounces maximum

ADDITIONAL PHYSICAL DATA:

Cable Data: - - - - - No cable

MIL-HDBK-173A/TM-11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-56( )/G (Cont)

FEDERAL STOCK NO: 5965-524-5520

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TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable  
Polarizing Voltage - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - Not rated  
Frequency Range - - - - - 600 to 33,000 Hz

ADDITIONAL TECHNICAL DATA:

Termination - - - - - Terminal board  
Special Features - - - - - 4 holes drilled for mounting flush with panel

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REFERENCE DATA and LITERATURE

SC-DL-100 432A

MANUFACTURER CODE	PART NUMBER
80058 64959	M-56( )/G GS55090

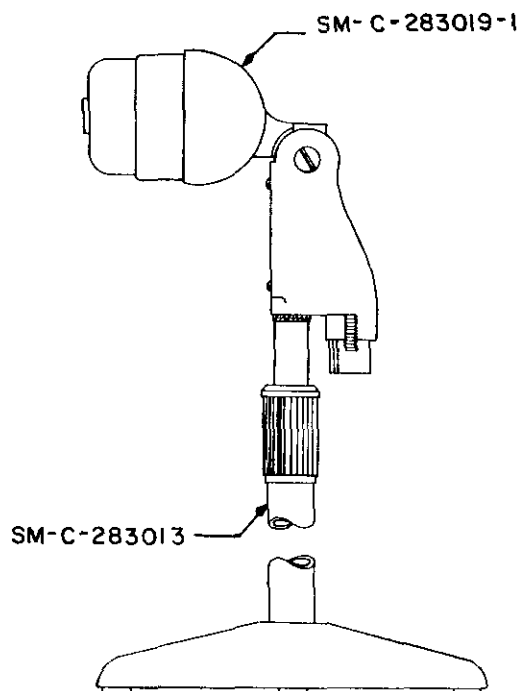


MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-65( )/U

FEDERAL STOCK NO: 5965-296-3117



FUNCTIONAL DESCRIPTION:

This microphone is a dynamic omnidirectional desk type with a stand, cable and a cable connector. It is used with a recorder-reproducer.

CONSISTS OF:

1 Microphone M-65( )/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Used with and part of AN/TNH-2.

PHYSICAL DESCRIPTION:

Dimensions (Over-all):

Length - - - - -	17.0 inches (431.8 mm)
Diameter (Base) - - - - -	6.0 inches (152.4 mm)
Height W/Stand - - - - -	12 inches (304.8 mm) to 17 inches (431.8 mm)

ADDITIONAL PHYSICAL DATA:

Cable Data:

Length (Extended) - - - - -	120 inches (3,048 mm)
Termination - - - - -	Integral Cable Type Connector

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-65( )/U (Cont)

FEDERAL STOCK NO: 5965-296-3117

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable  
 Polarizing Voltage - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - 150 ohms  
 Frequency Range - - - - - 100 to 10,000 Hz

ADDITIONAL TECHNICAL DATA:

Consists of

1 Microphone - - - - - M-44( )/U  
 1 Stand, Microphone - - - - - MT-1583( )  
 1 Cable Assembly - - - - - CX-3322( )/J

REFERENCE DATA and LITERATURE

MIL-M-11101  
 SM-C-283019  
 SM-C-283013  
 SM-D-28015  
 SM-B-34065

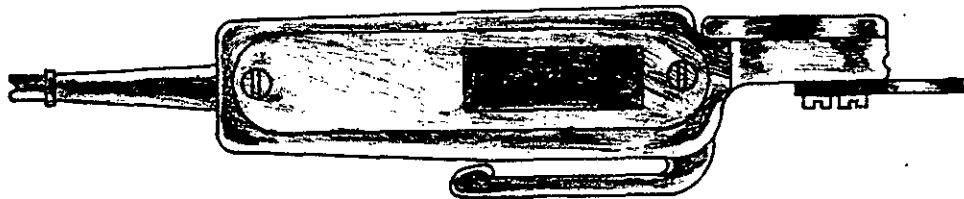
MANUFACTURER CODE	PART NUMBER
80058 82680	M-65( )/U TM-226

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-80C/U

FEDERAL STOCK NO: 5965-179-7762



#### FUNCTIONAL DESCRIPTION:

Palm held, dynamic, and noise canceling microphone that is equipped with a four conductor retractile cord terminated with a connector U-1902( )/U and a clip for attaching the microphone to the user's clothing or a radio set.

#### CONSISTS OF:

- 1 Microphone, Dynamic M-80 C/U
  - Including:
    - 1 Handle
    - 1 Five-conductor retractile cord
    - 1 Retractable cord with integral connector

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to M-80( )/GR microphone.

#### PHYSICAL DESCRIPTION:

Weight - - - - - Not rated

#### Dimensions:

Length - - - - - 2 inches (50.8 mm)  
 Width - - - - - 1.4 inches (35.56 mm)  
 Height - - - - - 6.1 inches (152.65 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-80C/U (Cont)

FEDERAL STOCK NO: 5965-179-7762

Cable Data:

Length (Retracted) - - - - - 11.5 inches (292.10 mm)  
 Length (Extended) - - - - - 6 feet (1,828.8 mm)  
 No. of Conductors - - - - - 5  
 No. of Connectors - - - - - 1  
 Connector Plug - - - - - U-182( )/U

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - 150 ohms at 1,000 Hz  
 Frequency Range - - - - - 300 to 3,500 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Moisture Resistance - - - - - Water tight (3 feet water for 2 hrs)  
 Operating Temperature - - - - - MIL-STD-169  
 Nonoperating Temperature - - - - - MIL-STD-169  
 Relative Humidity (Nonoperating) - - - - 97 to 100 percent  
 Elevation (Operating) - - - - - Up to 15,000 feet above sea level  
 Elevation (Nonoperating) - - - - - Up to 50,000 feet above sea level  
 Salt spray - - - - - 20 percent salt solution at 96°F for 48 hrs.  
 Vibration - - - - - Method 201 of MIL-STD-202  
 Blast - - - - - SK-N-864  
 Switch Data - - - - - Push-to-talk type

REFERENCE DATA and LITERATURE

MIL-E-55119  
 Drawing and Data List DL-SMA-317091

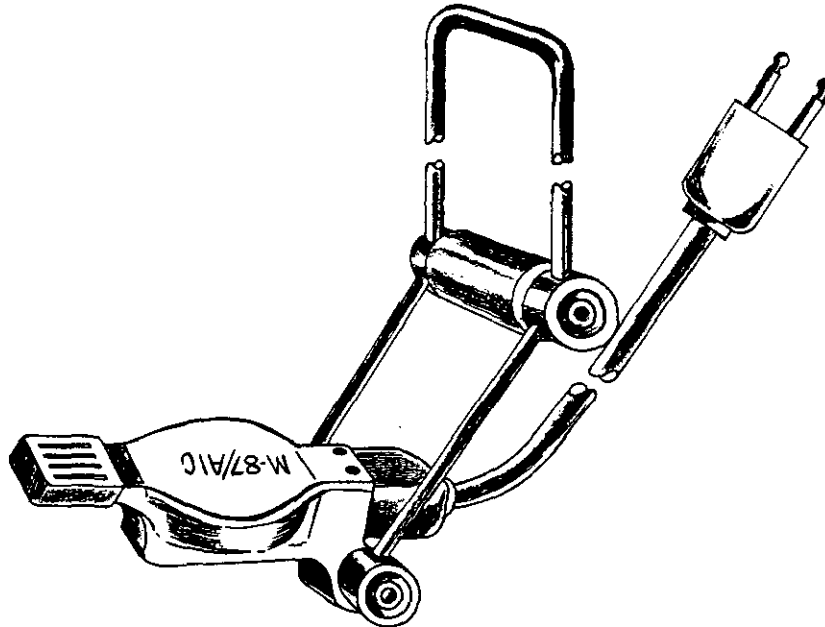
MANUFACTURER CODE	PART NUMBER
80058	M-80 C/U
81134	980

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-87/AIC

FEDERAL STOCK NO: 5965-755-4643



#### FUNCTIONAL DESCRIPTION:

Microphone, dynamic M-87/AIC is a noise-canceling dynamic moving coil microphone designed for use on a headband type headset at low altitudes or for use in a pressure type oxygen helmet, at altitudes where the use of an oxygen helmet is required. The microphone is intended for use as a part of intercommunication set AN/AIC-10( ) to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

#### CONSISTS OF:

- 1 Microphone, Dynamic M-87/AIC
- Including:
- 1 Cable Assembly - - - - - CX-4434( )/U (Dwg 57C12661).
- 1 Boom Assembly - - - - - Dwg 58C12687

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Weight - - - - - 45 grams maximum.  
 Color - - - - - Medium gray.

#### Dimensions:

Length - - - - - 8.67 inches (220.22 mm)  
 Width (max. point) - - - - - .72 inches (18.29 mm)  
 Height (overall) - - - - - 1.0 inches (25.4 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-87/AIC (Cont)

FEDERAL STOCK NO: 5965-755-4643

Cable Data:

Length - - - - - 5.25 inches (133.35 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - U-173/U

ADDITIONAL PHYSICAL DATA:

Diaphragm Material - - - - - Metal

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable.

OUTPUT

Nominal Impedance - - - - - 5.0 ohms  $\pm$  2.0 ohms at 1,000 Hz  
 Frequency Range - - - - - 200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Characteristics:

Ambient Operating Conditions:

Temperature - - - - - -55 degrees C to 85 degrees C  
 Explosive Decompression - - - - - Pressure reduction from 22 in Hg (8000 ft. ) to  
 7 in Hg (35,000 ft. ) in 0.1 second  
 Moisture Barrier Seal - - - - - .25 lb<sub>f</sub>/in<sup>2</sup>  
 Stray Magnetic Field - - - - - Maximum of 5 degrees compass deflection at  
 12 inches.  
 Humidity - - - - - MIL-T-5422  
 Vibration - - - - - MIL-T-5422  
 Shock - - - - - MIL-T-5422  
 Salt Spray - - - - - MIL-T-5422

REFERENCE DATA and LITERATURE

MIL-M-26542

Air Force Drawings: 57B12662, 58B12627, 58C12687, and 57C12661

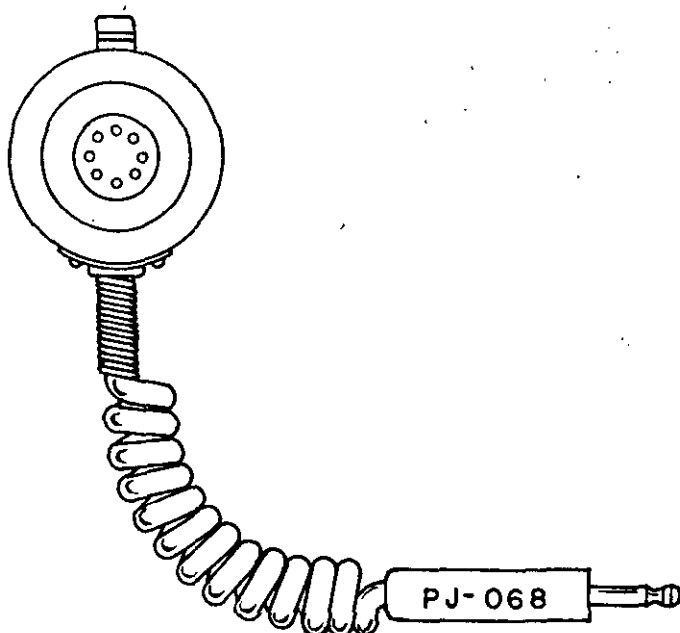
MANUFACTURER CODE	PART NUMBER
80058	M-87/AIC

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-92C/U

FEDERAL STOCK NO: 5965-845-6325



FUNCTIONAL DESCRIPTION:

The M-92C/U is a hand-held push-to-talk dynamic microphone with self-contained transistor amplifiers.

CONSISTS OF:

- 1 Microphone, Dynamic M-92C/U
  - Including:
- 1 Retractable Cord
- 1 Connecting Jack, PJ-068
- 1 Holder Assembly, MT-2014/U

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to M-85/U, except it uses a dynamic microphone.

PHYSICAL DESCRIPTION:

Weight - - - - -	12 ounces, max. (including holder and retractile cord)
<u>Dimensions:</u>	
Length - - - - -	2-3/16 inches (50.99 mm)
Width - - - - -	2-17/32 inches (51.33 mm)
Depth - - - - -	1-9/16 inches (25.96 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-92C/U (Cont)

FEDERAL STOCK NO: 5965-845-6325

Cable Data:

Length - - - - - 13 inches (330.2 mm) coiled  
 No. of Conductors - - - - - 3  
 Connector Designation - - - - - PJ-068

ADDITIONAL PHYSICAL DATA:

Case Data:

Material - - - - - Plastic  
 Finish - - - - - Polished or satinized dull finish

TECHNICAL DESCRIPTION:

Nominal Impedance - - - - - 100 ohms  
 Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Service Conditions - - - - - MIL-E-5400  
 Sand and Dust - - - - - Not rated  
 Stray Magnetic Field - - - - - 3 degrees maximum compass deflection  
 at 8-inch radius

REFERENCE DATA and LITERATURE

MIL-M-21393(WEP)

MANUFACTURER CODE	PART NUMBER
08288	M-92C/U

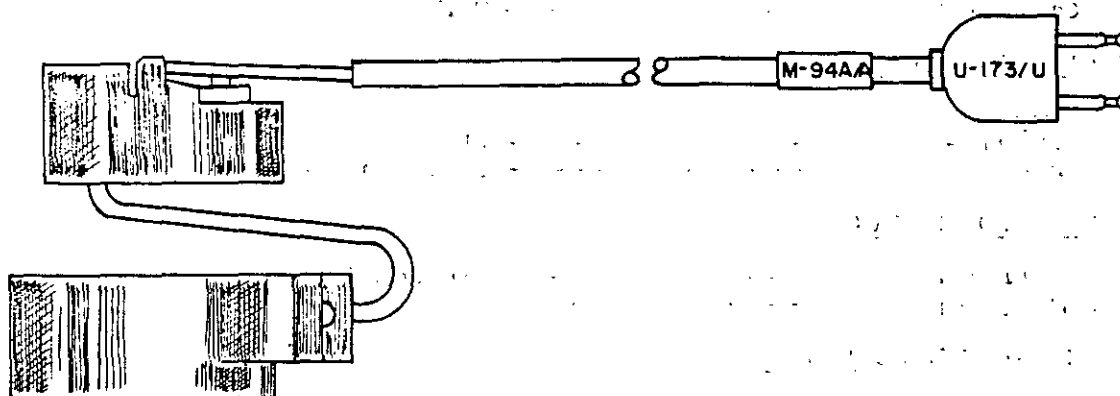


MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-94A/A

FEDERAL STOCK NO: 5965-978-2795



#### FUNCTIONAL DESCRIPTION:

The M-94A/A is a noise canceling, dynamic microphone suitable for use with standard Navy oxygen mask.

#### CONSISTS OF:

- 1 Microphone, Dynamic M-94A/A
  - Including:
- 1 Bracket Assembly
- 1 Cord Assembly
- 1 Connector Plug, U-173/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to NT-51004C except that it uses a retractile cord.

#### PHYSICAL DESCRIPTION:

Weight of microphone - - - - - 1.5 ounces, maximum

##### Dimensions:

Microphone Diameter - - - - - 1 inch (25.4 mm)  
 Depth - - - - - 0.50 inch (12.70 mm)

##### Bracket:

Diameter - - - - - 1-1/8 inch (25.52 mm)  
 Depth - - - - - 1/2 inch (.5 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-94A/A (Cont)

FEDERAL STOCK NO: 5965-978-2795

Cable Data:

Length - - - - - 24 inches (609.6 mm)  
 No. of Conductors - - - - - 2  
 Connector Designation - - - - - U-173/U

ADDITIONAL PHYSICAL DATA:

Case Data:

Material - - - - - Plastic  
 Finish - - - - - Polished or satinized dull finish

TECHNICAL DESCRIPTION:

Nominal Impedance - - - - - 100 ohms, dc  
 Frequency Range - - - - - 300 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Stray Magnetic Field - - - - - 3 degrees maximum compass deflection  
 at 8-inch radius  
 Altitude - - - - - Sea level to 50,000 feet (3.4 inches  
 (77.22 mm) of mercury)  
 Temperature - - - - - 62° C to +71° C  
 Salt Spray - - - - - MIL-T-5422  
 Humidity - - - - - MIL-T-5422  
 Vibration - - - - - MIL-T-5422  
 Impact - - - - - 6 feet on concrete floor

REFERENCE DATA and LITERATURE

MIL-M-21734(WEP)

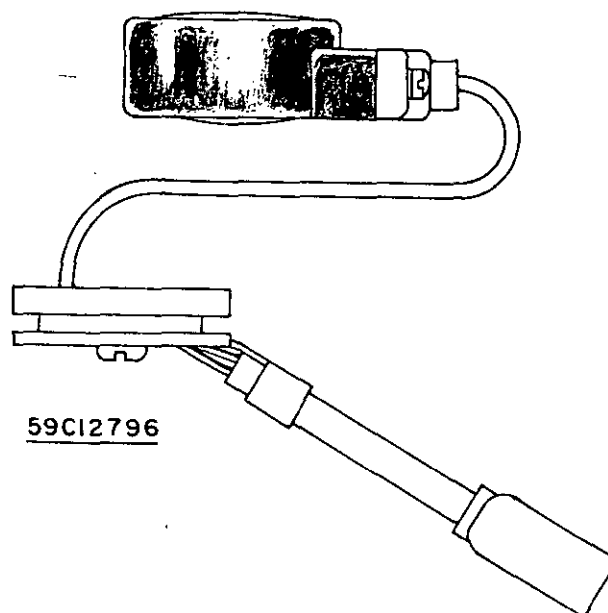
MANUFACTURER CODE	PART NUMBER
08288	M-94A/A

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-100/AIC

FEDERAL STOCK NO: 5965-854-0658



#### FUNCTIONAL DESCRIPTION:

Microphone, dynamic M-100/AIC is a noise-canceling dynamic moving-coil microphone designed for use with an oxygen mask, type MBU-5/P. The microphone is intended for use with intercommunication sets AN/AIC-10 ( ) and AN/AIC-18 to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

#### CONSISTS OF:

- |   |                    |       |             |
|---|--------------------|-------|-------------|
| 1 | Microphone Element | ----- | M101/AIC    |
|   | Including:         |       |             |
| 1 | Cable Assembly     |       |             |
| 1 | Bracket            | ----- | MT-2189/AIC |

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone M-100/AIC uses microphone element M-101/AIC of MIL-M-27291.

#### PHYSICAL DESCRIPTION:

Weight	-----	45 grams maximum.
Color	-----	Black

#### Dimensions:

Length	-----	2.375 inches (60.33 mm)
Width (max. point)	-----	1.375 inches (34.93 mm)
Height (overall)	-----	1.75 inches (44.45 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-100/AIC (Cont)

FEDERAL STOCK NO: 5965-854-0658

Cable Data:

Length - - - - - 24 inches (609.6 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - U-173/U

ADDITIONAL PHYSICAL DATA:

Diaphragm Material - - - - - Polyethylene terephthalate (Mylar polyester)

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable.

OUTPUT

Impedance - - - - - 7 ohms  $\pm$  2.0 ohms at 1,000 Hz  
 Frequency Range - - - - - 200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Characteristics:

Ambient Operating Conditions:

Temperature - - - - - -55 degrees C to 71 degrees C.  
 Humidity - - - - - 100 percent.  
 Explosive Decompression - - - - - Pressure reduction from 22 in Hg (8000 ft.) to  
 7 in Hg (35,000 ft.) in 0.1 second.  
 Moisture Barrier Seal - - - - - .25 lb<sub>f</sub>/in<sup>2</sup>  
 Vibration - - - - - MIL-T-5422

REFERENCE DATA and LITERATURE:

MIL-M-27291

MIL-M-27297

AF Drawings: 59C12795 and 59C12796

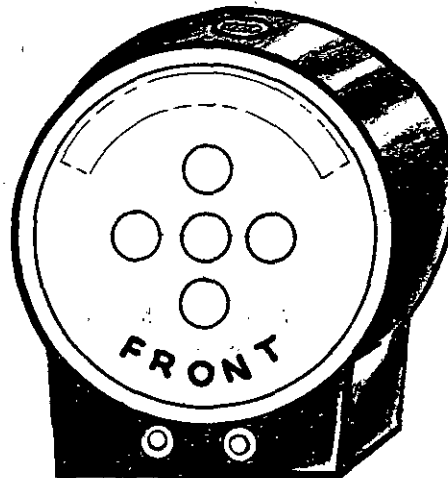
MANUFACTURER CODE	PART NUMBER
80058	M-100/AIC
81134	682-3067

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-101/AIC

FEDERAL STOCK NO: 5965-843-9957



#### FUNCTIONAL DESCRIPTION:

Microphone element M-101/AIC is a noise-canceling dynamic moving coil microphone element designed for use on a headband type headset at low altitudes or for use in an oxygen mask or pressure-type oxygen helmet, at altitudes where the use of an oxygen helmet is required. The microphone element is intended for use with intercommunication sets AN/AIC-10 and AN/AIC-18 to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

#### CONSISTS OF:

- 1 Microphone Element M-101/AIC

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone element M-101/AIC is used with microphone M-100/AIC.

#### PHYSICAL DESCRIPTION:

Weight - - - - - 16 grams maximum.

#### Dimensions:

Length - - - - - 1.163 inches (29.54 mm) (exclusive of cable).  
 Width (max. point) - - - - - .5 inches (12.70 mm)  
 Height (overall) - - - - - 1.047 inches (26.44 mm).

Cable Data - - - - - Not applicable.  
 No. of Conductors - - - - - 2

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-101/AIC (Cont)

FEDERAL STOCK NO: 5965-843-9957

ADDITIONAL PHYSICAL DATA:

Diaphragm Material - - - - - Polyethylene terephthalate (Mylar polyester)

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable.

OUTPUT

Nominal Impedance - - - - - 7 ohms  $\pm$  2 ohms at 1,000 Hz.

Frequency Range - - - - - 200 to 6,000 Hz.

ADDITIONAL TECHNICAL DATA:

Environmental Characteristics:

Ambient Operating Conditions:

Temperature - - - - - -55 degrees C to 71 degrees C.

Humidity - - - - - 100 percent

Explosive Decompression - - - - - Pressure reduction from 22 in Hg (8000 ft.) to  
 7 in Hg (35,000 ft.) in 0.1 second

Vibration - - - - - MIL-T-5422

Shock - - - - - MIL-T-5422

Salt Spray - - - - - MIL-T-5422

REFERENCE DATA and LITERATURE

MIL-M-27291

MANUFACTURER CODE	PART NUMBER
80058	M-101/AIC
81134	82368

MIL-HDBK-173A/TM 11-487M

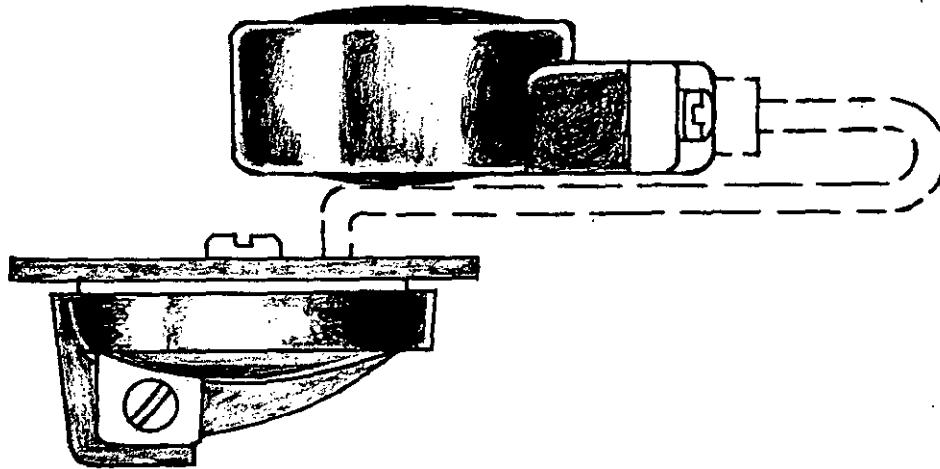
MIL-HDBK-173A

11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-102/AIC

FEDERAL STOCK NO: 5965-857-6622



60C4309

FUNCTIONAL DESCRIPTION:

Microphone, dynamic M-102/AIC is a noise-canceling dynamic moving-coil microphone designed for use with an oxygen mask, type MBU-4/P. The microphone is intended for use with intercommunication sets AN/AIC-10( ) and AN/AIC-18 to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

CONSISTS OF:

- 1 Microphone, Element M-101/AIC
- Including:
- 1 Bracket, Microphone MT-2190/AIC

RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone element M-101/AIC is used with this microphone.

PHYSICAL DESCRIPTION:

Weight - - - - - 40 grams maximum.

Dimensions:

Length - - - - - 1.5 inches (38.10 mm) (exclusive of cable)  
 Width (max. point) - - - - - 1.0 inches (25.4 mm)  
 Height (overall) - - - - - 1.5 inches (38.10 mm)

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-102/AIC (Cont)

FEDERAL STOCK NO: 5965-857-6622

Cable Data:

Length - - - - - 19 inches (482.6 mm)  
 No. of Conductors - - - - - 2  
 No. of Connectors - - - - - 1  
 Connector Designation - - - - - See Dwg. 60C4309

ADDITIONAL PHYSICAL DATA:

Diaphragm Material - - - - - Polyethylene terephthylate (Mylar polyester)

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not applicable.

OUTPUT

Nominal Impedance - - - - - 7 ohms  $\pm$  2 ohms at 1,000 Hz  
 Frequency Range - - - - - 200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Characteristics:

Ambient Operating Conditions:

Temperature - - - - - -55 degrees C to 71 degrees C.  
 Humidity - - - - - 100 percent.  
 Explosive Decompression - - - - - Pressure reduction from 22 in Hg (8000 ft.) to  
 7 in Hg (35,000 ft.) in 0.1 second.  
 Environmental - - - - - MIL-T-5422

REFERENCE DATA and LITERATURE

MIL-M-27469

MIL-M-27291

Air Force Drawings: 60C4308, 60C4309, and 60C4311

MANUFACTURER CODE	PART NUMBER
80058	M-102/AIC
82872	10300

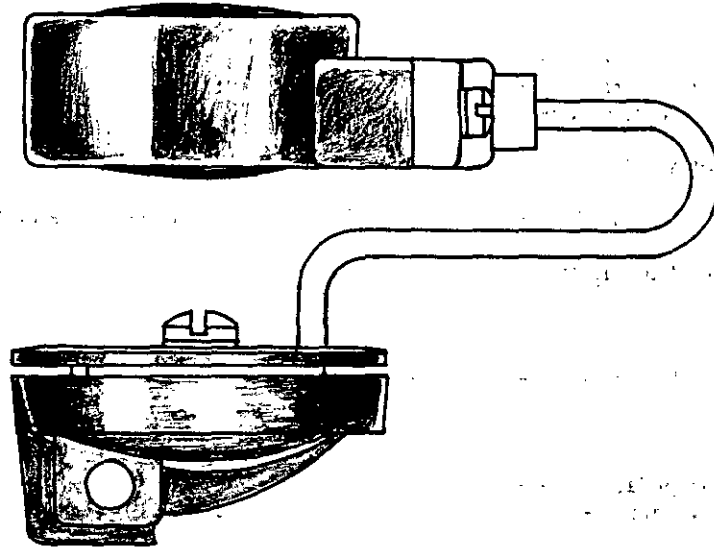


MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-103/AIC

FEDERAL STOCK NO: 5965-431-2476



60C4311

FUNCTIONAL DESCRIPTION:

Microphone, dynamic M-103/AIC is a noise-canceling dynamic moving-coil-microphone designed for use with an oxygen mask, type MBU-3/P. The microphone is intended for use with intercommunication sets AN/AIC-10( ) and AN/AIC-18 to provide communication of high intelligibility under the extreme noise conditions encountered in military aircraft.

CONSISTS OF:

- 1 Microphone, Dynamic M-103/AIC  
 Including:
- 1 Bracket MT-2191/AIC

RELATIONSHIP TO SIMILAR EQUIPMENT:

Microphone M-103/AIC uses microphone element M-101/AIC of MIL-M-27291.

PHYSICAL DESCRIPTION:

Weight - - - - - 35.0 grams.

Dimensions:

Length - - - - - 1.81 inches (45.97 mm) (exclusive of cable).  
 Width (max. point) - - - - - 1.125 inches (28.58 mm).  
 Height (overall) - - - - - 1.375 inches (34.93 mm).



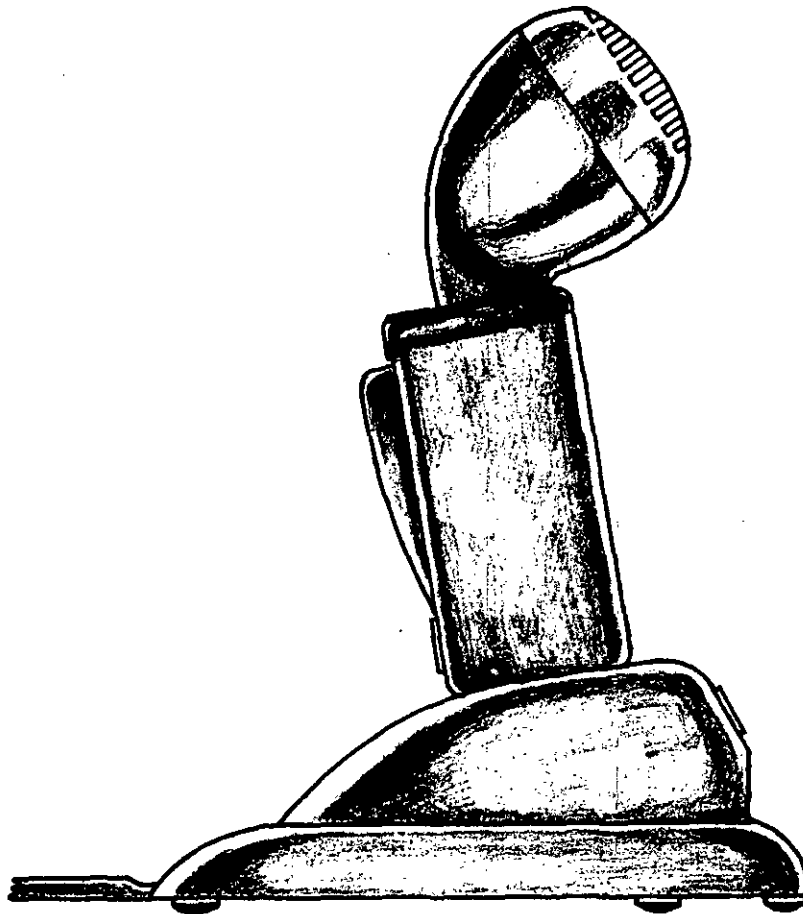
MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-110/U

FEDERAL STOCK NO: 5965-752-5820

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FUNCTIONAL DESCRIPTION:

Unidirectional, desk type, with stand, push to talk switch, and cable with integral connector terminal.

CONSISTS OF:

- 1 Microphone M-110/U
- 1 Stand
- 1 Cable
- 1 Switch - Press to talk type

MIL-HDBK-173A/TM-11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-110/U (Cont)

FEDERAL STOCK NO: 5965-752-5820

RELATIONSHIP TO SIMILAR EQUIPMENT:

This microphone is intended to be used with and part of OA-3014/FSW-8 and OA-3014 A/FSW-8.

PHYSICAL DESCRIPTION:

Microphone Type - - - - - Magnetic  
 Dimensions (Over-all):  
 Height - - - - - 9.313 inches (236.55 mm) (w/stand)  
 Base - - - - - 5 x 7 inches

ADDITIONAL PHYSICAL DATA:

Cable Data:

Length (Extended) - - - - - 84 inches (2,133.6 mm)  
 Number of Conductors - - - - - 4  
 Shielding - - - - - Yes  
 Termination - - - - - Integral cable type connector  
 Length (Retracted) - - - - - 16.5 inches (419.10 mm)

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - 100 mA  
 Polarizing Voltage - - - - - Not rated

OUTPUT

Nominal Impedance - - - - - 200 ohms  
 Frequency Range - - - - - 70 to 8,000 Hz

ADDITIONAL TECHNICAL DATA:

70 dB below 1 mW per 10 microbars.  
 Humidity, Indefinite Period - - - - - 97 percent  
 Humidity, 4 hours - - - - - 100 percent  
 Elevation (Operating) - - - - - 10,000 feet  
 Elevation (Nonoperating) - - - - - 25,000 feet  
 Temperature Operating - - - - - -20°F to +140°F  
 Temperature Nonoperating - - - - - -40°F to +160°F

REFERENCE DATA and LITERATURE:

MIL-C-55043  
 SM-C-366469

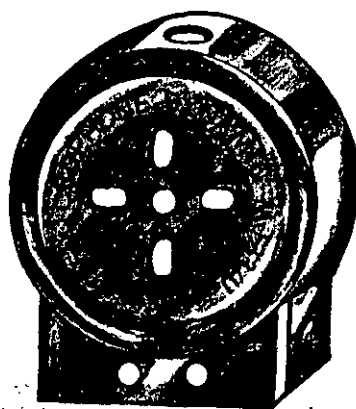
MANUFACTURER CODE	PART NUMBER
80058	M-110/U
77638	C492-5309

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE

NOMENCLATURE: M-133( )/U

FEDERAL STOCK NO: 5965-900-8102



#### FUNCTIONAL DESCRIPTION:

The M-133( )/U is a moving coil, noise canceling, dynamic microphone intended for use under Army aircraft oxygen masks.

#### CONSISTS OF:

- 1 Microphone element, dynamic, M-133( )/U

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

#### PHYSICAL DESCRIPTION:

Weight ----- Not Available

#### Dimensions:

Diameter -----	1.032 inches (26.21 mm)
Width -----	.500 inches (12.70 mm)
Height -----	1.200 inches (30.48 mm)

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: MICROPHONE  
 NOMENCLATURE: M-133( )/U-(Cont)  
 FEDERAL STOCK NO: 5965-900-8102

ADDITIONAL PHYSICAL DATA:

Case Material: Not rated.

TECHNICAL DESCRIPTION:

INPUT

Operating Current - - - - - Not rated

OUTPUT

Impedance - - - - - 4 to 7-1/2 ohms

Frequency Range - - - - - 200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Magnetic Performance:

External Magnetic Field - - - - - Open-circuit voltage sensitivity 470 microvolts (max) per oersted  
 Stray Magnetic Field - - - - - Less than 5 degrees magnetic deflection  
 Sensitivity at Sea Level - - - - - 2.5 to 5.0 microvolts per dyne  
 Sensitivity at 25,000 Feet - - - - - Within 8 dB of sea level  
 Signal to Noise Ratio - - - - - 16 dB minimum

Environmental Data:

Altitude - - - - - Operationally used up to 15,000 feet, but withstands altitudes up to 50,000 feet without permanent damage  
 Fungus - - - - - Procedure I, method 508, MIL-STD-810  
 Salt Fog - - - - - Method 509, MIL-STD-810  
 Immersion - - - - - 3 feet water  
 Temperature - - - - - +150° F to -40° F  
 Humidity - - - - - MIL-STD-170 and MIL-M-55516(EL)  
 Bounce - - - - - Package tester  
 Vibration - - - - - Simple harmonic motion having an amplitude of 0.03 inch (.76 mm) for 5 hours  
 Drop - - - - - 10 times from a 6 ft. height  
 Blast - - - - - SK-N-864  
 Sand and Dust - - - - - MIL-C-9436

REFERENCE DATA and LITERATURE

SC-DL-539922  
 MIL-M-55516(EL)

MANUFACTURER CODE	PART NUMBER
80058	M-133( )/U

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

## SECTION 9

### HORN AND DIAPHRAGM LOUDSPEAKERS

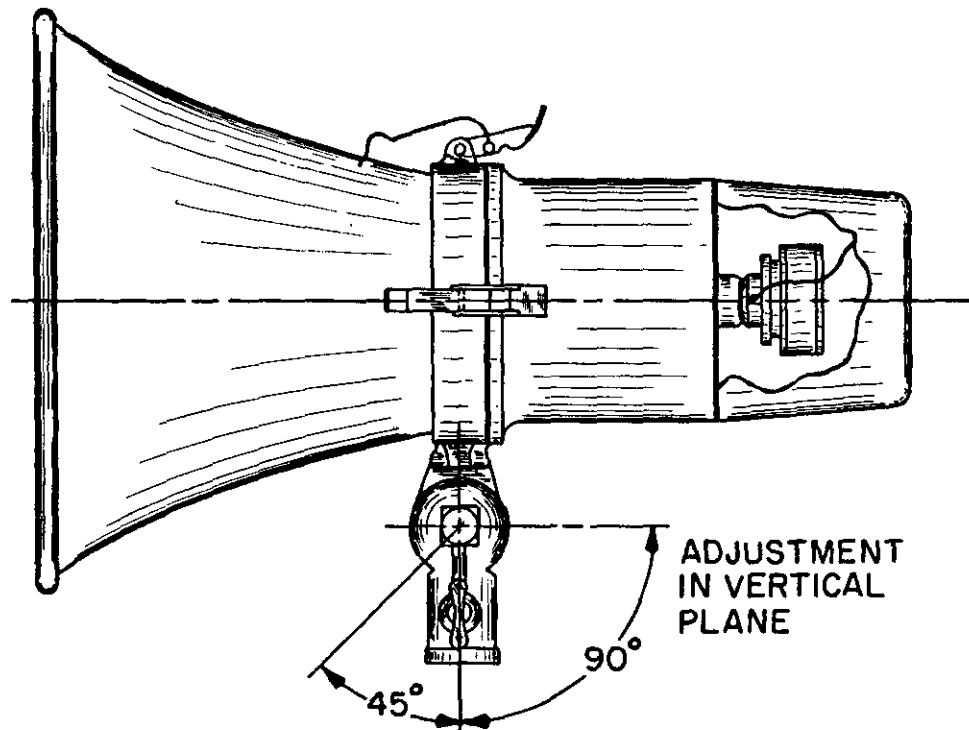
<u>Nomenclature, model or part number</u>	<u>Page</u>
LS-103( )/TIQ-2 - - - - -	9.2.1
LS-104( )/TIQ-3 - - - - -	9.3.1
LS-211/AIC-13 - - - - -	9.4.1
LS-387/SIC, LS-388/SIC - - - - -	9.5.1
M15 - - - - -	9.6.1
NT-49546 - - - - -	9.7.1

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-103( )/TIQ-2

FEDERAL STOCK NO: 5965-128-2983



FUNCTIONAL DESCRIPTION:

The LS-103 is a permanent magnet dynamic, reentrant horn type loudspeaker. The unit is rugged in construction and will operate over a wide temperature range and under harsh environmental conditions. The LS-103 is primarily intended for use as part of Public Address Set AN/TIQ-2.

CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet LS-103/TIQ-2.

RELATIONSHIP TO SIMILAR EQUIPMENT:

Used with Public Address Set AN/TIQ-2. This loudspeaker is similar to the LS-104( )/TIQ-3.



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-103( )/TIQ-2 (Cont)

FEDERAL STOCK NO: 5965-128-2983

PHYSICAL DIMENSIONS:

Diameter - - - - -	19.06 inches (484.12 mm)
Mounting Dimensions - - - - -	Adjustable mounting bracket with .84 inch mounting hole
Terminal/Connector Designation - - - - -	5 binding posts
<u>Over-all Dimensions:</u>	
Diameter - - - - -	19.06 inches (484.12 mm)
Length - - - - -	26 inches (660.50 mm)
Weight - - - - -	14 pounds

ADDITIONAL PHYSICAL DATA:

Horn thread size - - - - -	1-3/8-18
Loudspeaker color - - - - -	Green
Horn material - - - - -	Steel, Aluminum, or Bronze Alloys
Vertical adjustment - - - - -	Provides for adjustment in the vertical plane
Fasteners - - - - -	4 fasteners for attaching horn and driver cover

TECHNICAL DESCRIPTION:

<u>INPUT</u>	
Voice coil impedance - - - - -	16 Ohms
Power handling rating - - - - -	20 watts normal; 25 watts peak (warble tones)
Frequency range - - - - -	200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Nonoperating Conditions:

Temperature - - - - -	From -80°F (24 hours max.) to +160°F (4 hours max.)
Relative Humidity - - - - -	97% indefinitely, 100% for 4 hours
Elevation - - - - -	25,000 feet above sea level

Operating Conditions:

Temperature - - - - -	From -65°F (72 hours max.) to +150°F (4 hours max.)
Relative Humidity - - - - -	97%, 100% for 4 hours
Elevation - - - - -	100,000 feet above sea level

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-103( )/TIQ-2 (Cont)

FEDERAL STOCK NO: 5965-128-2983

Driver Unit Data:

Power Handling Capacity - - - - 25 watts at 175 Hz  
 Weight - - - - - 4 pounds maximum  
 Magnet Material - - - - - Alnico Number 5 or equal

Transformer Data: - - - - - Primary impedances 250, 500, 1,000, and 2,500 ohms

Resistant Characteristics: - - - - - Resistant to vibration, gun blast, moisture and shock

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REFERENCE DATA and LITERATURE

MIL-L-13941  
 MIL-L-13941/1  
 Drawings: SC-DL-15646

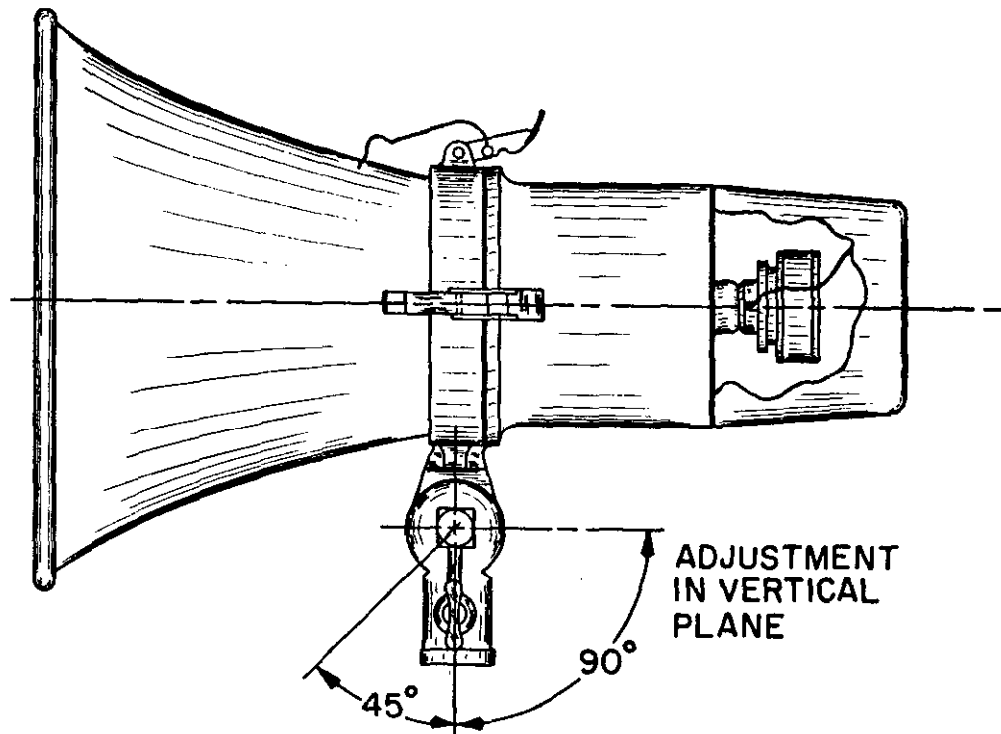
MANUFACTURER CODE	PART NUMBER
80058	LS-103( )/TIQ-2
87771	LS-103( )/TIQ-2

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-104( )/TIQ-3

FEDERAL STOCK NO: 5965-221-5786



#### FUNCTIONAL DESCRIPTION:

The LS-104 is a permanent magnet dynamic, reentrant horn type loudspeaker. The unit is rugged in construction and will operate over a wide temperature range and under harsh environmental conditions. The LS-104 is primarily intended for use as part of Public Address Set AN/TIQ-3.

#### CONSISTS OF:

- 1 Loudspeaker, Permanent Magnet LS-104-( )/TIQ-3.

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

Used with Public Address Set AN/TIQ-2. This loudspeaker is similar to the LS-103( )/TIQ-2.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-104( )/TIQ-3 (Cont)

FEDERAL STOCK NO: 5965-221-5786

PHYSICAL DIMENSIONS:

Diameter - - - - -	13.38 inches (339.95 mm)
Mounting Dimensions - - - - -	Adjustable mounting bracket with .84 inch mounting hole
Terminal/Connector Designation - - - - -	5 binding posts.

Over-all Dimensions:

Diameter - - - - -	13.38 inches (339.95 mm)
Length - - - - -	20.00 inches (508.00 mm)

ADDITIONAL PHYSICAL DATA:

Horn thread size - - - - -	1-3/8-18
Loudspeaker color - - - - -	Green
Horn material - - - - -	Steel, Aluminum, or Bronze Alloys
Vertical adjustment - - - - -	Provides for adjustment in the vertical plane
Fasteners - - - - -	4 fasteners for attaching horn and driver cover

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - -	16 Ohms
Power handling rating - - - - -	20 watts normal; 25 watts peak (warble tones)
Frequency range - - - - -	200 to 6,000 Hz

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Nonoperating Conditions:

Temperature - - - - -	From -80°F (24 hours max.) to +160°F (4 hours max.)
Relative Humidity - - - - -	97% indefinitely, 100% for 4 hours
Elevation - - - - -	25,000 feet above sea level

Operating Conditions:

Temperature - - - - -	From -65°F (72 hours max.) to +150°F (4 hours max.)
Relative Humidity - - - - -	97%, 100% for 4 hours
Elevation - - - - -	10,000 feet above sea level

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-104( )/TIQ-3 (Cont)

FEDERAL STOCK NO: 5965-221-5786

Driver Unit Data:

Power Handling Capacity - - - - 25 watts at 175 Hz  
Weight - - - - - 4 pounds maximum  
Magnet Material - - - - - Alnico Number 5 or equal

Transformer Data: - - - - - Primary impedances 250, 500, 1,000, and 2,500  
ohms

Resistant Characteristics: - - - - - Resistant to vibration, gun blast, moisture and  
shock

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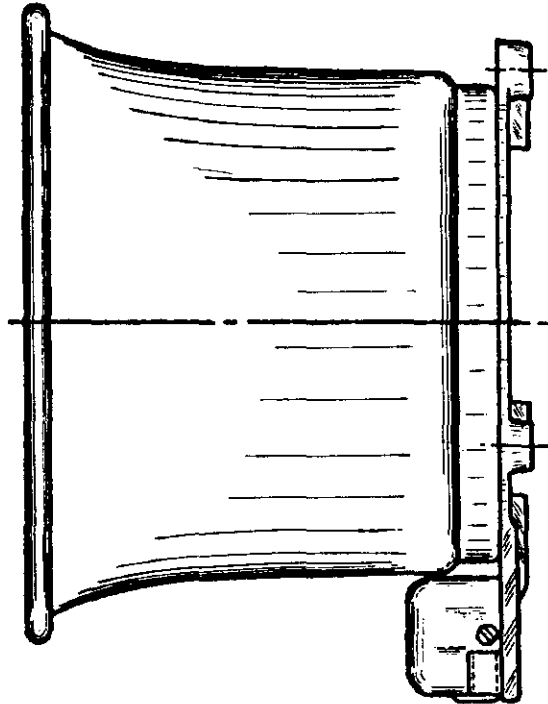
REFERENCE DATA and LITERATURE

MIL-L-13941  
MIL-L-13941/2  
Drawings: SC-DL-90626

MANUFACTURER CODE	PART NUMBER
80058	LS-104( )/TIQ-3
87771	LS-104( )/TIQ-3

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER  
NOMENCLATURE: LS-211/AIC-13  
FEDERAL STOCK NO: 5965-608-0130



FUNCTIONAL DESCRIPTION:

The LS-211/AIC-13 is a permanent magnet loudspeaker. It is intended to be used as part of Public Address Set AN/AIC-13 to transmit audio messages at low altitudes or at ground level within a military aircraft or from a military aircraft on the ground to personnel in the immediate vicinity. This unit is used where high power is reduced to override high noise levels.

CONSISTS OF:

- 1 Permanent Magnet Reflex Re-entrant Horn Type Loudspeaker LS-211/AIC-13

RELATIONSHIP TO SIMILAR EQUIPMENT:

Part of Public Address Set AN/AIC-13

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-211/AIC-13 (Cont)

FEDERAL STOCK NO: 5965-608-0130

PHYSICAL DESCRIPTION:

Over-all dimensions:

Length - - - - -	7.53 inches (191.26 mm)
Width - - - - -	6.80 inches (172.72 mm)
Depth - - - - -	4.97 inches (126.24 mm)
Net weight - - - - -	3.12 pounds

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - -	16 ohms nominal
Power handling rating - - - - -	20 watts, rms

OUTPUT

Frequency range - - - - -	500 to 8,000 Hz
Sensitivity - - - - -	115 dB at full rated power and at a distance of 4 feet on axis

ADDITIONAL TECHNICAL DATA:

Environmental Data:

Operating Conditions:

Temperature - - - - -	From -67°F to +160°F
Pressure - - - - -	To 50,000 feet

Other Data:

Explosive Decompression: - - -	10 consecutive explosive decompressions from an altitude of 8000 feet to an altitude of 35,000 feet (corresponding to pressures of 22.2 to 7.04 inches of mercury).
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Humidity-Shock-Vibration-Salt Spray-Fungus Resistance - -	MIL-E-5422
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REFERENCE DATA and LITERATURE

SGME-PD-162  
 MSS 5965-6  
 Air Force Drawing 55D13316  
 MIL-E-5422

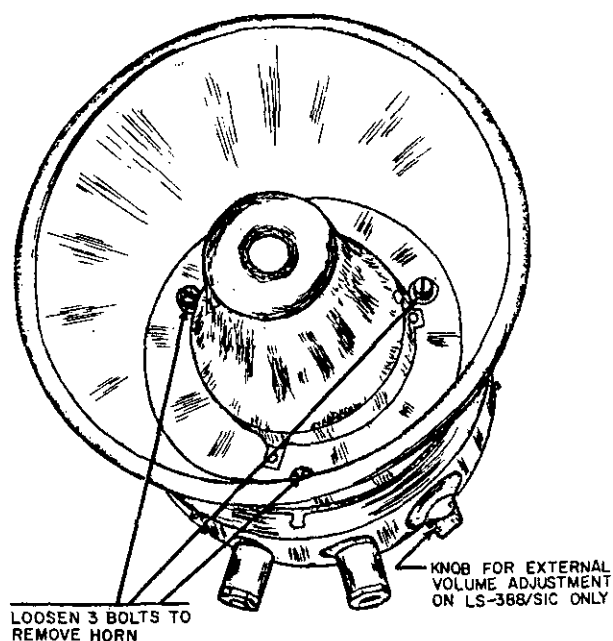
MANUFACTURER CODE	PART NUMBER
81349	LS-211/AIC-13
87771	LS-211/AIC-13

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-387/SIC; LS-388/SIC

FEDERAL STOCK NO: 5965-296-1808; 5965-636-2181



FUNCTIONAL DESCRIPTION:

The LS-387/SIC and LS-388/SIC are high power loudspeakers intended for use on shipboard. They provide good speech intelligibility and good reproduction of alarm signals in areas with high noise levels.

CONSISTS OF:

- 1 Loudspeaker LS-387/SIC or LS-388/SIC

Including:

- 1 Transformer FSN N5950-548-4829



MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-387/SIC: LS-388/SIC (Cont)

FEDERAL STOCK NO: 5965-296-1808; 5965-636-2181

#### RELATIONSHIP TO SIMILAR EQUIPMENT:

The LS-387/SIC is identical to the LS-388/SIC except for the method of volume adjustment. On the LS-387/SIC volume is adjusted internally by connecting a movable jumper to any one of five terminals inside the speaker case. The LS-388/SIC volume is adjusted by a five-position tap switch which is accessible on the outside of the case.

#### PHYSICAL DESCRIPTION:

Nominal diameter - - - - - 12 inches (304.8 mm)

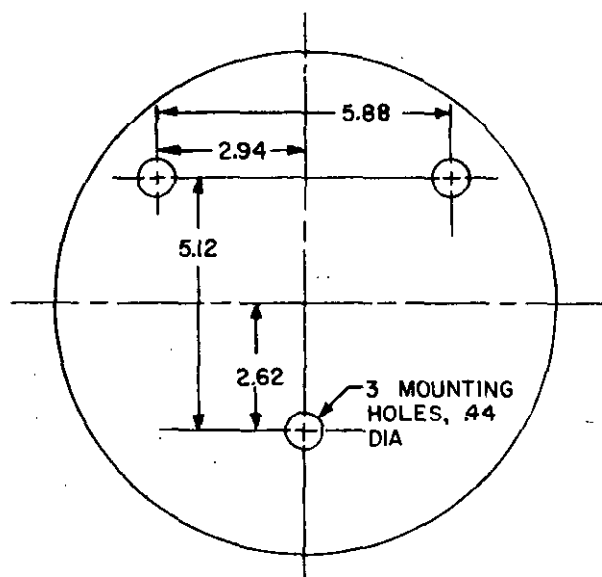
#### Mounting dimensions:

Refer to the following figure, Mounting dimensions, for arrangement of mounting holes:

#### Over-all dimensions:

Length - - - - - 10 inches (254.0 mm)  
 Diameter - - - - - 12.625 inches (320.68 mm)  
 Weight - - - - - 23 pounds

MOUNTING  
 DIMENSIONS



#### ADDITIONAL PHYSICAL DATA:

Material: Horn assembly and case are brass.  
 Finish: Light Gray, Semi-Gloss

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: LS-387/SIC: LS-388/SIC (Cont)

FEDERAL STOCK NO: 5965-296-1808; 5965-636-2181

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 13.5 ohms  
 Power handling rating - - - - - 7.5 watts, peak  
 Frequency range - - - - - 400 to 4,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer data:

The transformer is tapped to allow use with either a 50 or 70 volt audio line.  
 Primary impedances at 70 volt tap: 670; 3100; 10,200; 18,400; 22,000 ohms.  
 Primary impedances at 50 volt tap: 350; 1,500; 5,200; 9,600; 11,300 ohms.

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REFERENCE DATA and LITERATURE

Jensen Manufacturing Instruction Note No. 129-B.  
 MIL-A-20222

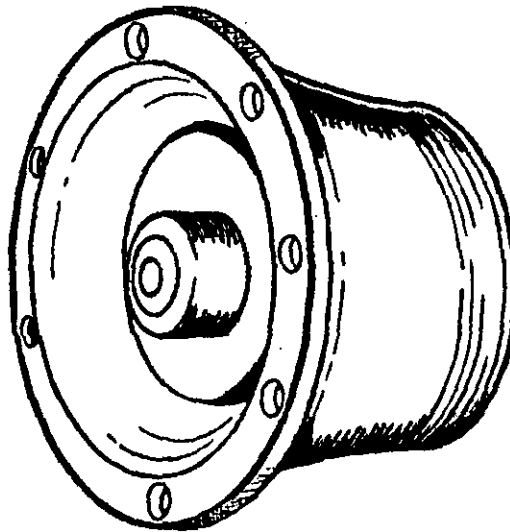
MANUFACTURER CODE	PART NUMBER
32001	LS-387/SIC
32001	LS-388/SIC

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: COMMERCIAL Model M15

FEDERAL STOCK NO: 5965-284-7456



FUNCTIONAL DESCRIPTION:

This loudspeaker is a compact reflex speaker designed for flange or flush mounting in cabinets, walls, etc. The unit has a waterproof construction and withstands destructive, corrosive agents such as humidity, salt spray, wind, and rain. The voice coil diaphragm assemblies are tropicalized and the driver mechanism is sealed in an airtight weather-proof housing. As well as being suitable for paging and public address systems, the speaker is designed to operate as a highly sensitive microphone whenever talk-back communication is desired.

CONSISTS OF:

- 1 Loudspeaker LTV University Loudspeaker Model M15

RELATIONSHIP TO SIMILAR EQUIPMENT:

LTV University Model M15 can also be obtained with 4- or 45-ohm voice coil impedance.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDS

NOMENCLATURE: COMMERCIAL Model M15 (Cont)

FEDERAL STOCK NO: 5965-284-7456

PHYSICAL DESCRIPTION:

Nominal diameter - - - - - 5.5 inches (139.70 mm)

Over-all dimensions:

Length - - - - - 4.438 inches (112.73 mm)

Diameter - - - - - 5.5 inches (139.70 mm)

Mounting Dimensions:

6 holes on 4.875 inch mounting diameter (123.83 mm)

Weight - - - - - 2-1/2 pounds

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - - 8 ohms

Power handling rating - - - - - 5 watts (10 watts above 500 Hz) (warble tones)

Frequency range - - - - - 500 to 13,000 Hz

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REFERENCE DATA and LITERATURE

LTV University Loudspeakers Inc. Commercial Catalog 78A155F  
 The Radio Electronic Master 26th Edition  
 University Loudspeakers Technilog  
 USS 5965-6

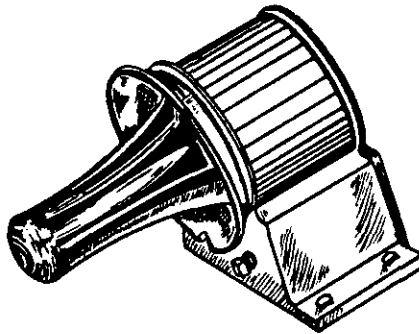
MANUFACTURER CODE	PART NUMBER
87771	M15

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: NT-49546

FEDERAL STOCK NO: 5965-296-3398



FUNCTIONAL DESCRIPTION:

This loudspeaker is an aluminum all die case reflexed air column speaker with a radial deflector for 360 degree horizontal dispersion. The speaker is resistant to salt spray, gases, live steam, fungus, and harmful dust. The unit, which is a multiduty loudspeaker, includes a tapped, variable primary impedance line or output transformer and a T-pad volume level control. It may be used in applications where ruggedness is a prime requirement.

CONSISTS OF:

- 1 Loudspeaker, NT-49546

Including:

- 1 Volume Control, LTV University Loudspeakers Part No. 19 E 13
- 1 Transformer, LTV University Loudspeaker Part No. 5430

RELATIONSHIP TO SIMILAR EQUIPMENT:

Similar to LTV University Model MSR-T.

MIL-HDBK-173A/TM 11-487M  
 MIL-HDBK-173A  
 11 September 1973

ITEM NAME: LOUDSPEAKER

NOMENCLATURE: NT-49546 (Cont)

FEDERAL STOCK NO: 5965-296-3398

PHYSICAL DESCRIPTION:

Over-all dimensions:

Height - - - - -	10.254 inches (277.83 mm)
Width - - - - -	7.75 inches (196.85 mm)
Depth - - - - -	8 inches (203.20 mm)

Mounting dimensions: Two 3/8-inch diameter holes 6-7/8 inches center to center.

Weight - - - - -	10-1/4 pounds
Finish - - - - -	Navy gray, semigloss

TECHNICAL DESCRIPTION:

INPUT

Voice coil impedance - - - - -	16 ohms
Power handling rating - - - - -	10 watts, normal; 15 watts, peak
Frequency range - - - - -	200 to 5,000 Hz

ADDITIONAL TECHNICAL DATA:

Transformer data:

Primary impedances - - - - -	600 ohms; 1200 ohms; 1800 ohms; 2400 ohms; 3000 ohms
Secondary impedances - - - - -	16 ohms
Terminal types - - - - -	2 solder lugs for secondary; 6 screw type terminals for primary

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REFERENCE DATA and LITERATURE

LTV University Loudspeakers Inc. Drawing Number 1915  
 LTV University Loudspeakers Inc. Commercial Catalog 78A155F  
 MSS 5965-6

MANUFACTURER CODE	PART NUMBER
80064	NT-49546
81501	MSR-M
87771	NT-49546

MIL-HDBK-173A/TM 11-487M  
MIL-HDBK-173A  
11 September 1973

Custodians:

Army - EL  
Navy - EC  
Air Force - 80

Preparing activity:

Army - EL

(Project 5965-0122 )

Review activities:

Army - EL, MI, , MU  
Navy - EC  
Air Force -80

User activities:

Army - None  
Navy - None  
Air Force - None

FOLD

Department of the Army  
Headquarters  
U.S.Army Electronics Command  
Fort Monmouth, New Jersey 07703

POSTAGE AND FEES PAID

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SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p><b>INSTRUCTIONS:</b> This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
<p>SPECIFICATION <b>MIL-HDBK-173A</b> DEPARTMENT OF THE ARMY TECHNICAL MANUAL 11-4871  <b>MILITARY STANDARDIZATION HANDBOOK AUDIO EQUIPMENT</b></p>		
ORGANIZATION		
CITY AND STATE		CONTRACT NUMBER
<p>MATERIAL PROCURED UNDER A</p> <p><input type="checkbox"/> DIRECT GOVERNMENT CONTRACT      <input type="checkbox"/> SUBCONTRACT</p>		
<p>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</p> <p>A. GIVE PARAGRAPH NUMBER AND WORDING.</p>		
<p>B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</p>		
<p>2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID</p>		
<p>3. IS THE SPECIFICATION RESTRICTIVE?</p> <p><input type="checkbox"/> YES      <input type="checkbox"/> NO (If "yes", in what way?)</p>		
<p>4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)</p>		
SUBMITTED BY (Printed or typed name and activity - Optional)		DATE

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DD FORM 1 JAN 66 1426

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.

ESC-FM 1068-68