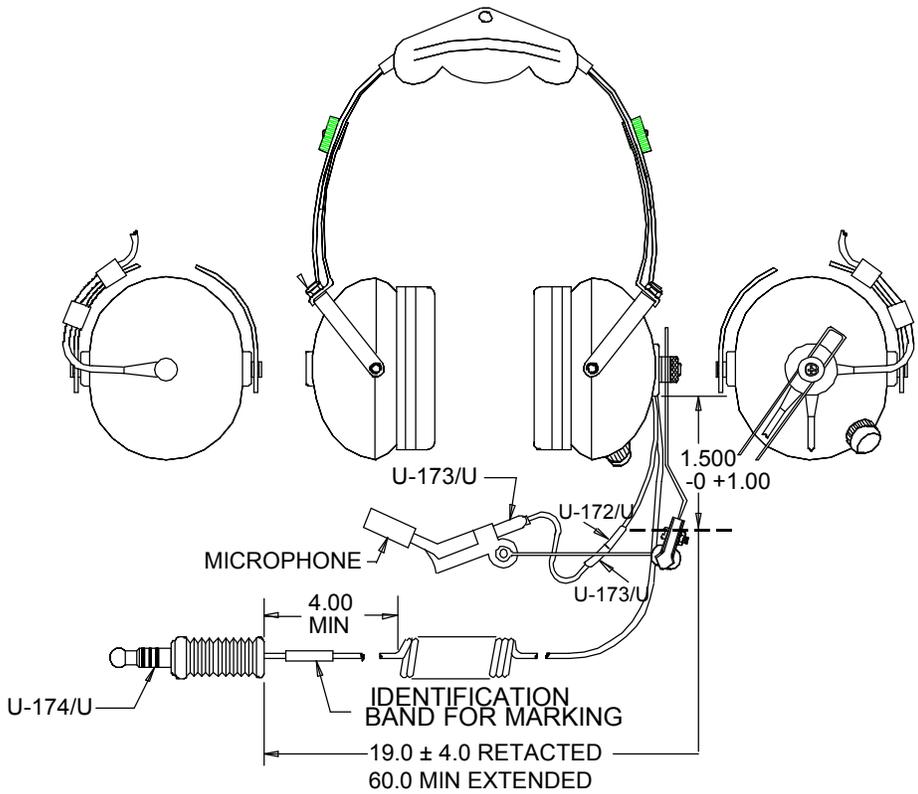


PERFORMANCE SPECIFICATION SHEET

HEADSET-MICROPHONE, HEARING PROTECTIVE TYPE
MODERATE AMBIENT NOISE LEVELS, UP TO 105 dB,
INFLIGHT AIRCREW HEADSET-MICROPHONE,
M87819/4-01

This specification sheet is approved for use by the Department of the Air Force, and is available for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-PRF-87819.



NOTES:

- 1. 1.50 in cord, and U-172/U plug, shall provide interface to emergency oxygen mask connectors.
- 2. Cord shall have the retracted and extended lengths shown, for movement around the console.
- 3. Cord shall include a 4.00 in section shown as a grasping location during removal from the console.

FIGURE 1. Headset-microphone, M87819/4-01, typical configuration

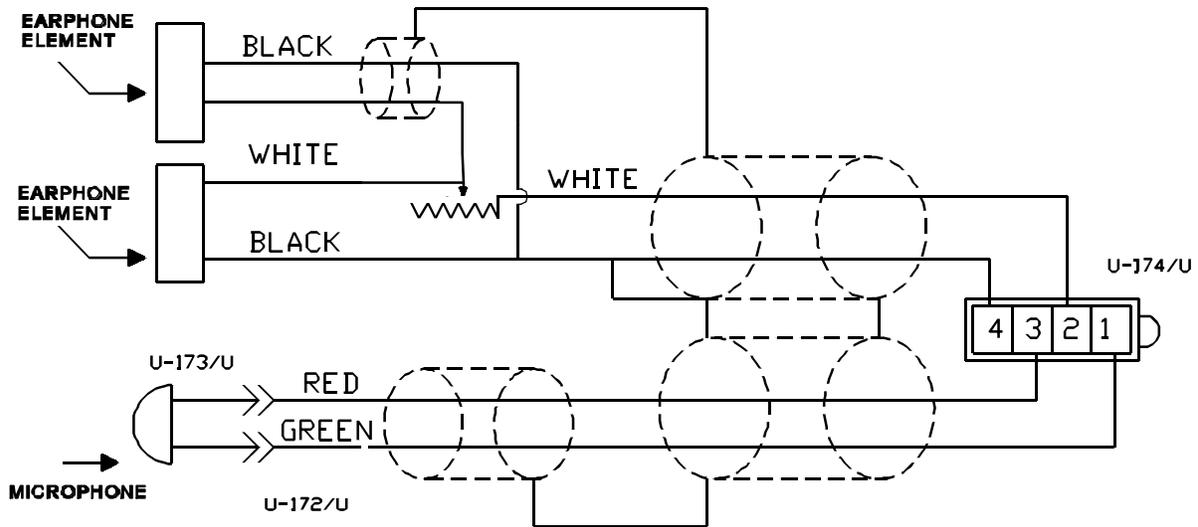


FIGURE 2. Wiring diagram.

REQUIREMENTS:

Design and construction:

Dimensions and configuration: See figure 1.

Headband pressure: Headband pressure shall be sufficient to meet the noise attenuation requirements of this specification, without compromising comfort, not to exceed 3.5 pounds.

Microphone assembly: Shall be M-87/AIC, in accordance with MIL-M-26542/2 (1 required), or electrically compatible, light-weight microphone element with equivalent or superior noise-canceling, environmental, altitude and ground-level, and shock (drop) performance, as approved by the qualifying activity.

Boom: If the boom is supplied separately, it shall provide equivalent mechanical interface to the microphone element, as well as equivalent or superior adjustability (fine and coarse), durability of finish, stability of operation, and high-strength, rust-resistant material performance.

Earphone element: Shall be PIN H-143/AIC, in accordance with MIL-E-25670/2, 2 required, or electrically compatible part having equivalent or superior noise-canceling, environmental and frequency response at ground level and altitude, meeting United States Air Force hazardous noise exposure standards, as approved by the qualifying activity.

MIL-PRF-87819/4(USAF)

Volume control: Shall be a 100-ohm, non-switched, variable resistor, having a slotted shaft to accept the control knob as specified below. It shall be electrically compatible with PIN RV6NAYSA101A, for interface with flight console electronics.

Control knob: The volume control knob shall be easily adjustable and replaceable. It shall have a low profile which does not interfere with the headband yoke, not to exceed 0.438 inches in height, and 0.813 inches in width.

Wiring diagram: Shall be in accordance with figure 2.

Plug assemblies: In accordance with figure 1, the plug assemblies shall include a U-174/U in accordance with MIL-C-9177/2(USAF) and U-173/U in accordance with Air Force Drawing 57B12662, and U-172/U type connector, or electrically and mechanically compatible parts as approved by the qualifying activity.

Color: Shall be in accordance with MIL-PRF-87819.

Weight: Shall be sufficient to meet the noise-attenuation requirements of this specification, without compromising comfort, not to exceed 1.65 lbs.

Part or Identifying Number (PIN): M87819/4-01.

Performance characteristics: See table I, table II, and MIL-PRF-87819.

Attenuation: Testing for attenuation shall be in accordance with MIL-PRF-87819 with exception; use table I specified herein for attenuation values.

TABLE I. Attenuation values.

Frequency (Hz.)	63	80	100	125	160	200	250	315
Minimum attenuation (mean - 2xSD)	3	3	4	5	7	9	12	14
Minimum attenuation (mean - 2xSD) with Eyeglasses	1	1	2	3	4	6	8	11
Frequency (Hz.)	400	500	630	800	1,000	1,250	1,600	
Minimum attenuation (mean - 2xSD)	16	18	19	20	21	21	22	
Minimum attenuation (mean - 2xSD) with Eyeglasses	13	15	16	17	19	20	21	
Frequency (Hz.)	2,000	2,500	3,150	4,000	5,000	6,300	8,000	
Minimum attenuation (mean - 2xSD)	22	22	22	22	21	21	20	
Minimum attenuation (mean - 2xSD) with Eyeglasses	22	22	22	21	20	19	14	

NOTE: Eyeglasses shall be in accordance with MIL-PRF-87819.

TABLE II. Performance characteristics

Inspection	Requirements paragraph	Test paragraph	Qual. test	Group A	Group B	Group C
Subgroup 1						
Visual and mechanical	3.3, 3.4, 3.6, 3.7	4.7.1	X	X		X
Acoustic quality	3.5.1	4.7.2	X	X		X
Attenuation (Qualification)	3.5.2.1	4.7.3.1	X			
Attenuation (Conformance)	3.5.2.2	4.7.3.2				X
Speech intelligibility	3.5.3	4.7.4	X			
Headset system sensitivity	3.5.4	4.7.5	X			X
Subgroup 2						
Headband pressure	3.5.12	4.7.13	X		X	
Headband flexing	3.5.13	4.7.14	X			X
Twist and pull	3.5.11	4.7.12	X			X
Shock (drop)	3.5.5	4.7.6	X			X
Fungus	3.5.6	4.7.7	X			
Vibration	3.5.7	4.7.8	X			X
Temperature	3.5.8	4.7.9	X			X
Subgroup 3						
Temperature shock	3.5.9	4.7.10	X			X
Humidity	3.5.10	4.7.11	X			X
Salt fog	3.5.15	4.7.16	X			X
Subgroup 4						
Cable isolation	3.5.14	4.7.15	X			X

Intended use: Headset-microphone M87819/4-01 is a moderate ambient noise level headset-microphone designed for use by in-flight aircrews to provide communication under the noise conditions encountered in military aircraft. The use of earplugs in conjunction with the headset is recommended when this headset is worn in close proximity to aircraft engines or other high-noise maintenance equipment. For such ground-level applications, it is recommended that PIN M87819/1-01 be used. The noise attenuation requirements for this document were developed by the Human Systems Center, Armstrong Laboratory, Biological and Bioacoustics branch, Wright-Patterson AFB, OH.

CONCLUDING MATERIAL

Custodian:
Air Force - 85

Preparing activity:
Air Force - 85

Review activity:
DLA - CC

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