



DEFENSE LOGISTICS AGENCY
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IN REPLY

REFER TO DSCC-VAI (Howard E. H. Jenkins/614-692-0560)

September 10, 2004

Military/Industry Distribution

SUBJECT: Initial Drafts of MIL-PRF-26542/1E (1): "MICROPHONE AND MICROPHONE ASSEMBLIES, M26542/1 and M26542/1-01" and MIL-PRF-26542/11B (1) "MICROPHONE AND MICROPHONE ASSEMBLY, M26542/11 and M26542/11-01".
Project numbers 5965-0426-000 and 5965-0427-000

As in the recent initial draft amendment for correction to MIL-PRF-26542/2E, an error was discovered in the top view of figure 1, within the subject documents. During the development of the current revisions, a decision was made to retain the 1.060 MAX dimension for the outer case. An error occurred, resulting in an incorrect "1.000 MAX" dimension appearing in the released document. Coordinated projects have been initiated (5965-0426-000 and 5965-0427-000), to change the outer case dimension to reflect the correct 1.060 MAX value.

The initial drafts for the subject documents are now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dscclia.mil>

or

<http://www.dscclia.mil/Programs/MilSpec/DocSearch.asp>

The changes include correction of the outer case dimension (1.060 MAX), replacement of the related entry to the metric conversion table on figure 1, and minor editorial updates.

If these documents are of interest to you, provide your comments or suggested changes by e-mail to <mailto:Howard.E.Jenkins@dla.mil> or by fax at (614) 692-6939. You may also send comments or suggested changes on Compilation of Comments Form 155, shown at the end of the documents posted on the web.

Comments or suggested changes that are not editorial in nature should include justification. Industrial activities should indicate whether they are commenting from the standpoint of a "User" or "Manufacturer." Military review activities should forward their comments to their custodians in sufficient time to allow for consolidating the departmental reply. Military departments must identify their comments as either "Essential" or "Suggested." Essential comments, which must be accepted or withdrawn, should be supported by test data unless they obviously require no data.

Please return comments to this Center no later than 45 days from the date of this letter. Any further coordination concerning this document will be circulated only to firms and organizations that furnish comments or reply that they have an interest.

If you do not have access to the World Wide Web or you have problems downloading this document, please notify <mailto:Howard.E.Jenkins@dla.mil> by e-mail address, by telephone at 614-692-0560, or fax at 614-692-6939.

Sincerely,

/ signed /

RICHARD L. TAYLOR
Chief,
Interconnection Devices Team

cc:

DSCC-CSBB (James Losey)
DSCC-VQP (Dwight Oglesby)



Note: This initial draft, dated September 3, 2004 prepared by DLA-CC, has not been approved and is subject to modification. DO NOT USE FOR ACQUISITION PURPOSES.
(Project: 5965-0426-000)

INCH - POUND

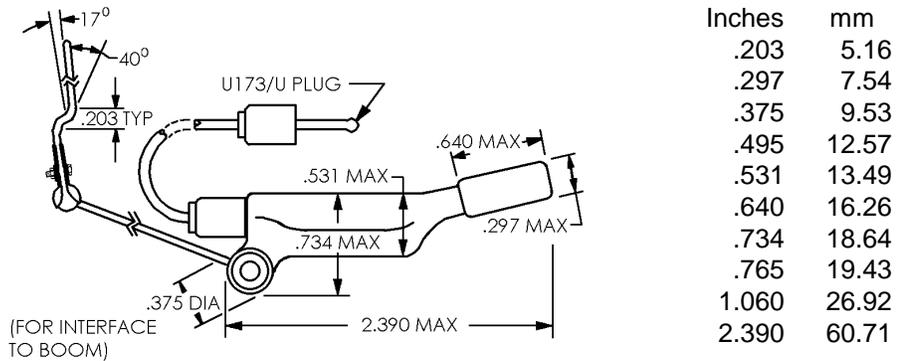
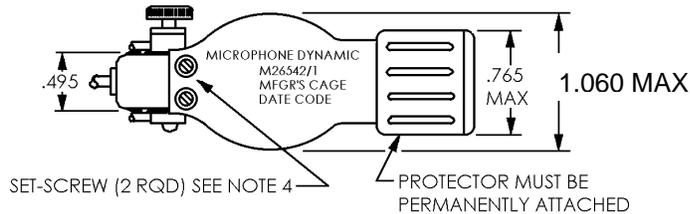
MIL-PRF-26542/1E
w/AMENDMENT 1
DRAFT
SUPERSEDING
MIL-PRF-26542/1E
16 July 2002

PERFORMANCE SPECIFICATION SHEET

**MICROPHONE AND MICROPHONE ASSEMBLIES,
M26542/1, M26542/1-01**

This specification is approved for use by all
Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-26542.

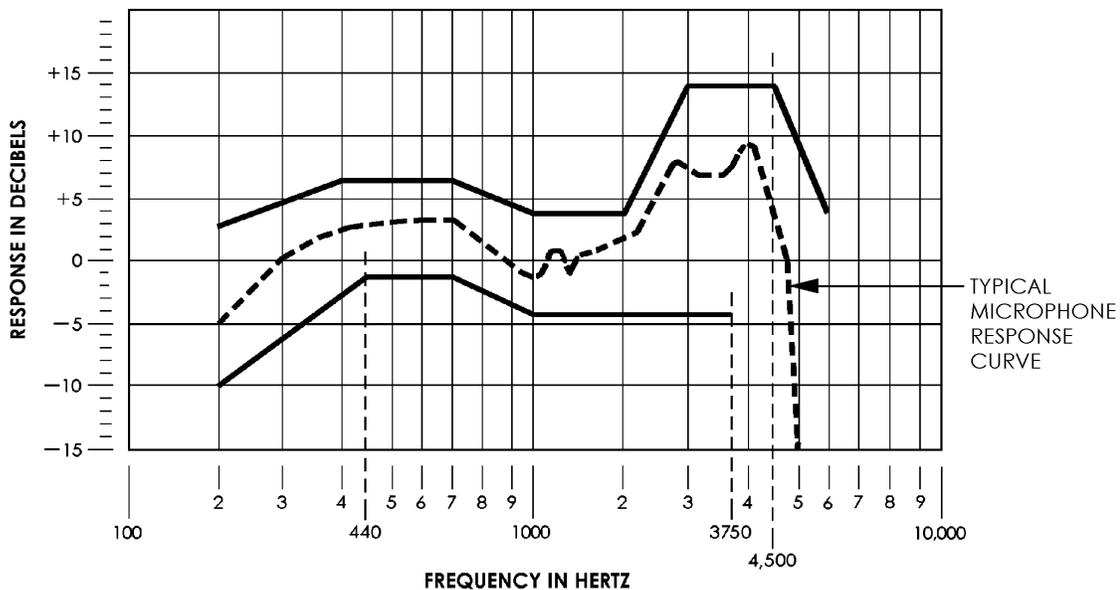


NOTES:

- Quantity and configuration of sound ports optional.
- The microphone element shall be marked with the same Part or Identifying Number (PIN) (i.e., M26542/1). The combined microphone-cable assembly PIN (i.e., M26542/1-01) shall appear on the packaging for that assembly in accordance with MIL-STD-129. Placement on surface shown is optional.
- Dimensions are in inches. Tolerance is $\pm .015$ inch, unless otherwise specified.
- Screws shall hold the element securely, shall be either slotted or allen type, and shall not protrude above the surface of the element.
- Angular requirements of boom shall be met to provide interface to headset, and for adjustability.

FIGURE 1. Microphone assembly.

MIL-PRF-26542/1E
w/AMENDMENT 1

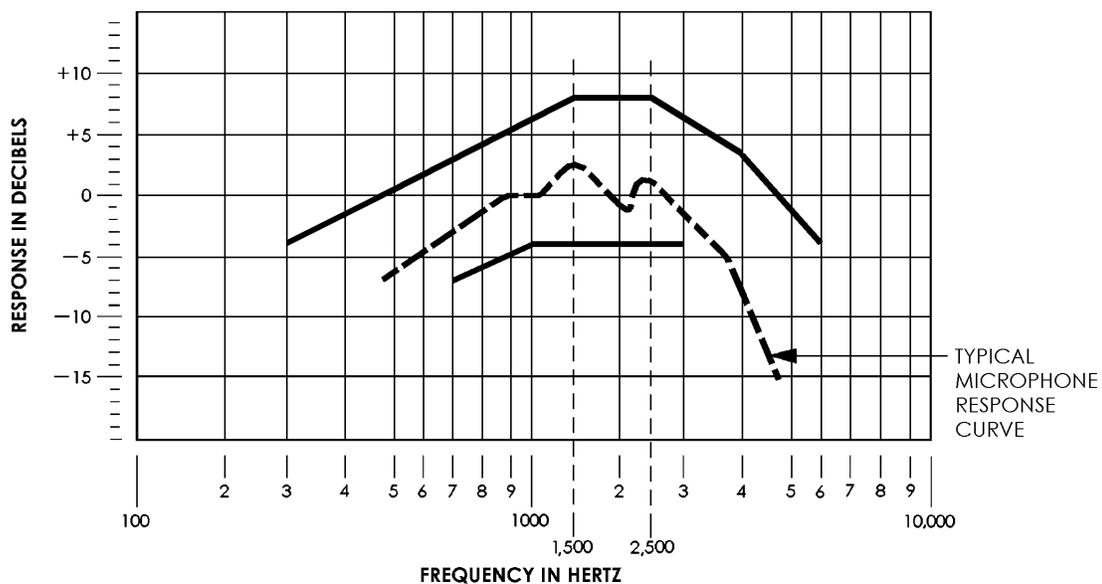


Frequency points	200 Hz	400 Hz	700 Hz	1,000 Hz	3,000 Hz	3,750 Hz	4,400 Hz	6,000 Hz
Upper Limits (dB)	+2.50	+7.0	+7.0	+3.75	+13.75	+13.75	+13.75	+3.0
Lower Limits (dB)	-10.0	-2.60 1/	-1.50	-4.25	-4.25	-4.25	---	---

1/ dB limits between key break point are calculated, using slope method.

FIGURE 2. Frequency response at ground level.

MIL-PRF-26542/1E
w/AMENDMENT 1



Frequency points	300 Hz	700 Hz	1,000 Hz	1,500 Hz	2,500 Hz	3,000 Hz	4,000 Hz	6,000 Hz
Upper Limits (dB)	-4.0	+2.32	+5.62	+8.0	+8.0	+6.26	+3.50	-4.0
Lower Limits (dB)	---	-7.0	-4.0	-4.0	-4.0	-4.0	---	---

1/ dB limits between key break point are calculated, using slope method.

FIGURE 3. Frequency response at 25,000 feet.

MIL-PRF-26542/1E
w/AMENDMENT 1

REQUIREMENTS:

Component parts.

Microphone element: Shall be in accordance with figure 1.

Boom:

Dimensions: Dimensions of the boom shall be in accordance with USAF Drawing 67B1854, for interchangeability with the next-higher-assembly headset-microphone.

Color: Boom shall be the same color as the microphone element.

Finish: Shall be in accordance with MIL-PRF-26542, (see boom finish requirements).

Operation: Shall be in accordance with MIL-PRF-26542, (see boom-operating force requirements).

Material: Shall be constructed from a high-strength, corrosion-resistant metal, meeting or exceeding the environmental and durability requirements of MIL-PRF-26542.

Cable assembly: The cable assembly shall be PIN M22442/36-1 (see MIL-DTL-22442/36), in accordance with either requirement for interface to oxygen gear, interchangeability, and environmental performance. The manufacturer shall meet the requirements of MIL-DTL-22442 in accordance with options specified in MIL-PRF-26542 for 'cable assemblies'. The microphone element shall provide a complete electrical and mechanical interface with the cable assembly.

Plug assembly: U-173/U, in accordance with USAF Drawing 57B12662, or electrically and mechanically compatible part.

Weight: 45 grams, maximum.

Performance.

Sensitivity at ground level: 49.77 dB - 55.79 dB (re 1 μ V) or 307.96 μ V - 615.88 μ V with a Sound Pressure Level (SPL) input of 28 dynes/cm² at 1 kHz, when tested with the microphone sound port .187 \pm .015 inch (4.75 \pm .38 mm) from, and coaxial with, the opening of the artificial voice.

Sensitivity at altitude: Shall be within \pm 3 dB of initial ground level sensitivity tested at a simulated 25,000 feet.

Frequency response envelope: Shall be as shown on figures 2 and 3, when tested with the microphone sound port .187 \pm .015 inch (4.75 \pm .38 mm) from, and coaxial with, the opening of the artificial voice. The response curves generated shall be on the same scale as shown on figures 2 and 3. The response curve shall not exceed the upper and lower limit curves of the stationary Frequency Response Envelope, within the frequency ranges identified in the appropriate chart (see figures 2 and 3).

Impedance: 150.0 ohms \pm 1.5 ohms.

MIL-PRF-26542/1E
w/AMENDMENT 1

Total harmonic distortion: Between 200 Hz to 6,000 Hz, 5 percent at 105 dB relative to 20 micropascals.

Resistive load: 150 ohms \pm 1.5 ohms.

Intended use: The microphone, including the boom and cord assembly, is intended for use in headset-microphones requiring noise-canceling communications at both ground level and altitude.

PIN: Consists of the letter M, the basic number of the specification sheet, and a dash number compiled from the code, as outlined in table I.

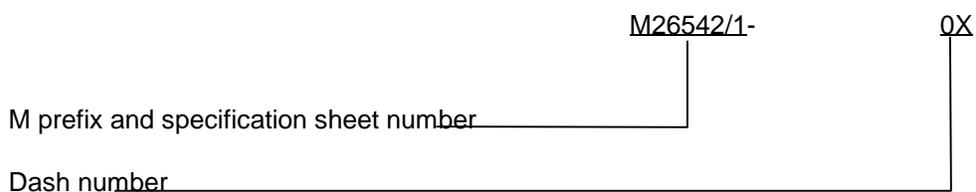


TABLE I. PIN designations.

PIN	Characteristics
M26542/1	Supplied with microphone element only.
M26542/1-01	Supplied with microphone element, boom, and cable assembly specified.

The microphone assembly shall be tested in accordance with the tests listed in table II.

MIL-PRF-26542/1E
w/AMENDMENT 1

TABLE II. Parameter applicability.

Inspection	Qualification	Group A	Group B	Group C
<u>Group I</u>				
Visual and mechanical inspection	X	X		
Sensitivity at ground level	X	X		
Sensitivity at altitude	X			
Frequency response at ground level	X	X		
Frequency response at altitude	X			
Impedance	X	X		
Noise cancellation characteristic	N/A			
Effect of external magnetic field	X			
Stray magnetic field	X			
Linearity	X			
Talk-out	X	X		
Dielectric withstanding voltage	X			
Signal-to-noise	X		X	
Distortion	X		X	
Interchangeability	X		X	
<u>Group II</u>				
Thermal shock	X			X
Humidity	X			X
Drop	X			X
Pressure equalization	X			X
Explosive decompression	X			X
Salt fog	X			X
<u>Group III</u>				
Vibration	X			X
Bounce	X			X
Altitude	X			X
Moisture barrier seal	X			X
Immersion	N/A			
<u>Group IV</u>				
Fungus	X			
<u>Group V</u>				
Gun blast	N/A			
Boom finish	X		X	
Boom operating force	X		X	

MIL-PRF-26542/1E
w/AMENDMENT 1

Reference documents. In addition to MIL-PRF-26542, this document references the following:

MIL-STD-129
USAF Drawing 67B1854
USAF Drawing 57B12662
MIL-DTL-22442
MIL-DTL-22442/36

The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force -11
DLA - CC

Preparing activity:

DLA - CC

(Project 5965-0426-000)

Review activities:

Army - AR, AT, AV, CR4
Navy - AS, OS
Air Force – 99

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

PROJECT NUMBER: 5965-0426-000		COMPILATION OF COMMENTS		COMMENT NUMBER:
DOCUMENT: MIL-PRF-26542/1E (1)		COMMENTOR: IND NAME OR CODE:		[] MFR [] USER [] IND ASSOC
<u>COMMENT:</u>				
DOD USE ONLY	DEPT.	[] A [] N [] AF [] DLA [] NSA [] CNDN [] NASA	[] ESSENTIAL [] SUGGESTED	
Recommended Disposition of Comment: [] ACCEPTANCE [] NON-ACCEPTANCE (see reason) [] WITHDRAW [] MODIFY [] DISCUSS [REASON]				
Final Disposition of Comment: [] ACCEPTANCE [] NON-ACCEPTANCE [] WITHDRAW [] MODIFY				

FORM 155

PROJECT NUMBER: 5965-0426-000		COMPILATION OF COMMENTS		COMMENT NUMBER:
DOCUMENT: MIL-PRF-26542/1E (1)		COMMENTOR: IND NAME OR CODE:		[] MFR [] USER [] IND ASSOC
<u>COMMENT:</u>				
DOD USE ONLY	DEPT.	[] A [] N [] AF [] DLA [] NSA [] CNDN [] NASA	[] ESSENTIAL [] SUGGESTED	
Recommended Disposition of Comment: [] ACCEPTANCE [] NON-ACCEPTANCE (see reason) [] WITHDRAW [] MODIFY [] DISCUSS [REASON]				
Final Disposition of Comment: [] ACCEPTANCE [] NON-ACCEPTANCE [] WITHDRAW [] MODIFY				

FORM 155