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IN REPLY

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

August 17,2004

Military/Industry Distribution

SUBJECT: Initial Draft of MIL-PRF-26542/2E (1): "MICROPHONE AND MICROPHONE ASSEMBLY, M87/AIC, M26542/2-01, M26542/2-02, M26542/2-03, M26542/2-04".  
Project number 5965-0422-000

The initial draft for the subject document is now available for viewing and downloading from the DSCC-VA Web site:

<http://www.dsccl.dla.mil>

or

<http://www.dsccl.dla.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, inclusion of interchangeability inspection, and minor editorial updates.

If this document is of interest to you, provide your comments or suggested changes by e-mail to 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 document 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 Essential comments, which must be accepted or withdrawn, should be supported by test data unless they obviously require no data.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, Lee Surowiec, for /*

RICHARD L. TAYLOR  
Chief,  
Interconnection Devices Team

cc:

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



**Note: This initial draft, dated August 17, 2004 prepared by DLA-CC, has not been approved and is subject to modification. DO NOT USE FOR ACQUISITION PURPOSES.**  
 (Project: 5965-0422-000)

INCH-POUND

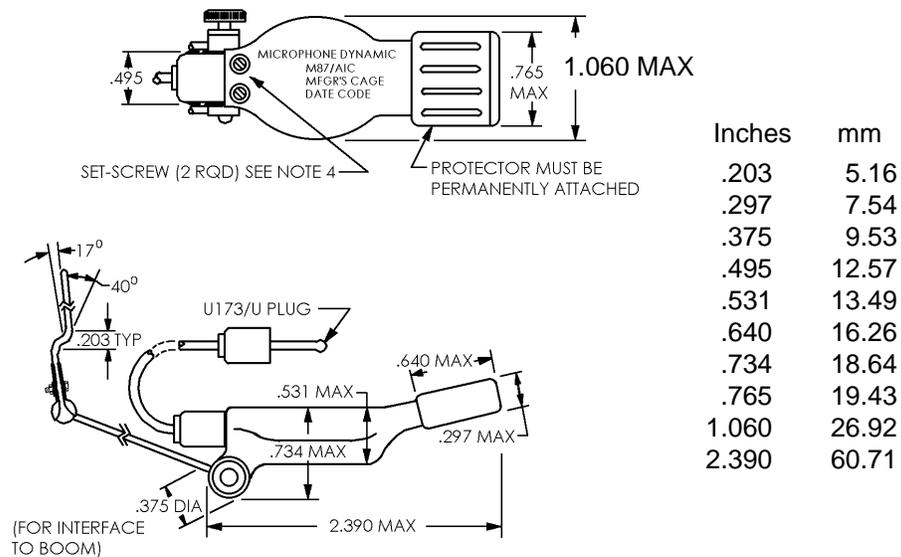
MIL-PRF-26542/2E  
 w/AMENDMENT 1  
 DRAFT  
 SUPERSEDING  
 MIL-PRF-26542/2E  
 16 July 2002

PERFORMANCE SPECIFICATION SHEET

MICROPHONE AND MICROPHONE ASSEMBLIES,  
 M87/AIC, M26542/2-01, M26542/2-02, M26542/2-03, AND M26542/2-04

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.

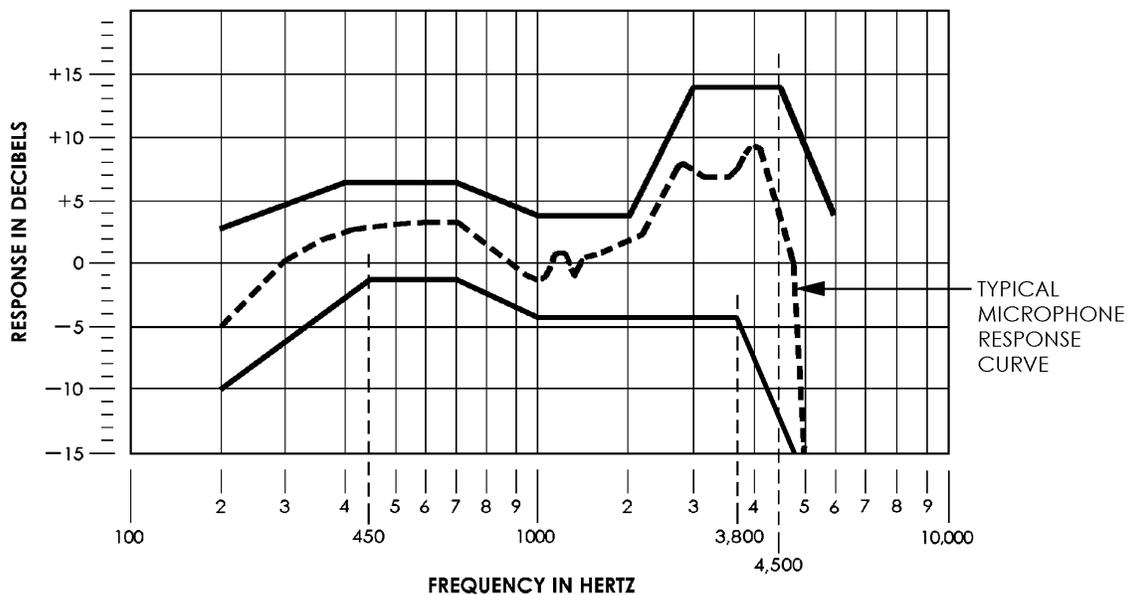


NOTES:

- Quantity and configuration of sound ports optional.
- The microphone element shall be marked with the same Part or Identifying Number (PIN) (i.e., M87/AIC). Placement on surface shown is optional. The combined microphone-cable assemblies PIN's (i.e., M26542/2-01, M26542/2-02, M26542/2-03, and M26542/2-04) shall appear on the packaging for that assembly, in accordance with MIL-STD-129.
- Dimensions are in inches. Tolerance is  $\pm 0.015$  inch (0.38mm), 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-26542/2E  
w/AMENDMENT 1

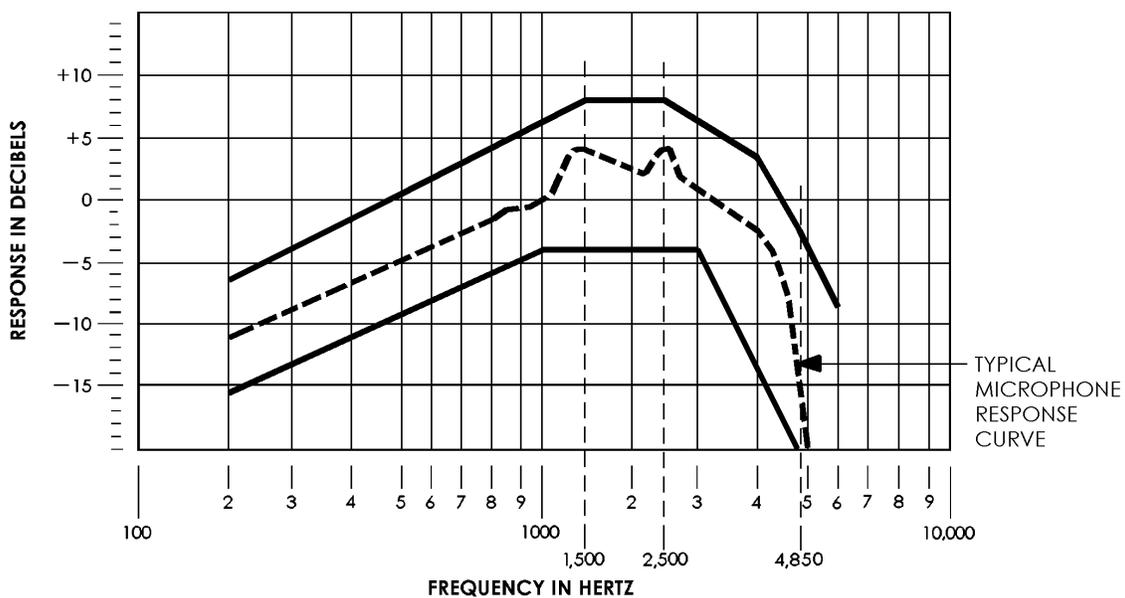


Frequency points	200 Hz	400 Hz	700 Hz	1,000 Hz	3,000 Hz	3,800 Hz	4,500 Hz	6,000 Hz
Upper limits (dB)	+2.50	+7.0	+7.0	+3.75	+13.75	+13.75	+13.75	+3.0
Lower limits (dB)	-10.0	-2.60 1/	-1.50	-4.25	-4.25	-4.25	-11.46 1/	---

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

FIGURE 2. Frequency response at sea level.

MIL-PRF-26542/2E  
w/AMENDMENT 1



Frequency points	200 Hz	700 Hz	1,000 Hz	1,500 Hz	2,500 Hz	4,000 Hz	4,850 Hz	6,000 Hz
Upper limits (dB)	-6.5	+2.3 1/	+5.6 1/	+8.0	+8.0	3.5	-2.5 1/	-9.0
Lower limits (dB)	-16.0	-7.0	-4.0	-4.0	-4.0	-13.6 1/	-20.0	---

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

FIGURE 3. Frequency response at 25,000 feet.

MIL-PRF-26542/2E  
w/AMENDMENT 1

REQUIREMENTS:

Component parts:

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 requirement).

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

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: Shall be in accordance with the specified part in order to provide interface to oxygen gear, for interchangeability, and for environmental performance. The microphone element shall provide a complete electrical and mechanical interface with the cable assembly. Cable assemblies per PIN are listed in table I.

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: 34.0 dB – 40.98 dB (re 1 mV) or 50.4  $\mu$ V – 112.0  $\mu$ V with a Sound Pressure Level (SPL) input of 28 dynes/cm<sup>2</sup> at 1 kHz, when tested with the microphone sound port 0.187 inch  $\pm$  0.015 inch (4.75 mm  $\pm$  0.38mm) from, and coaxial with the opening of the artificial voice.

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

Frequency response envelope at ground level and at altitude: The response shall be as shown on figures 2 and 3, when tested with the microphone sound port 0.187 inch  $\pm$  0.015 inch (4.75 mm  $\pm$  .38 mm) from, and coaxial with, the opening of the artificial voice. The response curves generated shall be on the same scale as shown in 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: 4.0 ohms to 6.0 ohms.

Resistive load: 5 ohms.



MIL-PRF-26542/2E  
w/AMENDMENT 1

TABLE II. Parameter applicability.

Inspection	Qualification	Group "A"	Group "B"	Group "C"
Group I				
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	
Group II				
Thermal shock. . . . .	X			X
Humidity . . . . .	X			X
Drop . . . . .	X			X
Pressure equalization . . . . .	X			X
Explosive decompression	X			X
Salt fog . . . . .	X			X
Group III				
Vibration . . . . .	X			X
Bounce . . . . .	X			X
Altitude . . . . .	X			X
Moisture barrier seal . . . . .	X			X
Immersion . . . . .	N/A			
Group IV				
Fungus	X			
Group V				
Gun blast . . . . .	N/A			
Boom finish . . . . .	X		X	
Boom operating force	X		X	

MIL-PRF-26542/2E  
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-22442/36

The margins of this specification sheet are marked with vertical lines to indicate modifications generated by this amendment. 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.

CONCLUDING MATERIAL

Custodians:

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

Preparing activity:  
DLA - CC

(Project 5965-0422-000)

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>.

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DOCUMENT: MIL-PRF-26542/2E (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: 5965-0422-000		COMPILATION OF COMMENTS		COMMENT NUMBER:
DOCUMENT: MIL-PRF-26542/2E (1)		COMMENTOR: IND NAME OR CODE:		[ ] MFR [ ] USER [ ] IND ASSOC
<u>COMMENT:</u>				
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FORM 155