

MIL-C-85642(AS)  
14 May 1985

## MILITARY SPECIFICATION

### COMMUNICATIONS CENTRAL AN/ASC-26

This specification is approved for use by the Naval Air Systems Command, Department of the Navy and is available for use by all departments and agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification establishes the design, performance, and acceptance requirements for the AN/ASC-26 Communications Central hereinafter referred to as ASC-26. The ASC-26 is intended for use in UH-1N Helicopters to provide radio communication between marine task commanders in the helicopters, higher headquarters, and supporting combat units.

Beneficial comments (recommendations, additions, deletions,) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Engineering Center, Systems Engineering and Standardization Department (SESD) Code 93, Lakehurst, NJ 08733, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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## MIL-C-85642(AS)

## 2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. Unless otherwise specified, the following specifications and standards of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

## SPECIFICATIONS

Military

DOD-D-1000/1	Drawings, Engineering, and Associated Data
MIL-W-5088	Wiring, Aircraft, Installation of
MIL-C-5541	Chemical Films for Aluminum and Aluminum Alloys
MIL-S-7742	Screw Threads, Standard, Optimum Selected Series; General Specification for
MIL-A-8625	Anodic Coatings, for Aluminum Alloys and Aluminum
MIL-E-17555	Electronic and Electrical Equipment Accessories and Repair Parts; Packaging and Packing of
MIL-T-18303	Test Procedures, Production, Acceptance and Life for Aircraft Electronic Equipments, Format for
MIL-N-18307	Nomenclature and Nameplates for Aeronautical Electronic and Associated Equipment
MIL-H-46855	Human Engineering Requirements for Military Systems, Equipment and Facilities

## STANDARDS

Military

MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	Identification Marking of U.S. Military Property

## MIL-C-85642(AS)

MIL-STD-454	Standard General Requirements for Electronic Equipment
MIL-STD-461	Electromagnetic Emission and Susceptibility Requirements for the Control of Electromagnetic Interference
MIL-STD-462	Electromagnetic Interference Characteristics, Measurement of
MIL-STD-471	Maintainability Demonstration
MIL-STD-704	Electric Power, Aircraft Characteristics and Utilization of
MIL-STD-781	Reliability Tests, Exponential Distribution
MIL-STD-794	Parts and Equipment Procedures for Packaging and Packing of
MIL-STD-810	Environmental Test Methods
MIL-STD-1472	Human Engineering Design Criteria for Military Systems Equipment and Facilities

2.1.2 Other Government documents, drawings, and publications. The following Government documents, drawings and publications form a part of this specification to the extent specified herein.

Naval Air Systems Command

## DRAWINGS

1067AS100	Communications Central AN/ASC-26
1067AS1001	Performance Requirements for the Communications Central AN/ASC-26

## PUBLICATIONS

NAVAIR AE-070AA-OMP-000	Technical Manual for Communications Central AN/ASC-26
NAVAIR 16-30ARC-159-1, -2, -3	Technical Manuals for UHF Transceiver AN/ARC-159(V)1

2.1.3 Other publications. The following documents form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

## MIL-C-85642(AS)

## PUBLICATIONS

523-0770254-001118	Collins VHF 186 AM/FM Radio Set Instruction Manual, Volume 1
523-0770255-101118	Collins VHF 186 AM/FM Radio Set Instruction Manual, Volume 2
523-0771532-00111A	Collins VHF 186 AM/FM Radio Set Instruction Manual, Volume 3
523-0770257-002118	Collins VHF 186 AM/FM Radio Set Instruction Manual, Volume 4

(Application for copies should be addressed to the Collins Telecommunication Products Division, Rockwell International, Cedar Rapids, Iowa 52402-9981)

(Copies of specification, standards, handbooks, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.1.4 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

## 3. REQUIREMENTS

3.1 Item description. The AN/ASC-26 shall consist of two major assemblies, Radio Set Group OZ-53/ASC-26 and Interconnecting Group ON-252/ASC-26. The Radio Set Group OZ-53/ASC-26 is illustrated in Figure 1, and the Interconnecting Group ON-252/ASC-26 is illustrated in Figure 2.

3.2 First article. When specified in the contract (see 6.2.1), a sample shall be subjected to first article inspection (see 4.4 and 6.3).

3.3 Parts and materials.

3.3.1 General. Parts and materials shall meet the requirements of MIL-STD-454, Requirement 22.

3.3.1.1 Nonstandard parts. Standard MS and AN parts shall be used unless the parts will not perform as required in the intended applications and environments specified herein. When no standard part is available, a nonstandard part may be used with prior approval of the procuring activity. Selection and approval of the use of nonstandard parts and materials shall be obtained by the contractor as specified in MIL-STD-454, Requirement 22.

3.3.2 Materials.

3.3.2.1 Metals. Metals shall be of the corrosion resistant type unless protected to resist corrosion during the life of the ASC-26.

MIL-C-85642(AS)

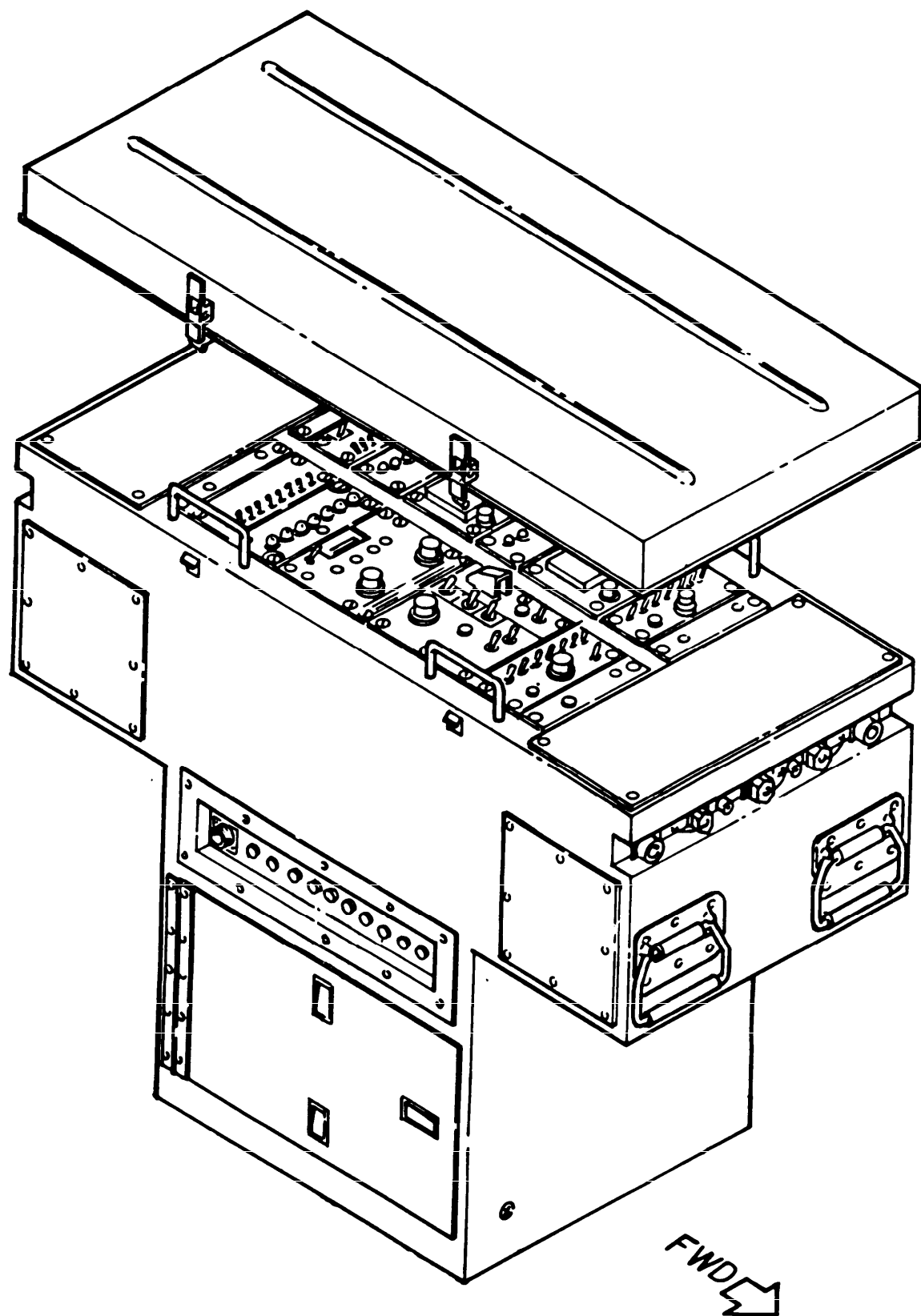


FIGURE 1. Radio Set Group OZ-53/ASC-26

MIL-C-85642(AS)

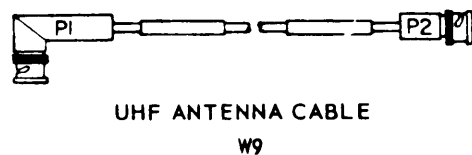
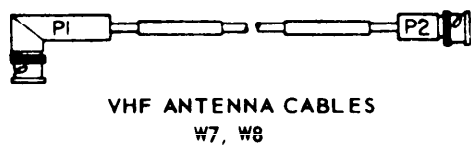
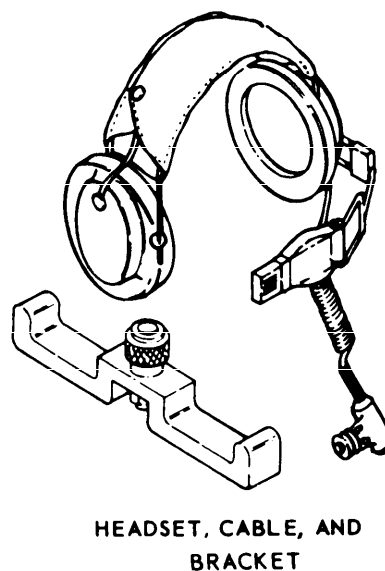
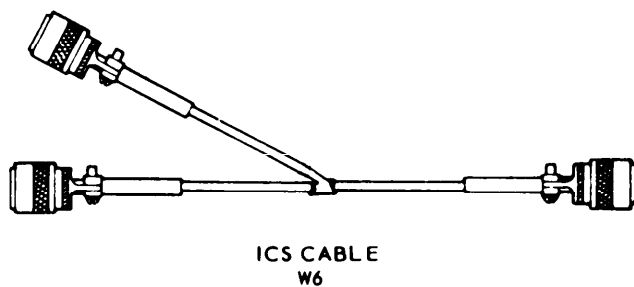
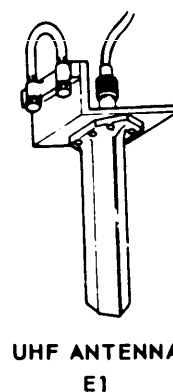
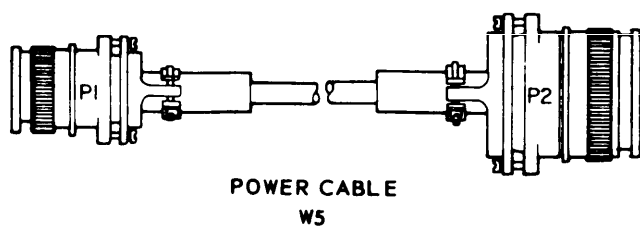
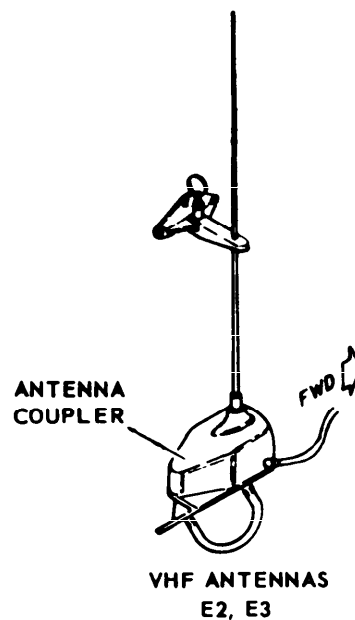
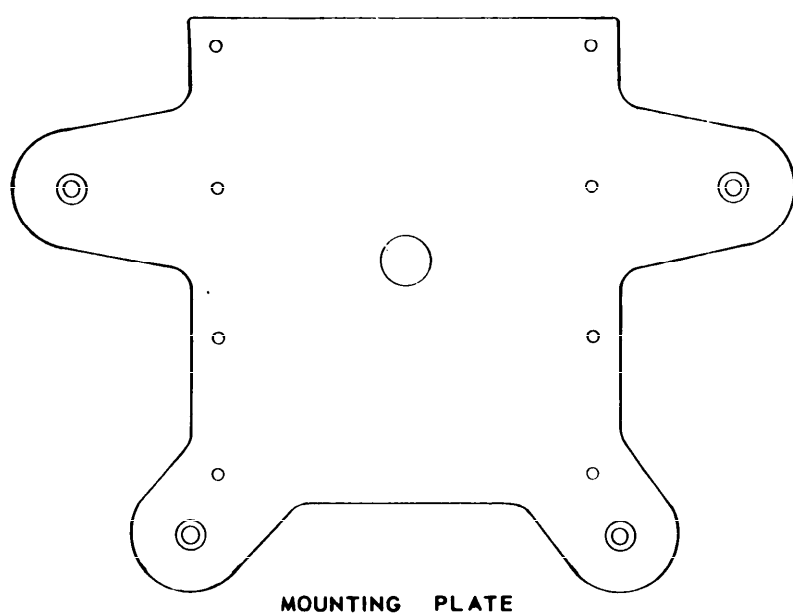


FIGURE 2. Interconnecting Group ON-252/ASC-26

## MIL-C-85642(AS)

3.3.2.2 Non-ferrous materials. Non-ferrous materials shall be used for all parts of the ASC-26 except where ferrous materials are considered essential by the contractors and authorized by the procuring activity (see 6.2.1).

3.3.2.3 Dissimilar metals. Unless protected against electrolytic corrosion by means of a protective coating, intimate contact of dissimilar metals, which are specified in Requirement 16 of MIL-STD-454 shall be avoided.

3.3.2.4 Protective treatment. When materials which are used in the construction of the ASC-26 are subject to deterioration when exposed to climatic and environmental conditions likely to occur during service life, they shall be protected against such deterioration in a manner that will in no way prevent compliance with the performance requirements of this specification. The use of any protective coating that will crack, chip, or scale with age or extremes of climatic and environmental conditions shall be avoided.

3.3.2.5 Fungus-proof-materials. Materials that are nutrients for fungi shall not be used unless hermetically sealed, or treated with fungicidal agent acceptable to the Government Inspector.

3.3.2.6 Toxic and corrosive fumes. The materials, as installed in the ASC-26 and under the conditions specified herein, shall not liberate deleterious or corrosive fumes. This shall include any fungicidal agents that are used.

3.3.2.7 Aluminum alloy parts. Aluminum alloy parts shall be covered with an anodic film in accordance with MIL-A-8625, except that dials, small holes, chassis inserts, need not be anodized. Parts which do not anodize as required may be coated in accordance with MIL-C-5541.

3.3.2.8 Components. The electronic and mechanical components shall be in accordance with MIL-STD-454, Requirement 22.

3.3.2.9 Threads. The threads of all machine screws shall be in accordance with MIL-S-7742.

3.4 Design and construction. The ASC-26 shall conform with the requirements of Drawing 1067ASI00-1 concerning design, construction, and workmanship. The design shall include minimum size and weight consistent with maximum reliability, operability, and minimum maintainability. In any case, it is a condition of final acceptance that the ASC-26s manufactured shall meet all the requirements of this specification.

3.4.1 Reliability. The contractor shall establish a reliability assurance test program in accordance with MIL-STD-781.

3.4.1.1 Operational stability. The ASC-26 shall operate as required continuously, or intermittently, for a period of at least 500 hours. During this time, it shall not be necessary to readjust any controls that are inaccessible to the operator during normal use.

3.4.1.2 Operating life. The ASC-26 shall have a minimum total operating life of 15 years with minimal servicing and replacement of parts.

## MIL-C-85642(AS)

3.4.1.3 Reliability in mean-time-between-failures (MTBF). The ASC-26 shall have a specified mean (operating) time between failures of 400 hours when tested in accordance with 4.5.4. Failures of Government Furnished Equipment will not be counted as ASC-26 equipment failures.

3.4.2 Interchangeability. Interchangeability shall exist between all units and replaceable assemblies, subassemblies, and parts for all equipment delivered on the contract in accordance with MIL-STD-454, Requirement 7. All parts having the same manufacturer's part number shall be directly and completely interchangeable with each other with respect to installation and performance. Changes in manufacturer's part numbers shall be governed by the drawing number requirements of DOD-D-1000/1.

3.4.3 Maintainability. The ASC-26 shall be maintained at organizational level by replacement of SRAs and WRAs. Piece part repair of the faulty SRAs and WRAs shall be performed at the intermediate level maintenance shops.

3.4.3.1 Repair time. Repair time for the ASC-26 shall be not greater than the following:

- a. Organizational level - 30 minutes for 90 percent of the failures and three hours for the remaining 10 percent.
- b. Intermediate level - 45 minutes for 90 percent of the failures and three hours for the remaining 10 percent.

The repair time is based on the use of one organization or intermediate level (as appropriate) technician and technical information. Spare parts and facilities will be available. Repair time shall include all repair and test time.

3.4.4 Transportability. The ASC-26 shall be transportable by air, rail, truck, or ship when packaged as specified in section 5.

3.4.5 Dimensions. The dimensions of the ASC-26 shall be not greater than the following:

a. Radio Set Group

- |            |           |
|------------|-----------|
| (1) Height | 28 inches |
| (2) Width  | 15 inches |
| (3) Length | 34 inches |

3.4.6 Weight. The total weight of the ASC-26 shall be not greater than 165 pounds.

3.4.7 Color and finish. The color and finish of the equipment shall be in accordance with Drawing 106/AS100-1.

3.4.8 Nameplate and identification marking. Serial number assignment, nameplate approval, and identification marking shall be in accordance with MIL-N-18307 and shall include the following:



## MIL-C-85642(AS)

- a. Unit name
- b. Unit nomenclature
- c. Contract number
- d. Manufacturer's code number
- e. Equipment drawing number
- f. Procuring activity
- g. Serial number

3.4.8.1 Decals, nameplates, and marking. All decals, nameplates, and marking shall be affixed to the ASC-26 in accordance with MIL-STD-130 and all referenced marking specifications and drawings therein.

3.4.8.2 Serial numbers. Serial numbers will be assigned by the procuring activity for ASC-26s under contract or order. The contractor shall serialize sequentially all ASC-26s which are delivered under the contract.

3.4.9 Safety. Safety requirements shall be in accordance with MIL-STD-454, Requirement 1.

3.4.9.1 Human performance/human engineering. The AN/ASC-26 and all component part thereof, shall be designed in accordance with the requirements of MIL-STD-1472. Recognized principles of human engineering as specified in MIL-H-46855 shall be followed during design.

3.4.10 Government furnished equipment (GFE). The following assemblies will be Government furnished to the contractor for assembling in the AN/ASC-26 (see 6.4):

- a. UHF Transceiver, AN/ARC-159(V)1
- b. VHF Transceiver, RT-1299(V)2/ARC-186(V) (2 units)
- c. Headset H-157/AIC (4 units)
- d. VHF Antenna AS1703/AR (2 units)
- e. UHF Antenna AT-256A/ARC
- f. VHF Antenna Coupler CU-942 (2 units)
- g. Control Communications C-6533/ARC (4 units)

3.4.11 Standard conditions. The following conditions shall be used to establish normal performance characteristics under standard conditions and for making laboratory bench test.

## MIL-C-85642(AS)

- a. Temperature 25 ± 10°C
- b. Altitude Normal ground
- c. Vibration None
- d. Humidity (Relative) Uncontrolled room ambient
- e. Input Power 28 ± 1.0 volt DC, 35 amperes

3.4.12 Service conditions. The ASC-26 shall operate as required under the environmental service conditions specified in 3.4.12.1 through 3.4.12.5.2.

3.4.12.1 Low pressure (altitude). The ASC-26 shall meet the operational requirements of this specification while being subjected to low pressure (altitude) tests in accordance with MIL-STD-810, Method 500.2.

3.4.12.2 Temperature. The ASC-26 shall meet the operational requirements of this specification while being subjected to high and low temperature tests in accordance with MIL-STD-810, Methods 501.2 and 502.2, respectively.

3.4.12.3 Vibration. The ASC-26 shall meet the operational requirements of this specification while being subjected to vibration exposure in accordance with MIL-STD-810, Method 514.3, Category 6, procedure I.

3.4.12.4 Humidity. The ASC-26 shall operate as required after being subjected to a humidity test in accordance with MIL-STD-810, Method 507.2, Procedure I. The ASC-26 shall not be damaged as a result of the humidity test.

3.4.12.5 Salt fog. The ASC-26 shall meet the operational requirements of this specification immediately after, and again 48 hours after, salt fog exposure in accordance with MIL-STD-810, Method 509.2, Procedure I.

3.4.12.6 Shock. The ASC-26 shall meet the requirements to shock exposure in accordance with MIL-STD-810, Method 516.3, procedures I, II, and V.

3.4.13 Warm-up time. The time required for the ASC-26 to warm-up prior to operation shall be not greater than one minute under standard conditions and five minutes under service conditions.

3.4.14 Input power. The ASC-26 shall meet all applicable requirements of MIL-STD-704 and shall meet specified performance requirements when energized from the power source having characteristics and limits defined in MIL-STD-704 for a 28 V d-c system.

3.4.14.1 Voltage transient. The ASC-26 shall meet the requirements of MIL-STD-704 for transient.

3.4.14.2 Electrical overload protection. Electrical overload protection for the ASC-26 shall conform to MIL-STD-454, Requirement 8.

## MIL-C-85642(AS)

3.4.15 Interference control. The generation of electromagnetic interference shall be controlled within the limits of MIL-STD-461 for the tests specified in 3.4.15.1 through 3.4.15.6. EMI testing shall be accomplished under standard conditions specified in 3.4.11 and in accordance with the procedures of MIL-STD-462 to demonstrate compliance with the requirements of MIL-STD-461.

3.4.15.1 Conducted emission, power, and interconnecting leads. Conducted emissions from the equipment power and interconnecting leads shall be within the limits of MIL-STD-461, Test Method CE03.

3.4.15.2 Conducted susceptibility, power leads, 30 Hz to 50 kHz. The ASC-26 shall not exhibit any malfunction, degradation of performance or deviation from the specified indications of Drawing 1067AS1001 beyond the tolerance specified therein when subjected to electromagnetic energy injected onto the power leads in accordance with MIL-STD-462 Test Method CS01.

3.4.15.3 Conducted susceptibility, power leads, 0.05 to 400 MHz. The ASC-26 shall not exhibit any malfunction degradation of performance or deviation from the specified indications of Drawing 1067AS1001 beyond the tolerance specified therein when subjected to the susceptibility test of MIL-STD-462, Test Method CS02.

3.4.15.4 Conducted susceptibility, spikes, power leads. The ASC-26 shall not exhibit any malfunction, degradation of performance or deviation from the specified indications of Drawing 1067AS1001 beyond the tolerance specified therein when subjected to test spikes having waveform in accordance with MIL-STD-461, Test Method CS06.

3.4.15.5 Radiated emissions, electric field 14 kHz to 10 GHz. The ASC-26 shall not have radiated emissions that are greater than the limits of MIL-STD-461, Test Method RE02. Above 30 MHz, the limits shall be met for both horizontally and vertically polarized waves.

3.4.15.6 Radiated susceptibility, electric field, 14 kHz to 40 GHz. The ASC-26 shall not exhibit any malfunction, degradation of performance or deviation from the specified indications of Drawing 1067AS1001 beyond the tolerance specified therein when subjected to radiated susceptibility tests in accordance with MIL-STD-462, Test Method RS03 and 4.7.5.

3.5 Performance. The performance of the ASC-26 shall be as specified in 3.5.1. Unless otherwise specified herein, these requirements shall apply under both standard and service conditions (see 3.4.11 and 3.4.12). When reduced performance requirements for service conditions are acceptable, such variations shall be as specified herein.

3.5.1 Function and description. Detail function, description, and maintenance requirements shall be in accordance with NAVAIR AE-070AA-OMA-000. The AN/ASC-26 shall be designed in accordance with Drawing 1067AS100-1 as an airborne communication system with a secure transmit/retransmit and receive capability. The ASC-26 shall be an integrated communication system for application in UH-1N helicopters without need for airframe changes. The ASC-26 shall be capable of the following functions (see Figure 3):

## MIL-C-85642(AS)

- a. Capable of being operated independently in plain or secure and retransmit modes by manipulation of the appropriate radio/modes select switches.
- b. Have four operator stations equipped with intercommunication sets, status display units and UHF or VHF radios.
- c. Allows each operator to manually select the desired radio for transmit/receive.
- d. Permits monitoring of communications on RT1, RT2, RT3, ACFT ICS, or remote RT channels.
- e. Provides a means of communication between the operators and crew.

### 3.5.2 Content. The ASC-26 shall consist of the following assemblies:

- a. Radio Set Group OZ-53/ASC-26
- b. Interconnecting Group ON-252/ASC-26

### 3.6 Detail requirements.

3.6.1 Radio Set Group OZ-53/ASC-26. The radio set group shall be manufactured in accordance with Drawing 1067AS1000 and shall meet the requirements stated thereon and in 3.6.1.1 through 3.6.1.2.12.

3.6.1.1 Radio set group function and description. The radio set group (see Figure 1) shall house all the system components except those listed as part of the Interconnecting Group ON-252/ASC-26. The avionics and electrical components shall be rack-mounted in the radio set group assembly which shall permit ease of installation/removal and shall provide accessibility for maintenance services and repair. The console dimensions, weight, and operating power requirements shall be as specified in 3.4.5, 3.4.6 and 3.4.14, respectively.

3.6.1.2 Radio set group content. The radio set group shall be comprised of the following assemblies:

- a. Cabinet Assembly
- b. VHF Transceiver, RT-1299(V)2/ARC-186(V) (Quantity 2)
- c. UHF Transceiver, AN/ARC-159(V)1 (Quantity 1)
- d. Control Communications, C-6533/ARC (Quantity 4)
- e. Indicator, Radio ID-2347/ASC-26 (Quantity 3)
- f. Indicator, Control ID-2348/ASC-26 (Quantity 4)
- g. Central Control, Communications C-11379/ASC-26 (Quantity 1)
- h. Power Control Assembly (Quantity 1)

## MIL-C-85642(AS)

- i. Station Audio Card Assembly (Quantity 4)
- j. Switching Control Card Assembly (Quantity 1)
- k. Retransmit Audio Card Assembly (Quantity 1)
- l. Extender Card Assembly (Quantity 1)
- m. Voltage Regulator Assembly (Quantity 1)

3.6.1.2.1 Cabinet assembly. The cabinet shall be manufactured in accordance with Drawing 1067AS1050. Figure 1 illustrated the cabinet with radio group components installed.

3.6.1.2.2 VHF Transceiver RT-1299(V)2/ARC-186(V). The VHF transceiver will be Government Furnished Equipment (GFE) to the contractor (see 6.4). Two identical VHF transceiver (designated RT1 and RT2) shall be required in the Radio Set Group OZ-53/ASC-26 assembly (see Figure 3). The VHF transceivers shall operate with frequency modulation (FM) using 20 preset channels. The frequency range shall be 30 MHz to 87.975 MHz in tunable 25 KHz increments. The power requirements shall be 28 volts dc; 4.5 amperes; 10 watts. Technical manuals 523-0770254-001118, volume 1, 523-0770255-101118, volume 2, 523-0771532-00111A, volume 3, and 523-0770257-002118, volume 4 contain detail description, operation, and maintenance requirements for the transceiver.

3.6.1.2.3 UHF Transceiver AN/ARC-159(V)1. The UHF transceiver will be furnished by the Government to the contractor (GFE) (see 6.4). The UHF transceiver shall be designated RT3 (see Figure 3). The UHF transceiver shall use amplitude modulation. The frequency range shall be 225 MHz to 400 MHz in tunable 25 KHz increments. The transceiver shall have 20 preset channels. The power requirements shall be 28 volts dc; 4.5 amperes; 10 watts. Technical Manuals NAVAIR 16-30ARC-159-1, -2, and -3 contain detail description, operation, and maintenance requirements for the transceiver.

3.6.1.2.4 Control Communications C-6533/ARC. The Control Communications C-6533/ARC will be furnished by the Government to the contractor (GFE) (see 6.4). Four identical controls shall be required in the assembly of the Radio Set Group OZ-53/ASC-26; they shall be designated A2, A6, A9 and A14 (see Figure 3). One control shall be used in each of the four operator stations. The control shall allow each operator to manually select the desired transceiver for transmit/receive, shall permit monitoring of the remaining radios and shall also provide a means of communication between the console operators and the aircrew.

3.6.1.2.5 Indicator, Radio ID-2347/ASC-26. The radio indicator shall be manufactured in accordance with Drawing 1067AS1020. Three identical radio indicators shall be required in the assembly of the Radio Set Group OZ-53/ASC-26. The units shall be designated A5, A10, and A12. The radio indicator shall provide a visual indication of the in-use radio(s) mode of operation. Each radio indicator visual display shall consist of the following six status indicators:

## MIL-C-85642(AS)

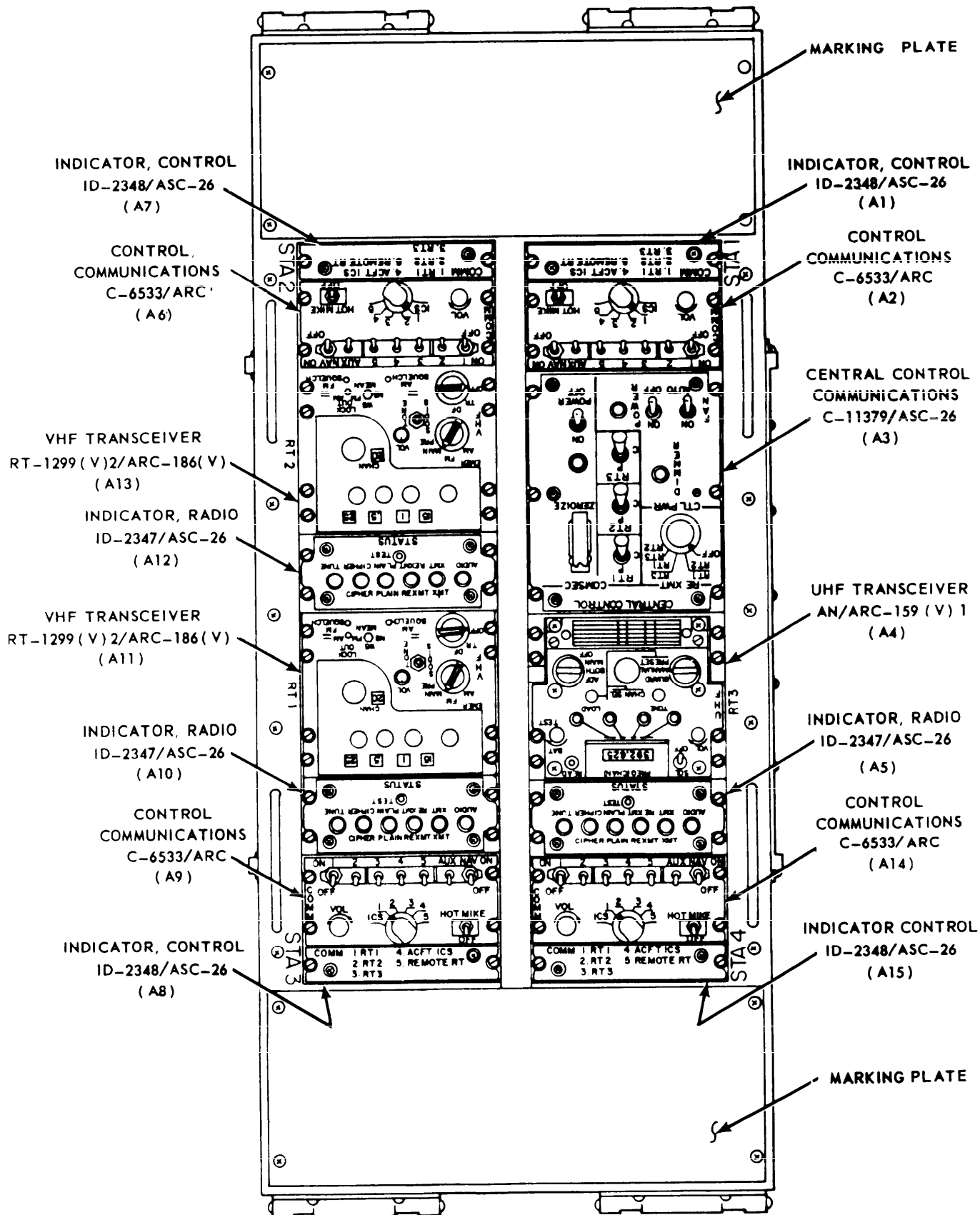


FIGURE 3. AN/ASC-26 controls and indicators



## MIL-C-85642(AS)

- a. AUDIO - radio is receiving audio communications
- b. XMT - radio is in transmit mode
- c. REXMT - radio is in retransmit mode
- d. CIPHER - radio is processing secure communications
- e. PLAIN - radio is processing plain text communications
- f. TUNE - antenna tuning signal is processing (not used in this configuration)

3.6.1.2.6 Indicator, Control ID-2348/ASC-26. The control indicator shall be manufactured in accordance with Drawing 1067AS1040. Four identical control indicators shall be required in the assembly of the Radio Set Group OZ-53/ASC-26. The units shall be designated A1, A7, A8, and A15. The control indicator shall, in conjunction with the Control Communications C-6533/ARC, display with a visual legend the selected position of the five channel position selections on the C-6533/ARC.

3.6.1.2.7 Central Control, Communications C-11379/ASC-26. The central control shall be manufactured in accordance with Drawing 1067AS1030. One central control shall be required in the assembly of the Radio Set Group OZ-53/ASC-26. The unit shall be designated A3. The central control shall provide on and off control for main power communications central system cooling fan, crypto power, crypto plain and cipher, radio transmit/retransmit and receive modes of operation and dimmer control on panel lighting and indicators.

3.6.1.2.8 Power control assembly. The power control assembly shall be manufactured in accordance with Drawing 1067AS1055. The assembly shall be designated A16. The power control assembly shall contain circuit breakers for power overload protection to the radios, cryptos, antennas and voltage regulator. The 28 volts dc to these assemblies shall be applied via the power control assembly.

3.6.1.2.9 Station audio card assembly. The station audio card assembly shall be manufactured in accordance with Drawing 1067AS1080. Four card assemblies shall be required in the assembly of the Radio Set Group OZ-53/ASC-26, one for each of the four operator stations. The assemblies shall be designated A21, A22, A23 and A24. The station audio card assembly shall control all functions of the C-6533 control boxes (ICS). For two-way communication at an operator station, the audio card must be in position and functioning properly. The audio card shall disconnect audio monitor signals from the ICS box when a transceiver is transmitting to prevent crypted signals being transmitted due to crosstalk.

3.6.1.2.10 Switching control card assembly. The switching audio card assembly shall be manufactured in accordance with Drawing 1067AS1090. The assembly shall be designated A25. The switching audio card assembly shall process all the dc control lines for the retransmit functions.

## MIL-C-85642(AS)

3.6.1.2.11 Retransmit audio card assembly. The retransmit audio card assembly shall be manufactured in accordance with Drawing 1067AS1100. The assembly shall be designated A26. The retransmit audio card assembly shall process all of the audio lines for the retransmit functions of the ASC-26.

3.6.1.2.12 Extender card assembly. The extender card assembly shall be manufactured in accordance with Drawing 1067AS1110. The assembly shall provide access to the test points of card assemblies A21, A22, A23, A24, A25 and A26 for testing and troubleshooting.

3.6.1.2.13 Voltage regulator. The voltage regulator assembly shall be manufactured in accordance with Drawing 1067AS1017. The assembly shall be designated A35. With  $\pm 28.0 \pm 5$  volts dc applied, the regulator shall be capable of maintaining +24 volt dc minimum at 2 amperes to ASC-26 circuitry.

3.6.2 Interconnecting group ON-252/ASC-26. The interconnecting group shall be manufactured in accordance with Drawing 1067AS105. The interconnecting group shall be comprised of the following assemblies (see Figure 2):

- a. Mounting Base
- b. Headset, Cable (W1-W4) and Bracket
- c. UHF Antenna (E1) and mounting bracket
- d. VHF Antenna (E2, E3) and mounting bracket
- e. Power Cable, W5
- f. ICS Cable, W6
- g. VHF Antenna Cable, W7, W8
- h. UHF Antenna Cable, W9
- i. VHF Antenna Coupler (Quantity 2)
- j. Standoff (Quantity 2)

3.6.2.1 Mounting base. The mounting base shall be manufactured in accordance with Drawing 1067AS103. The mounting base shall be used to mount the Radio Set Group OZ-53/ASC-26 to the helicopter floor.

3.6.2.2 Headset, cable, and bracket. The headset cable and bracket shall be manufactured in accordance with 1067AS1065, and 1067AS112, respectively. Four Headsets, H-157A/AIC, will be Government Furnished Equipment (GFE) (see 6.4). The contractor shall provide four cables and two brackets.

3.6.2.3 VHF antenna and mounting brackets. Two Antennas, AS-1703/AR, will be Government Furnished Equipment (see 6.4). Two antenna brackets (VHF Antenna Mounting Bracket) shall be manufactured in accordance with Drawing 1067AS114. Two antenna standoffs shall be manufactured in accordance with Drawing 1067AS115. The brackets and standoffs shall be used to mount the antennas to the side of the helicopter as illustrated in Figure 4.



MIL-C-85642(AS)

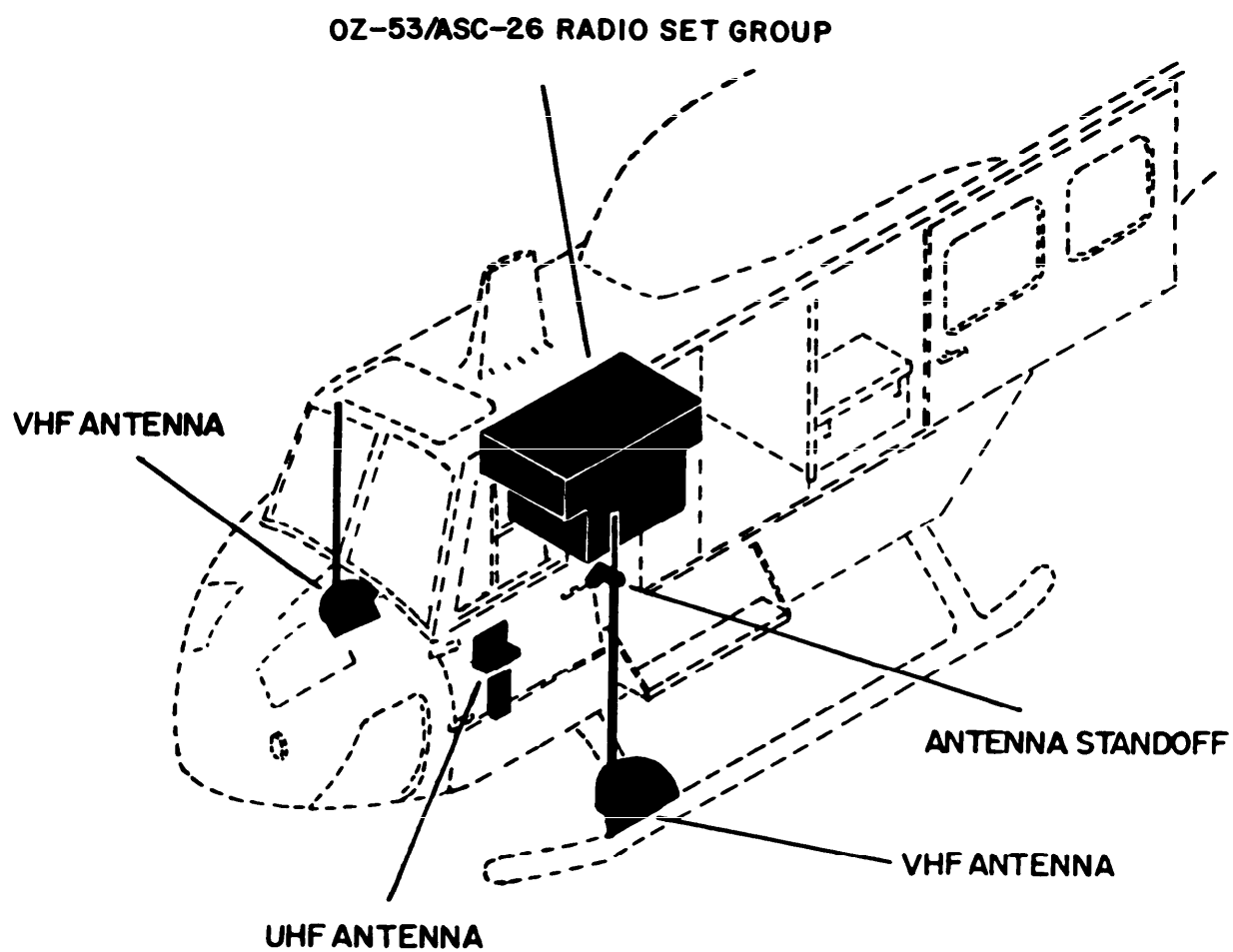


FIGURE 4. Helicopter UN-1N showing antenna locations

## MIL-C-85642(AS)

3.6.2.4 VHF antenna coupler. Two VHF Antenna Couplers CU-942/U will be Government Furnished Equipment (see 6.4). The antenna couplers shall be mounted at the base of the AS-1703/AR antennas and attached to the antenna brackets.

3.6.2.5 UHF antenna and mounting brackets. One Antenna, AT-256A/ARC, will be Government Furnished Equipment (see 6.4). The antenna bracket (UHF Antenna Mounting Bracket) shall be manufactured in accordance with Drawing 1067AS113. The bracket shall be used to mount the antenna to the underside of the helicopter as shown in Figure 4.

3.6.2.6 Power cable (W5). The power cable shall be manufactured in accordance with Drawing 1067AS110. The cable shall be designed to connect aircraft power to the ASC-26.

3.6.2.7 ICS cable (W6). The ICS cable shall be manufactured in accordance with Drawing 1067AS111. The cable shall be designed to interconnect each ASC-26 operator station with the helicopter aircrew ICS and to any aircraft transceiver via a C-6533/ARC communications box located in the cargo area of the helicopter.

3.6.2.8 VHF antenna cables (W7, W8). The VHF cables shall be manufactured in accordance with Drawing 1067AS1005-5. The antenna cables shall be designed to connect the VHF antennas, located on the side of the helicopter, to the ASC-26 cabinet located in the helicopter cargo bay.

3.6.2.9 UHF antenna cable, W9. The UHF antenna cable shall be manufactured in accordance with Drawing 1067AS1005-4. The UHF antenna cable shall be designed to connect the antenna, located on the underside of the helicopter, to the ASC-26 cabinet located in the helicopter cargo bay.

3.6.2.10 Standoff, VHF antenna. The standoff shall be manufactured in accordance with Drawing 1067AS115. The standoff shall be designed to mount on the helicopter door hinge and hold the VHF antenna from whipping in the wind (see figure 4).

3.7 Internal wiring. Internal wiring shall be in accordance with MIL-W-5088.

3.8 Workmanship. Workmanship for the ASC-26 shall conform with MIL-STD-454, Requirement 9.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsible for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

## MIL-C-85642(AS)

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

- a. First article inspection (see 4.4).
- b. Quality conformance inspection (see 4.5).

**4.3 Inspection conditions.** Unless otherwise specified herein, all inspections shall be performed with conditions specified as follows:

- |                |   |
|----------------|---|
| a. Temperature | Room ambient ( $25 \pm 10^{\circ}\text{C}$ )    |
| b. Altitude    | Normal ground                                   |
| c. Vibration   | None  |
| d. Humidity    | Room ambient up to 90 percent relative humidity |
| e. Input Power | $28 \pm 1.0$ volt dc                            |

**4.3.1 Performance characteristics.** Before testing, the ASC-26 shall satisfy the requirements for interference control (see 3.4.15) and warmup time (see 3.4.13). During inspection acceptance testing, the equipment shall satisfy the requirements of Section 3.

**4.4 First article inspection.** First article inspection shall be conducted by the contractor on one ASC-26 representative of the production ASC-26 to be supplied under the contract. First article tests shall be accomplished under the approved test procedures (see 4.9). Column I of table I lists minimum tests required for first article inspection. No first article inspections shall be conducted prior to acceptance of the first article test procedure by the procuring activity (see 6.2.2).

**4.4.1 First article test data.** The contractor shall make data collected in conducting first article tests available for the procuring activity (see 6.2.2).






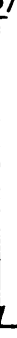
**4.4.2 Scope of first article tests.** First article tests shall include all tests deemed necessary by the procuring activity to determine that the ASC-26 meets all the requirements of this specification and the contract. First article tests shall include environmental tests in accordance with the procedures of MIL-STD-810 and interference tests in accordance with MIL-STD-461.

**4.4.3 First article approval.** Approval of the first article sample will be by the procuring activity upon completion of all tests and the first article test report being made available to the procuring activity (see 6.2.2).

**4.4.4 Production equipments.** ASC-26 supplied under the contract shall in all respects, including design, construction, workmanship, performance, and quality, be equal to the accepted first article sample. Each ASC-26 shall be capable of successfully passing the same tests as imposed on the first article sample.

## MIL-C-85642(AS)

TABLE I. First article and quality conformance inspection

Minimum test requirements	I. First Article Inspection	II. Quality Conformance Inspection			
		Individual	Sampling	Special	Life
Visual Examination (see 3.3 through 3.4.9)	4.5.1.1	4.5.1.1	4.5.1.1	4.5.1.1	4.5.1.1
Performance Characteristics (see 3.5)	4.5.1.2	4.5.1.2	4.5.1.2	4.5.1.2	4.5.1.2
Workmanship (see 3.6)	4.5.1.3	<u>4.5.1.3</u>	<u>4.5.1.3</u>	<u>4.5.1.3</u>	4.5.1.3
Environmental Tests (see 3.4.12)	4.6				See 4.5.7.2 and 4.5.7.3
Warm-up time (see 3.4.13)					
Interference Control (see 3.4.15)	4.7				
Reliability (see 3.4.1)	4.5.4.1				
Maintainability (see 3.4.3)	4.5.3				
			4.5.4.2		

1/ Additional individual tests may be requested by the procuring activity (see 4.5.1).

2/ Sampling tests to be performed will be determined by the procuring activity based on first article and individual test results (see 4.5.2.1).

3/ Special tests to be performed will be determined by the procuring activity (see 4.5.5.2).

## MIL-C-85642(AS)

4.5 Quality conformance inspection. The contractor shall furnish all samples and shall be responsible for accomplishing the quality conformance inspection. All inspection and testing shall be under the supervision of the government inspector. The contractor shall prepare and have available test reports showing quantitative results for all quality conformance tests (see 6.2.2). Such reports shall be signed by an authorized representative of the contractor or laboratory, as applicable. Quality conformance tests shall consist of the following (see table I):

- a. Individual Tests (see 4.5.1)
- b. Sampling Tests (see 4.5.2)
- c. Reliability Assurance Tests (see 4.5.4)
- d. Special Tests (see 4.5.5)
- e. Life Test (see 4.5.7)

4.5.1 Individual tests. Each ASC-26 submitted for quality conformance inspection shall be subjected to the individual tests. These tests shall determine compliance with the requirements of material, workmanship, operational adequacy and reliability. As a minimum, each ASC-26 accepted shall have passed the following tests:

- a. Examination of product (see 4.5.1.1)
- b. Operational test (see 4.5.1.2)
- c. Manufacturing run-in test (see 4.5.1.3)

4.5.1.1 Examination of product. Each ASC-26 shall be examined carefully to determine that the material, interchangeability, workmanship and safety requirements have been met. Particular attention shall be given to the following:

- a. Completeness
- b. Nameplate, identification marking, and labels
- c. Alignment and lightness
- d. Finish
- e. Fit and placement of components
- f. Ease of operation of jacks, switches, sliding parts and controls
- g. Mountings and brackets
- h. Fastening and securing of devices or parts
- i. Accessibility of components and parts

## MIL-C-85642(AS)

- j. Welded and soldered joints
- k. Cable runs between components including plugs and receptacles
- l. Forms, harnesses, and other wiring
- m. Grounding connections
- n. Weight
- o. Overall dimensions
- p. Potential shorts and defective insulation
- q. Foreign objects, lint, dust
- r. Other visual defects
- s. Workmanship
- t. Interchangeability

4.5.1.2 Operational tests. Each ASC-26 shall be subjected to operational tests to verify conformance with the functional and performance requirements of section 3. The following tests shall be conducted for a complete operational test of the ASC-26:

- a. Power distribution system
- b. Lighted panel system
- c. Indicator lights (including radio status lights)
- d. Cooling System
- e. Intercommunication System
- f. Communication test
- g. Retransmit test
- h. Antenna power
- i. Crypto operation

4.5.1.2.1 Power distribution system test. The power distribution system circuit breakers (CB), located in the power control box, shall be tested to verify specified operation. The power distribution system shall be tested using test procedures in Drawing 1067AS1055. Components and test points listed below shall be tested:

- a. CB1 - radio RT3
- b. CB2 - radio RT2

## MIL-C-85642(AS)

- c. CB3 - radio RT1
- d. CB4 - crypto for RT3
- e. CB5 - crypto for RT2
- f. CB6 - crypto for RT1
- g. CB7 - intercommunication system stations 3 and 4
- h. CB8 - intercommunication system stations 1 and 2
- i. CB9 - antenna power
- j. CB10 - main power

4.5.1.2.2 Lighted panel system. The lighted panel system lights shall be tested to verify that the specified lighting power is available at each of the lighted panels, that each bulb lights, and the intensity of the lights can be varied with rotation of the dimmer control located on the A3 assembly. The lighted panel system shall be tested using test procedures of Drawing 1067AS1001.

4.5.1.2.3 Indicator lights and radio status lights. The indicator lights and radio status lights shall be tested to verify operation by pressing the PRESS-TO-TEST switch located on the Radio Indicator ID-2347 panel. The indicator lights and radio status lights shall be completely tested using test procedures of Drawing 1067AS1001.

4.5.1.2.4 Cooling system. The cooling system shall be tested by applying an appropriate amount of heat to the thermocouple, located on the chassis, and verifying that the cooling fan is activated. The cooling system shall also be tested by placing the fan switch, located on the central control panel, in the ON position, and verifying that the cooling fan is activated. The cooling system shall be tested using test procedures of Drawing 1067AS1001.

4.5.1.2.5 Intercommunication system (ICS). All four C-6533 units shall be tested in the ICS mode to verify that audio can be sent and received in all four stations. The "Hot Mike" off/on switch shall be operationally tested to assure specified operation. The C-6533 units (ICS mode) shall be tested using test procedures of Drawing 1067AS1001.

4.5.1.2.6 Communication tests. Each C-6533 equipment shall be operationally tested in the RT1, RT2, RT3, ACFT ICS and REMOTE RT modes to verify that each of the four stations is capable of specified functions in each mode. The function switch, located on the C-6533 box, selects the five modes; position 1 is RT1, position 2 is RT2, position 3 is RT3, position 4 is ACFT ICS and position 5 is REMOTE RT. Verify that the markings on the legend panel indicates the correct function selection for every switch position. The C-6533 box operation modes versus functions shall be tested as follows:

- a. In modes RT1, RT2 and RT3, verify that the C-6533 units (all four stations) are capable of receiving and transmitting through VHF Radio RT1, VHF Radio RT2, and UHF Radio RT3, respectively.

## MIL-C-85642(AS)

b. In the ACFT ICS mode, verify that the C-6533 units (all four stations) are capable of communication with the aircraft pilot and crew.

c. In the REMOTE RT mode, verify that the C-6533 units (all four stations) are capable of receiving and transmitting through the aircraft radio.

d. Verify that any or all of the five radios can be monitored with the five monitor switches located at the top of the C-6533 equipment.

The procedures, to perform the communications tests described above, are specified in Drawing 1067AS1001.

4.5.1.2.7 Retransmit test. Verify that the operation of the ASC-26 in the retransmit mode meets the requirements of section 3. Retransmit signals received on RT1 to RT2, RT1 to RT3 and RT2 to RT3. Verify that when a signal retransmission is in progress (i.e., ground station A, on frequency A, transmits to the ASC-26 and the ASC-26 retransmits the signal to ground station B on frequency B) that:

a. the two ground stations can successfully communicate,

b. ASC-26 operators can monitor the retransmit communication, and

c. attempts to transmit on the two ASC-26 radios involved in the retransmission are prohibited. Verify also that attempt to transmit on either of the two radios involved in the retransmit mode by an C-6533 operator will result in retransmission on both radios. The procedures to perform the retransmit tests, described above, are specified in Drawing 1067AS1001.

4.5.1.2.8 Antenna power. Verify that signals are present on the three antenna power connectors located on the forward end of the console. These connectors shall be used to provide signals for tuning tunable antennas. The connectors are not used in the configuration for UH-1N helicopters. The procedures to perform the antenna power tests are specified in Drawing 1067AS1001.

4.5.1.2.9 Crypto operation. Verify that the crypto power indicator, located on the central control panel, light when power is applied. Verify that the PLAIN-CIPLER-RELAY crypto control switches, and ZEROIZE switch, are functioning properly. The procedures to perform the crypto operation tests are specified in Drawing 1067AS1001.

4.5.1.3 Manufacturing run-in tests. Each ASC-26 shall be operated under the conditions specified herein for a period of 10 hours without failure. A failure shall be defined as anything which causes malfunctioning of the ASC-26. Only those adjustments will be permitted which can be made by using such controls and adjustments that are accessible to the operator during the normal use of the ASC-26. This test shall be deleted if the reliability tests includes a test on each ASC-26 which consumes at least 10 hours of operation.



## MIL-C-85642(AS)

- a. Temperature      Room ambient
- b. Humidity          Room ambient
- c. Vibration          Any selected frequency within the range of 20 to 30 Hz (excluding resonant points) and a minimum amplitude of  $\pm 3g$ 's

The ASC-26 shall be vibrated (without vibration isolators) for a period of 10 minutes prior to the beginning of the 10 hour period of operation. Where feasible, the ASC-26 shall be operated during this vibration period for the purpose of detecting flaws and imperfect workmanship. Operation within the specified limits of specified performance is not necessarily required during the vibration period. The direction of vibration should be vertical to the normal mounting plane for five minutes and lateral to the plane for five minutes. Where it is not feasible to vibrate the ASC-26 in two directions the vertical direction shall be used. During the 10 hour period of operation following the 10 minute vibration period, the ASC-26 shall be mechanically cycled periodically through its various phases of operation. Should failure occur, it shall be repaired and the test started over, except that the 10 minute vibration period need not be repeated when it is certain the failure was not a result of the vibration. Should repetitive failure occur, corrective action shall be taken to eliminate this defect from future ASC-26. A record shall be kept of all failures. The 10 hour period specified above may be composed of several shorter periods to conform with standard working hours. This test is not required if a Reliability Assurance Test is selected which includes a test on each ASC-26 which consumes at least 10 hours of operation.

4.5.2 Sampling tests. ASC-26s selected for sampling tests shall first have passed the individual tests. ASC-26s shall be selected for sampling tests by the government inspector in accordance with table II.

TABLE II. Sample tests sample selection.

Quantity of Equipments Offered for Acceptance	Quantity to be Selected for Sampling Test <u>1</u> /
First 25	1
Next 75	1
Next 100	1
	1 for each additional 200 or fraction thereof

1/ Sampling Tests are not required when Reliability Assurance Tests are conducted.

## MIL-C-85642(AS)

4.5.2.1 Scope of sampling tests. As a minimum, each ASC-26 selected for sampling tests shall be subjected to the following tests:

a. Complete operational test at ambient room conditions, making all necessary measurements to assure that all applicable specification requirements have been met.

b. Operational test at certain environmental conditions. The conditions may vary for each ASC-26 tested and should be based on results of the first article, individual, and special tests.

c. Manufacturing run-in test specified in 4.5.1.3 except that the test duration shall be 120 hours with no restriction on the number of failures. However, each failure shall be analyzed as to cause and remedial action necessary to reduce the possibility of its recurrence in future ASC-26s.

4.5.3 Maintainability demonstration. Organizational level maintainability demonstration shall be in accordance with MIL-STD-471, Test Method 1, Plan B1. Maintainability demonstration shall be performed on a minimum of five selected repairs. The tasks selected to demonstrate maintainability shall be selected in advance and shall be acceptable by the procuring activity (see 6.2.2). An equivalent maintainability demonstration may be performed prior to initiation of qualification testing if authorized by the procuring activity.

4.5.4 Reliability assurance tests. Reliability assurance tests shall be conducted using MIL-STD-781. Tests as required by both the Qualification Phase and the Production Acceptance (Sampling) Phase shall be conducted.

4.5.4.1 Qualification phase. Prior to the acceptance of ASC-26s under the contract or purchase order, a minimum of three ASC-26s shall be tested in accordance with MIL-STD-781, under the section entitled "Qualification Phase of Production Reliability Tests". The maximum number of ASC-26s to be used shall be those listed in table V of MIL-STD-781. For the qualification phase, Test Level E shall be used. The accept-reject criteria for Test Plan IV shall be used.

4.5.4.2 Reliability sampling phase tests. Samples of the ASC-26 shall be tested in accordance with MIL-STD-781 under the section entitled "Sampling Phase of Production Reliability Tests". For the sampling Phase, Test Level E shall be used, except that the ASC-26 shall operate continuously. The accept-reject criteria for Test Plan V shall be used to determine the length of the tests (until an accept or reject decision is reached).

4.5.4.2.1 Lot size for sampling phase. The ASC-26 constructed during two months shall be one lot. The accept-reject criteria for Test Plan IV shall be used to determine the length of the tests in each lot. Unless otherwise specified in the contract or order, no ASC-26s shall be shipped until an accept decision is reached under each lot (see 6.2.1).

4.5.4.3 Test details. The test details such as the length of the test cycle, the length of the heat portion of the cycle, the performance characteristics to be measured, special failure criteria, and preventive

## MIL-C-85642(AS)

maintenance to be allowed during the test, shall be part of the test procedures to be made available and accepted by the procuring activity prior to the beginning of the qualification test phase of the reliability assurance tests (see 6.2.2).

**4.5.5 Special tests.** Special tests shall be conducted for the purpose of checking the effect of any design or material change on the performance of the ASC-26 and to assure quality control. The ASC-26 selected for special tests may be selected from ASC-26s previously subjected to the sampling or reliability assurance tests.

**4.5.5.1 Special test schedule.** Selection of ASC-26s for special tests shall be made as follows:

- a. On an early ASC-26 after an engineering or material change.
- b. Whenever failure reports or other information indicate additional tests are required. (This will be determined by the procuring activity.)

**4.5.5.2 Scope of special tests.** Special tests shall consist of such tests as are acceptable to the procuring activity. Test procedures previously authorized for the first article tests shall be used where applicable. When not applicable, the contractor shall prepare a test procedure and make available for procuring activity acceptance prior to conducting the tests (see 6.2.2).

**4.5.6 Equipment failure.** Should a failure occur during either the sampling, reliability assurance or special tests, the following action shall be taken:

- a. Determine the cause of failure.
- b. Determine if the failure is an isolated case or a design defect.
- c. Have available for procuring activity acceptance, proposed corrective action intended to reduce the possibility of the same failure(s) occurring in future tests (see 6.2.2).
- d. Where practical, include a test in the individual test to check all ASC-26s for this requirement until assurance is obtained that the defect has been corrected.

**4.5.7 Life test.** The contractor shall furnish all samples and shall be responsible for accomplishing the life test. The test shall be of 1000-hours duration and shall be conducted on ASC-26s that have passed the individual tests. The life test, shall be performed under the conditions specified in 4.5.7.1. The life test sample will be selected by the government inspector in accordance with the following. (ASC-26s which have successfully passed the Sampling Tests, Reliability Tests, or Special Tests may be selected for life tests.) When reliability tests are conducted, the life test may be omitted if, during the reliability tests, a quantity of ASC-26s, equal to, or more than, that listed in table III receive at least 1000 hours each of test time.

## MIL-C-85642(AS)

TABLE III. Life test sample selection.

Quantity of Equipments Offered for Acceptance	Quantity to be Selected for Life Test
First 100	1
Next 250	1
Next 500	1
	1 for each additional 500 or fraction thereof

4.5.7.1 Test conditions. The life test shall be conducted under the following simulated service conditions:

- |                |                   |
|----------------|-------------------|
| a. Temperature | Normal room       |
| b. Altitude    | Normal ground     |
| c. Humidity    | Room ambient      |
| d. DC Voltage  | 28 ± 0.1 volts dc |

4.5.7.2 Test periods. The test may be run continuously or intermittently. Any period of operation shall be of sufficient duration to permit the equipment temperature to stabilize. Periodically, the ASC-26 shall be turned on and off several times and put through its various phases of operation.

4.5.7.3 Performance check. At approximately eight-hour intervals during the test, a limited performance check shall be made. The performance check shall be subject to procuring activity acceptance (see 6.2.2).

4.5.8 Test data. The contractor shall keep a daily record of the performance of the ASC-26, making particular note of any deficiencies or failures (see 6.2.2).

4.5.8.1 Failure report. In event of a failure, the government inspector shall be notified immediately. A report shall be prepared and made available for the procuring activity upon completion of the test (see 6.2.2). In this report, the contractor shall propose design or material corrections for all failures which occurred. The procuring activity will review such proposals and determine whether they are acceptable (see 6.2.2).

4.6 Environmental tests. The ASC-26 shall be subjected to the following tests to be performed in accordance with the specified procedures of MIL-STD-810. Upon completion of each environmental test, the ASC-26 shall be subjected to and meet the tests of 4.5.1.1 and 4.5.1.2.

## MIL-C-85642(AS)

4.6.1 Low pressure (altitude). The ASC-26 shall be subjected to low pressure (altitude) tests in accordance with MIL-STD-810, Method 500.2, except maximum altitude shall be 15000 feet.

4.6.2 Temperature. The ASC-26 shall be subjected to high and low temperature test in accordance with MIL-STD-810, Methods 501.2 and 502.2, respectively except temperature extremes shall not exceed +85°C for high temperature and -60°C for low temperature.

4.6.3 Vibration. The ASC-26 shall be subjected to vibration exposure in accordance with MIL-STD-810, Method 514.3, Category 6, procedure I with the following modifications:

- |                       |                  |
|-----------------------|------------------|
| a. Acceleration Level | 2.5g maximum     |
| b. Displacement       | 0.2 inch maximum |
| c. Sweep Range        | 5 to 2000 Hz     |

4.6.4 Humidity. The humidity test shall be performed in accordance with MIL-STD-810, Method 507.2, Procedure I, except the test item may be removed from the chamber at the completion of the exposure period for the performance of tests. The ASC-26 shall be thoroughly examined within at least 48 hours after completion of the humidity exposure and there shall be no evidence of corrosion and deterioration that would affect subsequent operation of the ASC-26.

4.6.5 Salt spray. The salt spray test shall be performed in accordance with MIL-STD-810, Method 509.2, Procedure I. The ASC-26 shall be subjected to the tests listed in 4.5.1.1 and 4.5.1.2 immediately after completion of the salt spray exposure period and again 48 hours (approximately) later.

#### 4.6.6 Shock.

4.6.6.1 Functional shock. The functional shock test shall be performed in accordance with MIL-STD-810, Method 516.3, procedure I, figure 516.3-4. The ASC-26 shall be electrically energized and operating before, during and after the test. Monitoring ASC-26 performance during application of impact shocks is not required. Upon completion of the tests for each axis, the ASC-26 shall be operated long enough to check sufficient characteristics and record adequate data to assure equipment operation. The ASC-26 and data shall be examined, and any electrical or mechanical failure or degradation shall be recorded (see 6.2.2). Upon completion of the basic design shock test, the ASC-26 shall be subjected to and meet the requirements of the tests listed in 4.5.1.1 and 4.5.1.2.

4.6.6.2 Shocks for equipment to be packaged and crash hazard. These tests shall be performed in accordance with MIL-STD-810, Method 516.3, procedure II, figure 516.3-5, Table 516.3-I for equipment to be packaged shock, and procedure V, figure 516.3-4 for crash hazard shock. A dummy load of same size and weight may be used in lieu of an ASC-26. Upon completion of the crash safety shock test, the test item shall be examined and all damage recorded (see 6.2.2). Bending and distortion of the mounting attachment shall not constitute a failure, but a broken mounting attachment shall be counted as

## MIL-C-85642(AS)

an equipment failure. Operation of the ASC-26 after the shock test is not required.

4.7 Electromagnetic interference and compatibility (EMIC). The ASC-26 shall be subjected to the EMIC tests specified in 4.7.1 through 4.7.5 in accordance with the test methods of MIL-STD-462 to verify that ASC-26 meets the requirements of MIL-STD-461 for the EMIC tests herein.

4.7.1 Conducted emissions, power and interconnecting leads, 0.15 to 50 MHz. Conducted emissions measurements shall be made over the frequency range of 0.15 to 50 MHz on power and interconnecting leads in accordance with MIL-STD-462, Test Method CE03.

4.7.2 Conducted susceptibility, power leads, 30 Hz to 400 MHz. The ASC-26 shall be subjected to conducted susceptibility tests by having signals over the range of 30 Hz to 400 MHz injected on the power leads in accordance with MIL-STD-462, Test Methods CS01 and CS02. Evidence of susceptibility observed shall be recorded (see 6.2.2).

4.7.3 Conducted susceptibility, spikes, power leads. The ASC-26 shall be subjected to conducted susceptibility tests consisting of superimposing a 32 volt maximum spike on the power line voltage waveform in accordance with MIL-STD-462, Test Method CS06. Evidence of susceptibility observed shall be recorded (see 6.2.2).

4.7.4 Radiated emissions, electric field, 14 kHz to 10 GHz. Radiated emissions emanating from the ASC-26 shall be measured over the frequency range of 14 kHz to 10 GHz in accordance with MIL-STD-462, Test Method RE02.

4.7.5 Radiated susceptibility, electric field, 14 kHz to 40 GHz. The ASC-26 shall be subjected to radiated susceptibility tests over the frequency range of 14 kHz to 40 GHz, electric field, in accordance with MIL-STD-462, Test Method RS03 as modified herein. Evidence of susceptibility observed shall be recorded (see 6.2.2).

a. Frequency range shall be limited to:

- (1) 30 MHz to 400 MHz
- (2) 1 GHz to 1.4 GHz
- (3) 2 GHz to 3.1 GHz
- (4) 5.4 GHz to 5.9 GHz

b. Radiated level shall be 200 V/M peak.

4.8 Presubmission testing. No item, part, or complete ASC-26 shall be submitted by the contractor until it has been previously tested and inspected by the contractor and found to comply with all applicable requirements.

4.9 Methods of examination and test. The procedures used for conducting first article, quality conformance tests, and life tests shall be prepared by the contractor and made available to the procuring activity for acceptance (see 6.2.2). The right is reserved by the procuring activity or Government inspector to modify the tests or require any additional tests deemed necessary to determine compliance with the requirements of this specification and the



## MIL-C-85642(AS)

contract (see 6.2.1). MIL-T-18303 and Drawing 1067AS1001 shall be used as a guide for preparation of test procedures. When approved test procedures are available from previous contracts, such procedures may be used when their use is acceptable to the procuring activity. However, the right is reserved by the procuring activity to require modification of such procedures, including additional tests, when deemed necessary (see 6.2.1).

## 5. PACKAGING

5.1 General. All ASC-26s to be delivered in accordance with the terms of the contract or purchase order shall be prepared for shipment in accordance with MIL-STD-794 and MIL-E-17555.

5.1.1 Preservation packaging and packing. Preservation packaging and packing shall be as specified for Level A in MIL-STD-794 and MIL-E-17555.

5.1.2 Marking. Marking of all shipments shall be as specified in MIL-STD-129.

## 6. NOTES

6.1 Intended use. The ASC-26 is intended for use in UH-1N Helicopters. The ASC-26 provides the capability for the Marine Air-Ground Task Commander and his staff and the Ground Combat Element Commander and his staff to maintain contact with subordinate, adjacent, and higher headquarters as well as the Supporting Arms Units and Logistics Support Units.

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number and date of this specification
- b. If a first article inspection is required (see 3.2, 6.3)
- c. When ferrous materials are to be used (see 3.3.2.2)
- d. Maintainability demonstration (see 4.5.3)
- e. Test procedure modifications or additional tests, if required (see 4.9).
- f. If equipment is to be shipped prior to an accept decision during reliability sampling phase tests (see 4.5.4.2.1).

6.2.2 Data requirements. When this specification is used in an acquisition which incorporates a DD Form 1423, Contract Data Requirements List (CDRL) the data requirements identified below will be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (DD Form 1423) incorporated into the contract. When the provisions of FAR-7-104.9(n) are

## MIL-C-85642(AS)

invoked, and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification is cited in the following paragraphs:

Paragraph no.	Data requirement title	Applicable DID no.	Option
4.4, 4.9	Procedure, First Article Inspection	DI-T-4901	
4.4.1, 4.4.3, 4.6.5.1, 4.6.5.2, 4.7.2, 4.7.3, 4.7.5	Report, First Article Inspection	DI-T-4902	
4.5, 4.5.3, 4.5.8.1, 4.9	Procedure, Production/Acceptance Inspection	DI-T-4903	
4.5	Reports, Production Inspection	DI-T-4904	
4.5.4.3	Procedures, Reliability Tests	DI-R-7035	
4.5.8, 4.5.8.1	Report, Failure	UDI-R-21141A	
4.5.8.1, 4.5.6	Plan, Failure Data Collection, Analysis and Corrective Action	UDI-I-23719	

(Data item descriptions related to this specification, and identified in section 6 will be approved and listed as such in DOD 5000.19L., Vol. II, AMSL. Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting office.)

6.3 First article. When a first article inspection is required, the item will be tested and should be a first article sample. The first article should consist of one ASC-26. The contracting officer should include specific instructions in acquisition documents regarding arrangements for examinations, test and approval of the documents' first article.

6.4 Government-furnished property. The contracting officer should arrange to furnish the property listed in 3.4.10, 3.6.1.2.2, 3.6.1.2.3, 3.6.1.2.4, 3.6.2.2, 3.6.2.3, 3.6.2.4, and 3.6.2.5.

Preparing Activity  
NAVY-AS  
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**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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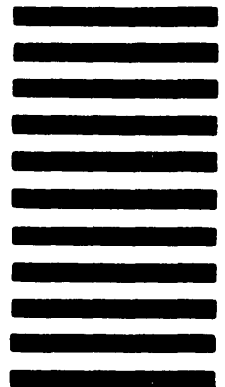
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MIL-C-85642(AS)**2. DOCUMENT TITLE**  
Communications Central AN/ASC-26**3a. NAME OF SUBMITTING ORGANIZATION****4. TYPE OF ORGANIZATION (Mark one)**☐

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**b. ADDRESS (Street, City, State, ZIP Code)****5. PROBLEM AREAS****a. Paragraph Number and Wording:****b. Recommended Wording:****c. Reason/Rationale for Recommendation:****6. REMARKS****7a. NAME OF SUBMITTER (Last, First, MI) - Optional****b. WORK TELEPHONE NUMBER (Include Area Code) - Optional****c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional****8. DATE OF SUBMISSION (YYMMDD)**

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