INCH-POUND
MIL-DTL-18266C
15 January 2014
SUPERSEDING
MIL-DTL-18266B
17 February 2006

DETAIL SPECIFICATION

CORD ASSEMBLY, ELECTRICAL: P/O H-87B/U

Inactive for new design after 22 September 1999.

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

1. SCOPE

1.1 Scope. This specification covers requirements and tests for Cord: P/O H-87B/U. See 6.1 for information about use with earphone H-87B/U as specified in MIL-DTL-18239.

1.2 Classification. The cords covered by this specification are of one type, designated, Cord: P/O H-87B/U.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

FEDERAL STANDARDS

FED-STD-228 - Cable and Wire, Insulated; Methods of Testing

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-P-642/3 - Plug, Telephone (Types PJ-054B and PJ-054R) and Accessory Screws
MIL-DTL-10392 - Cord, Electrical (Audio, Miniature)

Comments, suggestions, or questions on this document should be addressed to: DLA Land and Maritime, Attn: VAI, Post Office Box 3990, Columbus, Ohio 43218-3990 or emailed to RFConnectors@dla.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.dla.mil.

AMSC N/A FSC 5995

MIL-DTL-18307 - Nomenclature and Identification for Aeronautical Systems Including Joint Electronics Type Designated Systems and Associated Support Systems

(Copies of these documents are available online at http://quicksearch.dla.mil or from the Document Automation and Production Service (DAPS) Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Qualification. Cords furnished under this specification shall be products that are authorized by qualifying activity for listing on the applicable qualified products list before contract award (see 4.2 and 6.4).

3.2 Parts, materials and processes. Parts, materials and processes shall be as specified herein. However, when definite parts, materials, and processes are not specified, parts, materials and processes shall be used, which will enable the cord to meet all the requirements of this specification. Acceptance or approval of any constituent parts, materials, and processes shall not be construed as a guarantee of the acceptance of the finished product (see 6.7).

3.2.1 Fungus and moisture resistant materials. Materials which are not nutrients for fungi and moisture resistant shall be used.

3.2.1.1 Central cords, fillers, binders, etc. All cotton or other textiles used as a central core, filler, binder, etc. shall be fungus treated prior to their use. The impregnating material shall not affect the electrical or physical characteristics of the cordage.

3.2.2 Cordage. The insulation and jacket compounds shall be in accordance with MIL-DTL-10392 homogenous in character, tough and elastic. The resultant cordage shall be free from blisters, cracks and other imperfections, which would affect the serviceability.

3.2.2.1 Pure tin. The use of pure tin, as an underplate or final finish, is prohibited both internally and externally. Tin content of cord assembly components and solder shall not exceed 97 percent, by mass. Tin shall be alloyed with a minimum of 3 percent lead, by mass (see 6.5.1).

3.3 Design and construction.

3.3.1 Jacket. The jacket shall provide long life under severe service conditions. The jacket shall have a minimum thickness of 0.020 inch and shall not adhere or stick to the conductor insulation. The finished cordage shall have a reasonably smooth surface.

3.3.1.1 Stripping. Irregularities in the jacket edge due to stripping shall not exceed 0.1875 (3/16) inch (4.76 mm) overall.

3.3.2 Conductor. Each stranded conductor shall be equivalent to 404 circular mils (# 24 AWG) and shall consist of 41 strands of # 40 AWG bunched stranded with a lay of no more than 0.6 inch.

3.3.2.1 Conductor resistance. The resistance of the individual conductor of the finished cordage shall not exceed 0.04 ohm per foot at a temperature of 20 degrees C.

3.3.2.2 Conductor strands. The conductor strands shall be 9.8 circular mils (#40 AWG).

3.3.2.3 Conductor insulation. The conductor insulation shall be “free-stripping” and shall not have any detrimental properties, which would make soldering of the conductors difficult. The conductor insulation shall be in accordance with MIL-DTL-10392.

3.3.3 Cordage assembly. The single conductor cordage shall be composed of a conductor in accordance with 3.3.2 and conductor insulation in accordance with 3.3.2.3. The multi-conductor cordage shall be Type WM-59A/U in accordance with MIL-DTL-10392.

3.3.3.1 Outside diameter. The cordage shall have a maximum outside diameter of 0.059 inch (1.5 mm) for single conductor and 0.212 ± 0.010 inch (5.4 mm) for multi-conductor.

3.3.3.2 Electrical continuity (see 4.6.2). The electrical continuity shall be as shown schematically on figure 1.

3.3.4 Tensile strength and elongation (see 4.5.5). The tensile strength and elongation of the conductor strands shall exhibit the following performance.

Tensile strength	45,000 pound per square inch (psi) minimum
Elongation (in 10 inches)	13% minimum

3.3.5 Dielectric strength (see 4.5.2). The finished cordage shall withstand, without breakdown, the specified voltage.

3.3.6 Insulation resistance (see 4.5.3). The insulation resistance of the finished cordage shall be not less than 500 megohms per 1,000 feet at a temperature of 20 degrees C.

3.3.7 Transformer dc insulation resistance (see 4.6.3). The dc insulation resistance between the primary and secondary windings within the transformer-plug shall be not less than 100 megohms at a temperature of 20 degrees C.

3.3.8 Stay cord. Where more than one conductor is required, a central core or interstice filler shall extend through the length of the cordage and shall be suitable for use as a strain-relief cord. The central core or filler shall be a low stretch material with a 25 pound minimum breaking strength. Where a single conductor is used, a stay cord will not be required; however, the conductor insulation shall be secured to the terminal by a suitable bonder.

3.3.9 Flexing (see 4.5.6). The cordage shall be capable of withstanding at least 30,000 flexing cycles without showing evidence of electrical discontinuity or change in specified characteristics of the insulation.

3.3.10 Transformer-plug.

3.3.10.1 Transformer. The transformer shall be of the isolating impedance matching type capable of transferring audio frequency energy from a 600 ohm source (radio receiver output) to a 7.5 ohm load (two 15 ohm impedance earphones connected in parallel). The transformer shall provide a maximum power transfer of one-half watt with a power insertion loss not to exceed 2.5 dB and with no direct current (dc) flowing in either primary or secondary winding.

3.3.10.2 Size. The size of the transformer shall be governed by the dimensions of the transformer-plug shell.

3.3.10.3 Plug. The plug shall be in accordance with MIL-P-642-3 for type PJ-054 except that the shell and terminals may be modified to accommodate the transformer. The shell shall be an integral part of the plug sleeve and shall provide means for anchoring the cordage.

3.3.10.4 Terminals. The terminals shall be of the “slim type” made of half-hard brass and finished with white nickel plate to 0.0004 inch minimum depth. The finished dimensions shall be as presented on figure 1.

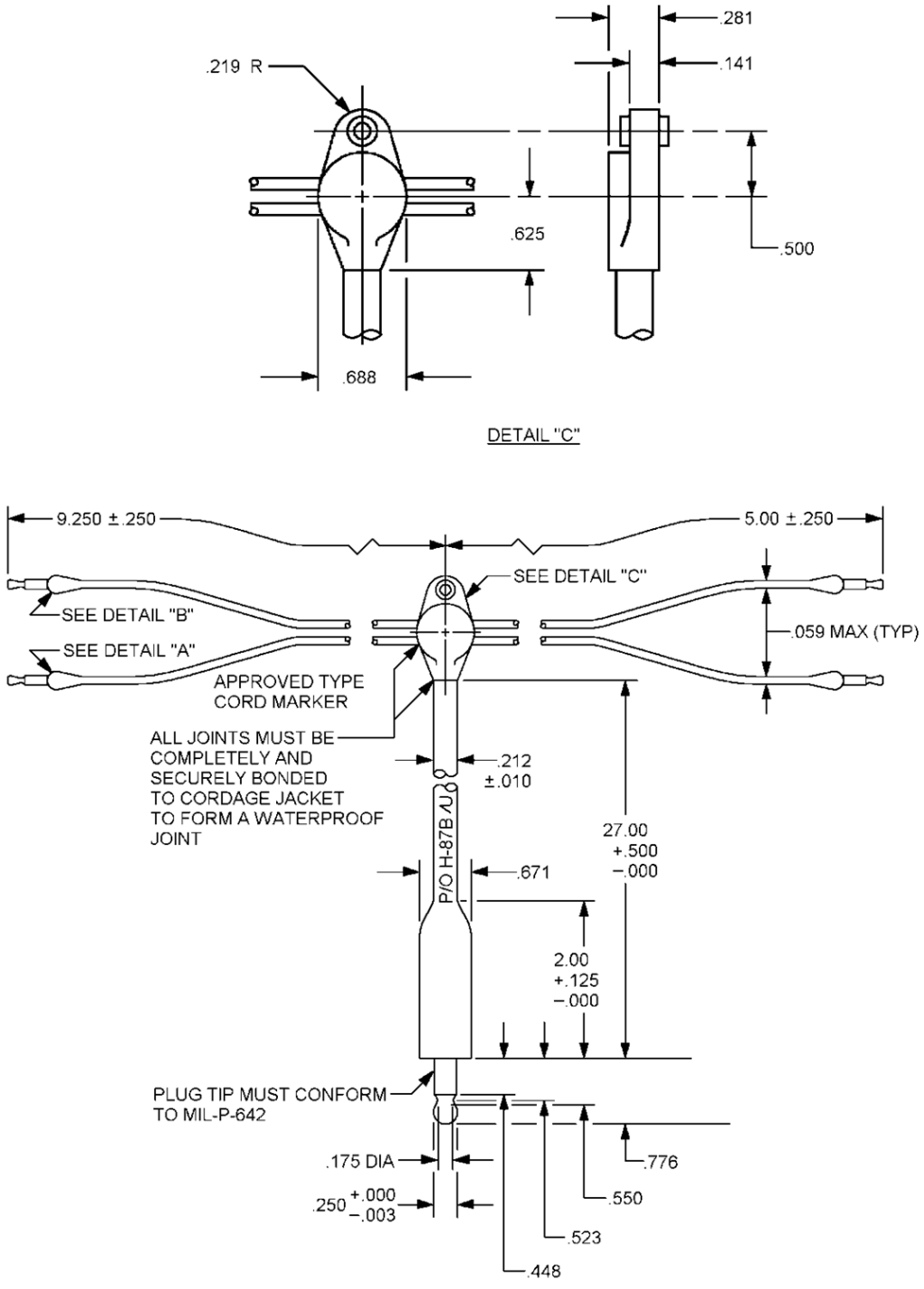
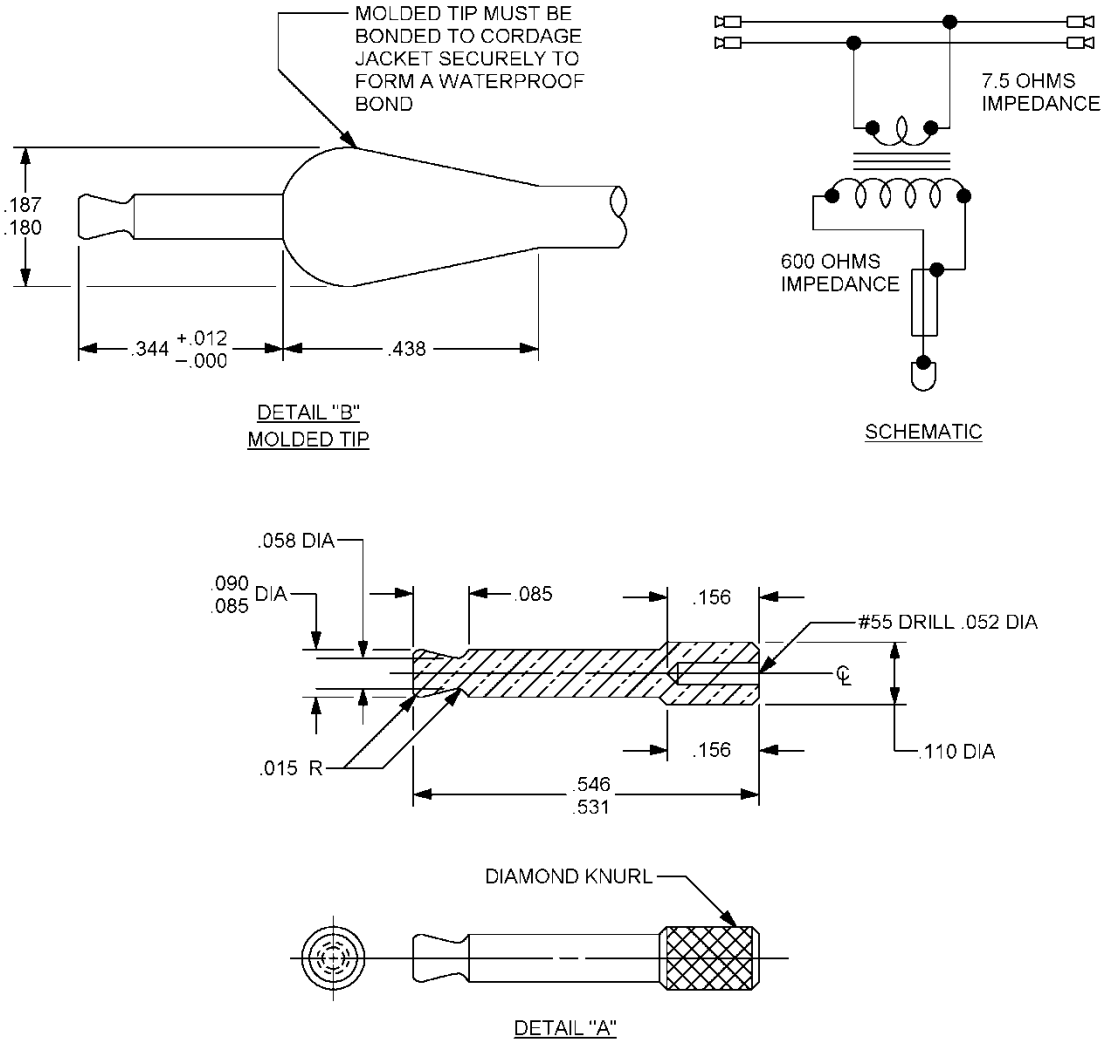


FIGURE 1. Cord assembly, P/O H-87B/U.



Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.1	.110	2.8	.250	6.4	.550	14.0
.010	0.25	.125	3.2	.281	7.1	.625	15.9
.012	0.3	.141	3.6	.344	8.7	.671	17.0
.015	0.4	.156	4.0	.438	11.1	.688	17.5
.052	1.3	.175	4.4	.448	11.4	.776	19.7
.058	1.47	.180	4.6	.500	12.7	2.00	50.8
.059	1.5	.187	4.7	.523	13.3	5.00	127.0
.085	2.2	.212	5.4	.531	13.5	9.25	235.0
.090	2.3	.219	5.6	.546	13.9	27.0	685.8

NOTES:
1. Unless otherwise specified, tolerance shall be ± 0.015 inch.
2. Metric equivalents are given for general information only.

FIGURE 1. Cord assembly, P/O H-87B/U - Continued.

3.3.11 Cord assembly. Cord: P/O H-87B/U shall be assembled as shown pictorially and schematically on figure 1. After assembling the transformer within the transformer-plug shell, the remaining space within the shell shall be filled with a suitable epoxy resin. The assembled transformer-plug shall be protected by rubber molding to a depth of not less than 0.025 inch. The junction of the single and multi-conductor cordage shall be protected and reinforced by a rubber molding. In addition, the junction molding shall include an eyelet for attaching the cord to the helmet. The dimensions of the finished cord shall be in accordance with figure 1.

3.3.12 Total weight. The total weight of each cord shall be no greater than six ounces.

3.3.13 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the specified requirements (see 3.1), and promotes economically advantageous life cycle costs.

3.4 Performance.

3.4.1 Frequency response (see 4.6.4). The frequency response characteristics of the transformer shall be smooth and free from abnormal irregularities over the frequency range of 200 to 6,000 Hz. The output response over this frequency range shall be within ± 2 dB of the 1,000 Hz output.

3.4.2 Distortion (see 4.6.5). The distortion introduced by the transformer shall not exceed 2 percent for frequencies between 1,000 and 6,000 Hz. The distortion may increase for frequencies below 1,000 Hz, but, shall not exceed 15 percent at 200 Hz.

3.4.3 Impedance (see 4.6.6). The impedance of the primary and secondary windings over the frequency range of 200 to 6,000 Hz shall not deviate from the 1,000 Hz values by more than 15 percent.

3.4.4 Overload (see 4.6.7). The cord (transformer) shall be able to withstand an overload of 500 milliwatts rms at 1,000 Hz for a period of 8 hours without signs of failure. After meeting this requirement, the cord (transformer) shall meet the requirements of 3.4.1 and 3.4.2.

3.5 Environmental.

3.5.1 Flame-retardant cord (see 4.5.4). Self-sustained combustion of the finished cord insulation shall not progress at a rate in excess of 1 inch per minute.

3.5.2 Temperature requirements.

3.5.2.1 Operating range. The cordage shall be flexible and resilient throughout the temperature range of –55 degrees to +85 degrees C (-67 degrees F to +185 degrees F).

3.5.3 Humidity (see 4.6.8). The cord shall be able to withstand an ambient humidity condition of 95 percent, relative at 50 degrees C (122 degrees F). After meeting this requirement, the cord shall meet the requirements of 3.4.1.

3.5.4 Cold bend (see 4.5.7). Specimens of the cordage shall show no evidence of cracking or other damage to the jacket or conductor insulation after being subjected to a cold bend test. Immediately following the cold bend test, the specimens shall withstand without breakdown a modified version of the dielectric withstanding voltage test of MIL-DTL-10392.

3.5.5 Ambient temperature cycling (see 4.6.9). The cord shall be able to withstand ambient temperature cycling without degradation of performance. After meeting this requirement, the cord shall meet the frequency response requirements of 3.4.1.

3.6 Identification.

3.6.1 Nomenclature. The nomenclature shall be in accordance with MIL-DTL-18307.

3.6.1.1 Cord. The complete cord shall have a metal band or other suitable means of marking to show the designation P/O H-87B/U, contract number, and contractor's CAGE code designation in conformance with MIL-DTL-18307 and as shown on figure 1.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. Qualification inspection (see 4.2)

b. Conformance inspection (see 4.3)

4.2 Qualification inspection (see 6.4). Qualification inspection shall consist of all the requirements and tests in table I and of this specification performed at a laboratory approved by the qualifying activity.

4.2.1 Qualification samples. Qualification samples shall consist of 10 (ten) complete cords of each manufacturer's part number, for which approval is requested. In lieu of ten completed cords, the manufacturer may, with the approval of the qualifying activity, submit 5 (five) complete cords and 5 (five) cords complete, except for the transformer-plug. The samples submitted for qualification approval shall be representative of normal production.

4.2.1.1 Scope. The qualification inspection shall consist of tests in the following categories.

a. Tests to determine the suitability of the cordage (see 4.5).

b. Tests to determine the suitability of the finished product (cord assembly, see 4.6).

4.2.2 Retention of qualification. Retention of qualification shall be made by means of certification (DD Form 1718, Certification of Qualified Products, shall be used for obtaining certification). Failure to provide certification shall be cause for removal from QPL.

4.3 Conformance inspection. The contractor shall furnish all samples and shall be responsible for performing the required tests. All inspection and testing shall be under the supervision of the government inspector. The contractor shall furnish test reports, in duplicate, showing quantitative results for all acceptance tests. Such reports shall be signed by an authorized representative of the contractor or laboratory. Conformance shall consist of the following tests:

a. Individual tests (see 4.3.1)

b. Sampling tests (see 4.3.2)

4.3.1 Individual inspections. Each cord (100 percent) shall be subjected to the tests specified under conformance inspection, "Individual" in table I.

TABLE I. Qualification and Conformance inspection.

Tests	Requirement paragraph	Test paragraph	Qualification	Conformance inspection	
				Individual	Sampling
Visual inspection	3.2, 3.3.11, 3.3.12, 3.6	4.6.1	X	X	
Electrical continuity	3.3.3.2	4.6.2	X	X	
Transformer dc insulation resistance	3.3.7	4.6.3	X		
Frequency response	3.4.1	4.6.4	X		X
Distortion	3.4.2	4.6.5	X		X
Impedance	3.4.3	4.6.6	X		X
Overload	3.4.4	4.6.7	X		
Humidity	3.5.3	4.6.8	X		
Ambient temperature cycling	3.5.5	4.6.9	X		
Visual inspection	3.2, 3.3 thru 3.3.3.1, 3.3.8, 3.3.10	4.5.1	X		
Dielectric strength	3.3.5	4.5.2	X		
Insulation resistance	3.3.6	4.5.3	X		
Flame retardance	3.5.1	4.5.4	X		
Tensile strength and elongation	3.3.4	4.5.5	X		
Flexing	3.3.9	4.5.6	X		
Cold bend	3.5.4	4.5.7	X		

4.3.2 Sampling inspections. Sampling inspections shall be as specified in table I and shall be made on cord assemblies, which have been subjected to and passed the individual inspections.

4.3.2.1 Sampling plan. A sample of parts shall be randomly selected in accordance with table II. If one or more defects are found, the contractor may rework it to correct the defects, or screen out the defective units, and resubmit for reinspection. After screening and removal of defects, a new sample of parts shall be randomly selected in accordance with table II. If one or more defects are found in the second sample, the lot shall be rejected and shall not be supplied to this specification.

TABLE II. Sampling plan.

Lot size	Sample size
2 to 13	1/
14 to 150	13
151 to 280	20
281 to 500	29
501 to 1,200	34
1,201 to 3,200	42
3,200 to 10,000	50
Over 10,000	60

1/ Indicates entire lot must be inspected.

4.3.2.2 Disposition of samples. Samples, which have passed the inspection, may be delivered on the contract, if the lot is accepted and the samples are still within specified electrical tolerances.

4.4 Inspection conditions. Unless otherwise specified, all inspections specified herein shall be made under the following ambient conditions:

a. Temperature: From +20 degrees to +35 degrees C.

b. Pressure: From 28 to 30 inches of mercury (13.75 to 14.74 PSI).

c. Humidity: From 15 to 90% relative.

4.4.1 Tolerances. Where specific tolerances are not given, the maximum allowable tolerances on test condition measurements shall be as follows:

a. Temperature: ± 2 degrees C.

b. Humidity: ± 5 percent (%) relative.

4.4.2 Test equipments. All instruments used in performing the tests required by this specification shall meet at least one of the following requirements:

4.4.2.1 Specific approval. All instruments shall be acceptable to the responsible government inspector and the procuring activity, as indicated by written approval on file at the contractor's plant.

4.4.2.2 Audio oscillator. The audio oscillator shall have a frequency range of at least 100 to 10,000 Hz, shall have a high degree of stability in both output voltage and frequency and shall have a waveform distortion of less than 2 percent.

4.4.2.3 Voltmeter. The voltmeters used shall have flat frequency response (± 1 dB), from at least 100 to 10,000 Hz, and shall be capable of measuring voltages from 0.005 volt to 100 volts).

4.4.2.4 Distortion analyzer. The distortion analyzer shall be of the wave analyzer or total distortion type. The frequency range shall be at least 100 to 10,000 Hz with high selectivity and an input voltage range from 0.001 to 10 volts.

4.5 Cordage test methods.

4.5.1 Visual inspection. The visual inspection shall be an examination of the cordage to determine that the materials, physical dimensions and method of construction are as specified.

4.5.1.1 Construction. The diameter, thickness of the conductor insulation and jacket of the cordage shall be measured by means of a measuring microscope or other gage accurate to 0.001 inch (0.03 mm) and capable of being operated in such a way as not to deform the insulation significantly.

4.5.1.2 Stripping. Irregularities in the jacket edge due to stripping shall not exceed 3/16 (0.188) inch (4.76 mm) overall.

4.5.2 Dielectric strength (see 3.3.5). The finished cordage shall be immersed in tap water at room temperature for 24 hours, with the end terminals entirely above the surface of the water. At the end of this period, a potential of 500 volts rms, 60 Hz shall be applied for 1 minute between the two conductors, and between each of the two conductors and the water in which the cordage is immersed.

4.5.3 Insulation resistance (see 3.3.6). The insulation resistance shall be measured immediately following the Dielectric Strength Test with a suitable resistance measuring device, using a 500-volt dc potential. The conductors shall be maintained negative, with respect to the ground. The insulation resistance shall be determined one minute after voltage application, or sooner if the reading of the resistance measuring device remains steady.

4.5.4 Flame-retardant cord (see 3.5.1). The flame-retardant test shall be performed, with the test sample fully extended in a horizontal position and in still air.

4.5.5 Tensile strength and elongation (see 3.3.4). The tensile strength and elongation of the coated conductor strands, removed from the insulated conductor prior to cabling, shall be tested in accordance with FED-STD-228, method 3211.

4.5.6 Flexing (see 3.3.9). The flexing tests shall be conducted in accordance with MIL-DTL-10392.

4.5.7 Cold bend (see 3.5.4). The cold bend test shall be conducted in accordance with MIL-DTL-10392. Immediately following the cold bend test, the dielectric withstanding voltage test of MIL-DTL-10392 shall be performed, with the specimens immersed in tap water, a potential of 500 volts rms at 60 Hz applied between each conductor (in sequence) and the other 2 (two)conductors tied together in electrical contact with the water, and for a period of 1 (one) minute.

4.6 Cord test methods.

4.6.1 Visual inspection. Each cord shall be visually inspected to insure that:

a. All external surfaces, including any plated parts, are free from blemishes which would permit breaking of the protective coating.

b. All moldings are free of wrinkles, excessive flash and fins.

c. All markings are complete and in accordance with figure 1.

d. The weight and all overall dimensions are correct by comparison with figure 1.

4.6.2 Electrical continuity (see 3.3.3.2). Each conductor shall be checked for electrical continuity with a circuit checker, ohmmeter, or similar instrument.

4.6.3 Transformer dc insulation resistance (see 3.3.7). The insulation resistance between the primary and secondary windings within the transformer-plug shall be measured between the tip or sleeve and the earphone terminals using any standard meg-ohmmeter circuit, which is designed to apply at least 500 volts dc across the test terminals during the measurement.

4.6.4 Frequency response (see 3.4.1). The frequency response of the transformer within the cord shall be measured as follows:

a. Connect the tip and sleeve of the plug across the 600 ohms output terminals of the audio oscillator. In the event the audio oscillator has no 600 ohms terminals, an impedance matching device may be used, provided there is sufficient output to overcome the loss.

b. Connect a 15 ohm ± 2 percent (%) 1-watt resistor across each pair of earphone terminals.

c. Adjust the output from the audio oscillator to give 1.9 volts rms at 1,000 Hz, as measured by a voltmeter at either pair of earphone terminals.

d. Maintain the audio oscillator output established for the 1,000 Hz reading and repeat the measurement for each of the following frequencies:

1. From 200 to 1,000 Hz inclusive – measure at each increment of 100 Hz.

2. From 1250 to 7,000 Hz inclusive – measure at each increment of 250 Hz.

4.6.5 Distortion (see 3.4.2). The distortion introduced by the transformer in the cord shall be determined as follows:

a. Connect the cord under test, audio oscillator and voltmeter outlined in 4.6.4 (a), (b), and (c).

b. Connect the distortion analyzer input in parallel with the voltmeter.

c. Measure the distortion introduced by the transformer for an output of 1.9 volts rms at 1,000 Hz.

d. Maintain the audio oscillator output established for the 1,000 Hz reading and repeat the distortion measurements for each of the following frequencies:

1. From 200 to 1,000 Hz inclusive: Measure at each increment of 200 Hz.

2. From 2,000 to 7,000 Hz inclusive: Measure at each increment of 1,000 Hz.

4.6.6 Impedance (see 3.4.3). The impedance shall be measured at frequencies selected as necessary to insure that the requirements are met. The voltmeter-ammeter method of measurement or other method satisfactory to the responsible government inspector shall be used. The voltage applied across the terminals during impedance measurements should be approximately the same as applied under maximum output conditions. When the impedance of the primary is measured, the secondary shall be terminated by a 7.5 ohm resistor and for the secondary measurement, the primary shall be terminated by a 600 ohm resistor.

4.6.7 Overload (see 3.4.4). Audio power of 500 milliwatts rms at 1,000 Hz shall be applied through the cord (transformer) to a dummy load for a period of 8 hours. During the last hour of the test, the cord (transformer) shall be checked for signs of failure. Upon completion of the overload test, the frequency response and distortion characteristics shall be measured as specified in 4.6.4 and 4.6.5.

4.6.8 Humidity (see 3.5.3). Each cord under test shall be subjected to an ambient humidity condition of 95 percent, relative at 50 degrees C (122 degrees F) for a total of 144 hours. At the end of this period, the frequency response measurement shall be as specified in 4.6.4.

4.6.9 Ambient temperature cycling (see 3.5.5). Ambient temperature cycling shall consist of varying the ambient temperature surrounding the cord under test as follows:

a. Reduce the ambient temperature from normal room temperature to – 62 degrees C, as rapidly as practicable.

b. Retain the ambient temperature at - 62 degrees C for 30 minutes.

c. Increase the ambient temperature to + 85 degrees C, as rapidly as practicable.

d. Retain the ambient temperature at + 85 degrees C for 30 minutes.

e. Reduce the ambient temperature to normal room temperature, as rapidly as practicable.

f. Retain the ambient temperature at normal room temperature for 10 minutes.

g. Repeat the procedures set forth in (a) to (f) above inclusive, until the cord has been subjected to 5 complete cycles.

h. Upon completion of the 5th and last set of temperature cycles, retain the ambient temperature at normal room temperature for one hour, and then measure the frequency response as specified in 4.6.4.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful but is not mandatory.)

6.1 Intended use. The cord covered by this specification is designed to provide electrical connections between earphone H-87B/U, as specified in MIL-DTL-18239 and inter-communication and/or radio facilities.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.

b. Packaging requirements (see 5.1)

6.2.1 Contract data requirements. Data specified in paragraph 4.3 will be listed directly on a DD Form 1423 and incorporated into the contract.

6.3 Definitions.

6.3.1 Cordage and cord. The term “cordage” as used in this specification means Cord, Electrical, while “cord” means Cord Assembly, Electrical.

6.4 Qualification (see 4.2). With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in the applicable Qualified Products List QPL-18266, whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. Information pertaining to qualification of products may be obtained from the DLA Land and Maritime (Attn: VQP), 3990 East Broad Street, Columbus, Ohio 43218-3990, Primary e-mail: vqp.do@dla.mil. An online listing of products qualified to this specification may be found in the Qualified Products Database (QPD) at https://assist.dla.mil.

6.5 Details of construction. This specification is not intended to be restrictive with respect to details of construction, except where such details are specified. Alternate forms of construction will be considered provided the contractor submits, to the procuring activity for approval, a clear description of the points of difference and data to show that all the performance requirements of this specification are being met.

6.5.1 Tin whisker growth (see 3.2.2.1). The use of alloys with tin content greater than 97 percent, by mass, may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture and can develop under typical operating conditions, on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead, by mass, have shown to inhibit the growth of tin whiskers. For additional information on this matter, refer to ASTM-B545 (Standard Specification for Electrodeposited Coatings of Tin).

6.6 General guidelines for electronic equipment. The information, where applicable, including materials, processing, workmanship, and fabrication specified in MIL-HDBK-5400 should apply to this specification. This handbook contains general guidelines for electronic equipment for operation in piloted aircraft and helicopters, missiles, boosters and allied vehicles. Detail electrical and mechanical design, performance and test requirements should be as specified in the detail specification or contract. This handbook is for guidance only. The earphones H-87B/U, to which this cord assembly is connected, should operate satisfactorily under any of the environmental and mechanical service conditions or reasonable combination of these conditions, as indicated in MIL-HDBK-5400, for Class 1B equipment, except that the information for Sand and Dust do not apply.

6.7 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals and additional information is available on their website http://www.epa.gov/osw/hazard/wastemin/priority.htm. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials should be minimized or eliminated unless needed to meet the requirements specified herein (see 3.2).

6.8 Subject term (key word) listing.

Cable
Conductor
Cordage
Earphone
Electronic
Jacket
Molding
Plug
Rubber
Strain-relief
Terminals
Transformer
Transformer-plug

6.9 Changes from previous issue. 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:
Navy – AS
DLA – CC

Preparing Activity:
DLA – CC

(Project 5995-2013-001)

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.