INCH - POUND

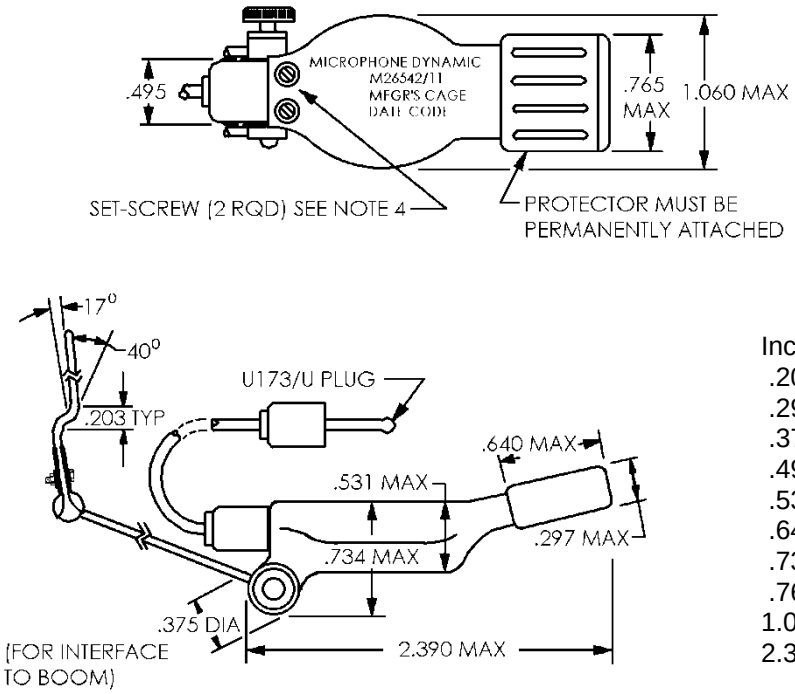
MIL-PRF-26542/11B
w/AMENDMENT 2
7 July 2015
SUPERSEDING
MIL-PRF-26542/11B
w/AMENDMENT 1
7 April 2005

PERFORMANCE SPECIFICATION SHEET

MICROPHONE AND MICROPHONE ASSEMBLY, M26542/11 AND M26542/11-01

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.



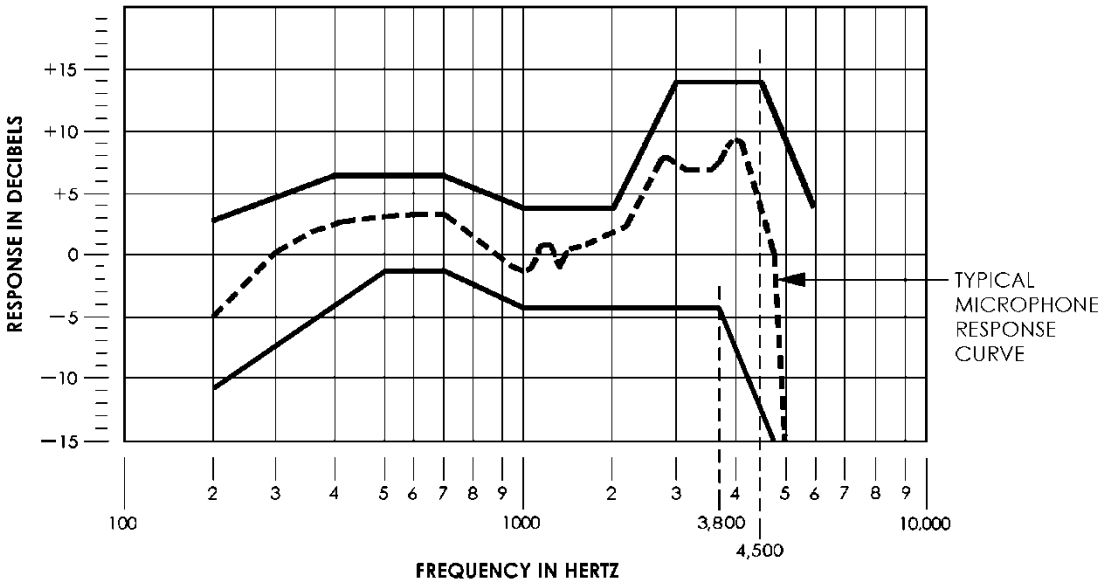
Inches	mm
.203	5.16
.297	7.54
.375	9.53
.495	12.57
.531	13.49
.640	16.26
.734	18.64
.765	19.43
1.060	26.92
2.390	60.71

FIGURE 1. Microphone assembly.

NOTES:
1. Quantity and configuration of sound ports are optional.
2. The microphone element shall be marked with the same Part or Identifying Number (PIN) (i.e., M26542/11). The combined microphone-cable assembly PIN (i.e., M26542/11-01) shall appear on the packaging for that assembly in accordance with MIL-STD-129. Placement on surface shown is optional.

3. Dimensions are in inches. Tolerance is ± .015 inch (0.38 mm), unless otherwise specified.
4. Screws shall hold the element securely, shall be either slotted or Allen type, and shall not protrude above the surface of the element.
5. Angular requirements of boom shall be met to provide interface to headset, and for adjustability.

FIGURE 1. Microphone assembly - Continued.



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)	-11.0	-3.82 1/	-1.50	-4.25	-4.25	-4.25	-12.02 1/	---

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

FIGURE 2. Frequency response at ground level.

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 shall be in accordance with USAF Drawing 57B12662, or electrically and mechanically compatible part.

Weight: 45 grams, maximum.

Performance.

Sensitivity at ground level: 34.04 dB - 42.92 dB (above 1 µV) or 50.40 µV - 139.63 µV with a sound pressure level (SPL) input of 2.8 Pascal's (Pa) at 1 kHz, when tested with the microphone sound port .187 ± .015 inch (4.75 ± .38 mm) from, and coaxial with, the opening of the artificial voice.

Frequency response envelope at ground level:
Shall be as shown on figure 2, when tested with the microphone sound port 0.187 ± .015 inch (4.75 ± .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 figure 2. 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 figure 2).

Impedance: 4.0 ohms to 6.0 ohms.

Resistive load: 5.0 ohms.

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

Intended use: This is a noise-canceling dynamic microphone designed for use on a headband type headset at low altitudes. The microphone is intended to provide communication under the noise conditions encountered in military aircraft.

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.

M26542/11- 0X

M prefix and specification sheet number

Dash number

TABLE I. PIN designations.

PIN	Characteristics
M26542/11	Supplied with microphone element only.
M26542/11-01	Supplied with microphone element, boom, and cable assembly M22442/36-3 (13.00 in).

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

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	N/A	N/A		
Impedance	X	X		
Noise cancellation characteristic	X			
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	N/A			N/A
Salt fog	X			X
Group III				
Vibration	X			X
Bounce	X			X
Altitude	N/A			N/A
Moisture barrier seal	X			X
Immersion	X			X
Group IV				
Fungus	N/A			
Group V				
Gun blast	N/A			
Boom finish	X		X	
Boom operating force	X		X	

Referenced 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

Amendment notations. The margins of this specification 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 - 85
DLA - CC

Review activities:
Army - AR, AT, CR4
Navy - AS, OS
Air Force – 99

Preparing activity:
DLA - CC

(Project 5965-2015 -011)

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