TM11-5821-342-13&P
NAVAIR 16-35DAL-1

TECHNICAL MANUAL

OPERATOR'S, AVIATION UNIT (AVUM), AND INTERMEDIATE (AVIM) MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

FOR
RADIO SET - PERSONNEL LOCATOR

AN/ARS-6(V)
AND TEST SET, PERSONNEL LOCATOR
TS-4360/AYD-1

INTRODUCTION

SERVICE UPON RECEIPT AND INSTALLATION

OPERATOR INSTRUCTIONS

AVUM INSTRUCTIONS

AVIM INSTRUCTIONS

REFERENCES

MAINTENANCE ALLOCATION CHART

REPAIR PARTS AND SPECIAL TOOLS LIST

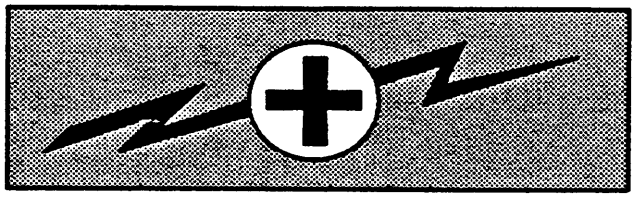
GLOSSARY

HEADQUARTERS, DEPARTMENT OF THE ARMY
1 JUNE 1993

5 SAFETY STEPS TO FOLLOW IF SOMEONE IS THE VICTIM OF ELECTRICAL SHOCK

1. DO NOT TRY TO PULL OR GRAB THE INDIVIDUAL
2. IF POSSIBLE, TURN OFF THE ELECTRICAL POWER
3. IF YOU CANNOT TURN OFF THE ELECTRICAL POWER, PULL, PUSH, OR LIFT THE PERSON TO SAFETY USING A DRY WOODEN POLE OR A DRY ROPE OR SOME OTHER INSULATING MATERIAL
4. SEND FOR HELP AS SOON AS POSSIBLE
5. AFTER THE INJURED PERSON IS FREE OF CONTACT WITH THE SOURCE OF ELECTRICAL SHOCK, MOVE THE PERSON A SHORT DISTANCE AWAY AND IMMEDIATELY START ARTIFICIAL RESUSCITATION

WARNING



HIGH VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnei fail to observe safety precautions

Never work on electronic equipment unless there is another person nearby who is familiar with the operation and hazards of the equipment and who is competent in administering first aid. When the technicians are aided by operators, they must be warned about dangerous areas.

Whenever possible, the power supply to the equipment must be shut off before beginning work on the equipment. Take particular care to ground every capacitor likely to hold a dangerous potential. When working inside the equipment after the power has been turned off, always ground every part before touching it.

Be careful not to contact high-voltage connections or 115 volt ac input connections when installing or operating this equipment

Whenever the nature of the operation permits, keep one hand away from the equipment to reduce the hazard of current flowing through the body.

Warning: Do not be misled by the term 'low voltage.' Potentials as low as 50 volts may cause death under adverse conditions.

For Artificial Respiration, refer to FM 21-11.

TRICHLOROTRIFLUOROETHANE

WARNING

Adequate ventilation should be provided while using Trichlorotrifluoroethane. Avoid prolonged breathing of vapor. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since Trichlorotrifluoroethane dissolves natural oils, avoid prolonged contact with skin. The use of chemical gloves (solvent resistant), chemical splash goggles and full faceshield are required when using Trichlorotrifluoroethane. Coordinate use of this material with your supporting Industrial Hygiene and Safety Offices. Ensure you read and understand the material safety data sheet (MSDS) for this material. DO NOT use compressed air to dry parts when Trichlorotrifluoroethane has been used.

WARNING

Trichlorotrifluoroethane (CFC-113) is a substance which harms public health and environment by destroying ozone in the upper atmosphere.

TM 11-5821-342-13&P
Department of the Army
and Navy, Washington D.C.
1 June 1993

**OPERATOR'S AVIATION UNIT (AVUM), AND
INTERMEDIATE (AVIM) MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)
FOR
RADIO SET-PERSONNEL LOCATOR
Current as of:1May 1993**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes, or if you know away to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommnded Changes to Publications and Blank Forms) or DA Form 2028-2 Iocated in back of this manual diretict to: Commander, US Army Communicatbns-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM-LT, Fort Monmouth, New Jersey 07703-5007.

For Navy, mail comments to the Commander, Space and Naval Warfare Systems Command, ATTN: SPAWAR 8122, Washington, DC 20363-5100.

In either case a reply will be furnished direct to you.

TABLE OF CONTENTS

Chapter	Title	Page
How To Use This Manual		iv
CHAPTER 1	INTRODUCTION	1-1
Section I	General Information	1-1
1-1	Scope	1-1
1-1.1	Technical	1-1
1-1.2	Maintenance Tasks	1-1
1-1.3	Warranty Information	1-1
1-2	Consolidated Index of Army Publications and Blank Forms	1-1
1-3	Maintenance Forms, Records, and Reports	1-1
1-3.1	Reports of Maintenance and Unsatisfactory Equipment.	1-1
1-3.2	Reporting of Item and Packaging Deficiencies	1-1
1-3.3	Transportation Deficiency Report (TDR) (SF 361)	1-4
1-4	Destruction of Army Electronics Material	1-4
1-5	Administrative Storage	1-4
1-6	Reporting Equipment Improvement Recommendations (EIRs)	1-4
Section II	Description of Data	1-4
1-7	Purpose and Use	1-4
1-8	Description	1-4
1-8.1	Definitions (Differences Between Model s)	1-4
1-8.2	Operation	1-6
1-8.3	Control Display Unit (CDU)..	1-6
1-8.4	Receiver-Transmitter (RAT)	1-6

TABLE OF CONTENTS (Continued)

Chapter	Title	Page
1-8.5	Mounting Base, Electronic Equipment	1-6
1-8.6	Remote Display Unit (RDU)..	1-6
1-8.7	Antenna Switching Unit (ASU)	1-6
1-8.8	Antenna Set	1-6
1-9	Tabulated Data	1-6
CHAPTER 2	SERVICE UPON RECEIPT	2-1
Section I	Service Upon Receipt of Material	2-1
2-1	Unpacking	2-1
2-1.1	Packaging Data	2-1
2-1.2	Removing Contents	2-1
2-2	Checking Unpacked Equipment	2-1
2-2.1	Damage	2-1
2-2.2	Completeness	2-1
Section II	Installation Instructions	2-1
2-3	Tool s	2-1
2-4	Installation Instructions	2-1
2-4.1	UH-1H Installation	2-1
2-4.2	UH-60A/L Installation	2-1
2-4.3	SH-3H Installation	2-1
CHAPTER 3	OPERATOR INSTRUCTIONS	3-1
Section I	Operator Controls and Indicators	3-1
3-1	General Information	3-1
3-1.1	Control Display Unit (CDU)	3-1
3-1.2	Remote Display Unit (RDU).	3-1
3-2	Operator Controls and Indicators	3-1
Section II	Operation under Usual Conditions	3-1
3-3	Initialization procedure	3-1
3-4	Operational Check	3-8
3-5	Ground Check Procedures..	3-8
3-5.1	Introduction and Purpose..	3-8
3-5.2	Equipment Required	3-8
3-5.3	Initial Procedures	3-9
3-5.4	Ground Check Positions.	3-9
3-5.5	Ground Check Procedures..	3-9
CHAPTER, 4	AVIATION UNIT MAINTENANCE (AVUM) INSTRUCTIONS	4-1
Section I	Tool sand Equipment	4-1
4-1	Scope of ALUM	4-1
4-2	AVUM Tools, Equipment, and Materials Required	4-1

TABLE OF CONTENTS (Continued)

Chapter	Title	Page
Section II	Preventive Maintenance and Troubleshooting	4-1
4-3	Preventive Maintenance.	4-1
4-3.1	Pullout Interval	4-1
4-3.2	AVUM Preventive Maintenance Checks and Services	4-1
4-4	Troubleshooting	4-4
4-5	Cable Continuity Tests....	4-4
4-6	Coaxial Cable Insertion Loss Test	4-4
CHAPTER 5	AVIATION INTERMEDIATE MAINTENANCE (AVIM) INSTRUCTIONS	5-1
Section I	Tool sand Equipment	5-1
5-1	Scope of AVIM	5-1
5-2	Tools, Materials, and Test Equipment Required for Intermediate Maintenance (or Equivalent)	5-1
Section II	Troubleshooting	5-1
5-3	General Information	5-1
5-4	AVIM BIT Fault Verification Tests	5-5
5-4.1	System Operational Test	5-5
5-4.2	RCVR FAIL, PLS Receiver Sensitivity Tests	5-7
5-4.3	XMTR FAIL, PLS Transmitter Power Test	5-9
5-4.4	PLS Antenna Switching Unit Test	5-11
5-5	Cable Continuity Tests....	5-16
5-6	Coaxial Cable Insertion Loss Test	5-16
5-7	Flight Tests	5-16
5-7.1	Transpond (BRST and CONT) Mode Tests	5-16
5-7.1.1	BRST Mode Tests.	5-16
5-7.1.2	CONT Mode Tests..	5-16
5-7.2	HOME Mode Tests	5-17
APPENDIX A	REFERENCE DOCUMENTS	A-1
APPENDIX B	MAINTENANCE ALLOCATION CHART (ARMY ONLY)	B-1
APPENDIX C	REPAIR PARTS AND SPECIAL TOOLS LIST	C-1
Section I	Introduction	C-3
Section II	Repair Parts List	C-11

		Figure	Page
Group 00	Radio Set. Personnel Locator	C-1	C-12
Group 05	UH-1H Mission Kit, MK-2683	C-2	C-14
Group 06	UH-60A/L Mission Kit, MK-2684	C-3	C-21
Group 07	Mounting Base, MT-6678	C-4	C-27

Section III	Special Tools List (Not Applicable)	
Section IV	National Stock Number and Part Number Index	C-31

TABLE OF CONTENTS (Continued)

Chapter	Title	Page
APPENDIX D	PILOT'S CHECK-LIST FOR AN/ARS-6 RADIO SET, PERSONNEL LOCATOR	D-1
APPENDIX E	COMPONENT OF END ITEM AND BASIC ISSUE ITEM LIST	E-1
APPENDIX F	EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST	F-1
APPENDIX G	INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MK-2683/ARS-6(V)1 MISSION KIT, PERSONNEL LOCATOR ON UH-1H HELICOPTER.	G-1
APPENDIX H	INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MK-2684/ARS-6(V)2 MISSION KIT, PERSONNEL LOCATOR ON UH-60A/L HELICOPTER	H-1
APPENDIX J	INSTALLATION INSTRUCTIONS AN/ARS-6 RADIO SET, PERSONNEL LOCATOR FOR DOWNED AIRCREW LOCATING SYSTEM (DALS) ON SH-3H HELICOPTERS	J-1
APPENDIX K	CHECKOUT PROCEDURE FOR TEST SET, PERSONNEL LOCATOR TS-4360/ AYD-1 PART NUMBER D6003070	K-1
Glossary	Glossary 1	

LIST OF ILLUSTRATIONS

Figure	Title	Page
1-1	PLS Concept of Operations	1-2
1-2	PLS Line Replaceable Units (LRUs)	1-3
2-1	AN/ARS-6 Shipping and Storage Configuration (Typical) Part Number 235504	2-2
3-1	Operator Controls and Indicators	3-2
5-1	PLS, AN/PRC-112 Operational Test Setup	5-6
5-2	PLS Receiver Sensitivity Test Setup	5-8
5-3	PLS Transmitter Power Output Test	5-10
5-4	PLS Antenna Switching Unit Test Setup (after verification of transmitter)	5-12

LIST OF TABLES

Table	Title	Page
1-1	AN/ARS-6 Performance Data	1-7
3-1	Control Display Unit Controls and Indicators	3-3
3-2	Remote Display Unit Controls and Indicators	3-5
4-1	AVUM Preventive Maintenance Checks and Services	4-2
4-2	AVUM Troubleshooting Procedures	4-5
4-3	Pin Assignments for RDU to CDU Cable W3 Connectors P1 and P2	4-9
4-4	Pin Assignments for CDU to RT Cable W2, Connectors P1 and P2	4-10
4-5	Pin Assignments for RT to ASU Cable W4 Connectors P1 and P2	4-11
5-1	AVIM Troubleshooting Procedures	5-2

HOW TO USE THIS MANUAL

This Technical Manual (TM) describes the Radio Set-Personnel Locator AN/ARS-6(V).

The front cover index provides quick access to important information. The table of contents shows the overall organization of the TM to the chapter and section level . The section contents at the beginning of each section shows the TM organization down to the paragraph level.

Use the alphabetical index in the back of this TM to locate specific information. The list of abbreviations in Chapter 1 defines abbreviations and acronyms used in the TM.

Read the WARNING pages in the front of this TM before performing any maintenance task. Observe the WARNINGS and CAUTIONS that appear throughout this TM. They are there to protect YOU and the EQUIPMENT.

Read all preliminary information at the beginning of the section before performing any maintenance tasks described in that section.

CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1 SCOPE.

The AN/AYD-1 Personnel Locator System (PLS) consists of the Radio Set- Personnel Locator AN/ARS-6, the KY-913/PRC-112 Program Loader, and the Survival Radio Set AN/PRC-112. Figure 1-1 illustrates the concept of operation.

1-1.1 Technical Manual. This technical manual contains operation, installation, and maintenance instructions for Radio Set- Personnel Locator AN/ARS-6(V)1 through AN/ARS-6(V)6 hereinafter called the AN/ARS-6. It also contains references to the Survival Radio Set, AN/PRC-112 hereinafter called the Radio Set. Figure 1-2 shows the Line Replaceable Units (LRUs) for the AN/ARS-6.

1-1.2 Maintenance Tasks. The maintenance tasks are limited to those categories at the operator's Aviation Unit Maintenance (AVUM), and Aviation Intermediate Maintenance (AVIM) levels.

NOTE

Repair parts at these levels for the AN/ARS-6 are located in Appendix C.

1-1.3 Warranty Information. The AN/ARS-6 is warranted by the contractor for depot maintenance on Line Replaceable Units (LRUs) only. These include the Receiver-Transmitter, Control Display Unit, Remote Display Unit. and Antenna Set. Warranty return procedures are specified in TB 11-5821-342-25.

CAUTION

Repair of LRUs is authorized only at the depot. Do not tamper with warranty seals.

1-2 CONSOLIDATED INDEX OF ARMY PUBLICATIONS AND BLANK FORMS

Refer to the latest issue of DA PAM 25-30 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

1-3 MAINTENANCE FORMS, RECORDS AND REPORTS.

1-3.1 Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750 and PAM 738-751 as contained in Maintenance Management Update. Navy personnel will report maintenance performed using the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR submissions IAW OPNAVINST 4790.2, Vol 2, chapter 17.

1-3.2 Reporting of Item and Packaging Deficiencies. Fill out and forward SF364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.53/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

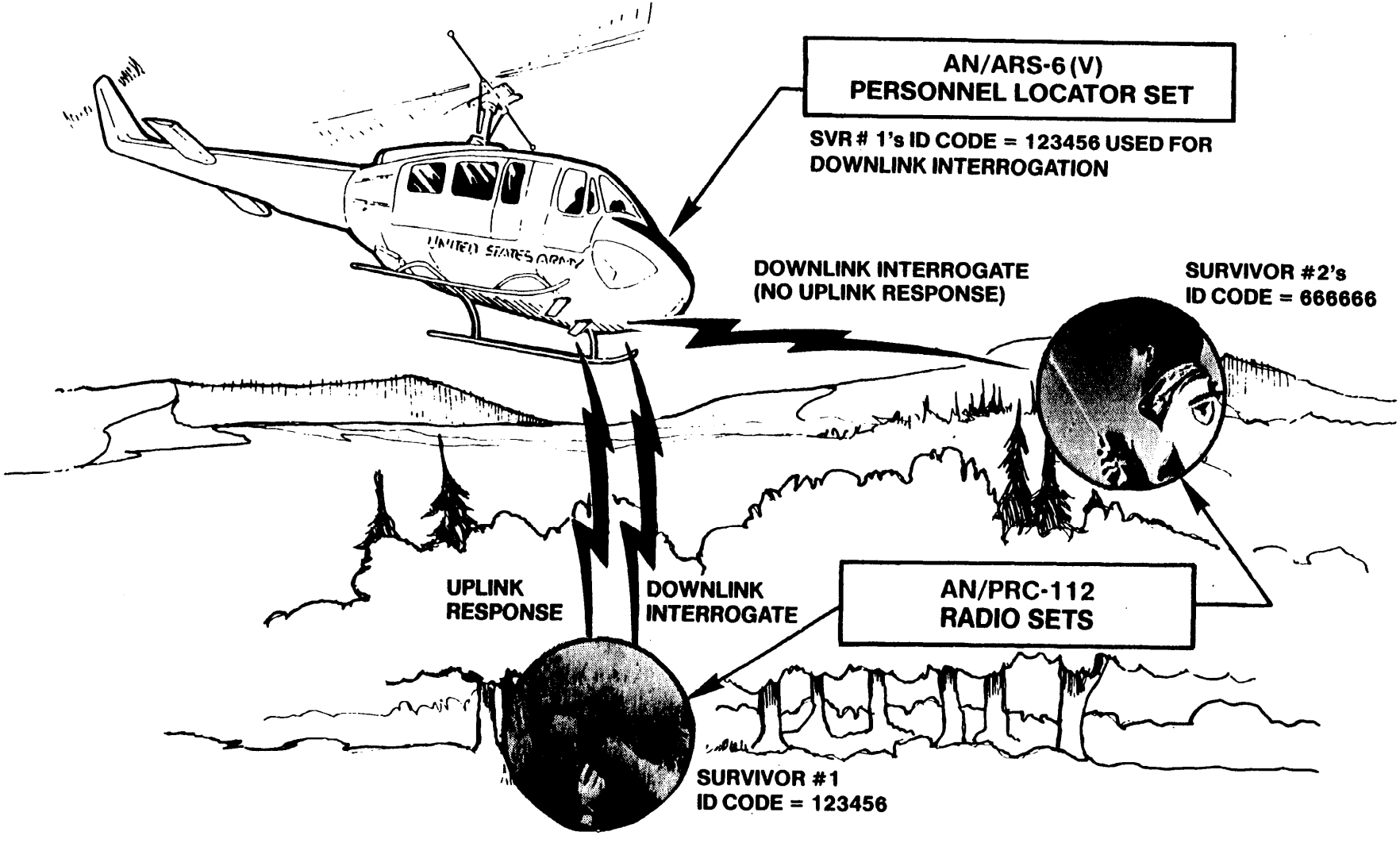


FIGURE 1-1 PLS Concept of Operation

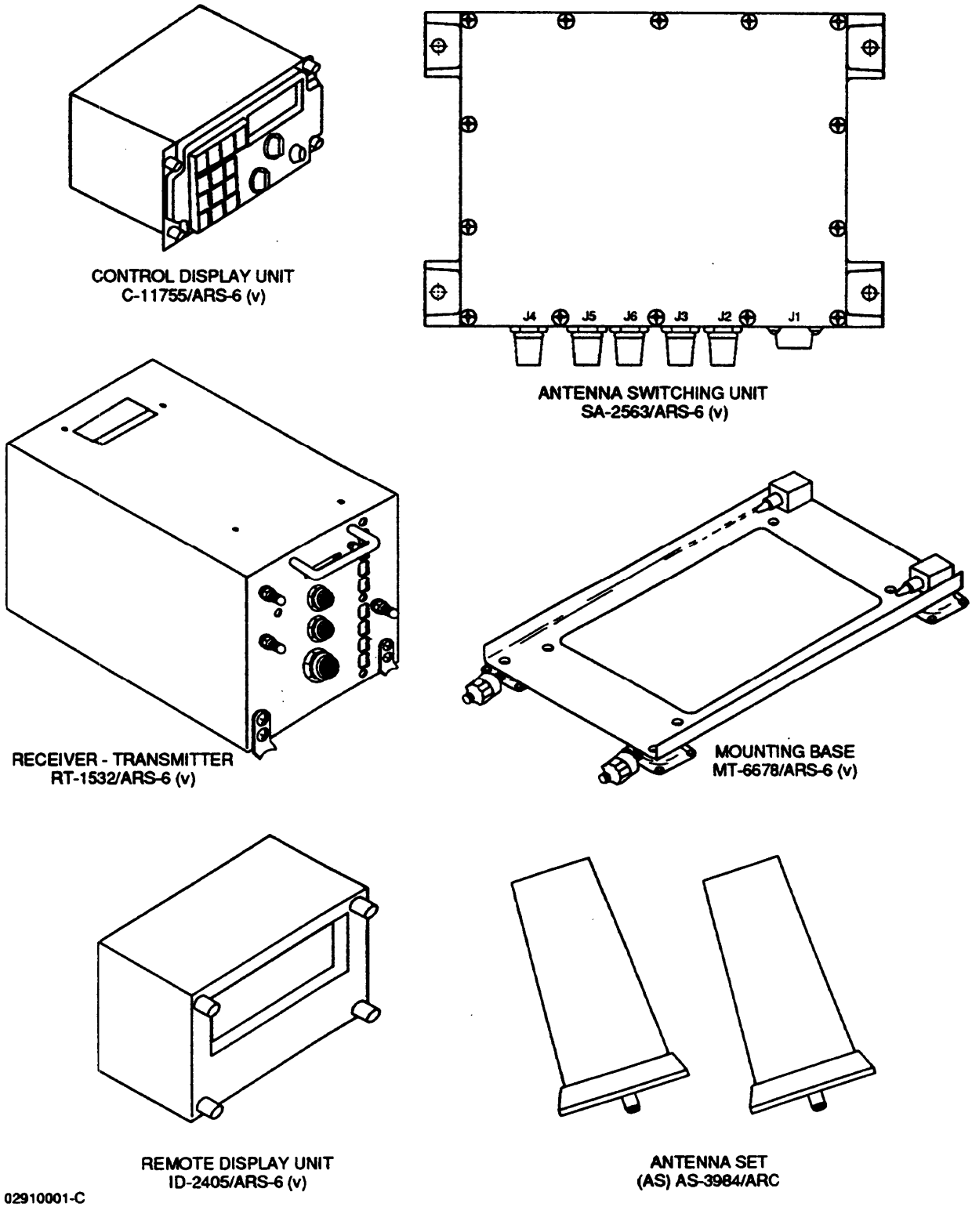


FIGURE 1-2. PLS Line Replaceable Units (LRUS).

1-3.3 Transportation Discrepancy Report (TDR) (SF 361). Fill out and forward Transportation Discrepancy Report (TDR) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

1-4 DESTRUCTION OF ARMY ELECTRONICS MATERIEL.

Destruction of Army electronics materiel to prevent enemy use shall be in accordance with TM 750-244-2.

1-5 ADMINISTRATIVE STORAGE.

Administrative storage of equipment issued to and used by Army activities will have preventive -maintenance performed in accordance with the preventive maintenance checks and services (PMCS) charts before storing. When removing the equipment from administrative storage the PMCS should be performed to assure operational readiness. Disassembly and repacking of equipment for shipment or limited storage are covered in paragraphs 2-1, 2-2, and 2-4.

1-6 REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

a. Army. lf your Personnel Locator System equipment needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF 368 (Product Quality Deficiency Report). Mail it to: Commander, US Army Communications-Electronics Commandant Fort Monmouth,ATTN: AMSEL-LC-ED-TC, Fort Monmouth, New Jersey 07703-5023. We'll send you a reply.

b. Navy. Navy personnel are encouraged to submit EIR's through their local Beneficial Suggestion Program.

Section II. DESCRIPTION AND DATA

1-7 PURPOSE AND USE.

The Radio Set- Personnel Locator AN/ARS-6 is a set of airborne electronic equipment designed to quickly and precisely locate survivors equipped with the Survival Radio Set AN/PRC-112. The AN/ARS-6 can also provide steering indication to any source of continuous wave UHF signals (such as the AN/PRC-90), and provide two-way UHF voice communications.

1-8 DESCRIPTION.

1-8.1 Definitions (Differences Between Models).

a. The AN/ARS-6(V)1 consists of the following:

Control Display Unit, C-11755/ARS-6(V)

Receiver-Transmitter, RT-1532/ARS-6(V)

Mounting Base, MT-6678/ARS-6(V)

Remote Display Unit, ID-2405/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Installation Kit, UH-1H, MK-2683/ARS-6(V)1

Shipping Container, CY-8564/ARS-6(V)1

Antenna Set, AS-3984/ARC (matched pair)

b. The AN/ARS-6(V)2 consists of the following:

Control Display Unit, C-11755/ARS-6(V)

Receiver-Transmitter, RT-1532/ARS-6(V)

Mounting Base, MT-6678/ARS-6(V)

Remote Display Unit, ID-2405/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Installation Kit, UH-60A/L, MK-2684/ARS-6(V)2

Shipping Container, CY-8564/ARS-6(V)2

Antenna Set, AS-3984/ARC (matched pair)

c. The AN/ARS-6(V)3 consists of the following:

Receiver-Transmitter, RT-1532A/ARS-6(V)

Mounting Base, MT-6678/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Antenna Set, AS-3984/ARC (matched pair)

d. The AN/ARS-6(V)4 consists of the following:

Receiver-Transmitter, RT-1532/ARS-6(V)

Control Display Unit, C-11755/ARS-6(V)

Remote Display Unit, ID-2405/ARS-6(V)

Mounting Base, MT-6678/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Installation Kit. UH-1V, MX-XXXX/ARS-6(V)4

Shipping Container, CY-8564/ARS-6(V)4

Antenna Set, AS-3984/ARC (matched pair)

e. The AN/ARS-6(V)5 consists of the following:

Receiver-Transmitter, RT-1532/ARS-6(V)

Control Display Unit, C-11755/ARS-6(V)

Remote Display Unit, ID-2405/ARS-6(V)

Mounting Base, MT-6678/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Antenna Set, AS-3984/ARC (matched pair)

f. The AN/ARS-6(V)6 consists of the following:

Receiver-Transmitter, RT-1532/ARS-6(V)

Control Display Unit, C-11755/ARS-6(V)

Remote Display Unit, ID-2405/ARS-6(V) - Qty. 2

Mounting Base, MT-6678/ARS-6(V)

Antenna Switching Unit, SA-2563/ARS-6(V)

Antenna Set, AS-3984/ARC (matched pair)

1-8.2 Operation. The AN/ARS-6 operates in the UHF band between 225 and 300 MHz and is tunable in 25 kHz increments. To locate a survivor, the AN/ARS-6 transmits short coded messages. The Radio Set receives the coded message and its internal transponder, designed to respond only to its ID code, transmits a coded message back to the AN/ARS-6. The received message from the survival radio is decoded, range and steering to the survivor is calculated. The AN/ARS-6 remote display unit indicates the range and left/right steering data to the survivor. The AN/ARS-6 can store nine survivor radio ID codes simultaneously. The AN/ARS-6 provides steering commands to any AM, FM, or CW source operating in the 225-300 MHz band.

NOTE

While the AN/ARS-6 can operate in the range of 225 to 300 MHz, the AN/PRC-112 can only be used in the frequency range of 225 to 299.975 MHz.

1-8.3 Control Display Unit (CDU). The CDU provides control of the AN/ARS-6 by the pilot. The CDU also provides interface to the aircraft primary dc power, aircraft intercom, and instrument lighting.

1-8.4 Receiver-Transmitter (RT). The RT contains a fully synthesized UHF receiver and transmitter, optimized to receive and transmit the pseudorandom noise (PN) coded modulation used by the Radio Set. The RT provides range and direction measurement to the survivor, as well as voice communications. In addition to the receive and transmit modules, the RT contains a system processor module (SPM), range computation module (RCM), power supply module and an optional MIL-STD-1553B data bus interface module.

1-8.5 Mounting Base, Electronic Equipment. A shock-mounted mounting base is included to mount the RT to the aircraft.

1-8.6 Remote Display Unit (RDU). The RDU enables the pilot to view the left/right steering and range to the survivor.

1-8.7 Antenna Switching Unit (ASU). The ASU contains a relay which alternates one of the blade antennas between transmit and receive.

1-8.8 Antenna Set (AS). A matched set of UHF blade antennas, used in conjunction with the ASU and two phase-matched coaxial cables, provide a 4 degree steering accuracy to the survivor.

1-9 TABULATED DATA.

Table 1-1 lists the performance data for the AN/ARS-6.

Table 1-1. AN/ARS-6 Performance Data

Characteristic	Performance
Electrical:	
Modes of Operation	
Covert Survivor Location	Receives from and transmits to AN/PRC-112 radios (simultaneous range and direction)
Direction	Homing to AN/PRC-90s or any FM, AM, or CW source in the operating band
Communication	High quality AM voice communications
Number of Survivors/Memory	Up to 9 six-digit ID codes
Receiver	
Type	Dual conversion superheterodyne
Sensitivity	-115, (+2, no lower limit) dBm for homing -113, (+2, no lower limit) dBm for receiving
Selectivity	70 kHz IF
Frequency Coverage	Fully synthesized UHF 225-300 MHz with 25 kHz spacing
First IF	70 MHz
Second IF	2.3 MHz
Transmitter	
Type	Class A linear
Power	10 watts (maximum)
Spectrum	Nominal 60 dB down at at MHz from carrier frequency

Table 1-1. AN/ARS-6 Performance Data-Continued

Characteristic		Performance
Displays		
	Type	Dichroic (white on black) LCD
	Readability	10,000 ft-candle sunlight readability
	Night Vision Goggle (NVG) Compatibility	MIL-L-85762. Compatible with AN/PVS-5 (GEN 11) and AN/AVS-6 (GEN III- ANVIS)
Ranging System		
	Type	Half duplex (interrogate/respond)
	Range Measurement System	High speed digital correlation of PN sequence compatible with AN/PRC-112.
Waveform		
	ON/OFF Key (OOK)	Repetitive 64-bit pseudo random noise
		(PN) code @ 16 bits/sec with superimposed AN/PRC-112 ID code
	Phase Shift Key (PSK)	32 kHz PSK fine range tone
Resolution		
	Number of Bits	2^{19} (524,287 counts)
	Range Distance per Count	3.7511 ft (1.14 meters)
	Maximum Range Resolution	322.0 nm
Cycle Time		
	Burst (Single Interrogate)	608.09375 ms
	Continuous (Multiple Interrogate)	612 ms

Table 1-1. AN/ARS-6 Performance Data-Continued

Characteristic	Performance
Operating Temperature	
Continuous	-40 to 55°C, (-40 to +130°F)
Intermittent	-54 to 71°C, (-129 to +160°F)
Altitude	
Operating	15,000 ft (4572 meters)
Non-operating	50,000 ft (15,240 meters)
Physical:	
Control Display Unit (CDU) C-11755/ARS-6(V)	
Dimensions	3.0(H) X 5.75(W) X 4.0(D) in. (76.2) X (146.05) X (101.6) mm
Weight	2.87 lbs (1.26 kg)
Remote Display Unit (RDU) ID-2405/ARS-6(V)	
Dimensions	1.87(H) X 3.0(W) X 1.5(D)in. (47.5) X (76.2) X (38.1) mm
Weight	0.57 lbs (0.25 kg)
Receiver Transmitter (RT) RT-1532/ARS-6(V), RT-1532A/ARS-6(V)	
Dimensions	7.8(H) X 7.59(W) X 12.48(D) in. (198.1) X (192.8) X (317.0) mm
Weight RT-1532/ARS-6(V) RT-1532A/ARS-6(V)	 21.75 lbs (9.58 kg) 22.5 lbs (9.91 kg)
Electronic Equipment Mounting Base MT-6678/ARS-6(V)	
Dimensions	1.73(H) X 7.92(W) X 15.75(D) in. (43.9) X (201.1) X (400.1) mm
Weight	2.1 lbs (0.93 kg)

Table 1-1. AN/ARS-6 Performance Data-Continued

Characteristic	Performance
Antenna Set (AS) AS-3984/ARC	
Type	Omnidirectional Phase monopulse
Antennas	UHF Blade Antennas (matched set)
Antenna Spacing	15 ± 0.5 inches, (381.00 ± 12.7) mm
Gain	3 dBi
Dimensions	9.0(H) X 0.42(W) X 4.6(D) in. (228.6? X (20.67) X (115.84) mm
Weight	1.0 lbs (0.45 kg)/per antenna
VSWR	< 2.5:1
Antenna Switching Unit (ASU)	
Dimensions	5.6(H) X 1.28(W) X 7.6(L) in. (142.24) X (32.51) X (193.04) mm
Weight	1.38 lbs (0.63 kg)
Performance Specifications:	
Range Parameters	
Maximum (line of sight)	100 nm (182.8 km)
Accuracy	150 feet to 1 nm 1% of range beyond 1 nm
Steering Accuracy	±4 deg. on boresight
Terminal Location Accuracy	100 ft (30.48 m)
Reliability	2843 hours (predicted)
Maintainability (Installation)	Less than 60 min.
Power Requirements	
Primary	+28 Vdc, 126 Watts max.
Panel Lighting	0 to 115 Vat, instrument dim bus power
Other Capabilities	
Interface	MIL-STD-1553B data bus

CHAPTER 2
SERVICE UPON RECEIPT

Section I. SERVICE UPON RECEIPT OF MATERIAL

2-1 UNPACKING

2-1.1 Packaging Data. The AN/ARS-6 LRUs are shipped in a reusable shipping container, CY-8564/ARS-6(V), see figure 2-1. The container overall dimensions are 29.75 in. (76 cm) in diameter by 14.05 in. (36 cm) deep and has a capacity of 39 gals. (148 ltr.). The packed container weighs approximately 70 lbs. (32 kg) and has a volume of 5.652 cu. ft. (0.16 cu. m.).

2-1.2 Removing Contents. (See figure 2-1).

a. Remove the lid from the metal shipping and storage container.
b. Remove AN/ARS-6 LRUs and packing pads until container is empty.
c. Store packing pads in container and replace container lid.

2-2 CHECKING UNPACKED EQUIPMENT.

2-2.1 Damage. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on SF 364 Report of Discrepancy (ROD).

2-2.2 Completeness. Check the equipment against the packing list and the appropriate appendix (Appendix G, UH-1H Mission Kit; Appendix H, UH-60A/L Mission Kit; Appendix J, SH-3H DALS Installation Kit) to see if the equipment is complete. Report all discrepancies in accordance with the instructions in DA PAM 738-750 and PAM 738-751.

Section II. INSTALLATION INSTRUCTIONS

2-3 TOOLS.

Electronic Equipment Tool Kit TK-101/G (NSN 5180-00-064-5178) is required to complete installation.

2-4 INSTALLATION INSTRUCTIONS.

2-4.1 UH-1H Installation. Refer to Appendix G for Installation Instructions on the UH-1H helicopter.

2-4.2 UH-60A/L Installation. Refer to Appendix H for Installation Instructions on the UH-60A/L helicopter.

2-4.3 SH-3H Installation. Refer to Appendix J for Installation Instructions on the SH-3H helicopter.

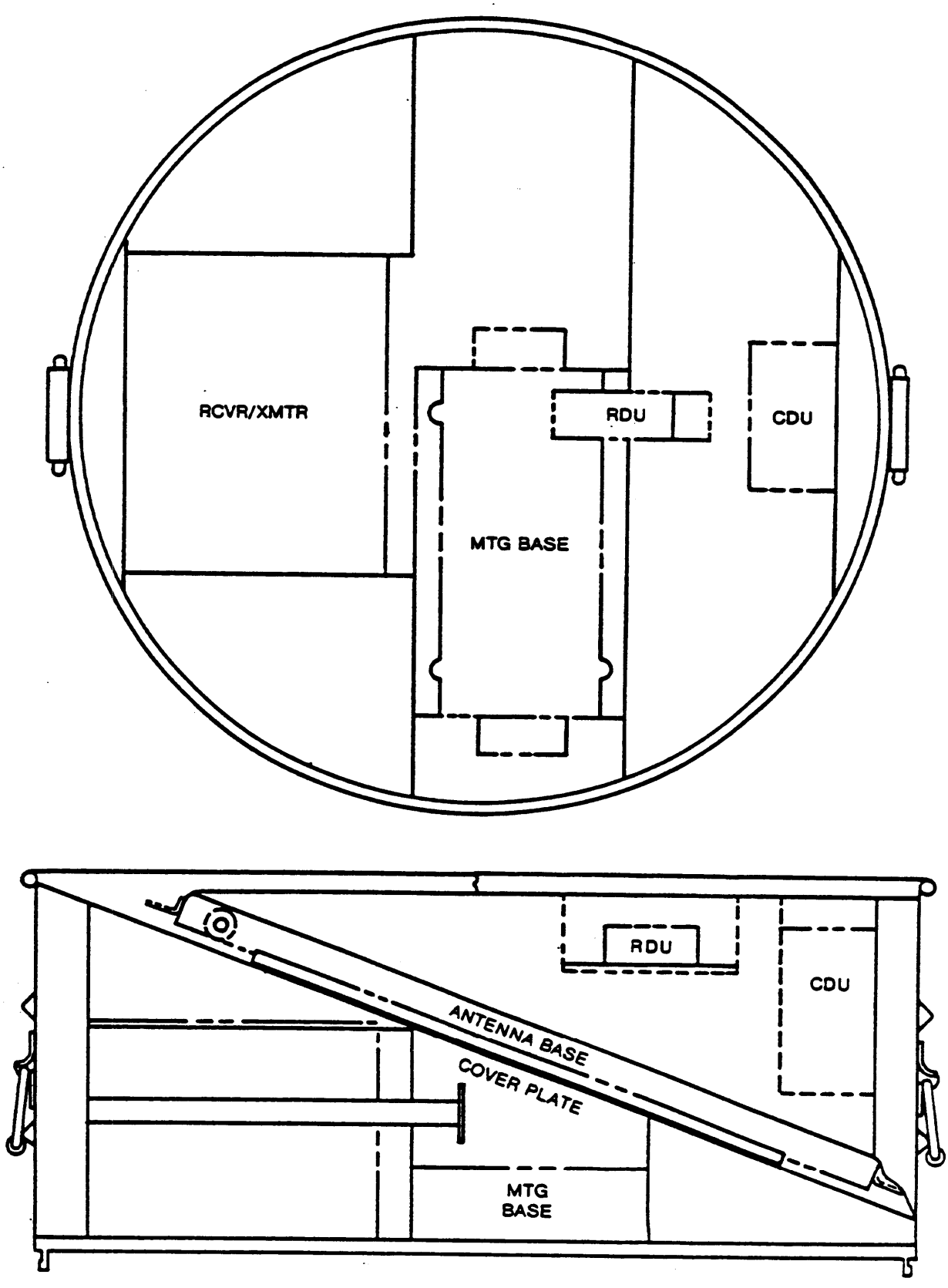


FIGURE 2-1. AN/ARS-6 Shipping and Storage Configuration (Typical)
Part Number 235504

CHAPTER 3
OPERATOR INSTRUCTIONS

Section I. OPERATOR CONTROLS AND INDICATORS

3-1 GENERAL INFORMATION.

3-1.1 Control Display Unit (CDU). All AN/ARS-6 data entries and control functions are accessed using the CDU, refer to figure 3-1. Modes include built-in-test (BIT), frequency programming (FREQ) and entry of survivor ID codes (CODE). Survivor interrogations can be either single burst (BRST) or continuous (CONT). Homing to any AM, FM, or CW signal source in the AN/ARS-6 frequency band is enabled by selecting the HOME mode. Voice communication on the designated UHF channel is accessed in BRST, CONT, or HOME modes by depressing the push-to-talk (PTT) button.

3-1.2 Remote Display Unit (RDU). The dichroic liquid crystal display (LCD) is designed for day and night readability and the electroluminescent (EL) backlighting makes viewing compatible with night vision goggles, refer to figure 3-1. The RDU displays range in nautical miles (rim) or in feet for ranges of 9999 feet or less. Steering commands are presented as a bargraph to command left or right turns, or a solid sphere signifying the survivor is dead ahead (or directly aft) of the aircraft. In addition, a no update (NO UPDT) annunciator on the RDU indicates whether survivor data is current.

3-2 OPERATOR CONTROLS AND INDICATORS.

Operator controls and indicators are illustrated in figure 3-1 and their functions are listed in tables 3-1 and 3-2.

NOTE

If any error is detected during PLS operation the CDU will display ERROR in the lower half of the display. This can occur during CODE, FREQ, BRST, CONT, or HOME modes, see table 4-2. A display of ERROR should be immediately followed by operator initiation of a BIT mode.

Section II. OPERATION UNDER USUAL CONDITIONS

3-3 INITIALIZATION PROCEDURE.

Perform the AN/ARS-6 initialization procedure as follows:

NOTE

Ensure FM2 circuit breaker is closed.

a. Set VOL control full counterclockwise (OFF).

NOTE

The CDU Mode Switch is a “pull-to-turn” switch.

b. Set MODE select switch to BIT.

(1) The CDU initiates a complete built-in-test (BIT) of the AN/ARS-6.

(a) Verify that segments on both the CDU and RDU are activated for approximately 3 to 5 seconds.

NOTE

No transmissions are made during BIT.

(b) Successful completion of the test is indicated by a CDU display of BIT PASS.

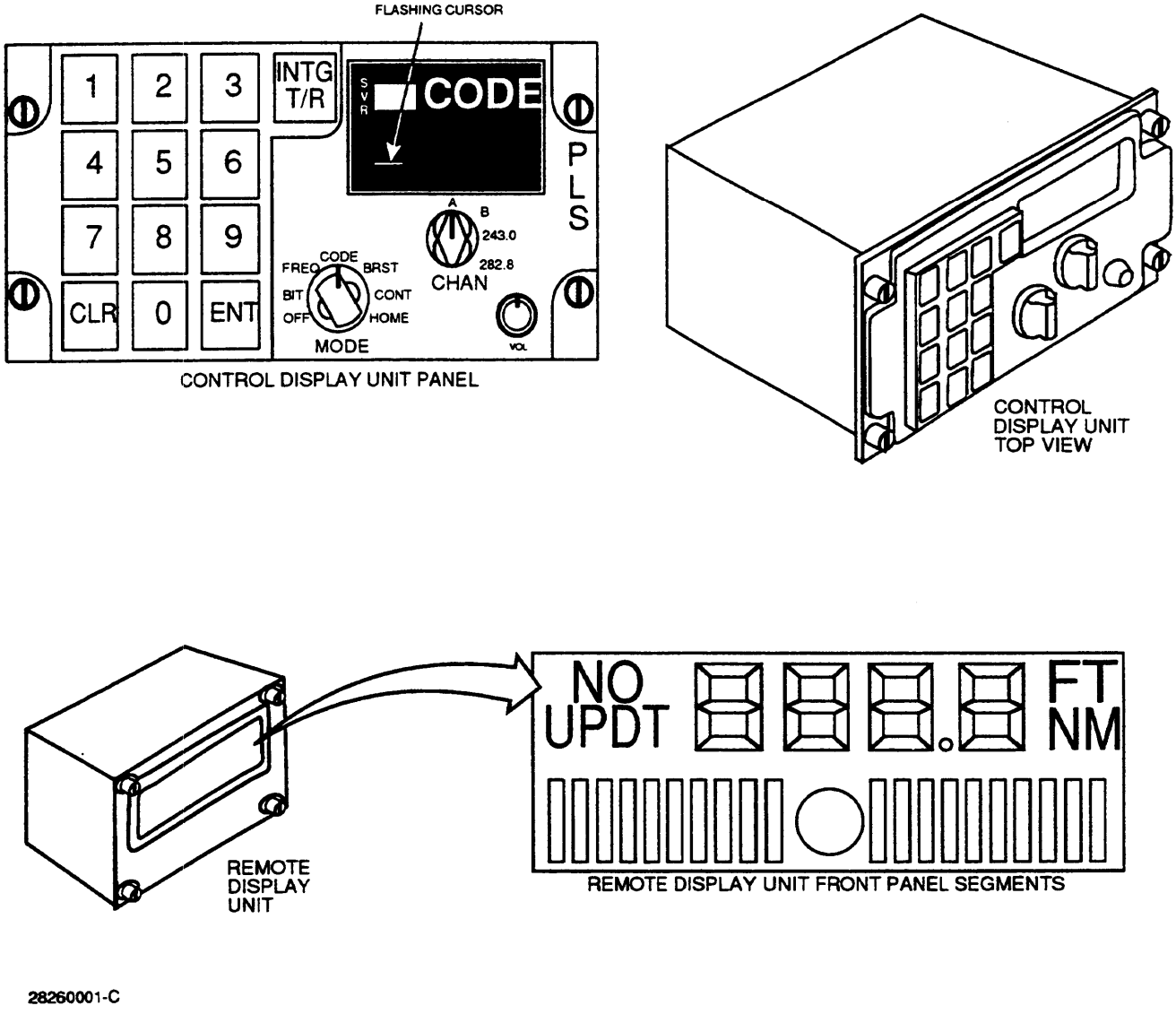


FIGURE 3-1. Operator Controls and Indicators.

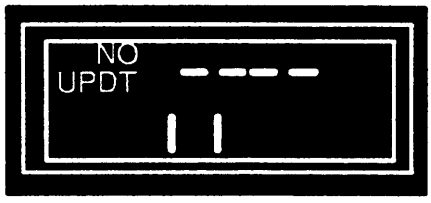
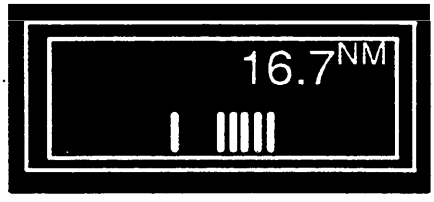
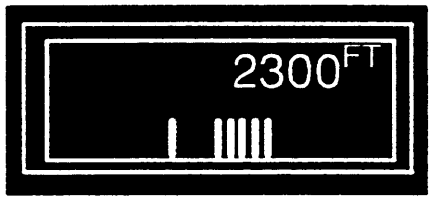
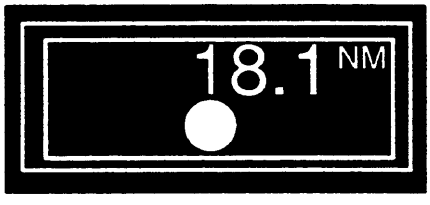
Table 3-1. Control Display Unit Controls and Indicators

"Control/Indicator	Function
Number Keys O through 9	When pressed the numerical values for frequency, code, or survivor number are selected. If incorrect number is pressed, press CLR and start over.
INTG-T/R Key	When pressed, alternately selects transmit-receive or interrogate mode of operation
CLR Key	When pressed, clears frequency or survivor code and initiates a flashing cursor on the display NOTE CLR must a ways be pressed before the key section of frequency or code.
ENT Key	When pressed, enters the displayed frequency or survivor code into memory".
Display Screen	The display indicates survivor code, operating frequency, survivor numbers, mode and BIT results.
CHAN switch (four positions)	A: Selects channel A for frequency programming or operation. B: Selects channel B for frequency programming or operation. 243.0: Selects the preset International Distress of 243.0 MHz. 282.8: Selects the preset frequency of 282.8 MHz.
MODE switch (seven positions)	OFF: Removes electrical power for the AN/ARS-6. When another position is selected, power is applied to the AN/ARS-6. BIT: Initiates the AN/ARS-6 self-test. FREQ: Enables key programming of frequencies for channels A and B.

Table 3-1. Control Display Unit Controls and Indicators-Continued

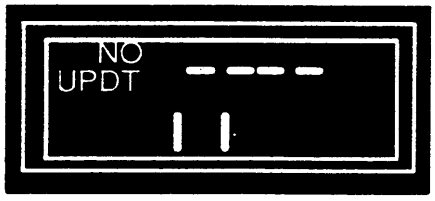
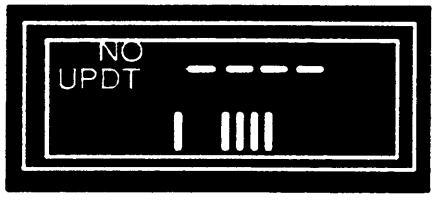
Control/Indicator	Function
	CODE: Enables key programming of survivor number and survivor identification number. BRST: In conjunction with the INTG-T/R key, single interrogation of a survivor is enabled. CONT: In conjunction with the INTG-T/R key, multiple interrogation of a survivor is enabled. NOTE The operator needs to press the INTG-T/R key to re-initiate interrogations. HOME: Enables the system to display steering data on the RDU to the selected beacon.
VOL Control	Varies the receive audio level to the aircraft intercom system.

Table 3-2. Remote Display Unit Controls and Indicators

Control/Indicator	Function
Four dashes in range readout, two bars in steering bargraph 	NOTE Bars "left" or "right" do not correlate to any specific number of degrees. No steering or range data inputs to the display, or data entry mode (i.e. FREQ, CODE) selected on the CDU.
RANGE  	Range to survivor displayed in nautical miles to the nearest 0.1 mile until within 9999 feet, then range is displayed in feet (100'S of feet from 9900 to 1000, 10's of feet from 990 to O). If four dashes are displayed, no range value has been received.
STEERING 	BORESIGHT: Indicates the aircraft is headed directly towards or away from the survivor.
	VERTICAL BARS RIGHT (maximum of 10): Commands the aircraft to turn right to place the survivor on the nose of the aircraft.
	VERTICAL BARS LEFT (maximum of 10): Commands the aircraft to turn left to place the survivor on the nose of the aircraft.

28260002-C

Table, 3-2. Remote Display Unit Controls and Indicators-Continued

Control/Indicator	Function
NO UPDT  	Homing Mode Displays Steering data from the beacon has not been received.
NO UPDT  23260003-C	Indicates that all additional displayed data is not current, or that the initial response has been received. Steering data lost. Last valid steering command displayed.

(c) Failure of the test is indicated by a CDU display of the failed LRU name and FAIL.

NOTE

A BIT failure may occur on initial power up due to initialization in internal registers. Therefore, re-run the BIT at least three times before performing maintenance.

(2). Failure of the BIT mode requires troubleshooting and maintenance before proceeding (refer to paragraph 4-4 and table 4-2).

c. Set the MODE switch to FREQ and the CHAN select switch to A. The display reads FREQ with six dashes.

d. Press the CLR key to clear the six dashes on the display. A flashing cursor display indicates the system is ready for frequency selection.

e. Enter the desired Channel A frequency by pressing the required numbered keys.

NOTE

Software automatically adds trailing zeros for even number channels such as 258.000.

(1) The display reads the selected frequency.

(2) Press the ENT key to enter the selected frequency into memory.

NOTE

Kilohertz frequency must be entered in increments of 25 kHz

If the operator enters a wrong value, the number will not be displayed and the operator must press CLR and then enter the correct value.

f. Set the CHAN switch to Channel B and repeat steps d. and e. above for Channel B.

g. Set the MODE switch to CODE.

(1) The SVR display shows 1 CODE and six dashes.

h. Survivor (SVR) number 1 ID code entry.

(1) Press the CLR key to clear the six dashes on the display. The cursor will flash.

(2) Press the numbered keys to enter a six-digit survivor ID code. The display will read the code value.

(3) Press the ENT key to enter ID code into memory.

i. Survivor (SVR) number 2 ID code entry.

(1) Press key number 2. The SVR display will read 2 CODE and six dashes.

(2) Press the CLR key to clear the display. The cursor will flash.

(3) Press the numbered keys to enter a six-digit survivor ID code. The display will read the code value.

(4) Press the ENT key to enter ID code into memory.

j. Repeat step i. above for each additional survivor code to be entered up to a maximum of 9 survivor codes.

3-4 OPERATIONAL CHECK.

To check AN/ARS-6 operation proceed as follows:

a. If initialization per paragraph 3.3 has not been completed perform the initialization procedure described in paragraph 3-3.

b. Set the MODE switch to BRST. The display should read T/R.

c. Set the CHAN switch to A. The display should read the channel A frequency.

d. Press key number 1. SVR should display 1.

e. Press the INTG-T/R key.

(1) The CDU display reads INTG until completion of the interrogate/respond cycle (about 0.5 second), then the display reverts to T/R.

(2) The RDU display shows NO UPDT, four dashes in range readout, and two parallel bars.

f. Set the MODE select switch to CONT. The display reads SVR 1, T/R, and the selected channel frequency.

g. Press the INTG-T/R key.

(1) The display reads SVR 1, INTG, and the selected channel frequency.

(2) The display will continue to read INTG until INTG-T/R key is pressed or the intercom push-to-talk (PTT) switch is pressed.

(3) The RDU display shows NO UPDT, four dashes in the range readout, and two parallel bars.

h. Set the MODE switch to HOME.

(1) The CDU display reads HOME and the selected channel frequency.

(2) The CDU display will continue to read HOME and the selected channel until the intercom push-to-talk (PTT) switch is pressed, which will temporarily interrupt homing functions, resulting in a display of T/R. When the PTT switch is released, homing automatically resumes.

(3) If no beacon is present on the selected channel, the RDU display shows NO UPDT, four dashes in the range readout, and two parallel bars.

(4) If a beacon is present on the selected channel, the RDU displays four dashes, and the steering command to the beacon.

3-5 GROUND CHECK PROCEDURES.

3-5.1 Introduction and Purpose. The purpose of the Ground Check is to provide confidence in the overall system. The Ground Check will prove operational capability of both the airborne avionics and the survival radio.

3-5.2 Equipment Required. The following list of equipment is required to properly perform a System Ground Check.

a.	Aircraft	1 each
b.	Radio Set, AN/PRC-112	1 each (minimum)
c.	Program Loader, KY-913/PRC-112	1 each
d.	Radio Set-Personnel Locator, AN/ARS-6	1 each (installed in the aircraft)
e.	Aircraft Parking Point	1 each (optional)
f.	Known Distance Markers from the Aircraft Parking Point	As Desired (optional)

3-5.3 Initial Procedures.

a. Radio Set AN/PRC-112 and Program Loader KY-913/PRC-112. Ensure that the desired Channel A and B frequencies have been properly loaded into the AN/PRC-112 radio(s) and that the six-digit survivor ID codes have been loaded. If not loaded, refer to TM 11-5820-1037-13&P for proper procedures.

NOTE

Failure to load the proper channel frequencies and survivor ID code will result in a faulty Ground Check.

b. Radio Set-Personnel Locator, AN/ARS-6. With the AN/ARS-6 installed in the aircraft, perform initialization procedures as described in paragraph 3-3.

3-5.4 Ground Check Positions. Starting from the nose of the aircraft, walk in a straight line out to 75 feet. Vary the position of the walker to the left and right of the aircraft nose through performance of the Ground Check and also vary the distance up to 600 feet (200 yards).

3-5.5 Ground Check Procedures.

a. Turn on the Radio Set AN/PRC-112 and the Radio Set-Personnel Locator AN/ARS-6.

b. Establish voice communications between the AN/PRC-112 and the AN/ARS-6 on Channel A or B, as desired.

WARNING

Do not transmit on 121.5 or 243.0 MHz unless actual emergency conditions exist.

c. Set the CDU mode switch on the AN/ARS-6 to BRST and press the INTG key.

(1) The AN/PRC-112 interrogation light should flash for 8 seconds.

(2) The AN/ARS-6 CDU display should read “INTG” for approximately 1 second and then revert to T/R.

(3) The RDU of the AN/ARS-6 displays a radio set range and one of the following (see table 3-2): (a) bulls eye (solid sphere)-radio set directly in front of the aircraft, (b) bars on the left side of the RDU-radio set on the left side of the aircraft, and (c) bars on the right side of the RDU-radio set on the right side of the aircraft.

NOTE

If any of the above results are not obtained, replace the AN/PRC-112 (see step 1), or have the Avionics Mechanic run a BIT test on the AN/ARS-6 and a system check [steps (2) and (3)]. System Operational Test is shown in Section 5-4.1

d. Set the CDU mode switch on the AN/ARS-6 to CONT and then press the INTG button.

(1) The AN/PRC-112 interrogation light should blink continuously.

(2) The AN/ARS-6 CDU display should read “SVR #”, “INTG and Channel #” until the INTG switch is pressed or the push-to-talk (PTT) switch is pressed.

(3) The RDU of the AN/ARS-6 displays a radio set range and one of the following (see table 3-2): (a) solid sphere (bulls eye)-radio set directly in front of the aircraft, (b) bars on the left side of the RDU-radio set on the left side of the aircraft, and (c) bars on the right side of the RDU-radio set on the right side of the aircraft.

NOTE

If any of the above results are not obtained, replace the AN/PRC-112 or have the Avionics Mechanic run a BIT test on the AN/ARS-6 and a system check [steps (2) and (3)1. System Operational Test is shown in Section 5-4.1.

e. Set the CDU mode switch on the AN/ARS-6 to HOME.

(1) The AN/ARS-6 CDU display should read “HOME” and the selected channel. If the PTT switch is pressed, T/R will be displayed until the PTT is released. The unit will automatically resume homing operations.

(2) The AN/ARS-6 RDU display should show four dashes and a bull’s eye (solid sphere) only if the AN/PRC-112 mike button is depressed and the radio is directly in front of the aircraft.

NOTE

The above steps should be made to the front, left, and right of the aircraft. These steps may also be performed with a crew member, using the AN/PRC-112 walking away from the aircraft. Communications between the pilot and the crew member is important during all tests.

NOTE

If any of the above results are not obtained, have the Avionics Mechanic perform a BIT test on the AN/ARS-6 and a System Operational Test [steps (1) and (2)1. The System Operational Test is shown in 5-4.1.

CHAPTER 4
AVIATION UNIT MAINTENANCE (AVUM) INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

4-1 SCOPE OF AVUM.

This chapter contains instructions covering aviation unit maintenance (AVUM) of the AN/ARS-6. A reference to the paragraph covering the specific maintenance to be performed by the AVUM electronics equipment technician or crew chief is listed below. The tools and equipment are listed in paragraph 4-2.

a. AVUM preventive maintenance checks and services (para 4-3.2).

b. Troubleshooting (para 4-4).

c. Replacement of LRUs (refer to installation instructions contained in appendices E, F, and G).

4-2 AVUM TOOLS, EQUIPMENT AND MATERIALS REQUIRED.

a. Electronic Equipment Tool Kit TK-101/G, NSN 5180-00-064-5178.

b. Lint-free cloth.

c. Trichlorotrifluorethane, NSN 6850-00-105-3084, (or equivalent).

d. Digital Multimeter, AN/PSM-45 (or equivalent), NSN 6625-01-139-2512

e. RF Power Meter, AN/URM-120A (or equivalent) NSN 6625-01-039-1488

f. Maintenance Kit, MK-693A, NSN 5120-00-045-9695

Section II. PREVENTIVE MAINTENANCE AND TROUBLESHOOTING

4-3 PREVENTIVE MAINTENANCE.

To be sure the equipment is always ready for operation, inspect it systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services (PMCS) to be performed are listed and described in table 4-1. While performing PMCS before and during the operation of equipment, always keep in mind the CAUTIONS and WARNINGS set forth in this manual. Defects discovered during operation of the AN/ARS-6 will be noted for future corrections to be made as soon as operation has ceased. If the equipment fails to operate, refer to paragraph 4-4 troubleshooting and record all deficiencies in accordance with the procedures contained in DA PAM 738-750 and PAM 738-751.

4-3.1 Pullout Interval. No pullout interval for the AN/ARS-6 is required. The units shall be removed for maintenance only when faulty or inoperative.

4-3.2 AVUM Preventive Maintenance Checks and Services. Perform the maintenance functions indicated in the AVUM preventive maintenance checks and services once each periodic interval. Periodic preventive maintenance checks and services will be scheduled in accordance with the requirements of DA PAM 738-750 and PAM 738-751. The preventive maintenance checks and services will be scheduled together with the periodic maintenance checks

Table 4-1. AVUM Preventive Maintenance Checks and services

Item no.	Interval W QTR	Item to be inspected	Procedure	Equipment will be reported not ready (red) if
1	x	Knobs	Check tightness of knobs on shaft. Rotate and check for free operation and proper detenting or adjust knobs by access-ing two set screws on each knob.	Knobs are missing, Control shafts bind, do not detent, or do not operate smoothly.
2	x	Exterior surfaces	Inspect exterior surfaces of the AN/ARS-6 LRUs. The exterior surfaces shall be clean and free of dust, dirt, grease, and fungus. Remove dust and loose dirt with a soft, clean cloth. Remove grease, fungus and ground-in dirt from the case; use a cloth dampened with Trichlorotrifluoro-ethane.	
	x	CDU and RDU display glass	Clean fingerprints, grease, etc. , from the display glass using a cloth damp-ened with Trichlorotri-fluroethane. CAUTION Do not press on the display glass when cleaning. WARNING DO NOT use ammonia-based cleaning products on the display glass.	

Table 4-1. AVUM Preventive Maintenance Checks and Services-Continued

Item no.	Interval w	QTR	Item to be inspected	Procedure	Equipment will be reported not ready (red) if
4	X		Antenna coaxial cable	Check coaxial connectors and cable condition.	
5	X		Interconnect wiring cables	Check connectors for tightness. Check condition of cables.	

and services schedule of the system in which the AN/ARS-6 is installed to reduce out-of-service time. Refer to the applicable technical manuals for the hours between the service period. Faulty equipment that cannot be repaired at the AVUM level should be returned for maintenance in accordance with DA PAM 738-750 and PAM 738-751.

4-4 TROUBLESHOOTING.

AVUM troubleshooting is accomplished by substitution of line replaceable units (LRUs), inspection and standard checks of cabling, connectors, and associated equipment. Upon receipt of a discrepancy, perform the built-in-test (BIT). The CDU will display BIT PASS for completion of a successful test or will identify the suspected malfunctioning LRU (CDU, ASU, RT, RDU) followed by FAIL (refer to table 4-2). After the indicated faulty LRU has been replaced, repeat BIT. If the CDU again indicates the same LRU is malfunctioning, check the inter connecting cables between LRUs. (Refer to the continuity tests in paragraph 4-5 and to the cable connector pin assignment tables 4-3 through 4-5.) (Refer to paragraph 4-6 for coaxial cable insertion loss tests).

NOTE

Displays of RCVR FAIL or XMTR FAIL on the CDU indicate that the RT should be removed and replaced. Faulty units are returned to the AVIM.

4-5 CABLE CONTINUITY TESTS. (For all cables except RF).

a. Use this procedure for the following cables:

PN 235987-1, -2
PN 236003-1, -2
PN 236004-1, -2
PN 236005-1, -2

b. Set the AN/PSM-45 Multimeter (or equivalent) to OHMS, using a scale of 0.0 to 2.0 ohms.

c. Using tables 4-3 through 4-5, locate the applicable part number for the cable to be tested. Test for continuity on all pins listed. The resistance reading shall not exceed 1 ohm for each point-to-point connection. If any test fails, repair the faulty connection.

d. If the cable tests good but still does not function properly, attach one probe of the multimeter to the backshell or body of one of the connectors. Then check each pin of the connector with the other probe. All contacts should now read OPEN. If any test fails, remove the backshell and examine the connector(s) for wires pinched into the backshell. Repair the connections as required.

4-6 COAXIAL CABLE INSERTION LOSS TEST.

a. Use this procedure on the following cables:

W5, UH-1H, RF Cable RT to ASU

W6, UH-1H, RF Cable RT to ASU

W7, UH-1H, RF Cable RT to ASU

W5, UH-60A/L, RF Cable RT to ASU

W6, UH-60A/L, RF Cable RT to ASU

W7, UH-60A/L, RF Cable Rt to ASU

NOTE

Do not attempt to test or repair any phase-matched antenna cables.

Table 4-2. AVUM Troubleshooting Procedures

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Discrepancy	Probable cause	Corrective action
1	Unit is totally inoperative	Power is not ON	Check FM2 radio breaker, CB1 on RT, and +28 Vdc power source.
		Unit connectors not properly seated or damaged	Check all connectors for damaged pins and proper seating.
2	EL backlighting dim or out	Power is not ON	Check circuit breakers for console lighting
		Aircraft lighting dimmer control turned down	Check dimmer control (lower pedestal) setting
		0-115 Vat, 400 Hz is not available at CDU P1-C, M	Install a 0-115 Vat, 400 Hz power inverter
3	Erratic display on CDU and/or no display on RDU	Failure in CDU	Replace CDU and perform BIT, see Table 5-1 (page 5-2)
		Cable W1 and/or W2 failure	Check cable W1 or W2 wiring
		Failure in RDU	Disconnect RDU-perform BIT, see Table 5-1 (page 5-2), if CDU OK, replace RDU
4	CDU indicates CDU FAIL	Failure in CDU	Replace CDU and perform BIT, see Table 5-1 (page 5-2)
		Failure in Cables W2, or W3 or aircraft interface to CDU J1	Check for cable continuity and shorts between conductors (refer to para 4.5)

Table 4-2. AVUM Troubleshooting Procedures-Continued

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Discrepancy	Probable cause	Corrective action
5	CDU indicates RT FAIL	Failure in RT	Replace RT and perform BIT, see Table 5-1 (page 5-2)
		RF cables W5, W6 and W7 improperly connected to ASU/RT	Check for audio side tones and comms. with AN/PRC-112 or local tower,
			Perform other ground tests (HOME modes, etc.)
			Check cable connections
		Failure in cables W2 and W4	Check for cable continuity and shorts between conductors.
6	CDU indicates RCVR FAIL	Failure in receiver-transmitter	Replace RT and perform BIT. see Table 5-1 (page 5-2)
		RF cables W5, W6 and W7 improperly connected to ASU/RT	Check for audio side tones and comms. with AN/PRC-112 or local tower,
			Perform other ground tests (HOME modes, etc.)
			Check cable connections
		Failure in cables W6 and W7	Check for cable continuity and shorts between conductors. Check RF cables for excessive insertion loss
	After replacing RT, BIT still indicates RCVR or XMTR fail. Cables W4, W5, W6, and W7 test good.	Failure in antenna switching unit, matched antenna cables or matched antennas	Replace antenna switching unit. Check W10/W11 cables for continuity and shorts. Check matched set of antennas.

Table 4-2. AVUM Troubleshooting Procedures-Continued

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Discrepancy	Probable cause	Corrective action
7	CDU counting "1 to 99" and "PLS" indicated in the CDU display	Complete initialization fault in RT or failure in RT	Cycle power several times, if no improvement replace RT and perform BIT, see Table 5-1 (page 5-2)
		Failure n cable W3	Check for cable continuity and shorts between connectors.
8	CDU display clears (ID codes, frequencies) programmed data during operation	Failure n receiver-transmitter or inadvertent reset/ loss of power/ transient	Perform BIT see Table 5-1 (page 5-2), cycling power if necessary. If results consistently indicate RT failure replace TR. If system OK, reprogram ID codes and frequencies as req'd.
		Failure in cable W2	Check cable continuity.
9	CDU indicates XMTR FAIL	Failure in receiver-transmitter	Check for audio side tone and comm. with a AN/PRC-112 or local tower. Perform other ground tests (HOME mode, etc).
			Replace RT and perform BIT, see Table 5-1 (page 5-2)
		Failure in cables W4 and W5	Check for cable continuity and shorts between conductors. Check RF cables for excessive insertion loss:

Table 4-2. AVUM Troubleshooting Procedures

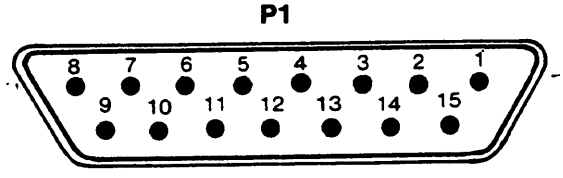
NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Discrepancy	Probable cause	Corrective action
9	(continued)		
		Incorrect RF cable connections for W5, W6, and W7 RT/ASU connections.	Check cable connections.
	After replacing RT, BIT still indicates RCVR or XCVR FAIL. Cables W4, W5, W6, and W17 test good.	Failure in antenna switching unit (ASU), matched cables, or antenna set.	Replace antenna switching unit Check matched set of antenna cables Check matched set of antennas.
10	RDU blank	Failure in RDU.	Replace RDU and perform BIT, see Table 5-1 (page 5-2)
		Failure in W3 cable	Check for cable continuity and shorts between conductors. Replace CDU.

Table 4-3. Pin Assignments for RDU to CDU Cable Assembly, W3 Connectors P1 and P2

P1 Pin	Function	P2 Pin
1	115 Vat, 400 Hz	1
2	115 Vac return	2
3	+28 Vdc	3
4	+28 Vdc return	4
5	Data in (+)	5
6	Data in (-)	6
7	Clock (+)	7
8	Clock (-)	8
9	Load (+)	9
10	Load (-)	10
11	Chip Select (+)	11
12	Chip Select (-)	12
13	+5 Vdc	13
14	-21 Vdc	14
15	DC ground	15



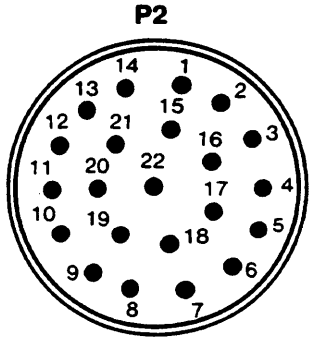


Table 4-4. Pin Assignments for CDU to RT Cable Assembly W2, Connectors P1 and P2

Pin	Function	Pin	Function
A	+28 Vdc power	a	Ground
B	+28 Vdc return	b	Power ON/OFF
c	+28 VDC power Switched	c	Spare
D	+28 Vdc power	d	Unattenuated receive audio
E	+28 Vdc return	e	Receive audio return
F	SPM Clock (+)	f	+8 Vdc power
G	SPM Clock (-)	9	Spare
H	Spare	h	Push-to-talk (Transmit control)
J	Spare	j	Spare
K	Transmit audio		
L	Transmit audio return		
M	Spare		
N	Spare		
P	Chassis ground		
R	CDU data (+)		
s	CDU data (-)		
T	CDU Clock (+)		
u	CDU Clock (-)		
v	SPM data (+)		
W	SPM date (-)		
x	Spare		
Y	Spare		
z	Spare		

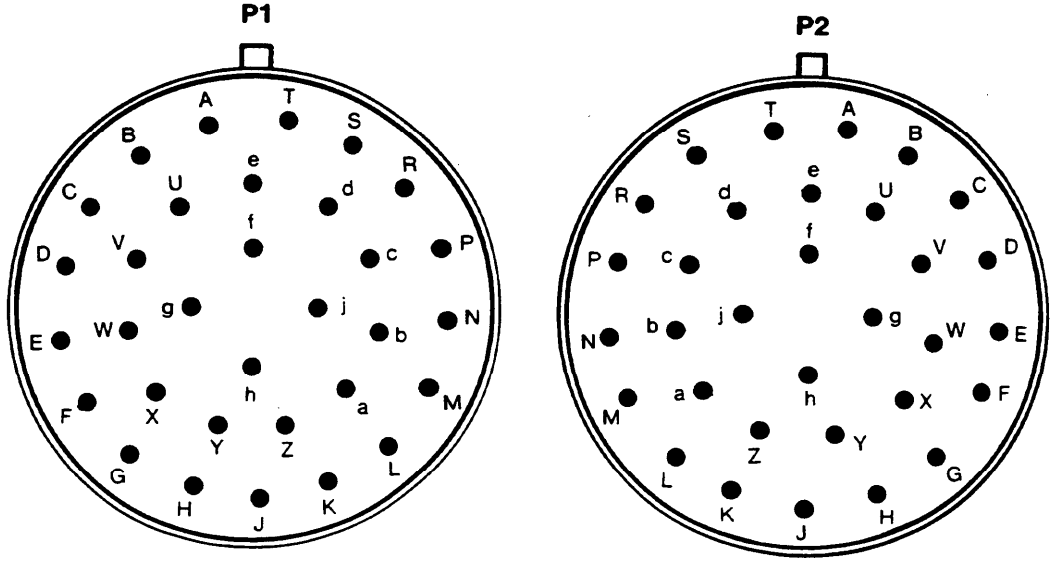
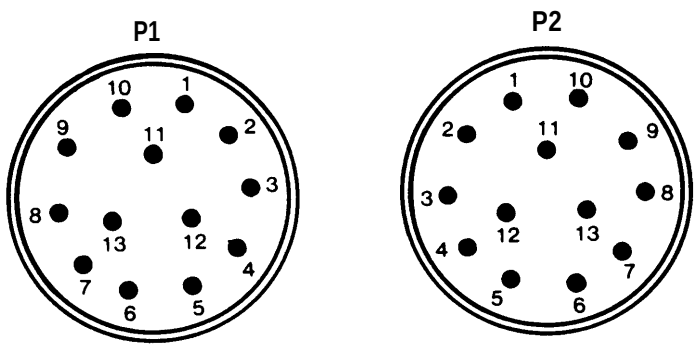


Table 4-5. Pin Assignments for RT to ASU Cable Assembly W4, Connectors P1 and P2

Pin	Function
1	+8 Vdc power
2	+28 Vdc power (not used)
3	Ground
4	Keyline (+)
5	Keyline (-)
6	Spare
7	Spare
8	Spare
9	Not connected
10	Not connected
11	Not connected
12	Not connected
13	Shield ground



CAUTION

Hatched antennas or matched cables are replaced as pairs.

b. Connect one end of the cable under test to the AN/URM-120A (or equivalent). Use RF adapters as required. Start the readout at the 10 watt setting.

c. Connect the other end of the cable under test to RT J4.

d. Program the AN/ARS-6 Channel A to 250.000 MHz. Set the MODE switch to BRST.

e. Key the transmitter on Channel A by pressing the push-to-talk switch.

f. Measure the insertion loss of the cable by reading the indication on the wattmeter. The wattmeter should read greater than or equal to 1.5 watts. Repair any cable that indicates excessive loss.

CHAPTER 5
AVIATION INTERMEDIATE MAINTENANCE (AVIM) INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

5-1 SCOPE OF AVIM.

This chapter contains instructions covering aviation intermediate maintenance (AVIM) of the AN/ARS-6. These procedures are performed to verify failures identified during built-in-test (BIT) on the aircraft. The System Operational Test (paragraph 5-4.1) should always be performed first by substituting the suspected faulty LRUs into the bench test setup. Tools and test equipment are listed in paragraph 5-2.

Depot (D) maintenance will be performed on Line Replaceable Units (LRUs) only. These include the Control Display Unit (CDU), Receiver-Transmitter (RT), Mounting Base, Remote Display Unit (RDU), Antenna Switching Unit (ASU), and Antenna Set (AS). Warranty return procedures are specified in TB 11-5821-342-25,

5-2 :TOOLS, MATERIALS, AND TEST EQUIPMENT REQUIRED FOR INTERMEDIATE MAINTENANCE (OR EQUIVALENT).

CAUTION

Repair of LRUs at AVIM is not authorized. Do not tamper with warranty seals.

a. Tool Kit, Electronic Equipment, TK-105/G (NSN 5180-00-610-8177).

b. Test Facilities Kit, MK-994A/AR, (NSN 6625-01-189-7882)

c. Test Set, AN/GRM-114A (NSN 6625-01-144-4481).

d. Test Set, TS-4360/AYD-1, (NSN 6625-01-342-3966) consisting of:

(1) CDU to RT Cable
(2) CDU to RDU Cable
(3) RT to ASU Cables (Qty 4)
(4) 20dB, 10 Watt Fixed Attenuators (Qty 2)
(5) AN/PRC-112 Antenna Adapter
(6) 50 ohm, TNC Connector

e. Power Source, dc, O to 28 Vdc, Current - 7.5 Amperes.

f. Survival Radio Set, AN/PRC-112, (NSN 5820-01-279-5450).

g. Program Loader, KY-913/PRC-112 (NSN 7025-01-279-5308).

h. Receiver-Transmitter, RT-1532/ARS-6(V) (NSN 5821-01-245-9095) .

i. Control Display Unit, C-11755/ARS-6(V) (NSN 5895-01-236-8964) .

j. Remote Display Unit, ID-2405/ARS-6(V) (NSN 5821-01-245-9067).

k. Antenna Switching Unit, SA-2563/ARS-6(V) (NSN 5821-01-251-8683) .

1. Headset-Microphone, H-157/AIC, (NSN 5965-00-755-4656).

Section II. TROUBLESHOOTING

5-3 GENERAL INFORMATION.

Troubleshooting of the AN/ARS-6 is based upon verification of faults identified by BIT at the AVUM level. The verification is performed at the AVIM level by substitution of the faulty LRU into a bench test setup and executing the BIT. Usually, as listed in the troubleshooting table 5-1, the BIT fault verification test is all that is required. Occasionally, however, additional bench testing may be done to further isolate the problem conclusively to a single LRU. Faulty LRUs (CDU, RT, RDU, and ASU) will be returned to the depot in accordance with TB 11-5821-342-25.

Table 5-1. AVIM Troubleshooting Procedures

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Fault symptom	Checks and corrective measures
1	BIT = XXXX FAIL (all failures)	a. Perform BIT fault verification (para. 5-4). b. Replace faulty LRU and retest.
2	BIT = RT FAIL	a. Perform BIT fault verification (para. 5-4). b. Replace RT.
2(a)	BIT = RCVR FAIL (after item 1)	a. Perform BIT fault verification (para. 5-4). b. Perform receiver sensitivity test (para. 5-4.2). c. Replace RT.
2(b)	BIT = XMTR FAIL (after item 1)	a. Perform BIT fault verification (para. 5-4). b. Perform XMTR power output test (para. 5-4.3). c. Replace RT.
2(c)	No receive audio in headset	a. Check headset. b. Replace RT.
2(d)	No transmit audio	a. Replace RT.

Table 5-1. AVIM Troubleshooting Procedures-Continued

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Fault symptom	Checks and corrective measures
2(e)	HOME mode inoperative	a. Perform ASU test (para. 5-4.4).
		b. Replace RT.
2(f)	CDU counts 1 to 99 and "PLS" indicated on CDU display display	a. Perform BIT fault verification (para. 5-4).
		b. Replace RT.
		c. Replace CDU.
	Erratic range and steering display	a. Perform BIT fault verification (para. 5-4).
		b. Perform ASU test (para. 5-4.4).
4	BIT = CDU FAIL	a. Perform BIT fault verification (para. 5-4).
		b. Replace CDU.
4(a)	Keyboard does not accept data entries	a. Perform BIT fault verification (para. 5-4).
		b. Replace CDU.
4(b)	Lights on CDU do not light	a. No 0-115 Vac 400 Hz source.
		b. Replace CDU.

Table 5-1. AVIM Troubleshooting Procedures-Continued

NOTE

If a fault is indicated on an initialization after performing maintenance, BIT should be repeated to ensure equipment performance.

Item no.	Fault symptom	Checks and corrective measures
5	BIT = RDU FAIL	a. Perform BIT fault verification (para. 5-4). b. Replace RDU.
5(a)	Lights on RDU do not light	a. Replace CDU. b. Replace RDU.
6	AN/PRC-112 Radio Set will not respond to interrogations	a. Perform BIT fault verification (para. 5-4). b. Perform System Operational Test (para. 5-4.1).
7	LRU failures are nonrepeatable on bench	a. Perform cable continuity tests (para. 4-5, 4-6) on installation cables (AVUM).

CAUTION

Repair of LRUs at AVIM is not authorized. Do not tamper with warranty seals.

To troubleshoot the AN/ARS-6, perform the fault verification procedures listed in troubleshooting table 5-1. The maintenance facility DC power source is assumed to be operating correctly; this item is not listed in the troubleshooting table.

5-4 AVIM BIT FAULT VERIFICATION TESTS

5-4.1 System Operational Test. This test will confirm that the AN/ARS-6 successfully performs the ranging and angle measurement tasks. Connect the test configuration as shown in Figure 5-1. Remove the whip antenna from the AN/PRC-112 and replace it with an antenna adapter supplied as part of the PLS Test Set, TS-4360/AYD-1. Turn the TS-4360/AYD-1 power ON.

NOTE

The CDU mode switch is a "pull to turn" switch.

a. Set all rotary switches on the MK-994A/AR and the AN/PRC-112 to OFF. Ensure that the CDU mode switch is set to OFF.

b. Set the DC power switch on the MK-994A/AR to ON. The red indicator lamp should illuminate.

c. Turn the CDU mode switch to BIT and verify BIT PASS. If BIT fails refer to the troubleshooting table 5-1.

d. Program the same frequencies for Channels A (227.250 MHz) and B (297.750 MHz) on the C-l1755/ARS-6(V) ascontained in the AN/PRC-112. Select Channel A when programming is completed.

NOTE

The AN/PRC-112 Radio Set cannot be programmed at a frequency above 299.975 MHz.

e. Program the same survivor ID codes into the AN/ARS-6 as used in the AN/PRC-112.

f. Turn ON the AN/PRC-112 and select Channel A.

g. Select the CONT mode on the CDU and press the T-R/INTG button.

h. Observe the range indication on the RDU. The reading should be not greater than 60 feet after a few interrogations. If the reading is abnormal refer to the troubleshooting table 5-1.

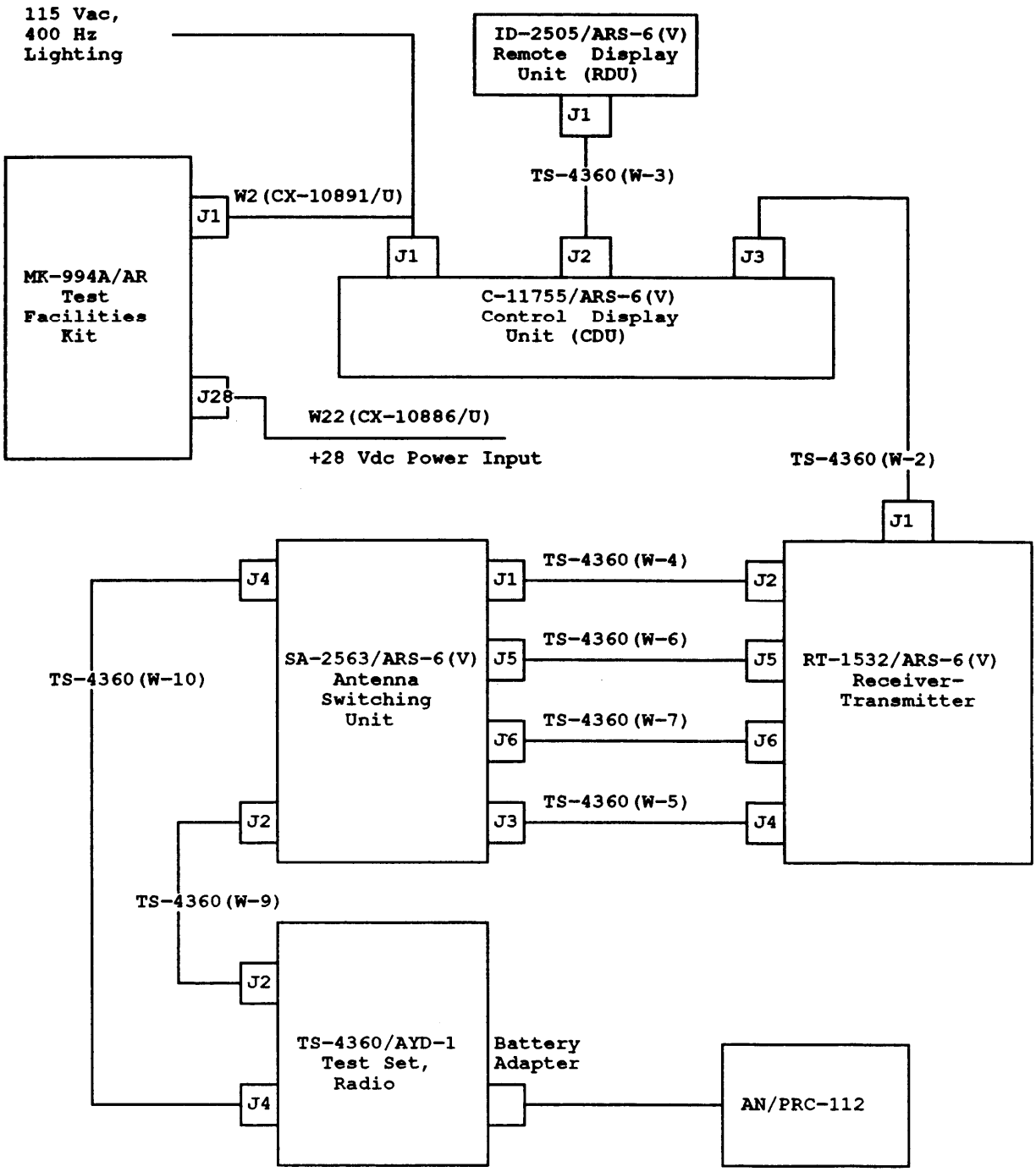
i. On the PLS Test Set, select BORESIGHT. Verify that the RDU displays BORESIGHT (BULLSEYE) position.

j. On the PLS Test Set, select the LEFT position. Verify that the RDU displays ≥ seven (7) steering bars to the left. If the reading is abnormal refer to the troubleshooting table 5-1.

k. On the PLS Test Set, select the RIGHT position. Verify that the RDU displays ≥ seven (7) steering bars to the right. If the reading is abnormal refer to the troubleshooting table 5-1.

l. Select Channel B for both the AN/PRC-112 and the CDU and repeat steps f through k.

m. If all test fail, power down and disconnect all test equipment.



N O T E

AN/PRC-112 is mounted to the Battery Adapter on the TS-4360/AYD-1. The antenna adapter on the AN/PRC-112 is used to connect the radio output to the TS-4360.

FIGURE 5-1. PLS-AN/PRC-112 Operational Test Setup.

5-4.2 RCVR FAIL, PLS Receiver Sensitivity Tests.

a. Set all rotary switches on the MK-994A/AR to OFF. Ensure that the CDU mode switch is set to OFF.

b. Connect the test configuration as shown in Figure 5-2. Perform the following for indication of receiver failure (RCVR FAIL) in BIT.

c. Set the DC power switch on the MK-994A/AR to ON. The red indicator lamp should illuminate.

d. Set the CDU mode switch to FREQ. Set the CHAN switch to Channel A. Program Channel A for 227.250 MHz. Set the CHAN switch to Channel B. Program Channel B for 297.750 MHz. Set the CHAN switch to Channel A.

NOTE

The CDU Mode Switch is a pull to turn switch.

e. Set the CDU mode switch to HOME. The CDU display should read HOME and 227.250 MHz. The RDU should display NO UPDT, ----, II If the test fails go to the troubleshooting table 5-1.

f. Set the AN/GRM-114A Test Set as follows:

Switch/Control	Position/Setting
PWR/OFF/BAT	OFF
GEN/RCVR	GEN
AM/FM	AM
VAR/OFF	OFF
1kHz/OFF	OFF
FREQUENCY	Set the RF FREQUENCY thumb wheel switches to the channel A frequency
RF Output	Set the HI LVL/uV X 100/NORM switch to HI LVL position. Adjust the BFO-RF LEVEL control to -110 dBm scale (equivalent to -20 dBm).

g. Place the AN/GRM-114A Test Set PWR/OFF/BAT switch in the PWR position. As soon as the AN/GRM-114A Test Set PWR/OFF/BAT switch is placed to the PWR position and the LOCK LEDs are lit, the NO UPDT should fade out on the RDU.

NOTE

Disregard any changes of the steering bargraph.

h. Set the HI LVL/uV X 100/NORM switch to the NORM position. Slowly decrease the signal strength using the BFO-RF LEVEL control until the NO UPDT annunciator is activated. The RF output level should be -100 dBm or less (as read on the BFO-RF LEVEL control).

i. If the sensitivity test fails, isolate the fault by connecting the AN/GRM-114A to RT J5 (use a BNC female-to-BNC male adapter, if required). Repeat steps g through h. If the RT performs satisfactorily, perform the antenna switching unit test of 5-4.4. (Receiver sensitivity should be -101 dBm or less as measured at RT J5). If the RT test fails, document the failure and return the RT to the depot for repair.

j. At the completion of the test, power down and disconnect the test setup.

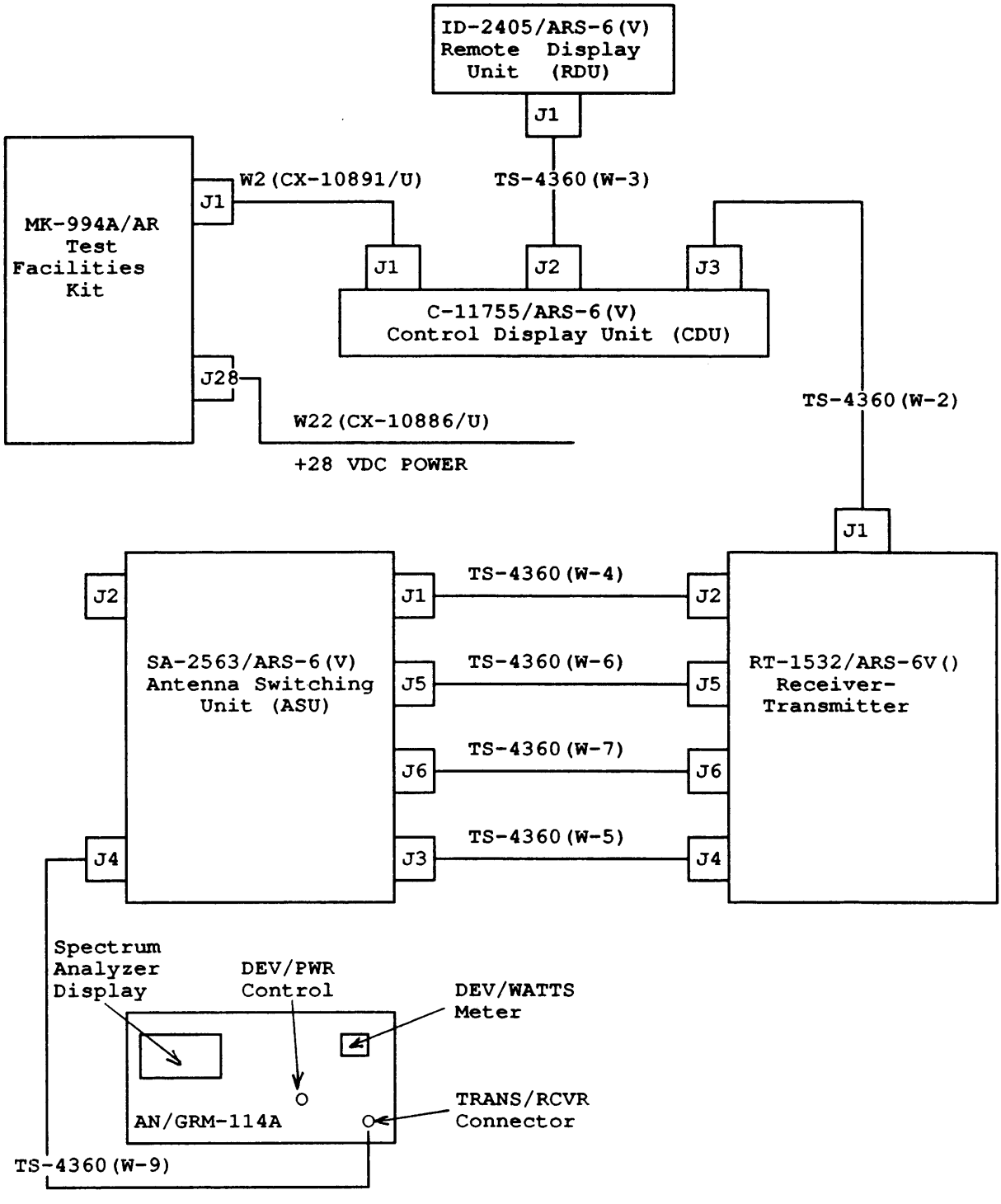


FIGURE 5-2. PLS Receiver Sensitivity Test Setup.

5-4.3 XMIT FAIL, PLS Transmitter Power Test.

a. Set all rotary switches on the MK-994A/AR to OFF. Set the Antenna Function Select switch to XCVR. Ensure that the CDU mode switch is set to OFF.

b. Connect the test configuration as shown in Figure 5-3. Perform the following indication of transmitter failure (XMIT FAIL) in BIT.

c. Set the DC power switch on the MK-994A/AR to ON. The red indicator should illuminate.

d. Set the CDU mode switch to FREQ. Set the CHAN switch to Channel A. Program Channel A for 227.250 MHz. Set the CHAN switch to Channel B. Program Channel B for 297.750 MHz. Set the CHAN switch to Channel A.

e. Set the CDU mode switch to HOME. The CDU should display HOME and 227.250 MHz. The RDU should display NO UPDT. If the test fails refer to the trouble-shooting table 5-1.

NOTE

The CDU Mode Switch is a pull-to-turn switch.

f., Set the control switches on the AN/GRM-114A Test Set as follows:

Switch/Control	Position/Setting
GEN/RCVR	RCVR
RCVR WIDE/MID/NARROW	WIDE
BFO-RF LEVEL	Fully CCW
AUTO ZERO/OFF/BAT	AUTO ZERO
SQUELCH/OFF	Fully CCW, short of detent to eliminate receiver noise
INT MOD/RCVR	RCVR
VOL	Fully CCW
BFO/OFF	OFF
AM/FM	AM
1 kHz/OFF	Fully CCW, detent OFF
VAR/OFF	Fully CCW, detent OFF
FREQ ERROR	15 kHz
DEV-PWR	Watts X 1
PWR/OFF/BAT	PWR

g. Adjust the CDU VOLUME control for a low level.

h. Set the AN/GRM-114A Test Set RF FREQUENCY thumb wheel switches to the CDU frequency A or B to be received.

i. Depress Headset Transmit Switch #1 on the MK-994/AR.

NOTE

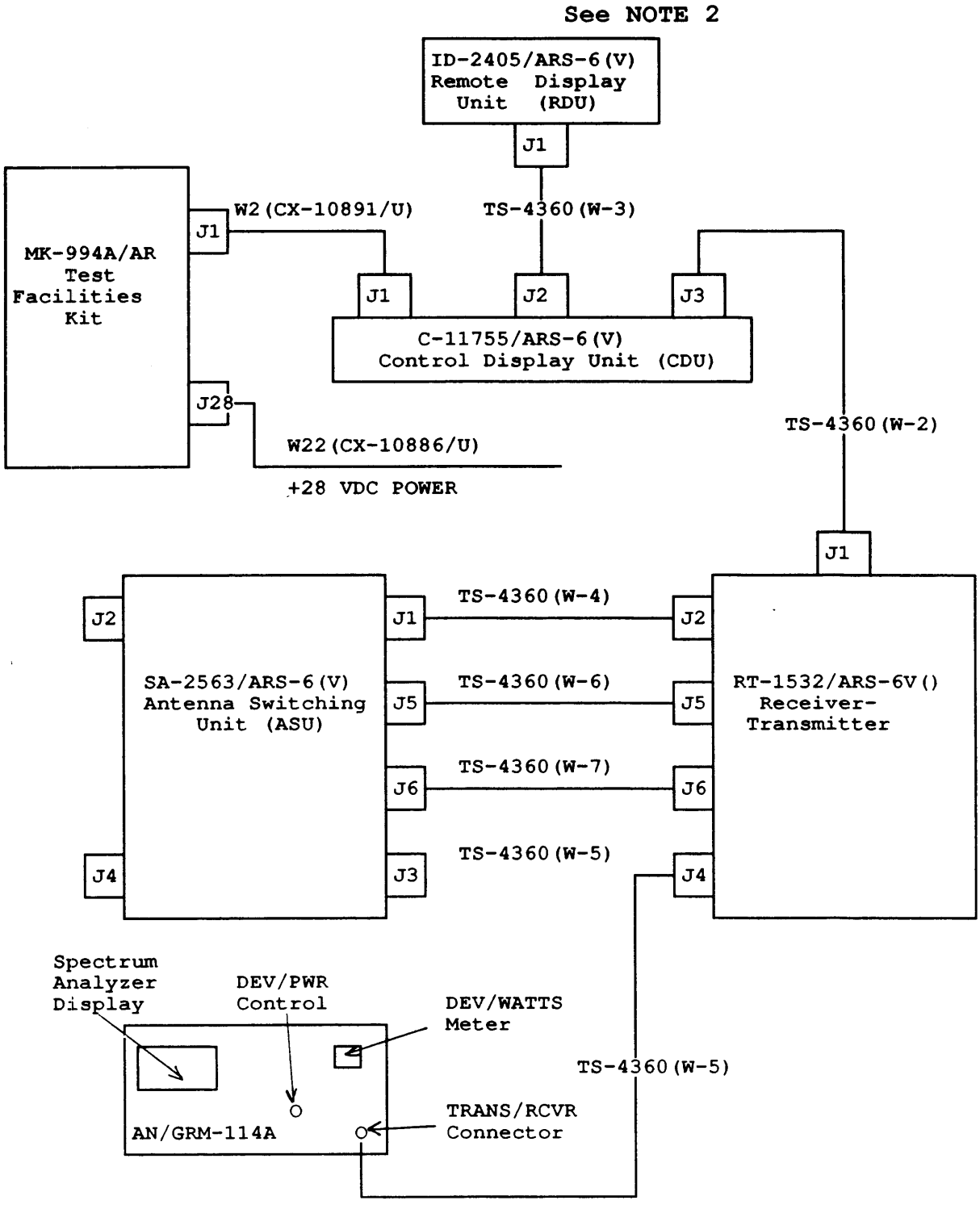
Release Headset Transmit Switch #1 as soon as the power measurement is complete.

NOTE

Set the radio test select switch to OFF as soon as the power measurement is complete.

j. Read the WATTS scale of the AN/GRM-114A DEV/WATTS meter for the RF output power of the RT. Set the DEV-PWR control to the WATTS X 10 or X 1 position, as required. Verify that the power reads a minimum of 1.5 watts for Channel A and 1.75 watts for Channel B. If readings are incorrect, refer to the troubleshooting table 5-1.

k. Set the CHAN rotary switch on the CDU to the B position. The RDU display should read T/R and 297.750 MHz. Repeat steps h, i, and j.



Notes:

1.) SET THE RADIO TEST SELECT SWITCH TO 4 ONLY FOR AS LONG AS NECESSARY FOR THE MEASUREMENT.

2.) NOT REQUIRED FOR THIS TEST.

3.) REFER TO MK-994A/AR MANUAL FOR CABLE PART NUMBERS FOR W2, W10, W11, AND W22.

FIGURE 5-3. PLS Transmitter Power Output Text.

1. If either test fails, provide complete test information for the faulty RT unit when returning to the depot. If both tests pass, but the AN/ARS-6 fails the BIT, perform the ASU tests in 5-4.4.

m. At completion of this test power down and disconnect the test setup as required.

5-4.4 PLS Antenna Switching Unit Test. If isolating the ASU is due to correct operation of transmitter in paragraph 5-4.3, proceed to step a. If isolating the ASU is due to correct operation of the receiver in paragraph 5-4.2, proceed to step n.

a. Connect the test configuration as shown in Figure 5-4, Sheet 1.

b. Set all rotary switches on the MK-994A/AR to OFF. Ensure that the CDU mode switch is set of OFF.

c. Set the DC power switch on the MK-994A/AR to ON. The red indicator light should illuminate.

d. Set the switches and controls on the AN/GRM- 114A Test Set as follows:

Switch/Control	Setting/Position
GEN/RCVR	RCVR
RCVR WIDE/MID/ NARROW	WIDE
BFO-RF LEVEL	Fully CCW
AUTO ZERO/OFF/BAT	AUTO ZERO
SQUELCH/OFF	Fully CCW, short of detent
INT MOD/RCVR	RCVR
VOL	Fully CCW
BFO/OFF	OFF
AM/FM	AM
1 kHz/OFF	Fully CCW, detent OFF
VAR/OFF	Fully CCW, detent OFF
FREQ ERROR	15 kHz
DEV-PWR	Watts X 1
PWR/OFF/BAT	PWR

e. Connect a cable from RT J4 to the AN/GRM-114A Test Set TRANS/RCVR connector.

f. Adjust the CDU volume control to a low level.

g. Set the CDU mode switch to FREQ. Set the CHAN switch to Channel A. Program Channel A for 227.250 MHz. Set the CHAN switch to Channel B. Program Channel B for 297.750 MHz. Set the CHAN switch to Channel A.

h. Set the CDU mode switch to BRST. The CDU should read T/R and 227.250 MHz.

i. On the AN/GRM-114A Test Set, set the RF FREQUENCY thumb wheel switches for the CDU frequency of A or B to be received.

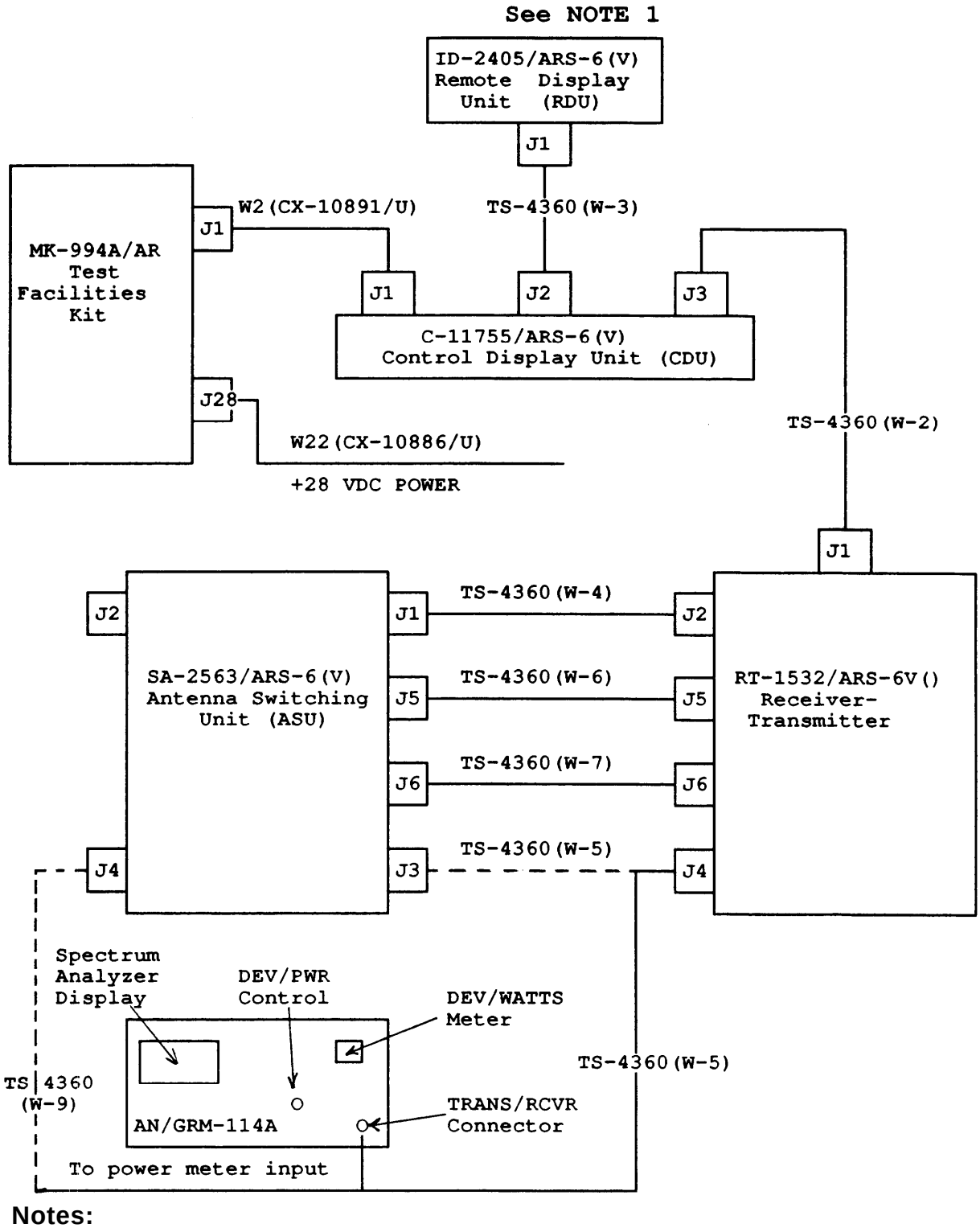
j. Depress Headset Transmit Switch #1 on the MK-994/AR.

NOTE

Release Headset Transmit Switch #1 as soon as the power measurement is complete.

k. On the AN/GRM-114A read the WATTS scale of the DEV/WATTS meter for the RF output power of the RT unit. Set the DEV-PWR control to the WATTS X 1 or WATTS X 10 position, as required. Verify that the power reads a minimum of 1.5 watts for the selected channel. Note the power measurements.

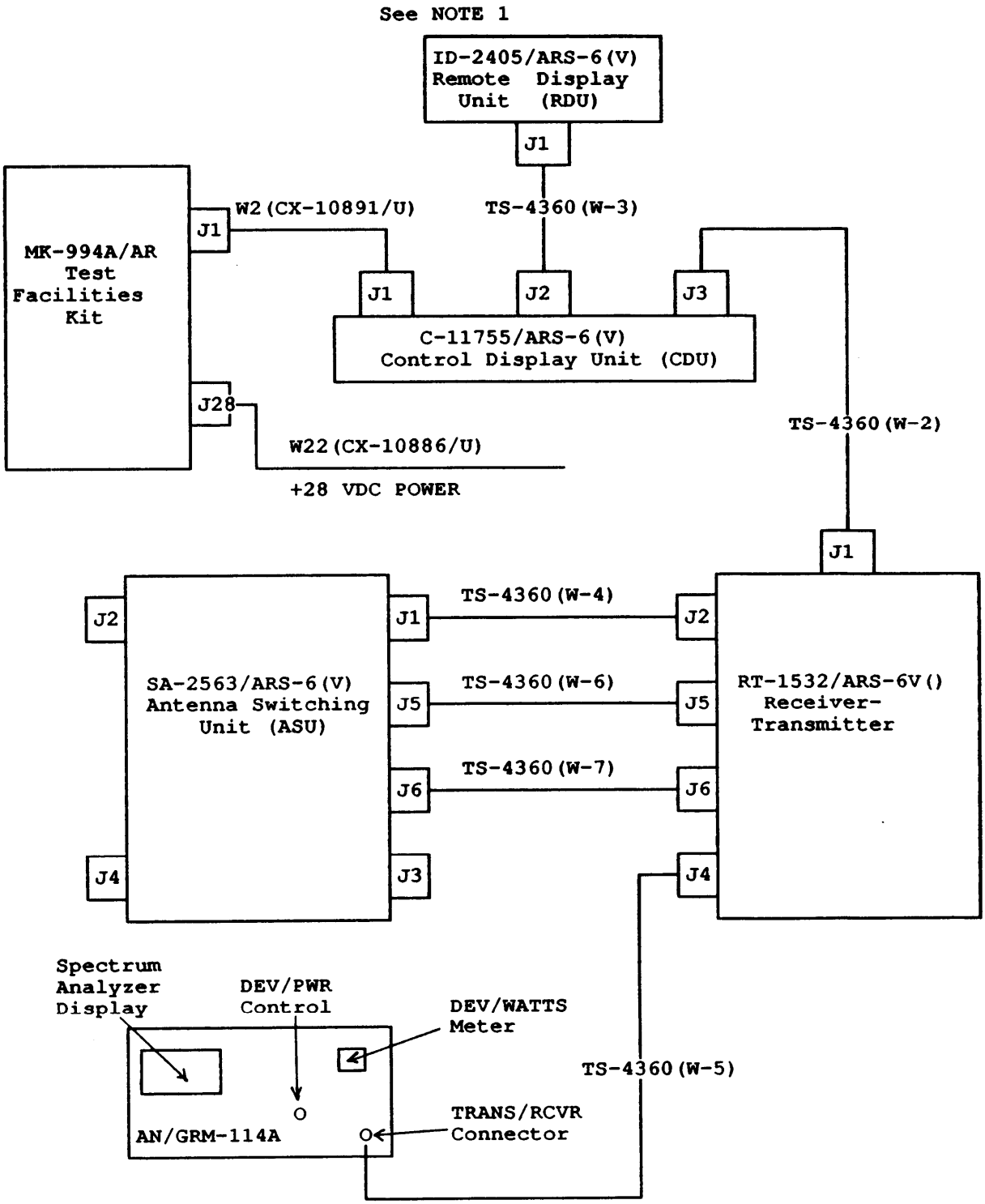
l. Set the CHAN switch on the CDU to Channel B. Set the AN/GRM-114A thumbwheel switches to the Channel B frequency (297.750 MHz). The display on the CDU should read T/R and 297.750 MHz. On the DEV-WATTS meter read the power output, the power output should be a minimum of 1.75 watts. Note the power measurement.



Notes:

1). NOT REQUIRED FOR THIS TEST.
2). REFER TO MK-994A/AR MANUAL FOR CABLE PART NUMBERS FOR W2, W10, W11, AND W22.
3). CONNECTIONS FOR PARA. 4.3m SHOWN AS DASHED LINES.

FIGURE 5-4. PLS Antenna Switching Unit Test Setup (after verification of transmitter) (Sheet 1 of 3).



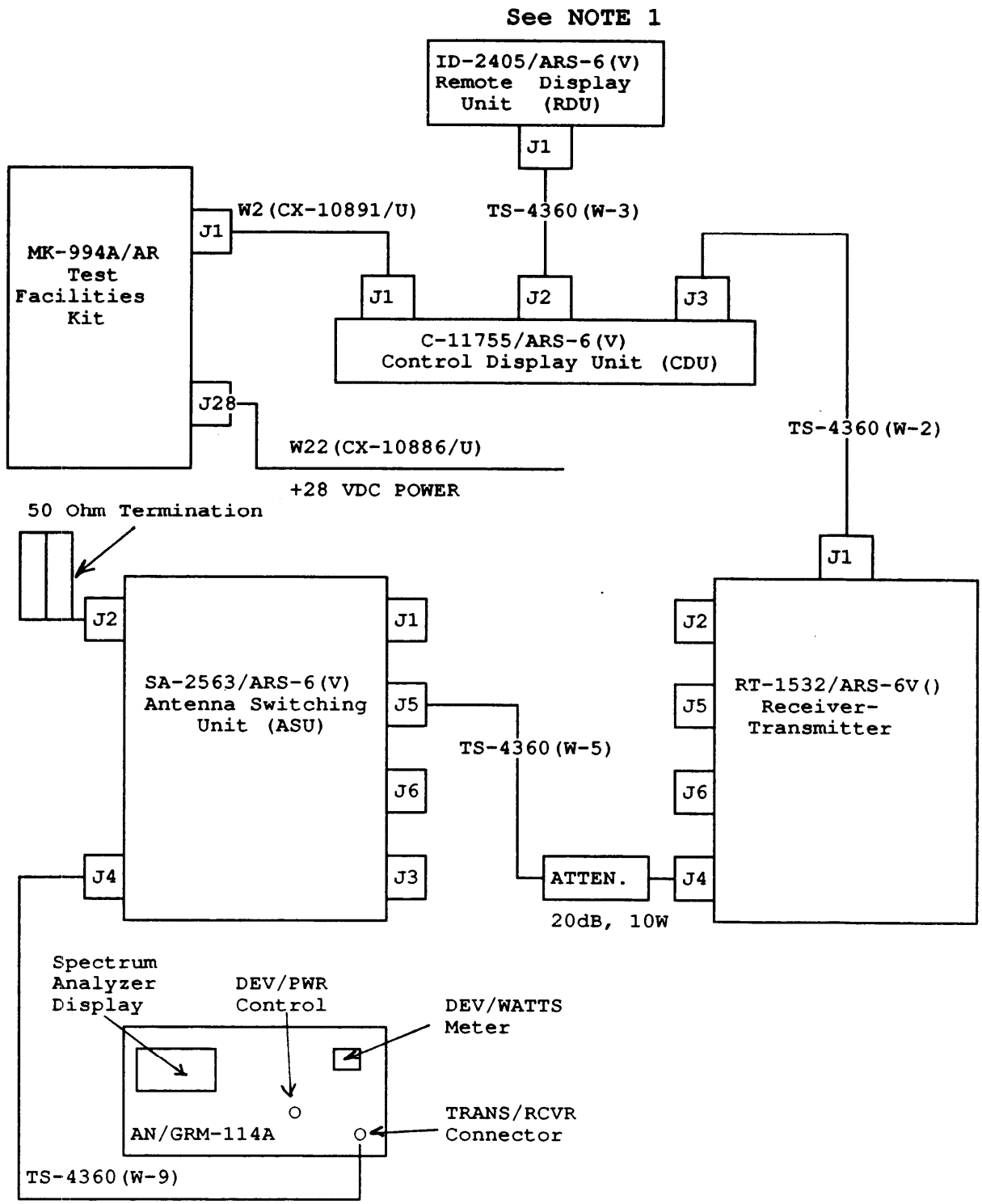
Notes:

1). NOT REQUIRED FOR THIS TEST.

2). REFER TO MK-994A/AR MANUAL FOR CABLE PART NUMBERS FOR W2, W10, W11, AND W22.

3). CONNECTIONS FOR PARA. 4.3m SHOWN AS DASHED LINES.

FIGURE 5-4. PLS Antenna Wsitching Unit Test Setup (after verification of receiver) (Sheet 2 of 3).



Notes:

1). NOT REQUIRED FOR THIS TEST.

2). REFER TO MK-994A/AR MANUAL FOR CABLE PART NUMBERS FOR W2, W10, W11, AND W22.

FIGURE 5-4. PLS Antenna Switching Unit Test Setup (Antenna Hybrid Test) (Sheet 3 of 3).

m. Move the cable from RT J4 to ASU J2 and reconnect RT J4 to ASU J3. Repeat steps g through 1. If the values measured at ASU J2 are lower than those measured at RT J4 by more than 0.5 watts. document the failure and return the ASU to the depot for repairs.

n. Connect the equipment as shown in Figure 5-4, sheet 2.

NOTE

The RF power should not exceed 2 watts.

o. Set the switches/controls on the AN/GRM-114A Test Set as follows:

Switch/Control	Position/Setting
GEN/RCVR	RCVR
RCVR WIDE/MID/ NARROW	WIDE
BFO-RF LEVEL	Fully CCW
AUTO ZERO/OFF/BAT	AUTO ZERO
SQUELCH/OFF	Fully CCW, short of detent
INT MOD/RCVR	RCVR
VOL	Fully CCW
BFO/OFF	OFF
AM/FM	AM
1 kHz/OFF	Fully CCW, detent OFF
FREQ ERROR	15 kHz
DEV-PWR	SIGNAL
PWR/OFF/BAT	PWR

p. On the AN/GRM-114A Test Set, set the RF FREQUENCY thumb wheel switches to the CDU frequency A or B to be tested.

NOTE

Connect a 50 ohm termination to the antenna connector of the AN/GRM-114A.

NOTE

If using the RT as a signal source ensure a 20 dB attenuator is connected between RT J5 and ASU J5 and RT J4 to AN/GRM-114A (Trans/Rcvr Connector).

q. Connect a cable from RT J4, AN/PRC-112, or RF Signal Generator to the TRANS/RCVR connector on the AN/GRM-114A. Ensure that a 20 dB attenuator is in series if using transmitter output RT J4. Observe the power on the watts scale of the DEV-WATTS meter on the AN/GRM-114A. Note the reading taken as a reference level for further comparison.

NOTE

An RF Signal Generator may be substituted for the PLS transmitter. The output level of the Signal Generator should be set to approximately O dB.

r. Connect RT J4 to ASU J5 as shown in Figure 5-4, sheet 3.

NOTE

Ensure ASU J1 is not connected.

s. Measure the power at ASU J4 on the watts scale of the DEV-WATTS meter on the AN/GRM-114A. The power level at ASU J4 should be no less than 25% of that measured in step q.

NOTE

This test may also be performed using the spectrum analyzer on the AN/GRM-114A Test Set.

t. Reverse the connections of the AN/GRM-114A Test Set and the 50 ohm termination (AN/GRM-114A Test Set is now connected to ASU J2 and 50 ohm termination now connected to ASU J4).

NOTE

This test may also be performed using the spectrum analyzer on the AN/GRM-114A Test Set.

u. Measure the power at ASU J2 on the watts scale of the DEV-WATTS meter on the AN/GRM-114A Test Set. The power level at ASU J2 should be no less than 25% of that measured in step q.

v. Repeat steps s, t, and u with RT J4 connected to ASU J6.

w. If either test fails, document the failure and provide test information with the faulty ASU when returning it to the depot.

5-5 CABLE CONTINUITY TESTS. (For all cables except RF).

Perform the continuity tests described in paragraph 4-5 as required and refer to cable connector pin assignments in tables 4-3 through 4-5.

5-6 COAXIAL CABLE INSERTION LOSS TEST.

Perform the coaxial cable insertion loss test. described in paragraph 4-6 as required.

5-7 FLIGHT TESTS. Flight tests should be performed to verify that the AN/ARS-6 will operate satisfactorily while all normal in-flight equipments are functioning. The AN/ARS-6 shall be tested in BRST, CONT, and HOME modes, verifying the ability of the system to locate the AN/PRC-112 Radio Set.

Apply power to the AN/ARS-6 equipment and perform BIT before commencing with the tests described in the following paragraphs.

WARNING

Performing the Built-In-Test (BIT) while in flight may cause the Barometric Altimeter hold function on the AFCS to disengage. This problem has occurred only on the USN HH-60 and SH-60 helicopters.

NOTE

The radio propagation path profile over which the flight tests are run shall be above the radio horizon, maintaining line-of-sight conditions at all times. Inability to remain locked-on to the transponder during maneuvers which shield or blank the PLS antennas shall not constitute a failure of the system. In addition, the AN/PRC-112 must be located in a clear area away from large metallic structures and/or radio transmission towers, etc.

NOTE

The AN/ARC-51BX Radio Set, when tuned to 241 MHz, and the AN/ARC-134 Radio Set when tuned to 138.8 MHz may experience noise interference caused by the operation of the AN/ARS-6 Personnel Locator.

NOTE

Operation of the AN/ARS-6 Personnel Locator may cause noise interference on the AN/ARN-89 Automatic Direction Finder (ADF). Turn off the AN/ARN-89 ADF when using the AN/ARS-6 Personnel Locator for search and rescue operations.

5-7.1 Transpond (BRST and CONT) Mode Tests.

5-7.1.1 BRST Mode Tests.

a. At a range of 10 nautical miles, or less, begin a slow climb from minimum altitude while pointing in the general direction of the AN/PRC-112 Radio Set.

b. Using the programming procedures previously described, set the system to the BRST mode and perform interrogations until responses are received from the AN/PRC-112.

c. Repeat the test on additional channels and frequencies as desired. remembering to change the channels on the AN/PRC-112 Radio Set.

5-7.1.2 CONT Mode Tests.

a. At a range of 10 nautical miles, or less, begin a slow climb from minimum altitude while pointing in the general direction of the AN/PRC-112 Radio Set.

b. Using the programming procedures previously described, set the system to the CONT mode and interrogate continuously until responses are received from the AN/PRC-112.

c. Fly inbound towards the AN/PRC-112 and verify that the AN/ARS-6 provides valid range and steering commands during the inbound flight.

d. Repeat the test on other channels and frequencies as desired, remembering to change the channels on the AN/PRC-112 Radio Set.

5-7.2 HOME Mode Tests.

a. At a range or 10 nautical miles, or less, begin a slow climb from minimum altitude while pointing in the general direction of the AN/PRC-112 Radio Set.

b. Using the programming procedures previously described, place the system in the HOME mode and verify that steering commands are received from the AN/ARS-6.

NOTE

The AN/PRC-112 Radio Set must be keyed continuously on the selected channel to complete this test.

c. Fly inbound towards the AN/PRC-112 Radio Set and verify that the AN/ARS-6 provides valid steering commands during the inbound flight.

d. Repeat the test on other channels and frequencies as desired, remembering to change channels on the AN/PRC-112 Radio Set.

APPENDIX A

REFERENCE DOCUMENTS

APENDIX A

REFERENCES

AR 55-38/ NAVSUPINST 4610.33C/ AFR 75-18/ MCO P4610.19D/ DLAR 4500.15	Transportaion Discrepancy Report
AR 735-11-2/ DLAR 4140.44/ SECNAVINST 4355.18B/ AFR 400.54/ MCO 4430.3J	Reports of Item and Packaging Deficiencies
DA PAM 25-30	Consolidated Index of Army Publications and Blank Forms
DA PAM 738-750	The Army Maintenance Management System (TAMMS)
DA PAM 738-751	The Army Maintenance Management System (Aviation) (TAMMS(A))
MIL-L-85762	Night Vision Goggle (NVG), Specification for
MIL-STD-454	Standard General Requirements for Electronic Equipment
TB 11-5821-342-35	Warranty Return Procedures
TM 11-1520-210-23	Unit and Intermediate Electronic Configuration Manual for Helicopters, Utility, UH-1 Series
TB 11-5820-1037-10-1	Operation of Radio Set, AN/PRC-112
TB 11-5820-1037-10-2	Operation of Program Loader, KY-913/PRC-112
TM 11-5820-1037-13&P	Aviation Unit and Intermediate Maintenance Manual for Radio Sets, AN/PRC-112, AN/PRC-l12A(C), and Program Loader KY-913/PRC-112
TM 11-5841-283-12	Aviation Unit, Maintenance Manual, Radar Signal Detecting Set, AN/APR-39(V)1
TM 11-6625-928-35	MK-994/AR Test Facilities Kit, DS, GS, and Depot Maintenance Manual including Repair Parts and Special Tools List
TM 11-6625-3016-10-1	Operator's Manual for Radio Test Set, AN/GRM-114A

TM 11-6625-3052-14	Operator's Manual for AN/PSM-45 Multimeter, Digital
TM 55-1520-210-10	Operator's Manual for the UH-1 Helicopter
TM 55-1520-210-23-1 TM 55-1520-210-23-2 TM 55-1520-210-23-2	Technical Manual Aviation Unit and Intermediate Maintenance Manual for the UH-1 Helicopter
TM 55-1520-210-23&P-1 TM 55-1520-210-23&P-2	Illustrated Parts Breakdown and Parts List for the UH-1 Helicopter
TM 55-1520-237-CL	Technical Manual, Operator's and Crewmember's Checklist, UH-60A Helicopter. EH-60A Helicopter
TM 55-1520-273-T	Technical Manual, Aviation Unit and Intermediate Maintenance Fault Isolation Isolation Procedures Manual for UH-60A and EH-60A Helicopters
TM 55-1520-237-10	Technical Manual, Operator's Manual for UH-60A and EH-60A Helicopters
TM 55-1520-237-23-6	Technical Manual Aviation Unit and Intermediate Maintenance for Army UH-60A and EH-60A Helicopters, Chapter 16, Mission Equipment.
TM 750-244-2	Destruction of Army Electronics Materiel to Prevent Enemy Use (Electronics Command).

APPENDIX B

MAINTENANCE ALLOCATION CHART

APPENDIX B

MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1 AVIATION MAINTENANCE ALLOCATION CHART (ARMY ONLY)

a. This Maintenance Allocation Chart (MAC) assigns maintenance functions in accordance with the Aviation Maintenance concept for Army aviation. These maintenance levels - Aviation Unit Maintenance (AVUM), Aviation Intermediate Maintenance (AVIM), and Depot Maintenance are depicted on the MAC as:

AVUM - corresponds to an O code in the Repair Parts and Special Tools List (RPSTL).

AVIM - corresponds to an F code in the Repair Parts and Special Tools List (RPSTL).

DEPOT - corresponds to a D code in the Repair Parts and Special Tools List (RPSTL).

b. The maintenance to be performed below depot and in the field is described as follows:

(1) Aviation Unit Maintenance (AVUM) activities will be staffed and equipped to perform high frequency “On-Aircraft” maintenance tasks required to retain or return aircraft systems to a serviceable condition. The maintenance capability of the AVUM will be governed by the Maintenance Allocation Chart (MAC) and limited by the amount and complexity of ground support equipment (GSE), facilities required, authorized manning strength, and critical skills available. The range and quantity of authorized spare modules/components will be consistent with the mobility requirements dictated by the air mobility concept. (Assignments of maintenance tasks to divisional company size aviation units will consider the overall maintenance capability of the division, the requirement to conserve personnel and equipment resources, and air mobility requirements.)

(a) Company Size Aviation Units: Perform those tasks which consist primarily of preventive maintenance and maintenance repair and replacement functions associated with sustaining a high level of aircraft operational readiness. Perform maintenance inspections and servicing to include preflight, daily, intermediate, periodic (or phased), and special inspections, as authorized by the MAC or higher headquarters. Identify the cause of equipment/system malfunctions using applicable technical manual trouble shooting instructions, built in test equipment (BITE), installed aircraft

instruments, or test, measurement, and diagnostic equipment (TDME). Replace worn or damaged modules/components that do not require complex adjustments or system alignment and which can be removed/installed with the available skills, tools, and ground support equipment. Perform operational and continuity checks and make minor repairs to the electrical system. Inspect, service, and make operational , capacity, and pressure checks to hydraulic systems. Perform servicing, functional adjustments, and minor repair/replacement to the flight control, propulsion, power train, and fuel systems. Accomplish airframe repair that does not require excessive disassembly, jigging, or alignment. The manufacture of airframe parts will be limited those items which can be fabricated with tools and equipment found in current air mobile tool and shop sets. Evaluate unserviceable modules/components and end items beyond the repair capability of AVUM to the support AVIM.

(b) Less than Company Size Aviation Units: Aviation elements organic to brigade, group, battalion headquarters, and detachment size units are normally small and have less than 10 aircraft assigned. Maintenance tasks performed by these units will be those which can be accomplished by the aircraft crew chief or assigned aircraft repair man and will normally be limited to preventive maintenance, inspections, servicing, spot painting, module/component fault diagnosis, and replacement of selected modules/components. Repair functions will normally be accomplished by the support AVIM unit.

(2) Aviation Intermediate Maintenance (AVIM)

(a) Provides mobile, responsive “one-step” maintenance support. (Maintenance functions which are not conductive to sustaining air mobility will be assigned to depot maintenance.)

(b) May perform all maintenance functions authorized to be done at AVUM. Repair of equipment for return to user will emphasize support or operational readiness requirements. Authorized maintenance includes replacement and repair of modules/components and end items which can be accomplished efficiently with available skills, tools, and equipment.

(c) Establishes the Direct Exchange (DX) program for AVUM units by repairing selected items for return to stock when such repairs cannot be accomplished at the AVUM level.

(d) Inspects, trouble shoots, performs diagnostic tests, repairs, adjusts, calibrates, and aligns aircraft system modules/components. AVIM units will have the capability to determine the serviceability of specified modules/components removed prior to the expiration of the Time Between Overhaul (TBO) or finite life. Module/component disassembly and repair will support the DX program and will normally be limited to tasks

requiring cleaning and the replacement of seals, fittings, and items of common hardware. Airframe repair and fabrication of parts will be limited to those maintenance tasks which can be performed with available tools and test equipment. Unserviceable repairable modules/components and end items which are beyond the capability of AVIM to repair will be evaluated to Depot Maintenance.

(e) Performs aircraft weight and balance inspections and other special inspections which exceed AVUM capability.

(f) Provides quick response maintenance support. including aircraft recovery and air evacuation, on-the-job training, and technical assistance through the use of mobile maintenance contact teams.

(g) Maintains authorized operational readiness float aircraft.

(h) Provides collection and classification services for serviceable/unserviceable material.

(i) Operates a cannibalization activity in accordance with the AR 750-50. (The aircraft maintenance company within the maintenance battalion of a division will perform AVIM functions consistent with air mobility requirements and conservation of personnel and equipment resources. Additional intermediate maintenance support will be provided by the supporting nondivisional AVIM unit.)

B-2 USE OF THE MAINTENANCE ALLOCATION CHART (SECTION 11)

NOTE

Approved item names are used throughout this MAC. Generic terms/nomenclatures (if any) are expressed in parentheses and are not to be considered as official terminology.

a. This Maintenance Allocation Chart assigns maintenance functions to the lowest level of maintenance, based on past experience and the following considerations:

(1) Skills available.

(2) Work time required

(3) Tools and test equipment required and/or available.

b. Only the lowest level of maintenance authorized to perform a maintenance function is indicated. If the lowest maintenance level cannot perform all tasks of any single maintenance function (e.g., test, repair), then the higher maintenance level(s) that can accomplish additional tasks will also be indicated.

c. A maintenance function assigned to a maintenance level will automatically be authorized to be performed at any higher maintenance level.

d. A maintenance function that cannot be performed at the assigned level of maintenance for any reason may be evacuated to the next higher maintenance level . Higher maintenance levels will perform the maintenance functions of lower maintenance levels when required by the commander who has the authority to direct such tasking.

e. The assignment of a maintenance function will not be construed as authorization to carry the related repair parts or spares in stock. Information to requisition or otherwise secure the necessary repair parts will be as specified in the associated Repair Parts and Special Tools List (RPSTL).

f. Normally there will be no deviation from the assigned level of maintenance. In cases of operational necessity, at the request of a lower maintenance level and on a one-time basis, transfer of maintenance functions to the lower level may be accomplished by specific authorization of the maintenance officer of the higher level of maintenance to which this function is assigned. The special tools, equipment, etc., required by the lower level of maintenance to perform this function will be furnished by the maintenance level to which the function is assigned. This transfer of maintenance function to a lower level of maintenance does not relieve the higher maintenance level of the responsibility for this function. The higher level of maintenance will provide technical supervision and inspection of the function being performed at the lower level.

B-3 MAINTENANCE FUNCTIONS.

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical , mechanical and/or electrical characteristics with established standards through examination.

b. Test. To verify serviceability and to detect early, minor, or intermittent faults by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper condition, that is, clean (decontaminate), to preserve, to drain, to paint, or to replenish fuel, lubricants, hydraulic fluids, or compressed air supplies.

d. Adjust. To maintain, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Align. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Install. The act of emplacing, seating, or fixing into position an item, part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. The act of substituting a serviceable like-part, subassembly, or module (component or assembly) for an unserviceable counterpart.

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, or replace) or other maintenance actions (welding, grinding, riveting; straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

j. Overhaul. That maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for restoration of unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of material maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours, miles, etc.) considered classifying Army equipment or components.

B-4 COLUMN ENTRIES.

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies, and modules with the next higher assembly.

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the items listed in column 2.

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of a "worktime" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance levels, appropriate "worktime" figures will be shown for each category. The number of task-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time, troubleshooting time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. Subcolumns of column 4 are as follows:

AVUM	Aviation Unit Maintenance
AVIM	Aviation Intermediate Maintenance
D	Depot

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools), and special tools, test, and support equipment required to perform the designated function.

f. Column 6, Remarks. Column 6 contains an alphabetic code which leads to the remark in Section IV, Remarks, which is pertinent to the item opposite the particular code.

B-5 TOOL AND TEST EQUIPMENT REQUIREMENTS (SECTION III).

a. Tool or Test Equipment Reference Code. The numbers in this column coincide with the numbers used in the tools and equipment column of the MAC. The numbers indicate the applicable tool or test equipment for the maintenance functions.

b. Maintenance Level. The codes in this column indicate the maintenance level allocated to the tool or test equipment.

c. Nomenclature. This column lists the noun names and nomenclature of the tools and test equipment required to perform the maintenance functions.

d. National/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

e. Tool Number. This column lists the manufacturer's part number of the tool followed by the Federal Supply Code for Manufacturer's (FSCM) (5-digit) in parenthesis.

B-6 REMARKS (SECTION IV).

a. Reference Code. This code refers to the appropriate item in Section II, Column 6.

b. Remarks. This column provides the required explanatory information necessary to clarify items appearing in Section II.

SECTION II. MAINTENANCE ALLOCATION CHART FOR
RADIO SET-PERSONNEL LOCATOR. AN/ARS-6(V)

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
00	Radio Set, Personnel Locator, AN/ARS-6 V1, V2, V3, V4, V5, V6	Install	0.5			1	A
		Inspect	0.1			1	C
		Service	0.1			3-6	
		Test	0.1			1	
		Repair	0.2			3,4,7-12,	B
		Repair			2.5	38	
01	Receiver-Transmitter RT-1532/ARS-6(V), u/w V1, V2, V4, V5, V6	Inspect	0.1				
		Replace	0.2			1	
		Inspect		0.5		3-12	
		Test		0.5		3,4,7-12,	D
		Repair			1.5	38	
	or						
	Receiver-Transmitter RT-1532A/ARS-6(V) u/w V3	Inspect	0.1				
		Replace	0.2			1	
		Inspect		0.5		3-12	
		Test		0.5		3,4,7-12,	D
		Repair			1.5	38	
0101	Sub-assembly	Repair			0.5	1,38	
010101	Circuit Card Assembly, Receiver-Transmitter Interconnect	Inspect			0.1	1,38	
		Replace			0.1	1,38	
		Test			0.2	5,8,12,16 17,24-26, 38	
		Repair			2.5	5,8,12,16 17,24-26, 38	
0102	Circuit Card Assembly, System Processor Module	Inspect			0.1	1,38	
		Replace			0.1	1,38	
		Test			0.2	5,8,12,16 17,24-26 38	
		Repair			2.5	5,8,12,16 17,24-26, 38	
0103	Circuit Card Assembly, Range Computation Module	Inspect			0.1	1,38	
		Replace			0.1	1,38	
		Test			0.2	5,8,12,16 17,24-26, 38	
		Repair			2.5	5,8,12,16 17,24-26 38	

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
0104	Circuit Card Assembly, Bus Interface Module, u/w V3	Inspect			0.1	1,38	
		Replace			0.1	1,38	
		Test			0.2	5,8,12,16 17,24-26, 38	
		Repair			2.5	5,8,12,16 17,24-26, 38	
0105	Receiver Assembly	Inspect			0.1	1,38	
		Replace			0.1	1,38	
		Test			0.2	3,19,21, 26-30,38	
		Repair			2.5	3,19,21, 26-30,38	
010501	Circuit Card Assembly, Preamplifier	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
0105 0101	Circuit Card Assembly, Delta Channel	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27	
		Repair			2.5	3,14,15, 17,19-21, 27, 31, 33,38	
0105 0102	Cirucit Card Assembly, Sum Channel	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27	
		Repair			2.5	3,14,15, 17,19-21, 27,31, 33,38	

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
010502	Circuit Card Assembly, First IF Amplifier	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27. 31-33,38	
010503	Circuit Card Assembly, Second IF Amplifier	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
010504	Circuit Card Assembly, AM Detector	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27. 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
010505	Circuit Card Assembly, Receiver Digital Interface	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27. 31-33,38	
010506	Circuit Card Assembly, Synthesizer	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
010507	Wiring Harness, Receiver	Inspect Replace Test Repair			0.1 2.0 0.3 3.0	1,38 1,38 3,38 3,38	
0106	Transmitter Assembly, u/w Vl, V2, V4, V5, V6	Inspect Replace Test Repair			0.1 0.2 0.2 2.4	1,38 1,38 3,14,15, 17,19-21, 27, 31-33,38 3,14,15, 17,19-21, 27, 31-33,38	
	or						
	Transmitter Assembly, u/w V3	Inspect Replace Test Repair			0.1 0.2 0.2 2.4	1,38 1,38 3,14,15, 17,19-21, 27, 31-33,38 3,14,15, 17,19-21, 27, 31-33,38	
010601	Digital Assembly, Transmitter	Inspect Replace Test Repair			0.1 0.5 0.2 2.4	1,38 1,38 3,14,15, 17,19-21, 27, 31-33,38 3,14,14, 17,19-21, 27, 31-33,38	
0106 0101	Circuit Card Assembly, Synthesizer	Inspect Replace Test Repair			0.1 0.5 0.2 2.5	1,38 1,38 3,14,15, 17,19-21, 27, 31-33,38 3,14,15, 17,19-21, 27, 31-33,38	

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
0106 0102	Circuit Card Assembly, Transmitter Modulator	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17.19-21. 27, 31-33,38	
0106 0103	Circuit Card Assembly, Transmitter Digital Interface	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27. 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
0106 0104	Wiring Harness, Transmitter	Inspect			0.1	1,38	
		Replace			2.0	1,38	
		Test			1.0	3,38	
		Repair			3.0	3,38	
0106 0105	Power Supply Assembly, u/w Vl, V2, V4, V5, V6	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
	or						
	Power Supply Assembly, u/w V3	Inspect			0.1	1,38	
		Replace			0.5	1,38	
		Test			0.2	3,14,15, 17,19-21, 27, 31-33,38	
		Repair			2.5	3,14,15, 17,19-21, 27, 31-33,38	
02	Control Display Unit, C-11755/ARS-6(V), u/w Vl, V2, V4, V5, V6	Inspect	0.1			1	
		Replace	0.2				
		Inspect		0.1			
		Test		0.4		3-12	D
		Repair			1.3	3, 4, 7-12,38	

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
0201	Circuit Card Assembly, CDU Processor	Inspect Test Repair			0.1 0.2 2.5	1,38 17,37,38 17,37,38	
0202	Circuit Card Assembly, CDU Serial Output	Inspect Test Repair			0.1 0.2 2.5	1,38 17,37,38 17,37,38	
0203	Circuit Card Assembly, CDU Parallel Output	Inspect Test Repair			0.1 0.2 2.5	1,38 17,37,38 17,37,38	
02014	Circuit Card Assembly, CDU Motherboard	Inspect Test Repair			0.1 0.2 2.5	1,38 3,17,37, 38 17,37,38	
03	Display Unit, Remote ID-2405/ARS-6(V) u/w V1, V2, V4, V5, V6	Inspect Replace Inspect Test Repair	0.1 0.1	0.1 0.4	1.3	1 3-12 3, 4, 7-12,38	D
0301	Subassembly	Repair			0.5	1,38	
030101	Circuit Card Assembly, Flex Remote Display Unit	Inspect Test Repair			0.1 0.2 2.5	1,38 3,17,37, 38 3,17,37, 38	
04	Antenna Switching Unit, AS-2563/ARS-6(V), u/w V1, V2, V3, V4, V5, V6	Inspect Replace Inspect Test Repair	0.1 0.2	0.1 0.4	1.4	1 3-12 3, 4, 7-12,38	D
0401	Circuit Card Assembly, Antenna Switching Logic	Inspect Test Repair			0.1 0.4 2.5	1,38 3,17,23, 34-36,38 3,17,23, 34-36,38	
05	UH-1H Mission Kit, MK-2683/ARS-6(V)1 u/w V1	Inspect Repair Replace	0.1 1.0 0.1			1, 2 1	H
0501	Cable Assembly, CDU to RT (W2) D6004201-502	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			3 1 1,2	E F
0502	Cable Assembly, CDU to RDU (W3) D6004201-506	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			3 1 1,2	E F

(1) Group Number	(2) Component/ Assembly	(3) Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
0503	Cable Assembly, RT to ASU (W4) D6004201-501	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3 1 1,2	 E F
0504	RF Cable, RT to ASU (W5) D6004202-501	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3,4 1 1,2	 G F
0505	RF Cable, RT to ASU (W6) D6004202-502	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3,4 1 1,2	 G F
0506	RF Cable, RT to ASU (W7) D6004202-503	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			3,4 1 1,2	 G F
0507	Console, Panel D6004209-1	Inspect Replace Repair	0.1 0.1 0.5			 1 1	
0508	Cover, External D6004208-1	Inspect Replace Repair	0.1 0.1 0.5			 1 1	
0509	Cover, Internal D6004207-1	Inspect Replace Repair	0.1 0.1 1.0			 1 1	
06	UH-60A/L Mission Kit, MK-2684/ARS-6(V)2 u/w V2	Inspect Replace Repair	0.1 0.1 1.0			 1 1	 H
0601	Cable Assembly, CDU to RT (W2) D6004174-502	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3 1 1,2	 E F
0602	Cable Assembly, CDU to RDU (W3) D6004174-506	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3 1 1,2	 E F
0603	Cable Assembly, RT to ASU (W4) D6004174-501	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3 1 1,2	 E F
0604	RF Cable, RT to ASU (W5) D6004167-501	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3,4 1 1,2	 G F
0605	RF Cable, RT to ASU (W6) D6004167-502	Inspect Test Replace Repair	0.1 0.5 0.1 1.0			 3,4 1 1,2	 G F

(1) Group Number	(2) Component/ Assembly	Maint. Function	(4) Maintenance Level AVUM	AVIM	DEPOT	(5) Tools and Equipment	(6) Remarks
0606	RF Cable, RT to ASU (W7) D6004167-503	Inspect	0.1				
		Test	0.5			3,4	G
		Replace	0.1			1	
		Repair	1.0			1,2	H
07	Mounting Base, MT-6678/ARS-6(V) U/W V1. V2. V3, V4, V5, V6	Inspect	0.1			1	
		Replace	0.1				
		Repair	0.5			1	I

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR
RADIO SET, PERSONNEL LOCATOR, AN/ARS-6(V)

TOOL OR TEST EQUIPMENT REF. CODE	MAINT. LEVEL	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NO.
1	AVUM	TOOL KIT, ELECTRONIC EQUIPMENT TK-101G	5180-00-064-5178	
2	AVUM	MAINTENANCE KIT, MK-693A	5120-00-045-9695	
3	AVUM AVIM,D	MULTIMETER, DIGITAL AN/PSM-45	6625-01-139-2512	
4	AVUM AVIM,D	WATTMETER, AN/URM-120	6625-01-039-1488	
5	AVUM AVIM,D	RADIO SET, AN/PRC-112	5820-01-279-5450	
6	AVUM AVIM,D	PROGRAM LOADER, KY-913/ PRC-112	7025-01-279-5308	
7	AVIM,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105G	5180-00-610-8177	
8	AVIM,D	TEST FACIL-ITIES KIT, MK-994A/AR	6625-01-189-7882	
9	AVIM,D	TEST SET, RADIO TS-4360/AYD-1	6625-01-342-3966	
10	AVIM,D	TEST SET, RADIO AN/GRM-114A	6625-01-144-4481	
11	AVIM,D	HEADSET, MICROPHONE, H-157/AIC	5965-00-755-4656	
12	AVIM,D	RADIO SET, PERSONNEL LOCATOR AN/ARS-6(V)5	5821-01-324-5906	
13	D	FREQUENCY COUNTER, HP-5385A		

TOOL OR TEST EQUIPMENT REF. CODE	MAINT. LEVEL	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NO.
14	D	SPECTRUM ANALYZER, HP-8568B	6625-01-082-6363	
15	D	FUNCTION GENERATOR, WAVETEK-182A	6625-01-153-2668	
16	D	+28 VDC (10A) POWER SUPPLY, HP-6267B	6130-00-415-0300	
17	D	+12 VDC POWER SUPPLY, HP-6281A	6130-01-034-0139	
18	D	PERSONAL COMPUTER CROSSTALK XVI S/W INST.		
19	D	OSCILLOSCOPE, TEKTRONIX 2465	6625-01-159-3106	
20	D	SIGNAL GENERATOR, HP-8642B (QTY-2)	4820-01-017-3583	
21	D	+20.4 VDC POWER SUPPLY HP-6236B	6130-01-067-1655	
22	D	+/-15 VDC POWER SUPPLY HP-6253A		
23	D	NETWORK ANALYZER, HP-8754A	6625-01-100-4336	
24	D	ATTENUATOR, 20 DB, 10W NARDA 766-20		
25	D	RS-232 MONITOR VT-100		
26	D	EXTENDER BOARD P/N SK236010		
27	D	IBM PC-AT W/TEST S/WARE ATP-1553		
28	D	BIM TEST BOX P/N 236022		
29	D	BIM TEST CABLE P/N 236083		

TOOL OR TEST EQUIPMENT REF. CODE	MAINT. LEVEL	NOMENCLATURE	NAITONAL/NATO STOCK NUMBER	TOOL NO.
30	D	TRANSFORMER COUPLING BOX P/N 236085		
31	D	AMDEK 722 COLOR MONITOR		
32	D	EPSON FX-286 PRINTER		
33	D	SLOTTED LINE ALFORD 2181-4		
34	D	POWER SPLITTER HP-11850A	6625-01-122-3438	
35	D	50 OHM TERMINATION TNC -QTY. 3		
36	D	50 OHM TERMINATION TYPE N		
37	D	TERMINAL, LEAR SIGLER, ADM-3 (RS-232)		
38	D	ESD ROOM, PORTABLE	4940-01-250-4235	

Section IV. REMARKS

Reference Code	Remarks
A	Version (V)1 and (V)2.
B	Repair by replacing LRUs, knobs, and AS-3984/ARC Antenna
c	System test using BIT and ground checks.
D	Test LRU using Test Facilities Kit, MK-994A/AR, interfaces and associated test equipment to verify defect.
E	Test for continuity.
F	Replace faulty contacts in cable connectors. For crimping shield, use die closure “B” on crimping tool.
G	Test for insertion loss.
H	Repair by replacing the following cable assemblies. AN/ARS-6(V)1 CG-3886 AN/ARS-6(V)2 CG-3887 AN/ARS-6(V)4 CG-3893 & CG-3894 Also replace associated nuts, bolts, clamps, and tie-down clamps. All other cables are repaired or assembled at AVUM.
I	Repair by tightening or replacing nuts, bolts, shock mounts, and straightening metal guides/rails.

APPENDIX C

REPAIR PARTS AND SPECIAL TOOLS LIST
(SUBJECT TO REVISION)

SECTION 1
INTRODUCTION

1. SCOPE

This manual lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for the performance of Operator and Aviation Unit (AVUM) maintenance of Radio Set, Personnel Locator AN/ARS-6(V). It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance, and recoverability (SMR) codes.

2. GENERAL

This Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Repair Parts List. A list of spares and repair parts authorized by this RPSTL for use in the performance of maintenance. This list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending item number sequence, with the parts in each group listed in ascending item number sequence. Figure numbers are listed directly beneath the group header. Bulk materials are listed in item name sequence. Repair part kits are listed separately in their own functional group within Section II. Repair parts for reparable special tools are also listed in this section. Items listed are shown on the associated illustration.

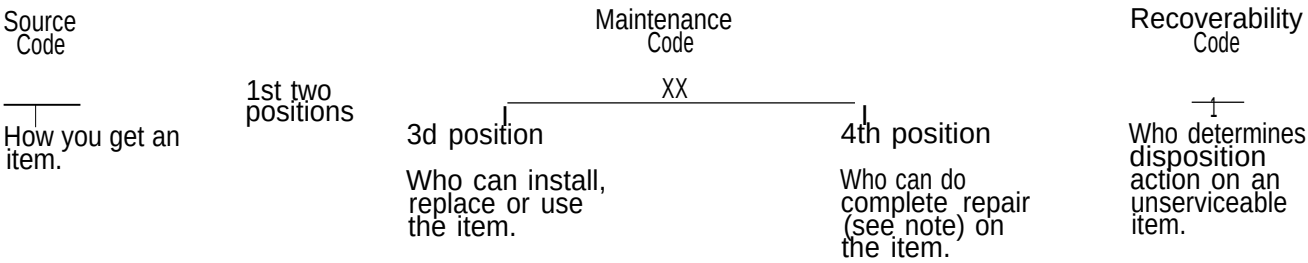
b. Section III. Special Tools List.Not applicable.

c. Section IV. Cross-Reference Indexes. A list, in National Item Identification Number (NIIN) sequence, of all National stock numbered items appearing in the listing, followed by a list in alphameric sequence of all part numbers appearing in the listings. National stock numbers and part numbers are cross-referenced to each illustration figure and item number appearance. The figure number and item number index lists figure and item numbers in numeric sequence and cross-references National stock number, Commercial and Government Entity Code, and part numbers.

3. EXPLANATION OF COLUMNS (SECTION II AND III)

a. Item No. (Column (1)). Indicates the number used to identify items called out in the illustrations.

b. SMR Code (Column (2)). The source, maintenance, and recoverability (SMR) code is a five-position code containing supply/requisitioning information, maintenance category authorization criteria and disposition instruction, as shown in the following breakout:



NOTE

Complete repair: Maintenance capacity, capability, and authority to perform all corrective maintenance tasks of the "repair" function in a use/user environment in order to restore serviceability to a failed item.

(1) *Source code.* The source code tells you how to get an item needed for maintenance, repair, or overhaul of an end item/equipment. Explanations of source codes follows:

Code	***Explanation***
PA PB PC PD PE PF PG	Stocked items: use the applicable NSN to request/requisition items with these source codes. They are authorized to the category indicated by the code entered in the third position of the SMR code.
	NOTE Items coded PC are subject to deterioration.
KD KF KB	Items with these codes are not to be requested/requisitioned individually. They are part of a kit which is authorized to the maintenance category indicated in the third position of the SMR code. The complete kit must be requisitioned and applied.
MO - Made at org/AVUM category MF - Made at DS/AVIM category MH - Made at GS category ML - Made at Specialized Repair Activity (SRA) MD - Made at Depot	Items with these codes are not to be requested/requisitioned individually. They must be made from bulk material which is identified by the part number in the description and usable on code (UOC) column and listed in the Bulk Material group of the repair parts list. If the item is authorized to you by the third position code of the SMR code, but the source code indicates it is made at a higher category, order the item from the higher category of maintenance.

Code	*Explanation*
AO - Assembled by org/AVUM category AF - Assembled by DS/AVIM category AH - Assembled by GS category AL - Assembled by SRA AD - Assembled by Depot	Items with these codes are not to be requested/requisitioned individually. The parts that make up the assembled item must be requisitioned or fabricated and assembled at the category of maintenance indicated by the source code. If the third position code of the SMR code authorizes you to replace the item, but the source code indicates the item is assembled at a higher category, order the item from the higher category of maintenance.

Code	*Explanation*
XA	- Do not requisition and "XA" coded item. Order its next higher assembly.
XB	- If an "XB" item is not available from salvage, order it using the CAGEC and part number given.
xc	- Installation drawing, diagram, instruction sheet, field service drawing. that is identified by manufacturer's part number.
XD	- Item is not stocked. Order an "XD" coded item through normal supply channels using the CAGEC and part number given, if no NSN is available.

NOTE

Cannibalization or controlled exchange, when authorized, may be used as a source of supply for items with the above source codes, except for those source coded "XA" or those aircraft support items restricted by requirements of AR 750-1.

(2) *Maintenance code.* Maintenance codes tell you the category of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the SMR code as follows:

(a) The maintenance code entered in the third position tells you the lowest maintenance category authorized to remove, replace, and use an item. The maintenance code entered in the third position will indicate authorization to one of the following categories of maintenance.

Code	*Application/Explanation*
C	- Crew or operator maintenance done within organizational or aviation maintenance.
O	- Organizational or aviation unit category can remove, replace, and use the i tern.
F	- Direct support or aviation intermediate category can remove, replace, and use the item.
H	- General support category can remove, replace, and use the item.
L	- Specialized repair activity can remove, replace, and use the item.
D	- Depot category can remove, replace, and use the item.

(b) The maintenance code entered in the fourth position tells whether or not the item is to be repaired and identifies the lowest maintenance category with the capability to do complete repair (i.e., perform all authorized repair functions). This position will contain one of the following maintenance codes.

NOTE

Some limited repair may be done on the item at a lower category of maintenance, if authorized by the Maintenance Allocation Chart (MAC) and SMR codes.

Code	***Explanation***
O	- Organizational or aviation unit is the lowest category that can do complete repair of the item.
F	- Direct support or aviation intermediate is the lowest category that can do complete repair of the item.
H	- General support is the lowest category that can do complete repair of the item.
L	- Specialized repair activity (designate the specialized repair activity) is the lowest category that can do complete repair of the item.
D	- Depot is the lowest category that can do complete repair of the item.
Z	- Nonreparable. No repair is authorized.
B	- No repair is authorized. (No parts or special tools are assigned for the maintenance of a "B" coded item.) However, the item may be recondition by adjusting, lubricating, etc., at the user category.

(3) *Recoverability code.* Recoverability codes are assigned to items to indicate the disposition action on unserviceable items. The recoverability code is entered in the fifth position of the SMR code as follows:

Recoverability code	***Application/Explanation***
Z	Nonreparable item. When not serviceable, condemn and dispose of the item at the category of maintenance shown in the third position of SMR code.
O	Reparable item. When not economically reparable, condemn and dispose of the item at organizational or aviation unit category.
F	Reparable item. When not economically reparable, condemn and dispose of the item at direct support or aviation intermediate category.
H	Reparable item. When not economically reparable, condemn and dispose of the item at general support category.
D	Reparable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.
L	Reparable item. Condemnation and disposal not authorized below specialized repair activity (SRA).
A	Item requires special handling or condemnation procedures because of specific reasons (e.g., precious metal content, high dollar value, critical material, or hazardous material. Refer to appropriate manuals/directives for specific instructions.

c. CAGEC (Column (3)). The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code which is used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

d. Part Number (Column (4)). Indicates the primary number used by the manufacturer (individual, company, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

NOTE

When you use an NSN to requisition an item, the item you receive may have a different part number from the part ordered.

e. Description and Usable on Code (UOC) (Column (5)). This column includes the following information:

(1) The federal item name and, when required, a minimum description to identify the item.

(2) Items that are included in kits and sets are listed below the name of the kit or set.

(3) Spare/repair parts that make up an assembled item are listed immediately following the assembled item line entry.

(4) Part numbers for bulk materials are referenced in this column in the line entry for the item to be manufactured/fabricated.

(5) When the item is not used with all serial numbers of the same model, the effective serial numbers are shown on the last line of the description (before UOC).

(6) Usable on code, when applicable (para 5).

(7) The statement “END OF FIGURE” appears just below the last item description in Column (5) for a given figure in both section II and section III.

f. Qty (Column (6)). Indicate the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A “V” appearing in the column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

4. EXPLANATION OF COLUMNS (Section IV)

d. National Stock Number (NSN) Index.

(1) Stock number column. This column lists the NSN by National Item Identification Number (NIIN) sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. When requisitioning items use the complete NSN (13 digits) sequence. The NIIN consists of the last nine digits of the NSN. When using this column to locate an item, ignore the first four digits of the NSN. When requisitioning items use the complete NSN (13 digits).

(2) Fig. column. This column lists the number of the figure where the item is identified/located. The illustrations are in numerical sequence in sections II and III.

(3) *Item column.- The* item number identifies the item associated with the figure listed in the adjacent Fig. column. This item is also identified by the NSN listed on the same line.

b. Part Number Index. Part numbers in this index are listed by part number in ascending alphameric sequence.

(1) CAGEC column. This column lists the Commercial and Government Entity Code (CAGEC).

(2) *Part Number column.* This column indicates the part number assigned to the item.

(3) Stock number column. This column lists the National stock number for the associated part number and manufacturer identified in the part number and CAGEC columns to the left.

(4) *Fig. column.* this column lists the number of the figure where the item is identified/located in sections II and III.

(5) Item column. The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

c. Figure and Item Number Index.

(1) Fig. column. This column lists the number of the figure where the item is identified/located in sections 11 and III.

(2) *Item column.* The item number is that number assigned to the item as it appears in the figure referenced in the adjacent figure number column.

(3) *Stock number column.* This column lists the National stock number for the item.

(4) *CAGEC column.* The Commercial and Government Entity Code (CAGEC) is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., that supplies the item.

(5) Part number column. Indicates the primary number used by the manufacturer (individual, firm, corporation, or Government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications, standards, and inspection requirements to identify an item or range of items.

5. SPECIAL INFORMATION

a. Usable on Code. The usable on code appears in the lower left corner of the description column heading. Usable on codes are shown as "UOC: _____" in the description column (justified left) on the first line applicable item decryption nomenclature. Uncoded items are applicable to all models. Identification of the usable on codes used in this RPSTL are:

Code	*Used on*
HVH	V1
HVJ	V2
HVK	V3
JD7	V4
JD8	V5
JV7	V6

b. Fabrication Instructions. Not applicable.

c. Assembly Instructions. Not applicable.

d. Kits. Line item entries for repair part kits appear in a group in section II (refer to table of contents).

e. Index Numbers. Items which have the word BULK in the figure column will have an index number shown in the item number column. This index number is a cross--reference between the National Stock Number/Part Number Index and the bulk material list in section II.

f. Associated publicdtions. The publications listed below pertain to the AN/ARS-6(V) and its components:

TM 11-5820-1037-13&P Radio Set AN/PRC-112 and KY-913/PRC-112 Program Loader

g. Nationdal Stock Numbers. National stock numbers (NSNs) that are missing from P source coded items have been applied for and will be added to this TM by future change/revision when they are entered in the Army Master Data File (AMDF). Until the NSNs are established and published, submit exception requisitions to: Commander, U.S. Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-MM, Fort Monmouth, NJ 07703-5007 for the part required to support your equipment.

6. HOW TO LOCATE REPAIR PARTS

a. When Ndtional stock number or *part number is not known.*

(1) *First.* Using the table of contents, determine the assembly group or subassembly group to which the item belongs. This is necessary since figures are prepared for assembly groups and subassembly groups, and listings are divided into the same group.

(2) *Second.* Find the figure covering the assembly group or subassembly group to which the item belongs.

(3) *Third.* Identify the item on the figure and note the item number.

(4) *Fourth.* Refer to the Repair parts Lists for the figure to find the part number for the item number noted on the figure.

(5) *Fifth.* Refer to the Part Number Index to find the NSN, if assigned.

b. When National stock number or part number is known.

(1) First. Using the index of National stock numbers and part numbers, find the pertinent National stock number or part number. The NSN index is in National Item Identification Number (NIIN) sequence (para 4a(l)). The part numbers in the part number index are listed in ascending alphameric sequence (para 4b). Both indexes cross-reference you to the illustration figure and item number of the item you are looking for.

(2) *Second.* After finding the figure and item number, verify that the item is the one you're looking for, then locate the item number in the repair parts list for the figure.

7. ABBREVIATIONS

Not applicable.

SECTION II

REPAIR PARTS LIST

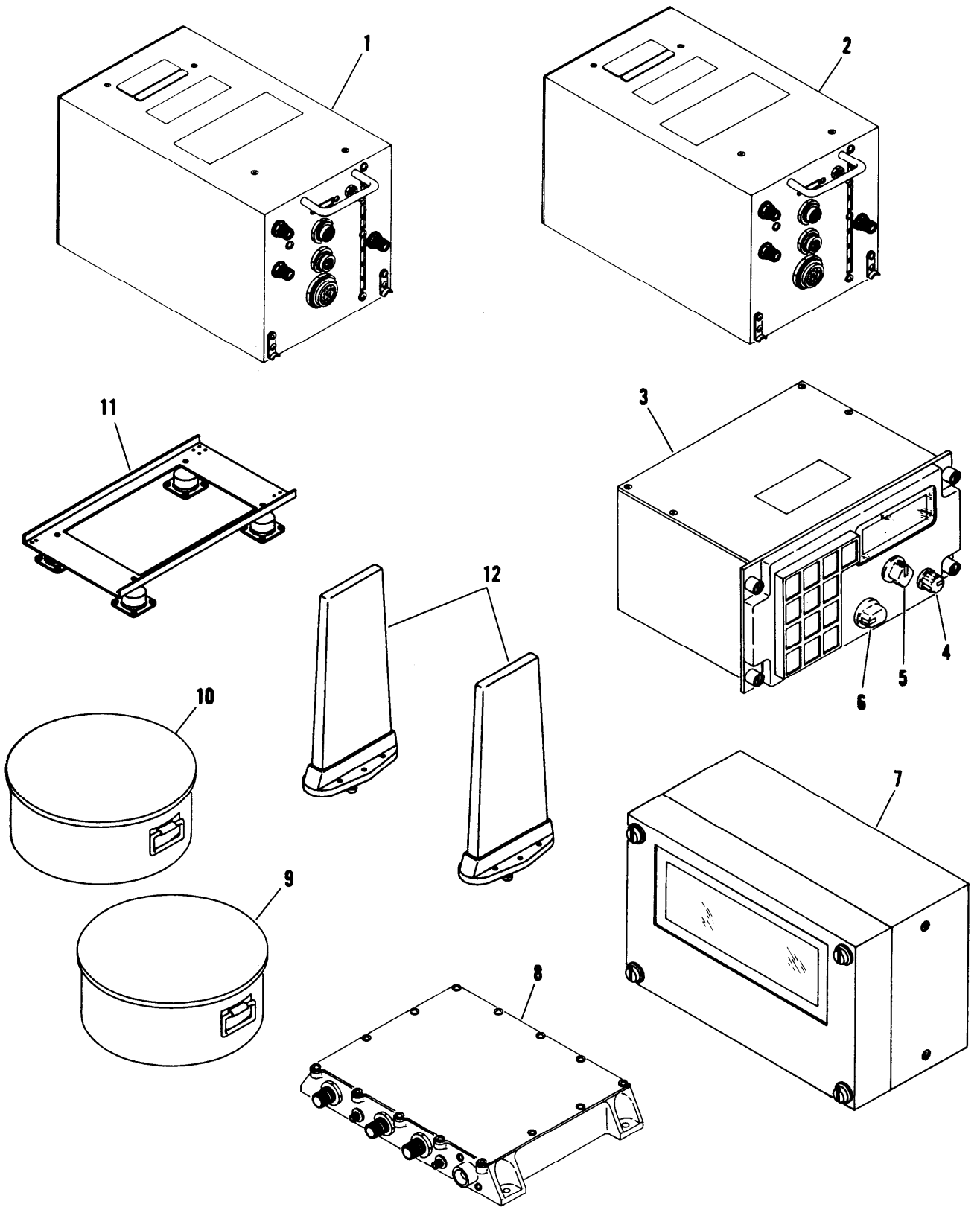


Figure C-1. Personnel Locator System Radio Set AN/ARS-6(V)l, 2, 3, 4, 5, 6

SECTION II

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 00 PERSONNEL LOCATOR SYSTEM RADIO SET AN/ARS-6(V)1,2,3,4,5,6	
				FIGURE C1	
1	PAODD	80058	RT-1532/ARS-6	RECEIVER-TRANSMITTE UOC: HVH, HVJ, JD7, JD8, JV7	1
2	PAODD	80058	RT-1532A/ARS-6(V))	RECEIVER-TRANSMITTE R UOC: HVK	1
3	PAODD	80058	C-11755/ARS-6	CONTROL, DISPLAY UN UOC: HVH,HVJ,JD7,JD8,JV7	1
4	PAOZZ	15084	RD238-A3B3	.KNOB UOC:HVH,HVJ,JD7,JD8,JV7	1
5	PAOZZ	15084	TT377-A3B1	.KNOB UOC:HVH,HVJ,JD7,JD8,JV7	1
6	PAOZZ	15084	TT375-A3B1	.KNOB UOC:HVH,HVJ,JD7,JD8,JV7	1
7	PAODD	80058	ID-2405/ARS-6	DISPLAY UNIT REMOTE (V6 QTY 2 EA) UOC:HVH,HVJ,JD7,JD8,JV7	1
8	PAODD	80058	SA-2563/ARS-6(V)	SWITCHING UNIT, ANT	1
9	XCOOO	94987	236101-1	CABLE GROUP, SYSTEM INSTALLATION UHIV (SEE FIGURE 2 FOR PARTS BREAKOUT) UOC: HVH	1
10	XCOOO	94987	236102-1	CABLE GROUP, SYSTEM INSTALLATION, UH60 (SEE FIGURE 3 FOR PARTS BREAKOUT) UOC: HVJ	1
11	PAOOO	80058	MT-6678/ARS-6	MOUNTING BASE, ELECT (SEE FIGURE 4 FOR PARTS BREAKOUT)	1
12	PAOZZ	80058	AS-3984/ARC	ANTENNA SET (MATCHED PAIR)	1
				END OF FIGURE	

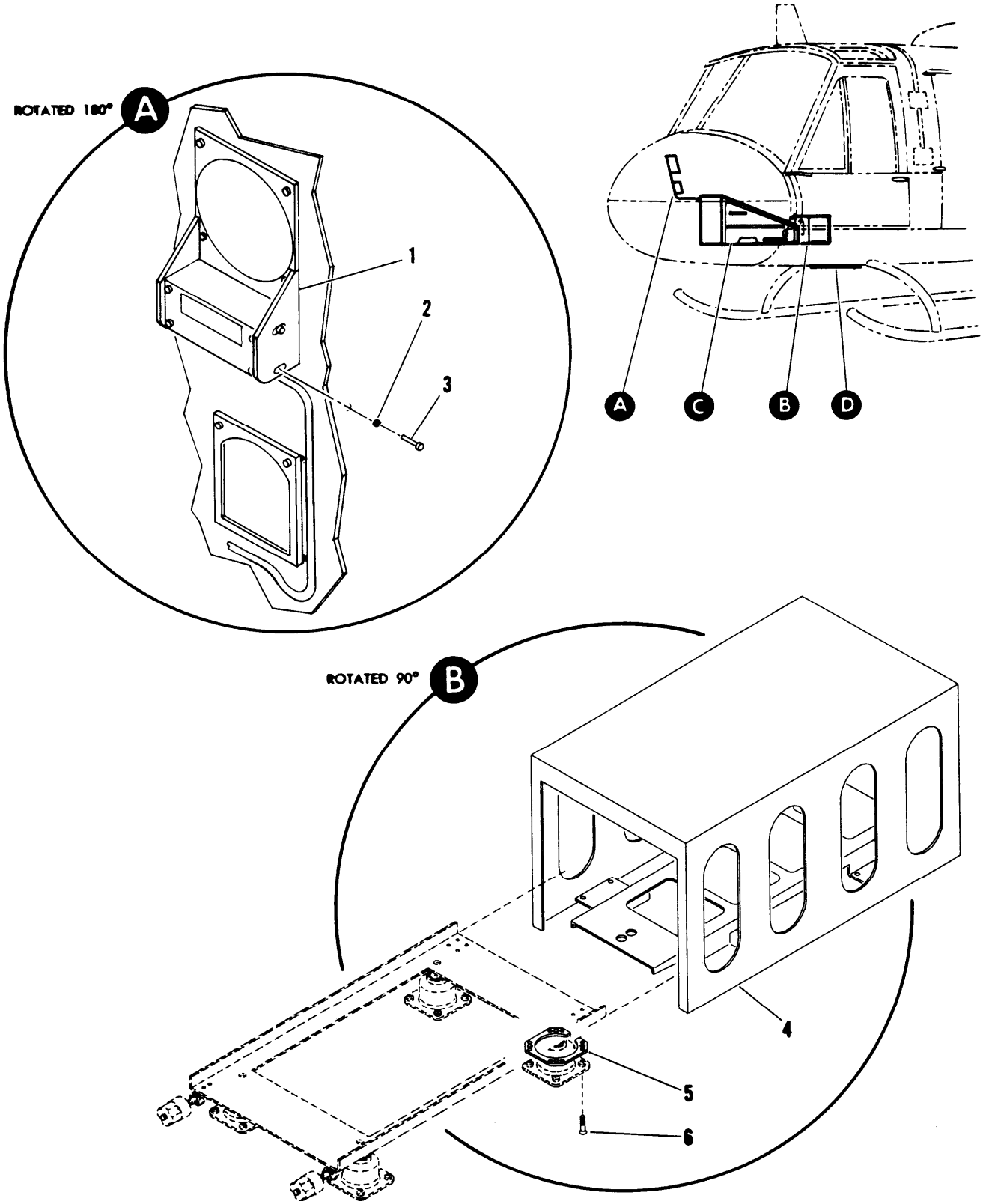


Figure C-2. UH1H Systems Installation Cable Group (Sheet 1 of 4)

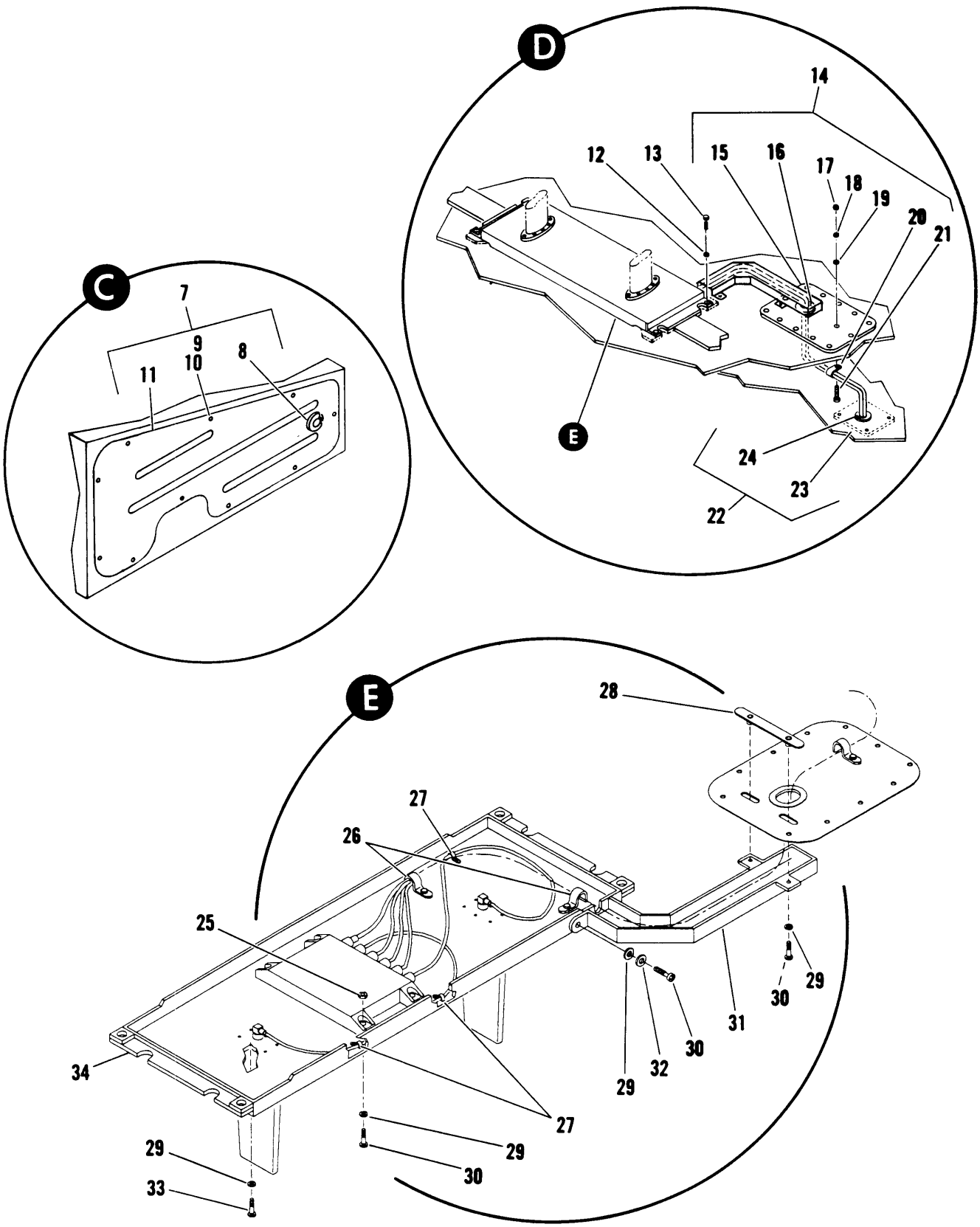


Figure C-2. UH1H Systems Installation Cable Group (Sheet 2 of 4)

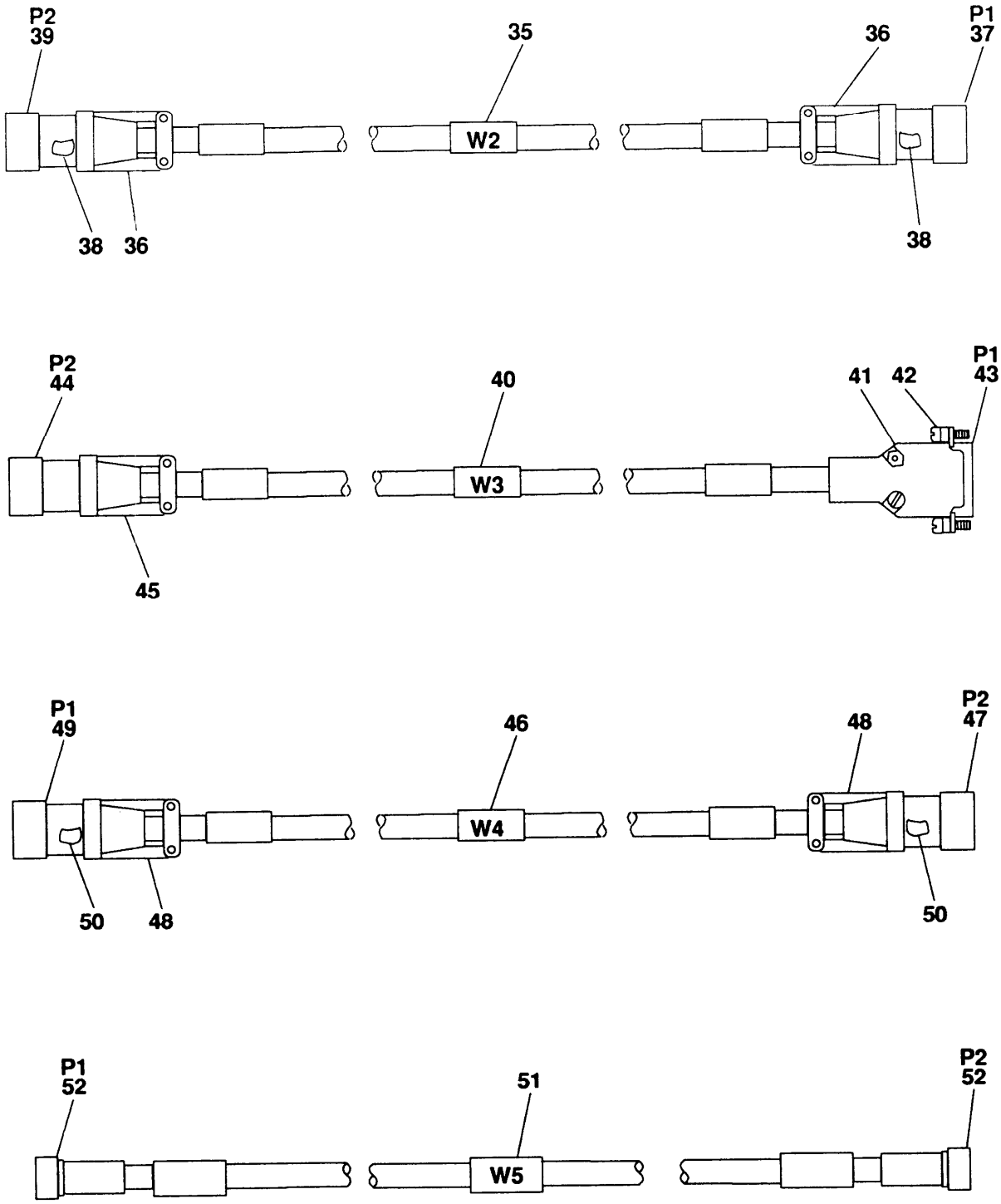


Figure C-2. UH1H Systems Installation Cable Group (Sheet 3 of 4)

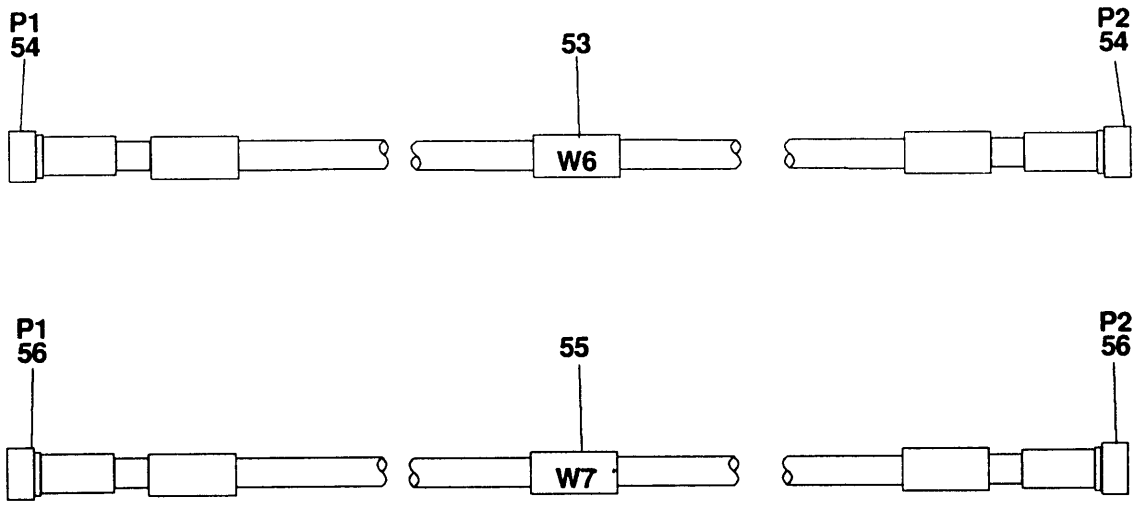


Figure C-2. UH1H Systems Installation Cable Group (Sheet 4 of 4)

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 05 UH-1H MISSION KIT MK-2683	
				FIGURE C2	
1	XBOZZ	57045	D6004204-1	BRACKET UOC: HVH	1
2	PAOZZ	96906	MS15795-803	WASHER, FLAT UOC: HVH	4
3	PAOZZ	96906	MS51957-14	SCREW, MACHINE UOC: HVH	4
4	XBOZZ	57045	D6004212-501	SHROUD ASSEMBLY UOC: HVH	1
5	PAOZZ	57045	D6004184-501	NUTPLATE UOC: HVH	4
6	PAOZZ	96906	MS24693-C52	SCREW, MACHINE UOC: HVH	16
7	XBOOO	94987	236112-1	ACCESS PANEL, CENTER (GROUP 0507) UOC: HVH	1
8	PAOZZ	96906	MS35489-27	.GROMMET, NONMETALLIC (PART OF GROUP 0507) UOC: HVH	1
9	PAOZZ	72794	A3 1/2T9	.STUD, TURNLOCK FASTE (PART OF GROUP 0507) UOC: HVH	10
10	PAOZZ	72794	GH3 1/2	.EYELET, TURNLOCK FAS (PART OF GROUP 0507) UOC: HVH	10
11	XBOZZ	57045	D6004209-1	.COVER (PART OF GROUP 0507) UOC: HVH	1
12	PAOZZ	03487	C776	WASHER, LOCK UOC: HVH	4
13	PAOZZ	88044	AN4H20	BOLT, MACHINE UOC: HVH	4
14	XBOOO	94987	236113-1	ACCESS COVER, SHELL (GROUP 0508) UOC: HVH	1
15	XBOZZ	57045	D6004208-1	.COVER (PART OF GROUP 0508) UOC: HVH	1
16	PAOZZ	96906	MS35489-27	.GROMMET, NONMETALLIC (PART OF GROUP 0508) UOC: HVH	1
17	PAOZZ	96906	MS35650-304	.NUT, PLAIN, HEXAGON (PART OF GROUP 0508) UOC: HVH	1
18	PAOZZ	96906	MS35338-138	.WASHER, LOCK (PART OF GROUP 0508) UOC: HVH	1
19	PAOZZ	96906	MS15795-808	.WASHER, FLAT (PART OF GROUP 0508) UOC: HVH	1
20	PAOZZ	96906	MS25281R12	.CLAMP, LOOP (PART OF GROUP 0508) UOC: HVH	1
21	PAOZZ	96906	MS51958-64	.SCREW, MACHINE (PART OF GROUP 0508) UOC: HVH	1

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
22	XBOOO	94987	236111-1	ACCESS, COVER, SHELL (GROUP 0509) UOC: HVH	1
23	XBOZZ	57045	D6004207-1	.COVER (PART OF GROUP 0509) UOC: HVH	1
24	PAOZZ	96906	MS35489-27	.GROMMET, NONMETALLIC (PART OF GROUP 0509) UOC: HVH	1
25	PAOZZ	96906	MS21083C3	NUT, SELF-LOCKING HE UOC: HVH	4
26	PAOZZ	96906	MS21919WCJ9	CLAMP, LOOP UOC: HVH	3
27	PAOZZ	96906	MS21919WCJ4	CLAMP, LOOP UOC: HVH	3
28	PAOZZ	57045	D6004214-1	NUTPLATE UOC: HVH	1
29	PAOZZ	96906	MS15795-809	WASHER, FLAT UOC: HVH	19
30	PAOZZ	96906	MS51958-64	SCREW, MACHINE UOC: HVH	7
31	PAOZZ	57045	D6004205-501	GUARD, CABLE UOC: HVH	1
32	PAOZZ	96906	MS15795-811	WASHER, FLAT UOC: HVH	1
33	PAOZZ	96906	MS51958-12	SCREW, MACHINE UOC: HVH	12
34	XBOZZ	57045	D6004213-501	MOUNTING, BRACKET, AN UOC: HVH	1
35	XBOOO	57045	D6004201-502	CABLE ASSEMBLY, CDU TO RECEIVER-TRANSMITTER (W2)(GROUP 0501) UOC: HVH	1
36	PAOZZ	81349	M85049/17-18N06	.ADAPTER, CABLE CLAMP (PART OF GROUP 0501) UOC: HVH	2
37	PAOZZ	96906	MS27484T18F32S	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0501) UOC: HVH	1
38	PAOZZ	06090	D-104-00	.SPLICE, CONDUCTOR (PART OF GROUP 0501) UOC: HVH	2
39	PAOZZ	96906	MS27484T18F32P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0501) UOC: HVH	1
40	XBOOO	57045	D6004201-506	CABLE ASSEMBLY, CDU TO RDU (W3)(GROUP 0502) UOC: HVH	1
41	PAOZZ	81349	M24308/21-2	.SHIELD, ELECTRICAL C (PART OF GROUP 0502) UOC: HVH	1
42	PAOZZ	81349	M24308/25-9	.SCREW-LOCK ASSEMBLY (PART OF GROUP 0502) UOC: HVH	2
43	PAOZZ	81349	M24308/2-2	.CONNECTOR, RECEPTACL (PART OF	1

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0502) UOC: HVH	
44	PAOZZ	96906	MS27484T12F35P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0502) UOC: HVH	1
45	PAOZZ	81349	M85049/17-12N04	.ADAPTER, CABLE CLAMP (PART OF GROUP 0502) UOC: HVH	1
46	XBOOO	57045	D6004201-501	.CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU (W4)(GROUP 0503) UOC: HVH	1
47	PAOZZ	96906	MS27484T10F35S	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0503) UOC: HVH	1
48	PAOZZ	81349	M85049/1710W03	.ADAPTER, CABLE CLAMP (PART OF GROUP 0503) UOC: HVH	2
49	PAOZZ	96906	MS27484T10F35P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0503) UOC: HVH	1
50	PAOZZ	81349	M83519/1-5	.SPLICE, CONDUCTOR (PART OF GROUP 0503) UOC: HVH	2
51	XBOOO	57045	D6004202-501	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU RF (W5)(GROUP 0504) UOC: HVH	1
52	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0504) UOC: HVH	2
53	XBOOO	57045	D6004202-502	CABLE ASSEMBLY, RECE (GROUP 0505) UOC: HVH	1
54	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0505) UOC: HVH	2
55	XBOOO	57045	D6004202-503	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU RF (W7)(GROUP 0506) UOC: HVH	1
56	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0506) UOC: HVH	2

END OF FIGURE

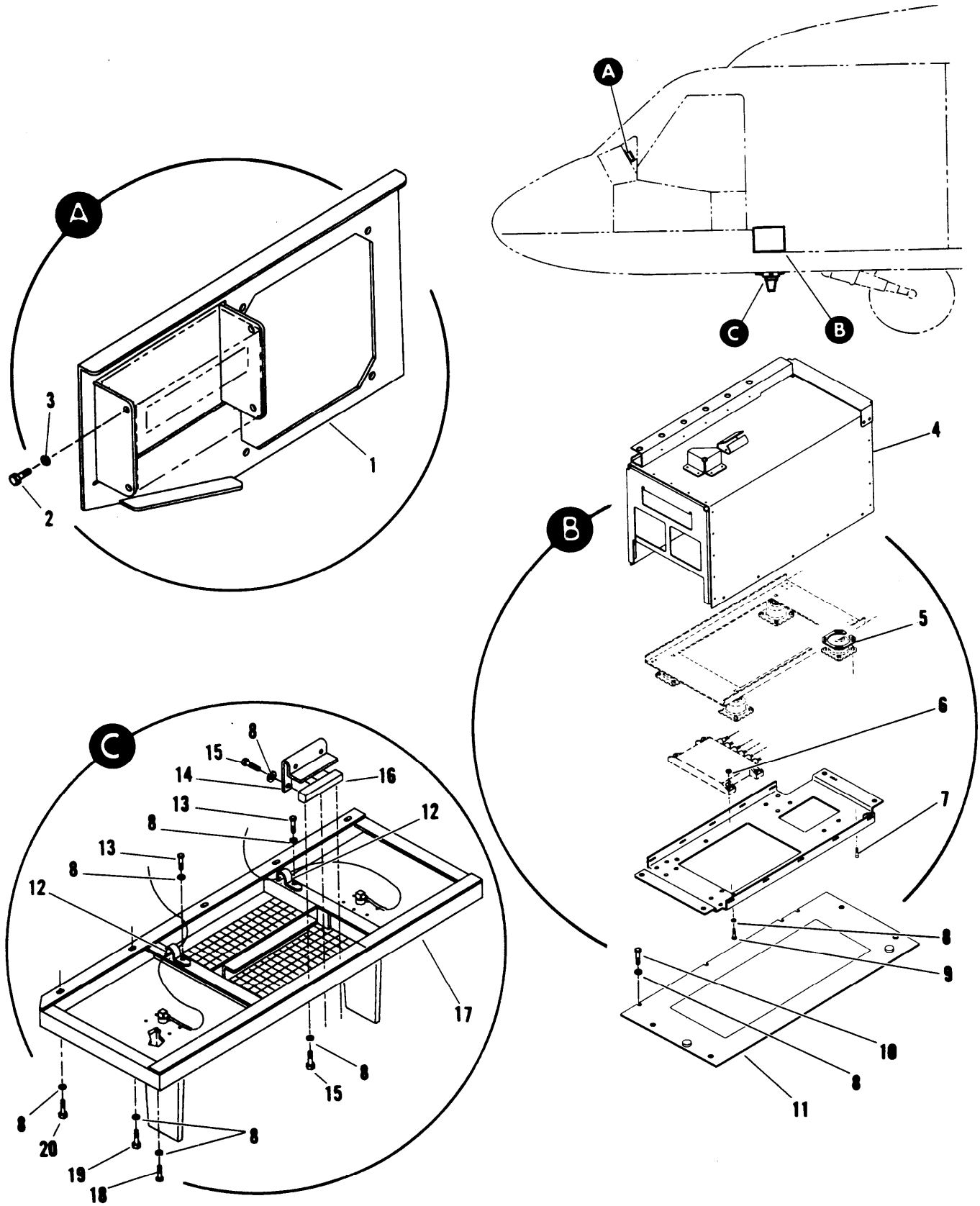


Figure C-3. UH60A/L System Installation Cable Group (Sheet 1 of 3)

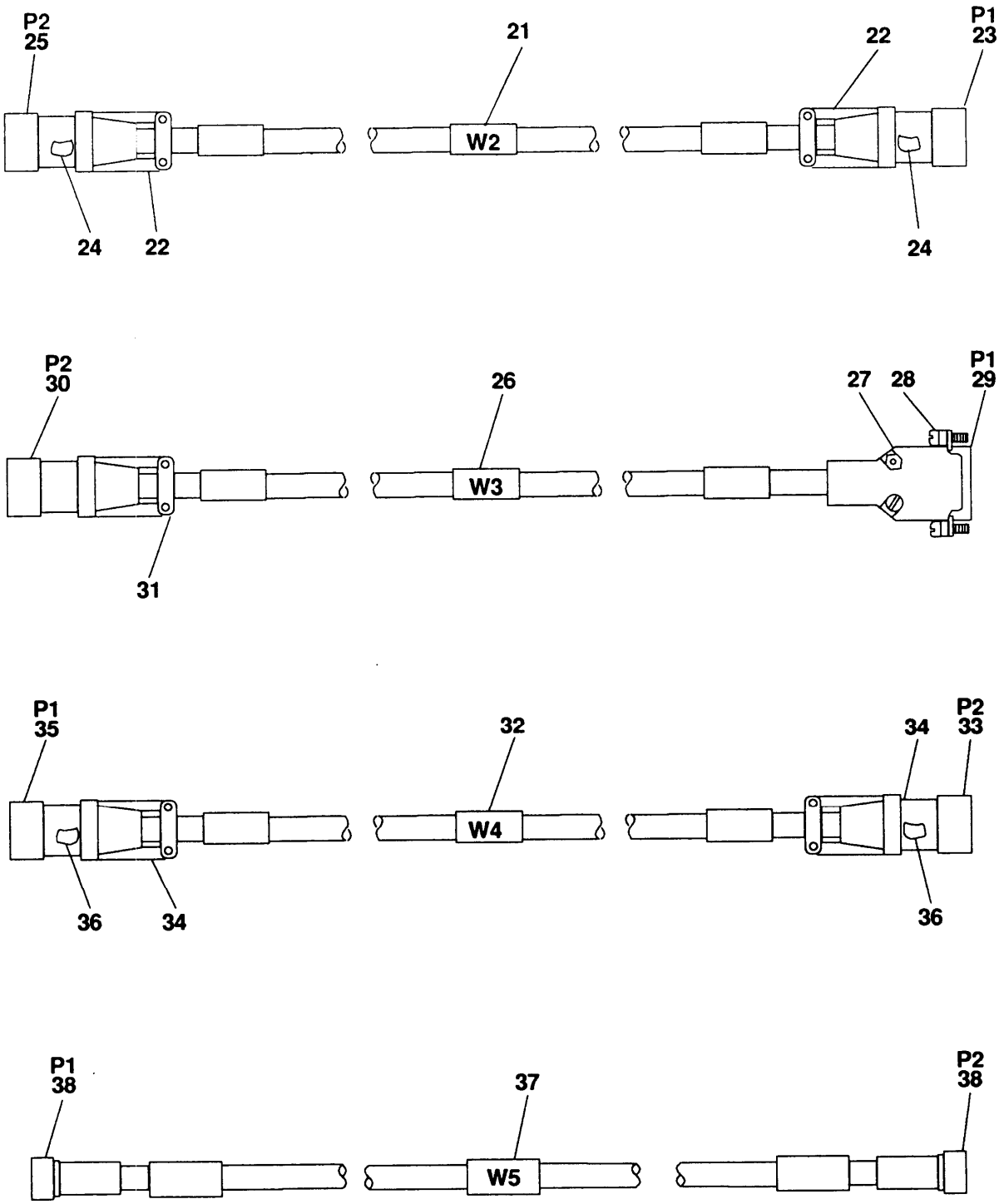


Figure C-3. UH60A/L System Installation Cable Group (Sheet 2 of 3)

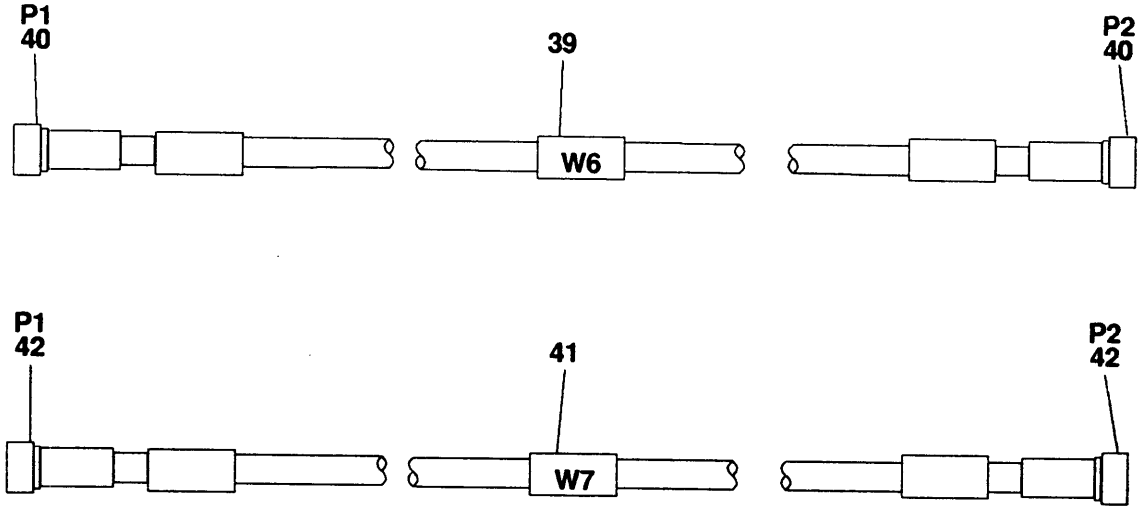


Figure C-3. UH60A/L System Installation Cable Group (Sheet 3 of 3)

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 06 UH-60A/L MISSION KIT MK-2684	
				FIGURE C3	
1	XBOZZ	57045	D6004176-1	BRACKET UOC: HVJ	1
2	PAOZZ	96906	MS51957-12	SCREW, MACHINE UOC: HVJ	4
3	PAOZZ	80205	MS15795-803	WASHER, FLAT UOC: HVJ	4
4	XBOZZ	57045	D6004181-501	SHROUD ASSEMBLY UOC: HVJ	1
5	PAOZZ	57045	D6004184-501	NUTPLATE UOC: HVJ	4
6	PAOZZ	96906	MS21083C3	NUT UOC: HVJ	4
7	PAOZZ	96906	MS24693-C52	SCREW, CSK HEAD UOC: HVJ	16
8	PAOZZ	96906	MS15795-809	WASHER, FLAT UOC: HVJ	36
9	PAOZZ	96906	MS24693-C273	SCREW, CSK HEAD UOC: HVJ	2
10	PAOZZ	88044	AN3H7A	BOLT UOC: HVJ	4
11	XBOZZ	57045	D6004182-1	PLATE, ADAPTER UOC: HVJ	1
12	PAOZZ	96906	MS21912WCJ4	CLAMP UOC: HVJ	2
13	PAOZZ	96906	MS51958-64	SCREW, PANHEAD UOC: HVJ	2
14	XBOZZ	57045	D6004171-501	J BRACKET UOC: HVJ	1
15	PAOZZ	88044	AN3H3A	BOLT UOC: HVJ	7
16	XBOZZ	57045	D6004172-1	BAR, ATTACHMENT UOC: HVJ	1
17	XBOZZ	57045	D6004166-501	MOUNTING, BRACKET AN UOC: HVJ	1
18	PAOZZ	96906	MS51958-65	SCREW, PANHEAD UOC: HVJ	12
19	PAOZZ	88044	AN3H51	BOLT UOC: HVJ	3
20	PAOZZ	88044	AN3H10A	BOLT UOC: HVJ	2
21	XBOOO	57045	D6004174-502	CABLE ASSEMBLY, CDU TO RECEIVER-TRANSMITTER (W2)(GROUP 0601) UOC: HVJ	1
22	PAOZZ	81349	M85049/17-18N06	.ADAPTER, CABLE CLAMP (PART OF GROUP 0601) UOC: HVJ	2
23	PAOZZ	96906	MS27484T18F32S	.CONNECTOR, PLUG, ELEC (PART OF	1

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 0601) UOC: HVJ	
24	PAOZZ	06090	D-104-00	.SPILCE, CONDUCTOR (PART OF GROUP 0601) UOC: HVJ	2
25	PAOZZ	96906	MS27484T18F32P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0601) UOC: HVJ	1
26	XBOOO	57045	D6004174-506	CABLE ASSEMBLY, CDU TO RDU (W3)(GROUP 0702) UOC: HVJ	1
27	PAOZZ	81349	M24308/21-2	.SHIELD, ELECTRICAL C (PART OF GROUP 0602) UOC: HVJ	1
28	PAOZZ	81349	M24308/25-9	.SCREW-LOCK ASSEMBLY (PART OF GROUP 0602) UOC: HVJ	2
29	PAOZZ	81349	M24308/2-2	.CONNECTOR, RECEPTACL (PART OF GROUP 0602) UOC: HVJ	1
30	PAOZZ	96906	MS27484T12F35P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0602) UOC: HVJ	1
31	PAOZZ	81349	M85049/17-12N04	.ADAPTER, CABLE CLAMP (PART OF GROUP 0602) UOC: HVJ	1
32	XBOOO	94987	236005-2	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU (W4)(GROUP 0603). UOC: HVJ	1
33	PAOZZ	96906	MS27484T10F35S	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0603) UOC: HVJ	1
34	PAOZZ	81349	M85049/1710W03	.ADAPTER, CABLE CLAMP (PART OF GROUP 0603) UOC: HVJ	2
35	PAOZZ	96906	MS27484T10F35P	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0603) UOC: HVJ	1
36	PAOZZ	81349	M83519/1-5	.SPLICE, CONDUCTOR (PART OF GROUP 0603) UOC: HVJ	2
37	XBOOO	94987	236006-4	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU RF (W)(GROUP 0604) UOC: HVJ	1
38	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0604) UOC: HVJ	2
39	XBOOO	94987	236006-5	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU RF (W6)(GROUP 0605) UOC: HVJ	1

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
40	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0605) UOC: HVJ	2
41	XBOOO	94987	236006-6	CABLE ASSEMBLY, RECE IVER-TRANSMITTER TO ASU RF (W)(GROUP 0606) UOC: HVJ	1
42	PAOZZ	81349	M39012/26-0011	.CONNECTOR, PLUG, ELEC (PART OF GROUP 0606) UOC: HVJ	2

END OF FIGURE

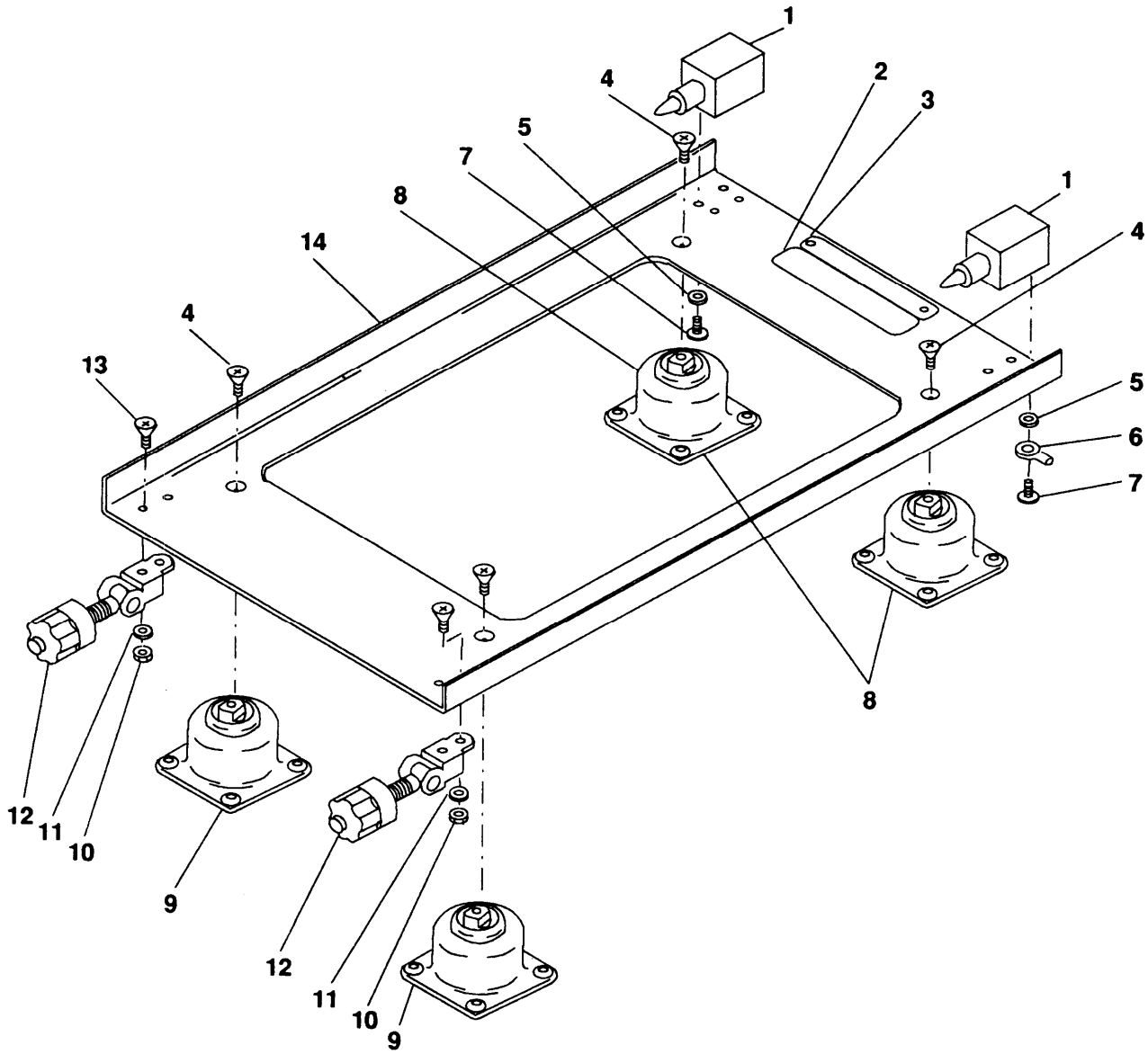


Figure C-4. Electronic Equipment Mounting Base Assembly MT-6678/ARS-6

SECTION II
TM11-5821-342-13&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES (UOC)	(6) QTY
				GROUP 07 RECEIVER-TRANSMITTER MOUNTING BASE MT-6678	
				FIGURE C4	
1	PAOZZ	81860	3098-005-000	CATCH, FRICTION	2
2	XBOZZ	94987	236115-8	PLATE, IDENTIFICATIO	1
3	XBOZZ	94987	236123-8	PLATE, SERNO	1
4	PAOZZ	96906	MS24693C50	SCREW, MACHINE	2
5	PAOZZ	80205	NAS620C8	WASHER, FLAT	8
6	PAOZZ	96906	MS25083-28B6	STRAP,GROUND	1
7	PAOZZ	96906	MS51957-42	SCREW,MACHINE	8
8	PAOZZ	81860	H44-BA-10	ISOLATOR,VIBRATION	2
9	PAOZZ	81860	H44-BA-6	ISOLATOR,VIBRATION	2
10	PAOZZ	96906	MS21083-C04	NUT,PLAIN,HEXAGON	4
11	PAOZZ	80205	NAS620C4	WASHER,FLAT	4
12	XBOZZ	81860	SLR1-AB	RETAINER,FRONT	2
13	PAOZZ	96906	MS24693C4	SCREW,MACHINE	4
14	XBOZZ	94987	235573-7	TRAY,SHOCK	1
				END OF FIGURE	

CROSS-REFERENCE INDEXES

NATIONAL STOCK NUMBER INDEX

STOCK NUMBER	FIG	ITEM	STOCK NUMBER	FIG	ITEM
5305-00-054-5646	C-3	2	5310-00-926-1835	C-3	6
5305-00-054-5648	C-2	3	5310-00-933-8120	C-2	18
5305-00-054-6667	C-4	7	5310-00-934-9765	C-2	17
5305-00-056-9961	C-4	13	5310-00-939-0849	C-4	10
5305-00-057-0509	C-2	33	5305-00-959-4158	C-3	9
5310-00-057-0573	C-4	11	5935-01-025-7047	C-2	49
5305-00-059-3660	C-2	21		C-3	35
	C-2	30	5935-01-025-7808	C-2	44
	C-3	13		C-3	30
5305-00-059-3661	C-3	18	5935-01-034-6656	C-2	37
5310-00-069-5291	C-4	5		C-3	23
5305-00-079-5835	C-4	4	5935-01-056-6280	C-2	39
5340-00-088-7768	C-2	20		C-3	25
5305-00-088-9671	C-2	6	5940-01-135-7079	C-2	50
	C-3	7		C-3	36
5340-00-103-2945	C-2	27	5935-01-175-8431	C-2	48
5935-00-136-6912	C-2	52		C-3	34
	C-2	54	5935-01-179-3497	C-2	42
	C-2	56		C-3	28
	C-3	38	5895-01-236-8964	C-1	3
	C-3	40	5355-01-244-4572	C-1	6
	C-3	42	5355-01-244-4573	C-1	5
5340-00-151-7342	C-4	8	5821-01-245-9067	C-1	7
5940-00-179-2884	C-2	38	5821-01-245-9095	C-1	1
	C-3	24	5821-01-251-8683	C-1	8
5306-00-182-1913	C-2	13	5821-01-251-8685	C-1	2
5306-00-182-2056	C-3	15	5985-01-285-9817	C-1	12
5306-00-182-2060	C-3	10	5935-01-293-0103	C-2	36
5306-00-182-2061	C-3	20		C-3	22
5325-00-281-4969	C-2	10			
5325-00-281-5081	C-2	9			
5325-00-290-1960	C-2	8			
	C-2	16			
	C-2	24			
5935-00-490-5220	C-2	43			
	C-3	29			
5340-00-500-0403	C-2	26			
5310-00-543-2740	C-2	12			
5310-00-550-5054	C-2	29			
	C-3	8			
5935-00-576-9454	C-2	41			
	C-3	27			
5306-00-582-8773	C-3	19			
5935-00-592-0871	C-2	47			
	C-3	33			
5310-00-595-6211	C-2	2			
5310-00-619-1148	C-2	19			
5340-00-629-3413	C-4	1			
5340-00-794-2936	C-4	9			
5310-00-926-1835	C-2	25			

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
88044	AN3H10A	5306-00-182-2061	C-3	20
88044	AN3H3A	5306-00-182-2056	C-3	15
88044	AN3H51	5306-00-582-8773	C-3	19
88044	AN3H7A	5306-00-182-2060	C-3	10
88044	AN4H20	5306-00-182-1913	C-2	13
80058	AS-3984/ARC	5985-01-285-9817	C-1	12
72794	A3 1/2T9	5325-00-281-5081	C-2	9
80058	C-11755/ARS-6	5895-01-236-8964	C-1	3
03487	C776	5310-00-543-2740	C-2	12
06090	D-104-00	5940-00-179-2884	C-2	38
			C-3	24
57045	D6004166-501		C-3	17
57045	D6004171-501		C-3	14
57045	D6004172-1		C-3	16
57045	D6004174-502		C-3	21
57045	D6004174-506		C-3	26
57045	D6004176-1		C-3	1
57045	D6004181-501		C-3	4
57045	D6004182-1		C-3	11
57045	D6004184-501		C-2	5
			C-3	5
57045	D6004201-501		C-2	46
57045	D6004201-502		C-2	35
57045	D6004201-506		C-2	40
57045	D6004202-501		C-2	51
57045	D6004202-502		C-2	53
57045	D6004202-503		C-2	55
57045	D6004204-1		C-2	1
57045	D6004205-501		C-2	31
57045	D6004207-1		C-2	23
57045	D6004208-1		C-2	15
57045	D6004209-1		C-2	11
57045	D6004212-501		C-2	4
57045	D6004213-501		C-2	34
57045	D6004214-1		C-2	28
72794	GH3 1/2	5325-00-281-4969	C-2	10
81860	H44-BA-10	5340-00-151-7342	C-4	8
81860	H44-BA-6	5340-00-794-2936	C-4	9
80058	ID-2405/ARS-6	5821-01-245-9067	C-1	7
96906	MS15795-803	5310-00-595-6211	C-2	2
			C-3	3
96906	MS15795-808	5310-00-619-1148	C-2	19
96906	MS15795-809	5310-00-550-5054	C-2	29
			C-3	8
96906	MS15795-811		C-2	32
96906	MS21083-C04	5310-00-939-0849	C-4	10
96906	MS21083C3	5310-00-926-1835	C-2	25
			C-3	6
96906	MS21912WCJ4		C-3	12
96906	MS21919WCJ4	5340-00-103-2945	C-2	27
96906	MS21919WCJ9	5340-00-500-0403	C-2	26

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
96906	MS24693-C273	5305-00-959-4158	C-3	9
96906	MS24693-C52	5305-00-088-9671	C-2	6
			C-3	7
96906	MS24693C4	5305-00-056-9961	C-4	13
96906	MS24693C50	5305-00-079-5835	C-4	4
96906	MS25083-28B6		C-4	6
96906	MS25281R12	5340-00-088-7768	C-2	20
96906	MS27484T10F35P	5935-01-025-7047	C-2	49
			C-3	35
96906	MS27484T10F35S	5935-00-592-0871	C-2	47
			C-3	33
96906	MS27484T12F35P	5935-01-025-7808	C-2	44
			C-3	30
96906	MS27484T18F32P	5935-01-056-6280	C-2	39
			C-3	25
96906	MS27484T18F32S	5935-01-034-6656	C-2	37
			C-3	23
96906	MS35338-138	5310-00-933-8120	C-2	18
96906	MS35489-27	5325-00-290-1960	C-2	8
			C-2	16
			C-2	24
96906	MS35650-304	5310-00-934-9765	C-2	17
96906	MS51957-12	5305-00-054-5646	C-3	2
96906	MS51957-14	5305-00-054-5648	C-2	3
96906	MS51957-42	5305-00-054-6667	C-4	7
96906	MS51958-12	5305-00-057-0509	C-2	33
96906	MS51958-64	5305-00-059-3660	C-2	21
			C-2	30
			C-3	13
96906	MS51958-65	5305-00-059-3661	C-3	18
80058	MT-6678/ARS-6		C-1	11
81349	M24308/2-2	5935-00-490-5220	C-2	43
			C-3	29
81349	M24308/21-2	5935-00-576-9454	C-2	41
			C-3	27
81349	M24308/25-9	5935-01-179-3497	C-2	42
			C-3	28
81349	M39012/26-0011	5935-00-136-6912	C-2	52
			C-2	54
			C-2	56
			C-3	38
			C-3	40
			C-3	42
81349	M83519/1-5	5940-01-135-7079	C-2	50
			C-3	36
81349	M85049/17-12N04		C-2	45
			C-3	31
81349	M85049/17-18N06	5935-01-293-0103	C-2	36
			C-3	22
81349	M85049/1710W03	5935-01-175-8431	C-2	48
			C-3	34

CROSS-REFERENCE INDEXES

PART NUMBER INDEX

CAGEC	PART NUMBER	STOCK NUMBER	FIG	ITEM
80205	NAS620C4	5310-00-057-0573	C-4	11
80205	NAS620C8	5310-00-069-5291	C-4	5
15084	RD238-A3B3		C-1	4
80058	RT-1532/ARS-6	5821-01-245-9095	C-1	1
80058	RT-1532A/ARS-6(V)	5821-01-251-8685	C-1	2
80058	SA-2563/ARS-6(V)	5821-01-251-8683	C-1	8
81860	SLR1-AB		C-4	12
15084	TT375-A3B1	5355-01-244-4572	C-1	6
15084	TT377-A3B1	5355-01-244-4573	C-1	5
94987	235573-7		C-4	14
94987	236005-2		C-3	32
94987	236006-4		C-3	37
94987	236006-5		C-3	39
94987	236006-6		C-3	41
94987	236101-1		C-1	9
94987	236102-1		C-1	10
94987	236111-1		C-2	22
94987	236112-1		C-2	7
94987	236113-1		C-2	14
94987	236115-8		C-4	2
94987	236123-8		C-4	3
81860	3098-005-000	5340-00-629-3413	C-4	1

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
C-1	1	5821-01-245-9095	80058	RT-1532/ARS-6
C-1	2	5821-01-251-8685	80058	RT-1532A/ARS-6(V)
C-1	3	5895-01-236-8964	80058	C-11755/ARS-6
C-1	4		15084	RD238-A3B3
C-1	5	5355-01-244-4573	15084	TT377-A3B1
C-1	6	5355-01-244-4572	15084	TT375-A3B1
C-1	7	5821-01-245-9067	80058	ID-2405/ARS-6
C-1	8	5821-01-251-8683	80058	SA-2563/ARS-6(V)
C-1	9		94987	236101-1
C-1	10		94987	236102-1
C-1	11		80058	MT-6678/ARS-6
C-1	12	5985-01-285-9817	80058	AS-3984/ARC
C-2	1		57045	D6004204-1
C-2	2	5310-00-595-6211	96906	MS15795-803
C-2	3	5305-00-054-5648	96906	MS51957-14
C-2	4		57045	D6004212-501
C-2	5		57045	D6004184-501
C-2	6	5305-00-088-9671	96906	MS24693-C52
C-2	7		94987	236112-1
C-2	8	5325-00-290-1960	96906	MS35489-27
C-2	9	5325-00-281-5081	72794	A3 1/2T9
C-2	10	5325-00-281-4969	72794	GH3 1/2
C-2	11		57045	D6004209-1
C-2	12	5310-00-543-2740	03487	C776
C-2	13	5306-00-182-1913	88044	AN4H20
C-2	14		94987	236113-1
C-2	15		57045	D6004208-1
C-2	16	5325-00-290-1960	96906	MS35489-27
C-2	17	5310-00-934-9765	96906	MS35650-304
C-2	18	5310-00-933-8120	96906	MS35338-138
C-2	19	5310-00-619-1148	96906	MS15795-808
C-2	20	5340-00-088-7768	96906	MS25281R12
C-2	21	5305-00-059-3660	96906	MS51958-64
C-2	22		94987	236111-1
C-2	23		57045	D6004207-1
C-2	24	5325-00-290-1960	96906	MS35489-27
C-2	25	5310-00-926-1835	96906	MS21083C3
C-2	26	5340-00-500-0403	96906	MS21919WCJ9
C-2	27	5340-00-103-2945	96906	MS21919WCJ4
C-2	28		57045	D6004214-1
C-2	29	5310-00-550-5054	96906	MS15795-809
C-2	30	5305-00-059-3660	96906	MS51958-64
C-2	31		57045	D6004205-501
C-2	32		96906	MS15795-811
C-2	33	5305-00-057-0509	96906	MS51958-12
C-2	34		57045	D6004213-501
C-2	35		57045	D6004201-502
C-2	36	5935-01-293-0103	81349	M85049/17-18N06
C-2	37	5935-01-034-6656	96906	MS27484T18F32S
C-2	38	5940-00-179-2884	06090	D-104-00

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
C-2	39	5935-01-056-6280	96906	MS27484T18F32P
C-2	40		57045	D6004201-506
C-2	41	5935-00-576-9454	81349	M24308/21-2
C-2	42	5935-01-179-3497	81349	M24308/25-9
C-2	43	5935-00-490-5220	81349	M24308/2-2
C-2	44	5935-01-025-7808	96906	MS27484T12F35P
C-2	45		81349	M85049/17-12N04
C-2	46		57045	D6004201-501
C-2	47	5935-00-592-0871	96906	MS27484T10F35S
C-2	48	5935-01-175-8431	81349	M85049/1710W03
C-2	49	5935-01-025-7047	96906	MS27484T10F35P
C-2	50	5940-01-135-7079	81349	M83519/1-5
C-2	51		57045	D6004202-501
C-2	52	5935-00-136-6912	81349	M39012/26-0011
C-2	53		57045	D6004202-502
C-2	54	5935-00-136-6912	81349	M39012/26-0011
C-2	55		57045	D6004202-503
C-2	56	5935-00-136-6912	81349	M39012/26-0011
C-3	1		57045	D6004176-1
C-3	2	5305-00-054-5646	96906	MS51957-12
C-3	3		80205	MS15795-803
C-3	4		57045	D6004181-501
C-3	5		57045	D6004184-501
C-3	6	5310-00-926-1835	96906	MS21083C3
C-3	7	5305-00-088-9671	96906	MS24693-C52
C-3	8	5310-00-550-5054	96906	MS15795-809
C-3	9	5305-00-959-4158	96906	MS24693-C273
C-3	10	5306-00-182-2060	88044	AN3H7A
C-3	11		57045	D6004182-1
C-3	12		96906	MS21912WCJ4
C-3	13	5305-00-059-3660	96906	MS51958-64
C-3	14		57045	D6004171-501
C-3	15	5306-00-182-2056	88044	AN3H3A
C-3	16		57045	D6004172-1
C-3	17		57045	D6004166-501
C-3	18	5305-00-059-3661	96906	MS51958-65
C-3	19	5306-00-582-8773	88044	AN3H51
C-3	20	5306-00-182-2061	88044	AN3H10A
C-3	21		57045	D6004174-502
C-3	22	5935-01-293-0103	81349	M85049/17-18N06
C-3	23	5935-01-034-6656	96906	MS27484T18F32S
C-3	24	5940-00-179-2884	06090	D-104-00
C-3	25	5935-01-056-6280	96906	MS27484T18F32P
C-3	26		57045	D6004174-506
C-3	27	5935-00-576-9454	81349	M24308/21-2
C-3	28	5935-01-179-3497	81349	M24308/25-9
C-3	29	5935-00-490-5220	81349	M24308/2-2
C-3	30	5935-01-025-7808	96906	MS27484T12F35P
C-3	31		81349	M85049/17-12N04
C-3	32		94987	236005-2
C-3	33	5935-00-592-0871	96906	MS27484T10F35S

FIGURE AND ITEM NUMBER INDEX

FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
C-3	34	5935-01-175-8431	81349	M85049/1710W03
C-3	35	5935-01-025-7047	96906	MS27484T10F35P
C-3	36	5940-01-135-7079	81349	M83519/1-5
C-3	37		94987	236006-4
C-3	38	5935-00-136-6912	81349	M39012/26-0011
C-3	39		94987	236006-5
C-3	40	5935-00-136-6912	81349	M39012/26-0011
C-3	41		94987	236006-6
C-3	42	5935-00-136-6912	81349	M39012/26-0011
C-4	1	5340-00-629-3413	81860	3098-005-000
C-4	2		94987	236115-8
C-4	3		94987	236123-8
C-4	4	5305-00-079-5835	96906	MS24693C50
C-4	5	5310-00-069-5291	80205	NAS620C8
C-4	6		96906	MS25083-28B6
C-4	7	5305-00-054-6667	96906	MS51957-42
C-4	8	5340-00-151-7342	81860	H44-BA-10
C-4	9	5340-00-794-2936	81860	H44-BA-6
C-4	10	5310-00-939-0849	96906	MS21083-C04
C-4	11	5310-00-057-0573	80205	NAS620C4
C-4	12		81860	SLR1-AB
C-4	13	5305-00-056-9961	96906	MS24693C4
C-4	14		94987	235573-7

APPENDIX D

PILOT'S CHECKLIST FOR AN/ARS-6 RADIO SET, PERSONNEL LOCATOR

CheCk List for AN/ARS-6 PLS

MODE to BIT (Pull to turn)

5 Second Self-Test < PASS / FAIL

MODE to FREQ
- CHAN to A or B
- Press CLR
- Enter FrequenCy _____
- Press ENT

MODE to CODE
- "SVR 1" Displayed
- Press CLR
- Enter Code _____
- Press ENT

- Press "2" (Select Survivor 2)
- Press CLR
- Enter Code _____
- Press ENT

MODE to BRST
- Press "l" (Select Survivor 1)
- Press INTG - T/R (Single Interrogation)
- Press "2" (Select Survivor 2)
- Press INTG - T/R (Single Interrogation)

MODE to CONT
- Press "1" (Select Survivor 1)
- Press INTG - T/R (Continuous Interrogation)
- Press INTG - T/R (Stops Interrogation)

APPENDIX E

COMPONENT OF END ITEM AND BASIC ISSUE ITEM LIST

APPENDIX E
COMPONENT OF END ITEM AND BASIC ISSUE ITEM LISTS

Section I. INTRODUCTION

E-1 Scope. This appendix lists the necessary required inventory items authorized for the safe and efficient operation of the equipment.

E-2 General. The Components of End Item and Basic Item Lists are divided into the following sections:

Section II. **COMPONENTS OF END ITEM.** These are part of the end item, but are removed and separately packaged for shipment. These items must be with the end item whenever it is issued or transferred between property accounts.

Section III, **BASIC ISSUE ITEMS (BII).** These are the minimum essential items required to place the equipment in operation and to perform emergency repairs. Although shipped separately, BII must be with the equipment during operation and whenever it is transferred between property accounts.

E-3 Explanation of Columns

Section II. COMPONENTS OF END ITEM

a. [Column (1)] **ILLUSTRATION NUMBER.** Lists the number of the illustration in which the item is shown.

b. [Column (2)] **NATIONAL/NATO STOCK NUMBER.** Lists the National/NATO Stock Number assigned to the item.

c. [Column (3)] **DESCRIPTION.** Lists the Federal Item Name and, if required, a description to identify the item. The last line for eaCh item lists the Commercial and Government Entity (CAGE) in parentheses followed by the part number. The Useable On Code is used to indiCate different models of the equipment.

d. [Column (4)] **UNIT OF MEASURE (U/M).** Lists the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (for example EA, IN, PR).

e. [Column (5)] **QUANTITY REWIRED.** Lists the quantity of the item required to be used with the equipment.

Section 111. BASIC ISSUE ITEMS (BII)

a. [Column (1)] **SMR CODE.** The Source. Maintenance, and Recoverability SMR) Code is a five-position code containing supply/requisitioning information, maintenance category authorization criteria, and disposition instruction.

b. [Column (2)] **FEDERAL STOCK NUMBER/PART NUMBER.** Lists the National/NATO Stock Number assigned to the item.

c. [Column (3)] **DESCRIPTION.** Lists the Federal Item Name and, if required, a description to identify the item. The last line for each item lists the Commercial and Government Entity (CAGE) in parentheses followed by the part number. The Useable On Code is used to indicate different models of the equipment.

d. [Column (4)] **UNIT OF MEASURE (U/M).** Lists the measure used in performing the actual maintenance function. This measure is expressed by a two-Character alphabetical abbreviation (for example EA, IN, PR).

e. [Column (5)] **QUANTITY INCLUDED IN UNIT.** Lists the quantity of the item(s) required to be used with the equipment.

f. [Column (6)] **QUANTITY FURNISHED WITH EQUIPMENT.** Lists the quantity of the item furnished with the equipment.

g. [Column (7)] **ILLUSTRATION.** Indicates the number used to identify items called out in the illustration.

SECTION II. COMPONENTS OF END ITEM.

(1) ILLUS NUMBER	(2) NATIONAL/NATO STOCK NUMBER	(3) DESCRIPTION (CAGE) AND PART NUMBER	USABLE ON CODE	(4) U/M	(5) QTY REQ'D
N/A		(N/A)			

SECTION III. COMPONENTS OF BASIC ISSUE ITEMS

(1) SMR CODE	(2) FEDERAL STOCK NUMBER/ PART NUMBER	(3) DESCRIPTION	(4) UNIT OF MEASURE	(5) QTY INC UNIT	(6) QTY FURN W/EQUIP	(7) ILLUS
PAODD	5821-01-245-9095	RT-1532/ARS-6(V) RECEIVER/TRANSMITTER	EA	1	1	
PAODD	5821-01-251-8685	RT-1532A/ARS-6(V) RECEIVER TRANSMITTER	EA	1	1	
PAODD	5985-01-236-8964	C-11755/ARS-6(V) CONTROL DISPLAY UNIT	EA	1	1	
PAOOF	5975-01-299-3433	MT-6678/ARS-6(V) MOUNTING BASE, ELECTRONIC EQUIPMENT	EA	1	1	
PAODD	5821-01-245-9067	ID-2405/ARS-6(V) REMOTE DISPLAY UNIT	EA	1	1	
PAODD	5821-01-251-8683	SA-2563/ARS-6(V) ANTENNA SWITCHING UNIT	EA	1	1	
PAOZZ	5985-01-285-9817	AS-3984/ARC ANTENNA SET	SET	1	1	
XCOOO	5895-01-342-3965	MK-2683/ARS-6(V) MISSION KIT	EA	1		
XCOOO	5895-01-342-3964	MK-2684/ARS-6(V) MISSION KIT	EA	1		
XCOOO	5895-01-349-2682	MK-2703/ARS-6(V) INSTALLATION KIT	EA	1		

APPENDIX F

EXPENDABLE/DURABLE
SUPPLIES AND MATERIALS LIST

APPENDIX F
EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

F-1 Information. This appendix lists expendable/durable supplies and materials you will need to operate and maintain the equipment. This listing is for informational purposes only and is not authorization to requisition the listed i terns. "These items are authorized to you by CTA 50-970, Expendable/Durable Items (except Medical, Class V, Repair Parts, and Heraldic Items), Or CTA B-l00, Army Medical Department Expendable/Durable Items.

F-2 Explanation of Columns.

a. Column 1, ITEM NUMBER. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., the cleaning compound. item 5, App. D").

b. Column 2, LEVEL. This column identifies the lowest level of maintenance that requires the listed item.

c - Operator/Crew
O - Unit
F - Intermediate Direct Support (IDS)
H - Intermediate General Support (IGS)

c. Column 3, NATIONAL/NATO STOCK NUMBER. Lists the National/NATO Stock Number assigned to the item; use it to request or requisition the item.

d. Column 4, DESCRIPTION. Lists the Federal Item Name and, if required, a description to identify the item. The last line for each item lists the Commercial and Government Entity (CAGE) in parentheses followed by the part number.

e. Column 5 UNIT OF MEASURE (U/M). Lists the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation (for example EA. IN, PR). If the unit of measure differs from the unit of issue, requisition the lowest unit of issue that will satisfy your requirements.

SECTION II. EXPENDABLE/DURABLE SUPPLIES AND MATERIALS LIST
FOR RADIO SET-PERSONNEL LOCATOR, AN/ARS-6

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL/NATO STOCK NUMBER	(4) DESCRIPTION (CAGE) AND PART NUMBER	(5) U/M
1	0	6850-00-105-3084	TRICHLOROTRIFLUOROETHANE	OZ.
2	0	8020-00-257-0382	BRUSH, MIL-G-7241	EA.
3	0	8305-00-286-5461	LINT-FREE CLOTH	YD.
4	0	MS3367-4-9	STRAP, TIE DOWN	EA.
5	0	MS3367-2-9	STRAP, TIE DOWN	EA.
6	0	MS20995-NC20	WIRE, LOCK	FT.

APPENDIX G

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MK-2683/ARS-6(V)1 MISSION KIT, PERSONNEL LOCATOR ON UH-1H HELICOPTER

NOTE

MK-2683/ARS-6(V)1 is a mission kit applique, to be installed prior to PLS mission and to be removed upon mission completion. If mission requirements dictate extended duration of installation then periodic maintenance specified in Table 3.11 of this appendix MUST be performed.

TABLE OF CONTENTS
APPENDIX G

	Paragraph	Page
Introduction	G-1	G-3
Equipment Location	G-2	G-3
Installation Kit	G-3	G-3
Installation Procedures	G-4	G-7
Forms and Records	G-5	G-18
Operation	Chapter 3	
Parts List		
Removal	G-6	G-20
Maintenance	G-7	G-20

INSTALLATION

G-1 Introduction. This appendix describes all parts required and a step-by-step procedure for installing the AN/ARS-6 Radio Set, Personnel Locator in a UH-1H helicopter.

G-2 AN/ARS-6 Equipment Location. Figure 1 shows the principal components of the AN/ARS-6 as installed in a UH-1H helicopter. The system is comprised of:

(1) A Receiver-Transmitter [RT-1532/ARS-6(V)] which is mounted in a protective shroud secured to the cabin floor.

(2) A Control Display Unit [C-11755/ARS-6(V)l installed in the center console.

(3) A Remote Display Unit [ID-2405/ARS-6(V)] installed on the instrument panel.

(4) An Antenna Set (AS-3584/ARC) with Antenna Switching Unit [SA-2563/ARS-6(V)] installed at the forward landing skid cross tube mounting points.

(5) An Equipment Mounting Base [MT-6678/ARS-6(V)] to provide vibration isolated mounting for the Receiver-Transmitter.

G-3 Mission Kit, UH-1H, MK-2683/ARS-6(V)1. All equipment, parts, cables, hardware, etc., that are required to install the AN/ARS-6 system are contained in the Mission Kit. This kit is shipped in a container [CY-8654/ARS-6(V)] approximately 14.75 inches high by 31.25 inches in diameter and weighs approximately 58 pounds. The contents of this kit are listed in Table 1. Provisions for storage of LRU's are included in the shipping and storage container, see Figures 2 and 3.

NOTE

Warranty Information. The AN/ARS-6(V) is warranted by the contractor for maintenance on Line Replaceable Units (LRUs) only. These include the Receiver-Transmitter, Control Display Unit, Remote Display Unit, and Antenna Set. Warranty return procedures are specified in TB 11-5821-342-25.

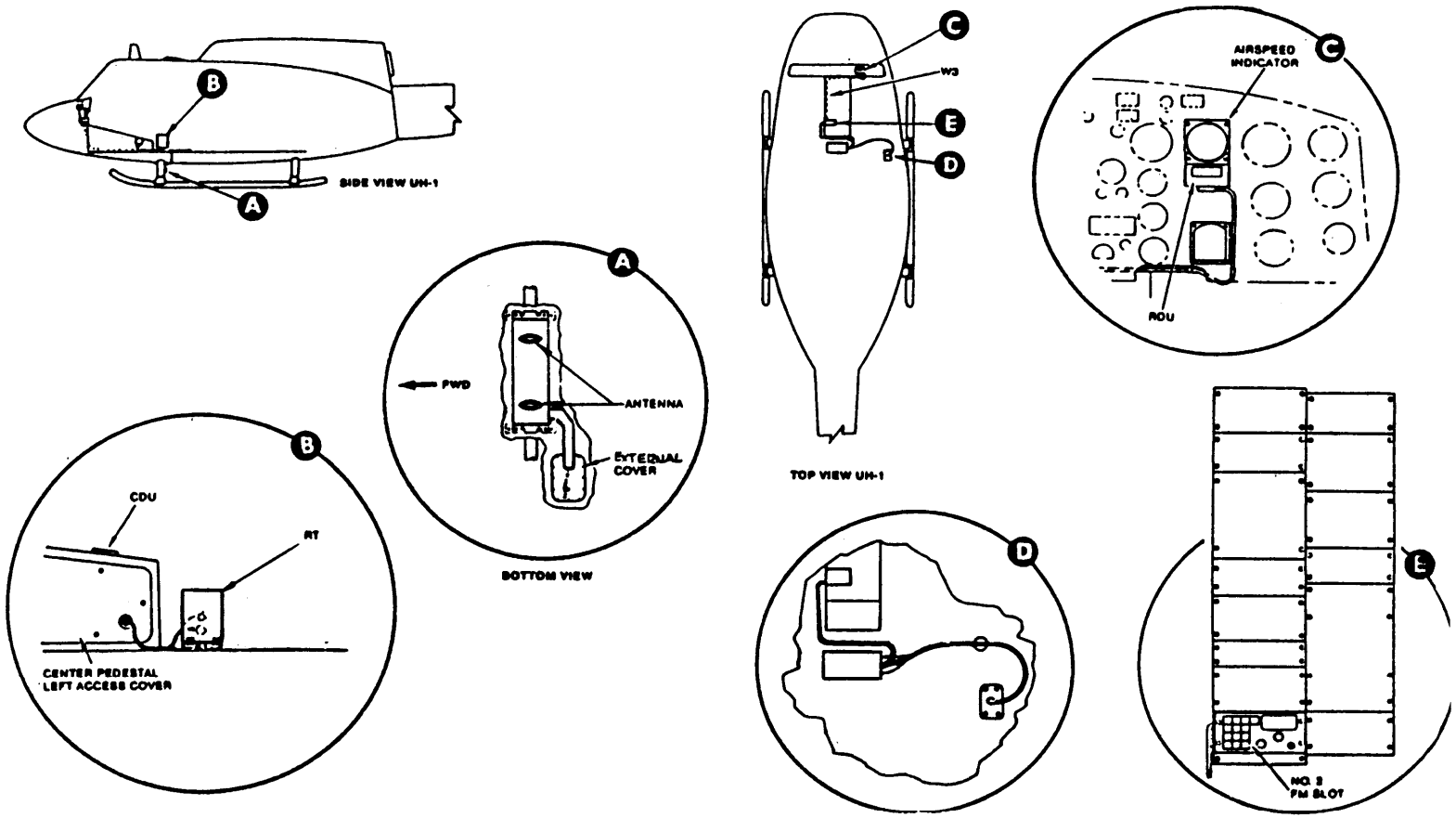


FIGURE 1. PLS Component Location in a UH-1H Helicopter.

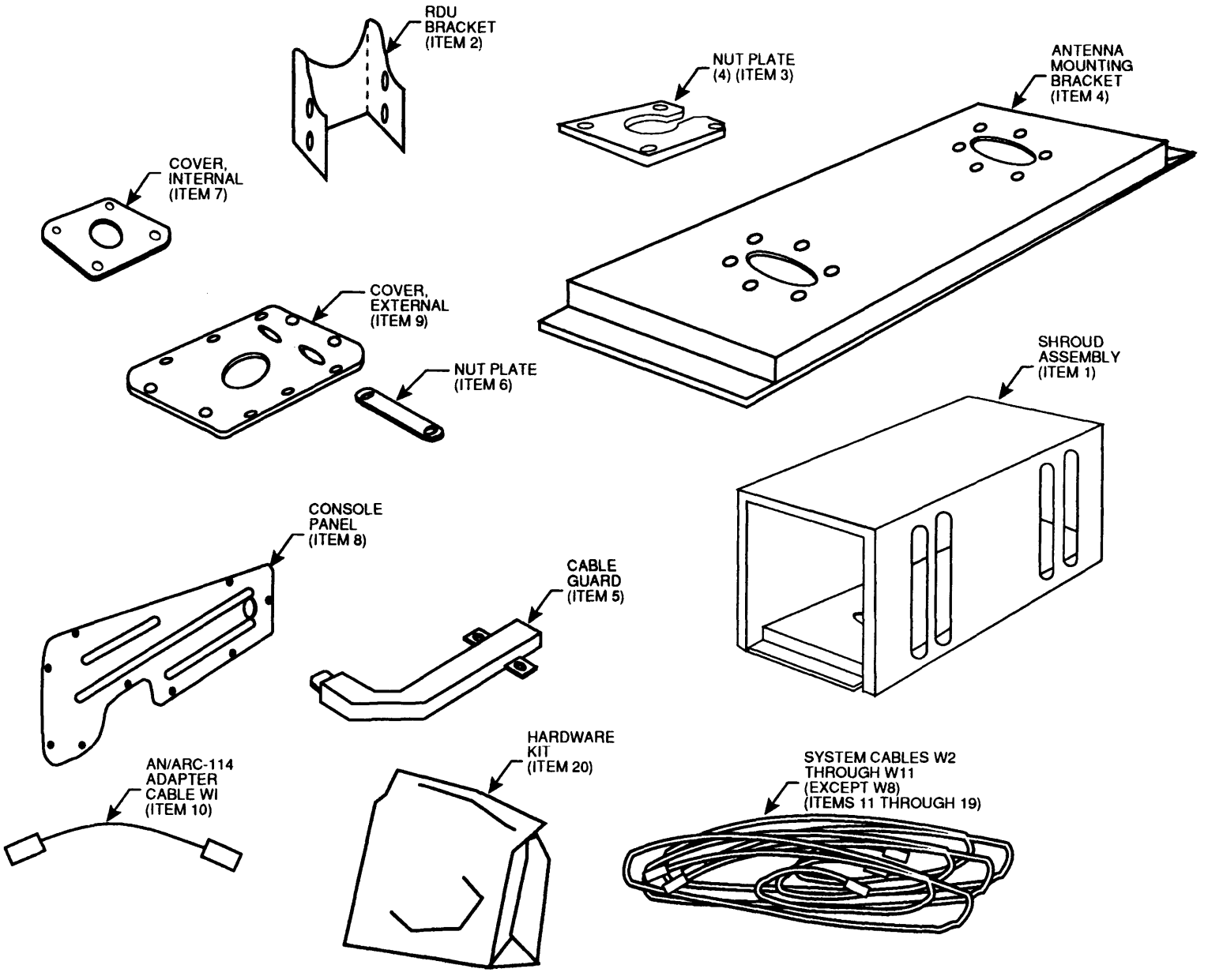


FIGURE 2. Mission Kit, MK-2683/ARS-6(V)1.

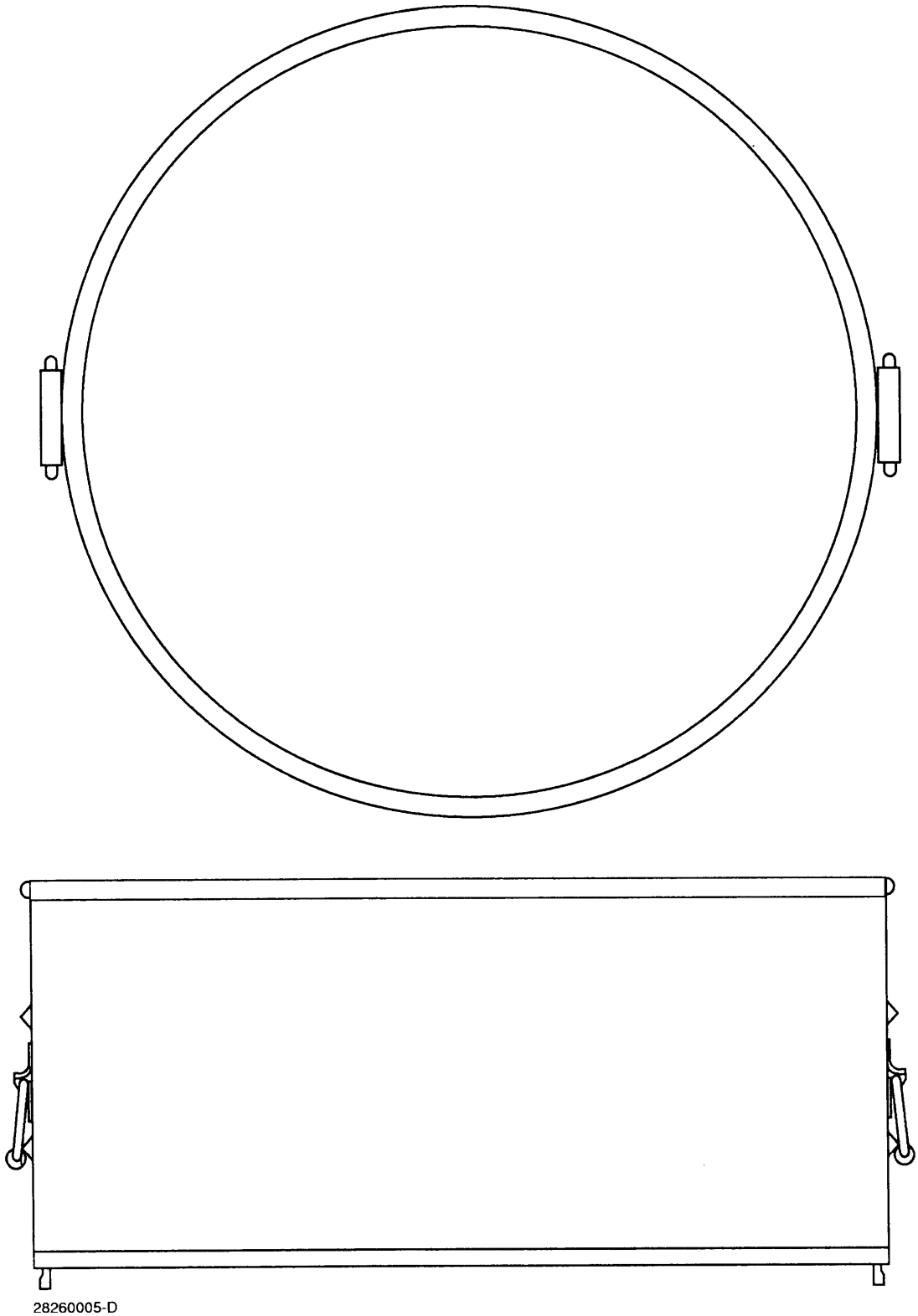


FIGURE 3. Shipping Container, Mission Kit.

NOTE

When unpacking the Mission Kit, ensure the contents are identical to those items listed in Table 1. Do not start installation unless all parts are present.

G-4 Installation Procedures. Prior to installing the AN/ARS-6 system, read the entire system installation procedure. Installation procedures for AN/ARS-6 equipment should follow the steps listed below:

(1) Pre-installation equipment assembly,
(2) Receiver-Transmitter (RT) Installation,
(3) Antenna Group (AG) installation,
(4) Remote Display Unit (RDU) installation,
(5) Control Display Unit (CDU) installation,
(6) Cable tie down and completion, and
(7) System checkout and test.

CAUTION

Aircraft power must be OFF before installation of the AN/ARS-6 system, or damage to the AN/ARS-6 and/ or aircraft may result.

NOTE

If the MK-2683/ARS-6(V)1 Mission Kit has been received in an assembled condition and/or has previously been installed in an aircraft, proceed to paragraph G-4.2. If however, the Mission Kist and LRUs are received as separate parts, then the Preinstallation Assembly Instructions of paragraph 6-4.1 should be performed prior to transporting the kit to the aircraft.

G-4.1 Pre-installation Assembly Instructions.

(1.) Assemble the equipment mounting base, MT-6678/ARS-6(V), to the shroud assembly (Item 1), using screws (Item 24), nut plates (Item 3) and spacers, see Figure 4.

(1) Assemble the Remote Display Unit (RDU), ID-2405/ARS-6(V), to the W3 cable (Item 12) and tighten the connector jack screws. Do not overtighten the jack screws. Attach the mounting bracket (Item 2) using screws (Item 21) and washers (Item 25) see Figure 5.

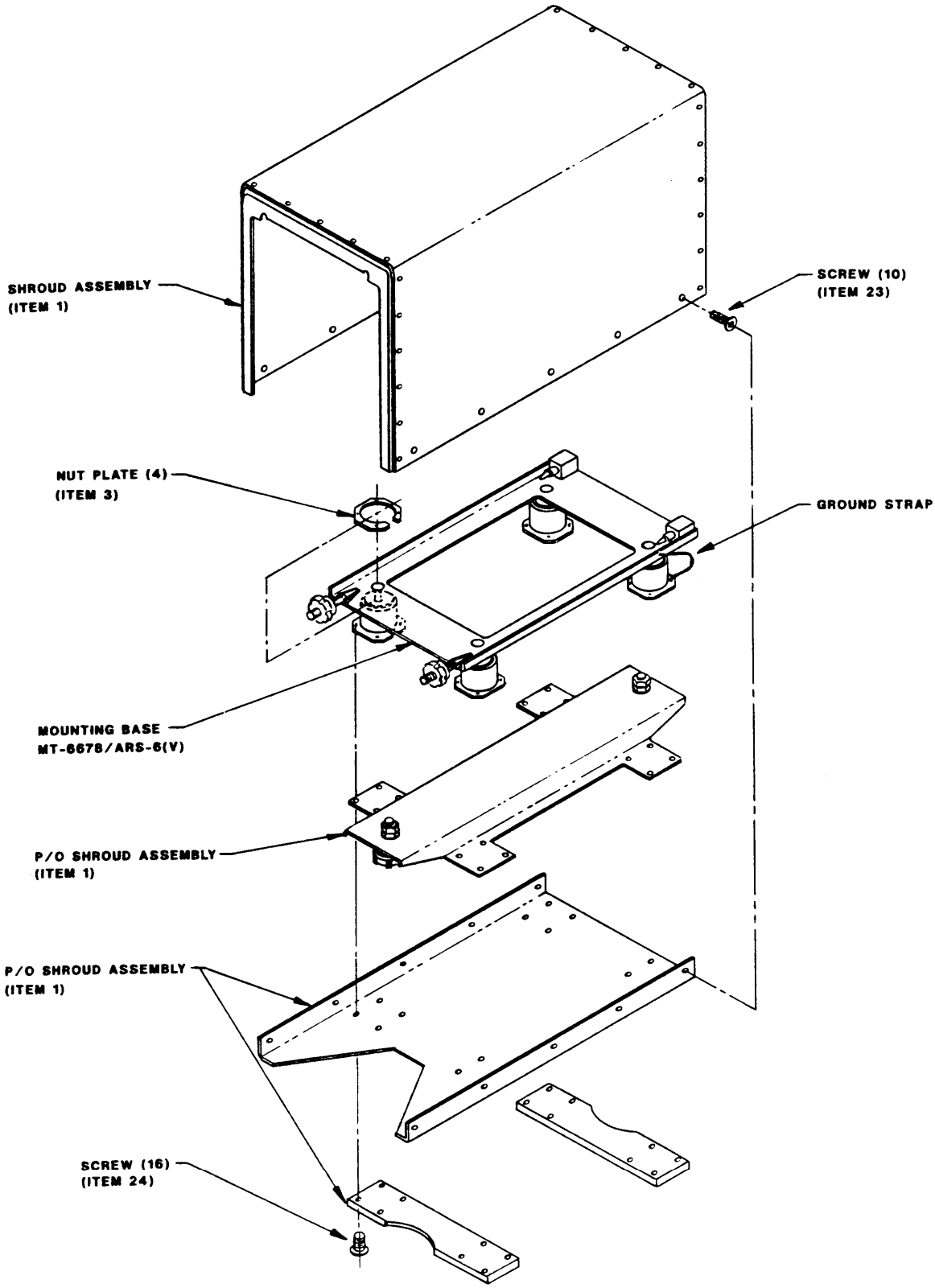


FIGURE 4. AN/ARS-6 Remote Display Unit, Pre-Installation Assembly.

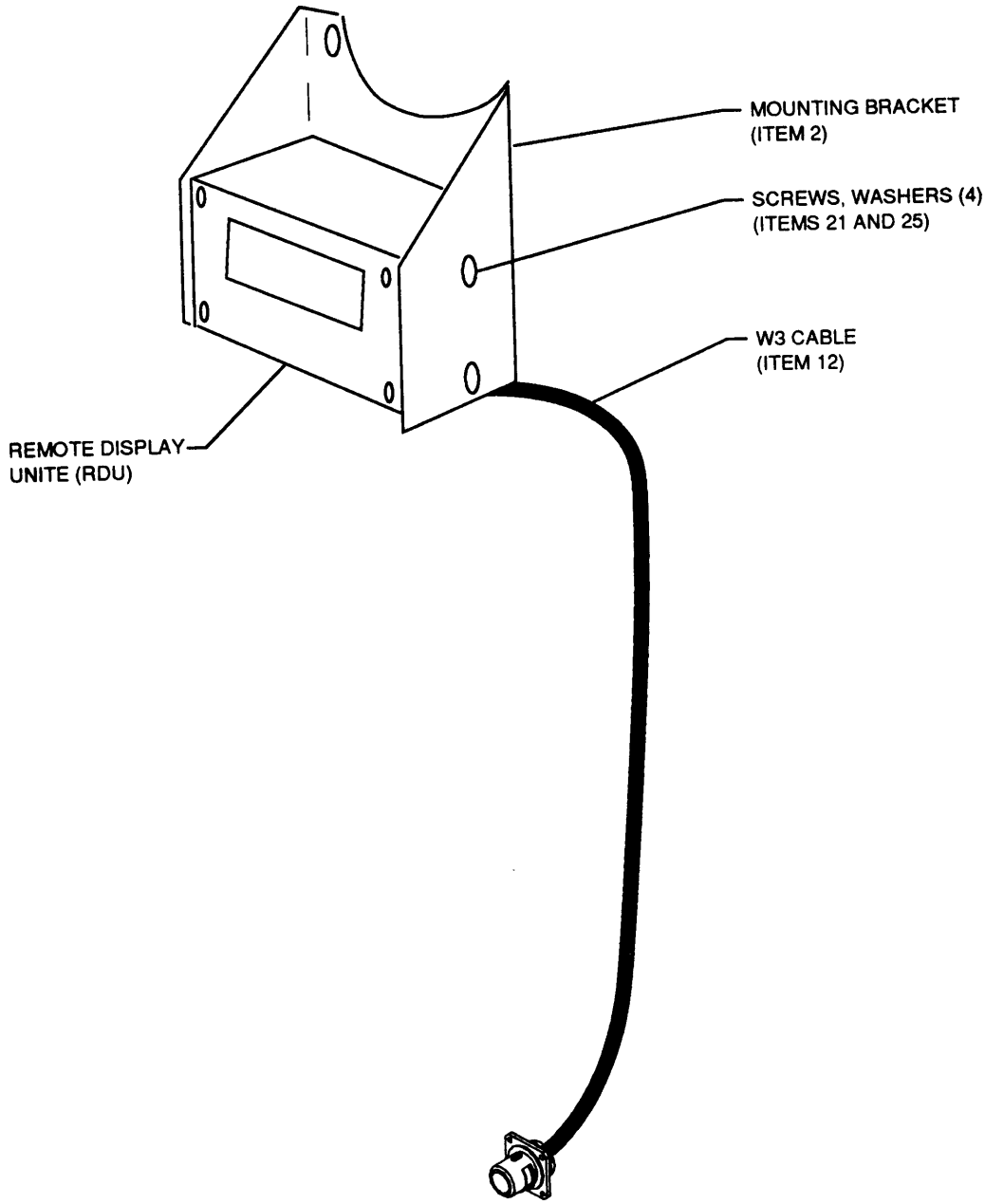


FIGURE 5. AN/ARS-6 Remote Display Unit, Pre-Installation Assembly.

(3) Assemble the matched set of blade antennas, AS-3984/ARC, to the mounting bracket (Item 4) using screws (Item 23), and washers (Item 26), see Figure 6.

(4) Install cables W4 (Item 13), W5 (Item 14), W6 (Item 15), W7 (Item 16), W10 (Item 18), and W11 (Item 19) to the mounting bracket as shown in Figure 6. Connect the cables to the ASU as directed by the reference designation on the cable and Figure 6.

(5) Assemble the Antenna Switching Unit (ASU), SA-2563/ARS-6(V), to the mounting bracket (Item 4) using screws (Item 22), washers (Item 26), and nuts (Item 28).

NOTE

Use care to ensure that the left and right cables are connected to the proper antenna or the PLS will not function as specified. Avoid severe bends to cables when routing to ASU.

(6) Fasten cable clamps to mounting bracket (Items 29 and 30), see Figure 6.

(7) Fasten the cable guard (Item 5) to the mounting bracket using screws (Item 22) and washers (item 26 and 27). Route the cables through the grommeted hole in the cover (Item 9), and attach the panel to the cable guard using screws (Item 22), washers (Item 26), and nut plate (Item 6), see Figure 6, fasten cables using cable clamps (Item 29).

NOTE

Pre-installation assembly steps 3 through 6 make up an assembly herein referred to as the Antenna Group (AG). See Table 2 for a complete parts list for the Antenna Group.

G-4.2 Receiver-Transmitter Installation. The RT is mounted to a mounting base, MT-6678/ARS-6(V), (part of the AN/ARS-6). The mounting base is contained in a protective shroud which is secured to the cabin floor as shown in Figure 7.

(1) Locate the shroud assembly (Item 1) quick release mounts over the floor fittings. Adjust the quick release mounts as shown in Figure 8 to avoid excessive bending of the bracket.

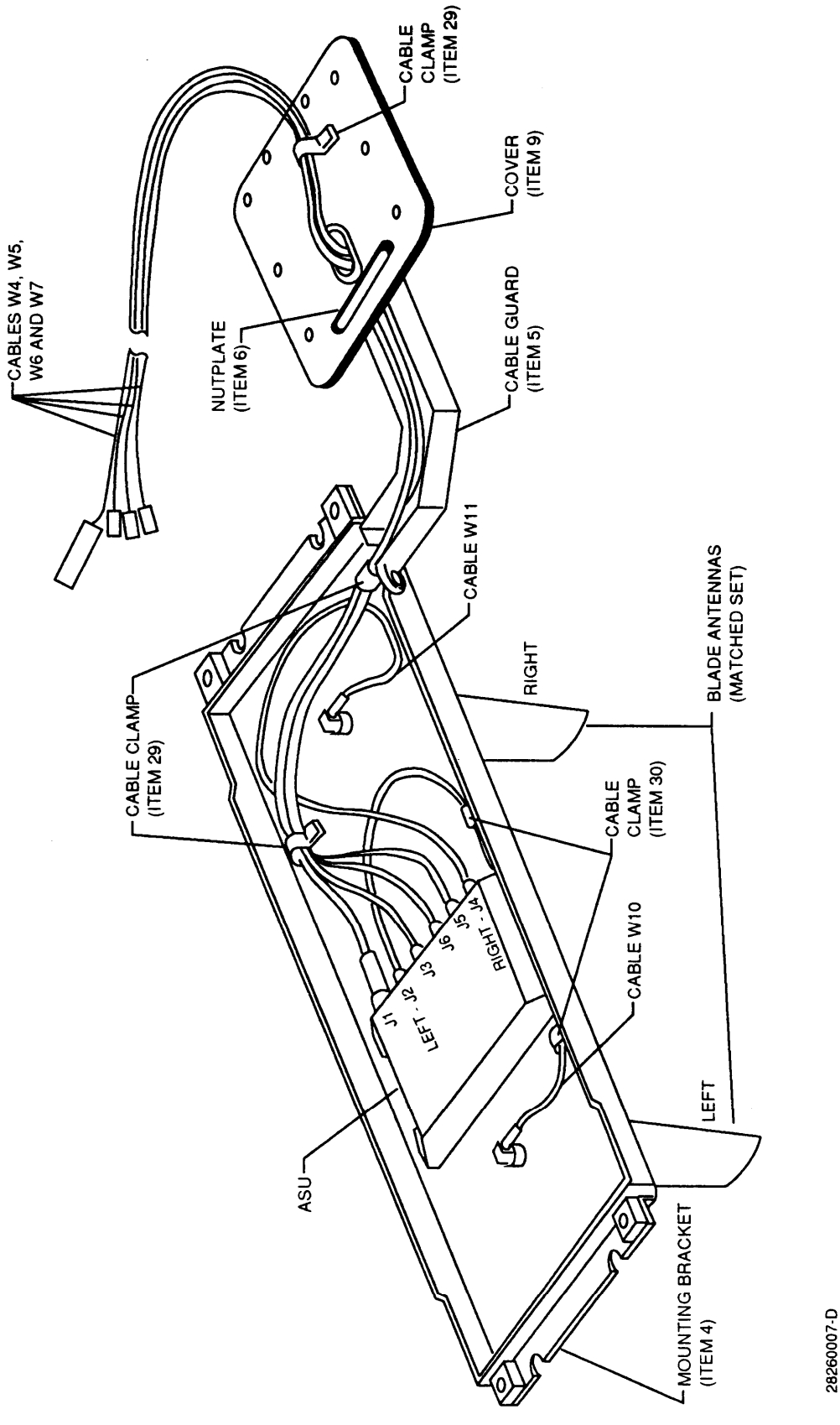


FIGURE 6. Antenna Group (AG), Pre-Installation Assembly.

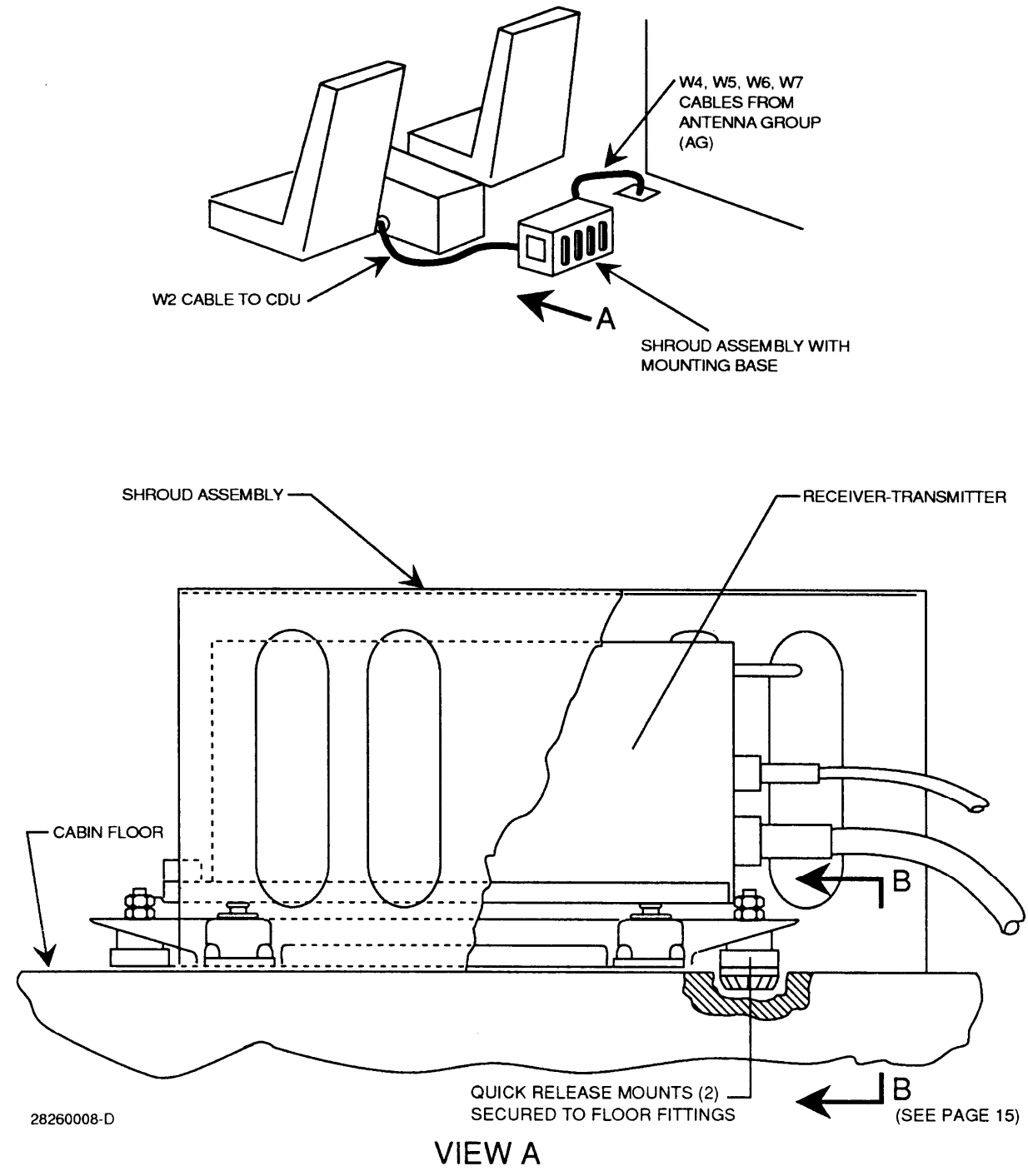


FIGURE 7. Receiver-Transmitter Installation.

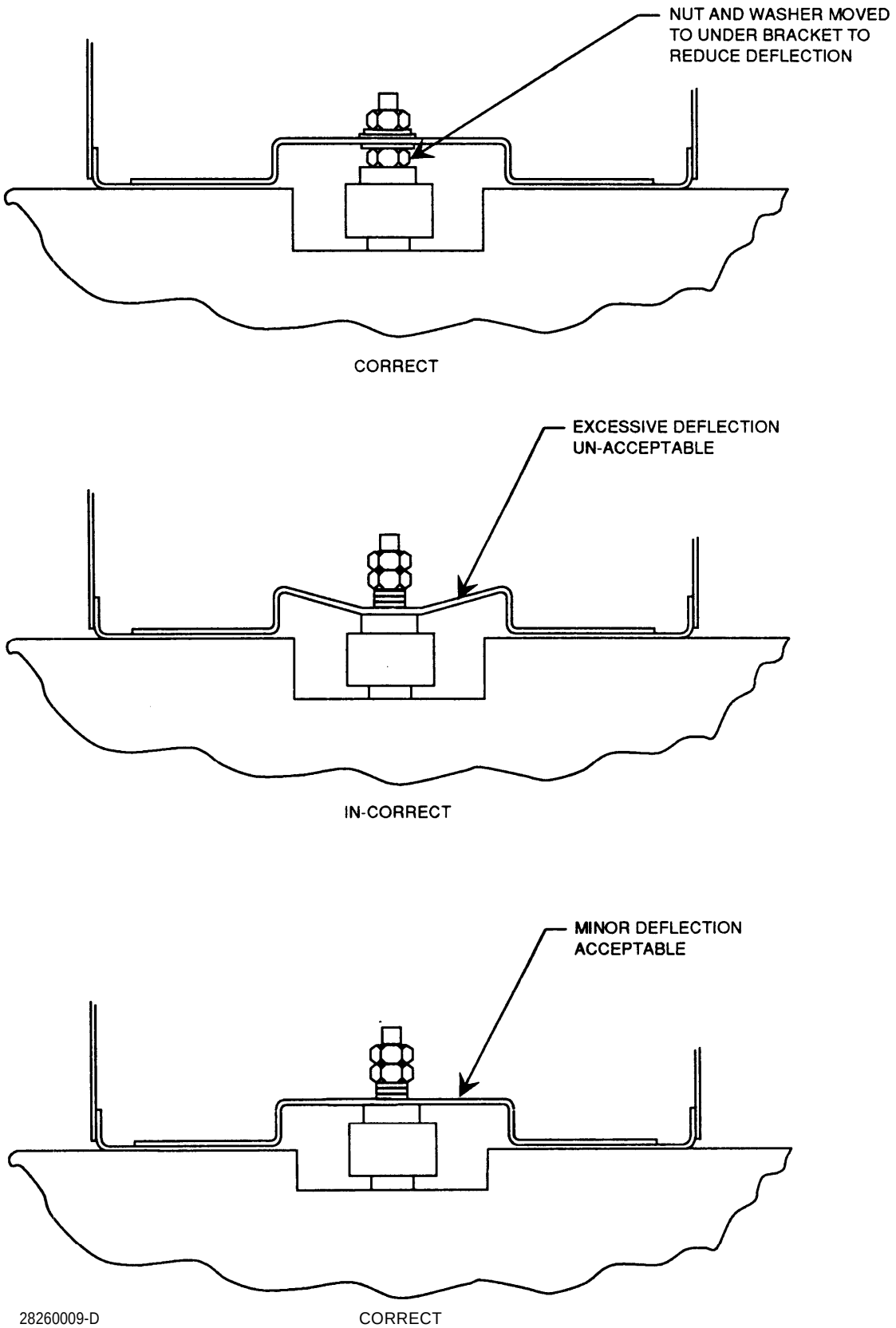


FIGURE 8. Quick Release Mount Adjustment.

NOTE

It may be necessary to remove the quick release mounts from the shroud assembly before attaching them to the floor fittings. Place the shroud assembly over the quick release mounts and tighten the nuts. Do not overtighten.

(2) Install the RT in the shroud assembly and tighten the retainers.

(3) Tie wrap any excess cable length.

G-4.3 Antenna Group (AG) with Antenna Switching Unit (ASU) Installation. The Antenna Group (AG) is mounted on the bottom of the helicopter at the forward landing skid cross tube mounting points, see Figure 9.

NOTE

Certain older model aircraft may have fiberglass ammo chutes still in place. It will be necessary to drill and grommet a 1 1/2 inch clearance hole for the AG cables to pass through.

(1) Remove the right hand inside shell eject panel from the cabin floor.

(2) Remove the access panel located aft and right of the forward landing skid cross tubes right side mounting point.

(3) Lay the Antenna Group on the ground directly below the forward landing skid cross tube and route the cables up through the panel openings into the cabin.

(4) Remove the four (4) outer most cross tube mounting bolts and lift the Antenna Group into position. Attach to the airframe using bolts (Item 35) and washers (Item 17).

NOTE

For bolt torque refer to Bolt Torque Specification, TM 55-1520-210-23.

NOTE

Due to variances in aircraft, the mounting bolt specified above may be of incorrect length. Use bolts (Items 33, 34, or 35) and multiple quantities of washers (Item 17) as required to obtain the correct length. Ensure that the Antenna Group is firmly mounted to the aircraft.

(5) Attach the external cover (part of Antenna Group) using existing aircraft hardware. Adjust the cable guard (part of Antenna Group) and tighten the screws.

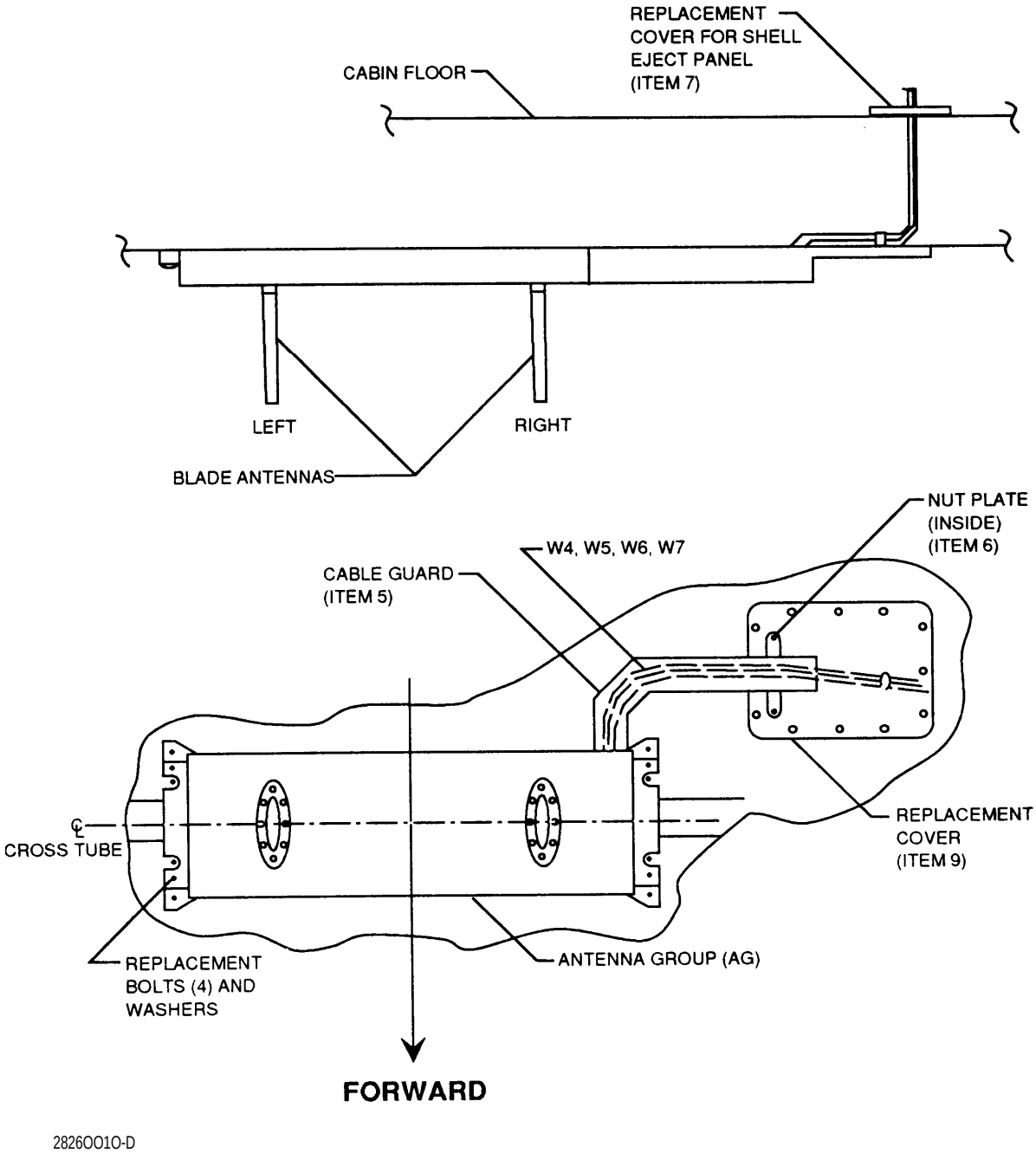


FIGURE 9. Antenna Group (AG) Installation.

(6) From inside the aircraft, feed the cables through the grommeted hole in the internal cover (Item 7) and secure the cover to the floor using existing aircraft hardware.

(7) Attach the cables to the Receiver-Transmitter. Refer to the reference designation on the cables and Figures 7 and 11.

"WARNING"

To prevent in-flight mishap securely tie all cables away from mechanical aircraft controls.

G-4.4 Remote Display Unit (RDU) Installation. The RDU is installed on the face of the instrument panel, see Figure 10.

(1) Install the RDU with bracket (Item 2) and W3 cable (Item 12) below the airspeed indicator using the instruments two (2) lower mounting screws.

(2) Route the W3 Cable (Item 12) from the RDU mounting location, aft through the front of the console, see Figure 10.

G-4.5 Control Display Unit (CDU) Installation. The CDU is installed in the center console, replacing the Number 2 FM Radio, see Figure 10. Interface to the aircraft power, intercommunications, and instrument lighting is accomplished as follows:

CAUTION

Before installing the CDU, aircraft power must be OFF and the CDU Mode Switch must be in the OFF position, or damage to the AN/ARS-6 equipment may result.

NOTE

The provision for the AN/ARS-6 instrument lighting must be 115 Vat, 400 Hz. If the aircraft has been modified to Modification Work Order MW055-1520-210-5O-21, to provide lighting for the AN/ARC-201 2nd FM Radio, this provision will exist. An adapter cable will be required if the aircraft has not been modified as above. The W1 adapter cable is required when using the provisions for the AN/ARC-114 2nd FM Radio (power and audio will be applied to the PLs, but no CDU internal lighting will exist).

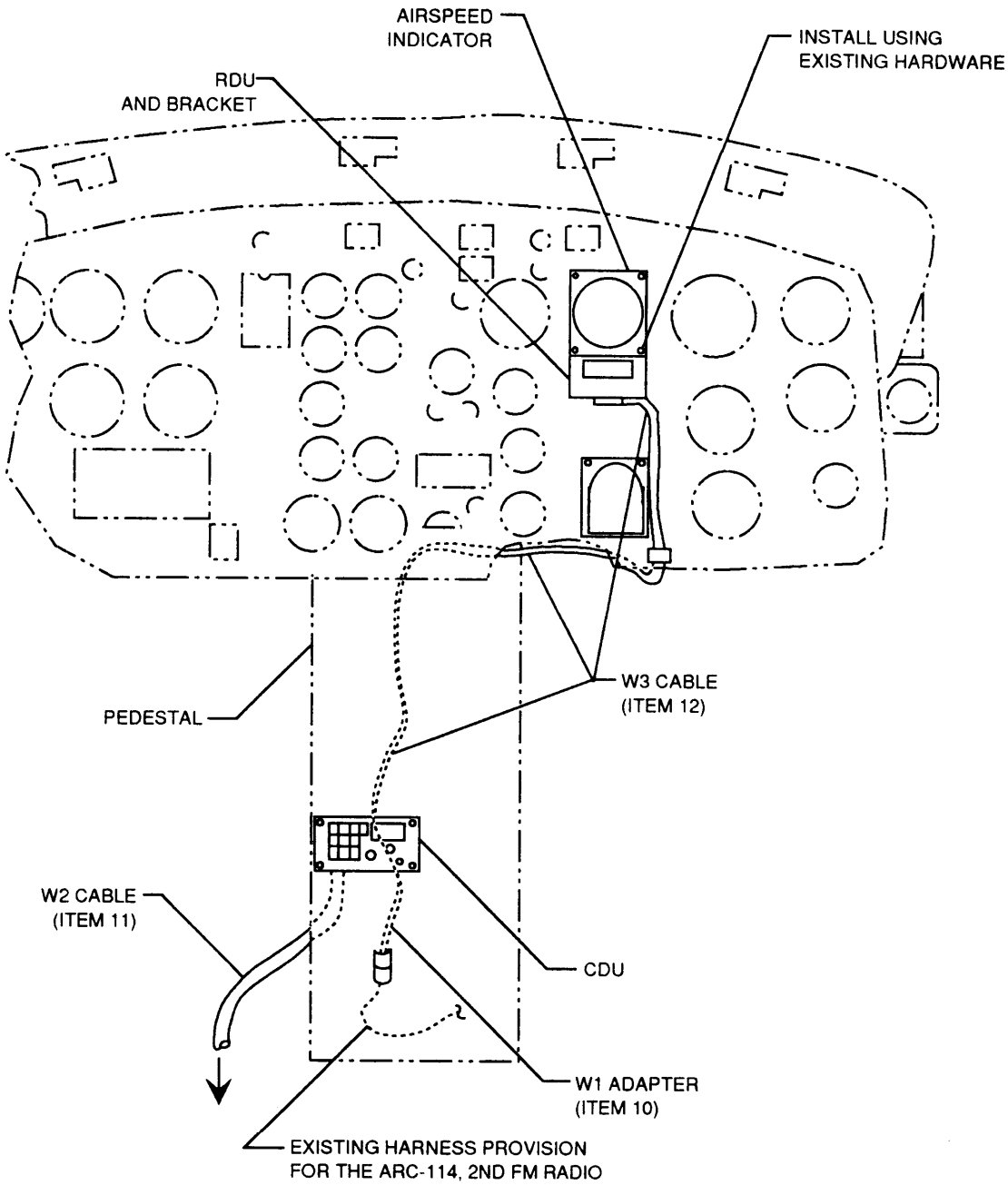


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FIGURE 10. CDU and RDU Installation.

(1) Remove the AN/ARC-114 or AN/ARC-201 2nd FM Radio and install the W1 adapter cable (Item 10) to the Radio's interface cable (AN/ARC-114).

NOTE

The W1 adapter cable will not be required for the AN/ARC-201, Sincgars interface.

(2) Remove the left side panel of the center console and replace with the replacement panel from the kit (Item 8).

(3) Connect the W2 Cable (Item 11) to the RT J1 and route through the grommeted hole in the replacement panel into the console. (See Figure 10).

(4) Connect the W1 adapter cable "(Item 10) (AN/ARC-114) or the radio interface cable (AN/ARC-201), the W2 cable (Item 11), and the W3 Cable (Item 12) (from RDU) to the CDU and mount the CDU in the console (see Figure 10).

G-4.6 Installation Completion.

(1) Secure all cables to the floor fittings using straps (Items 31 and 32).

(2) Replace all equipment and hardware removed for access during installation.

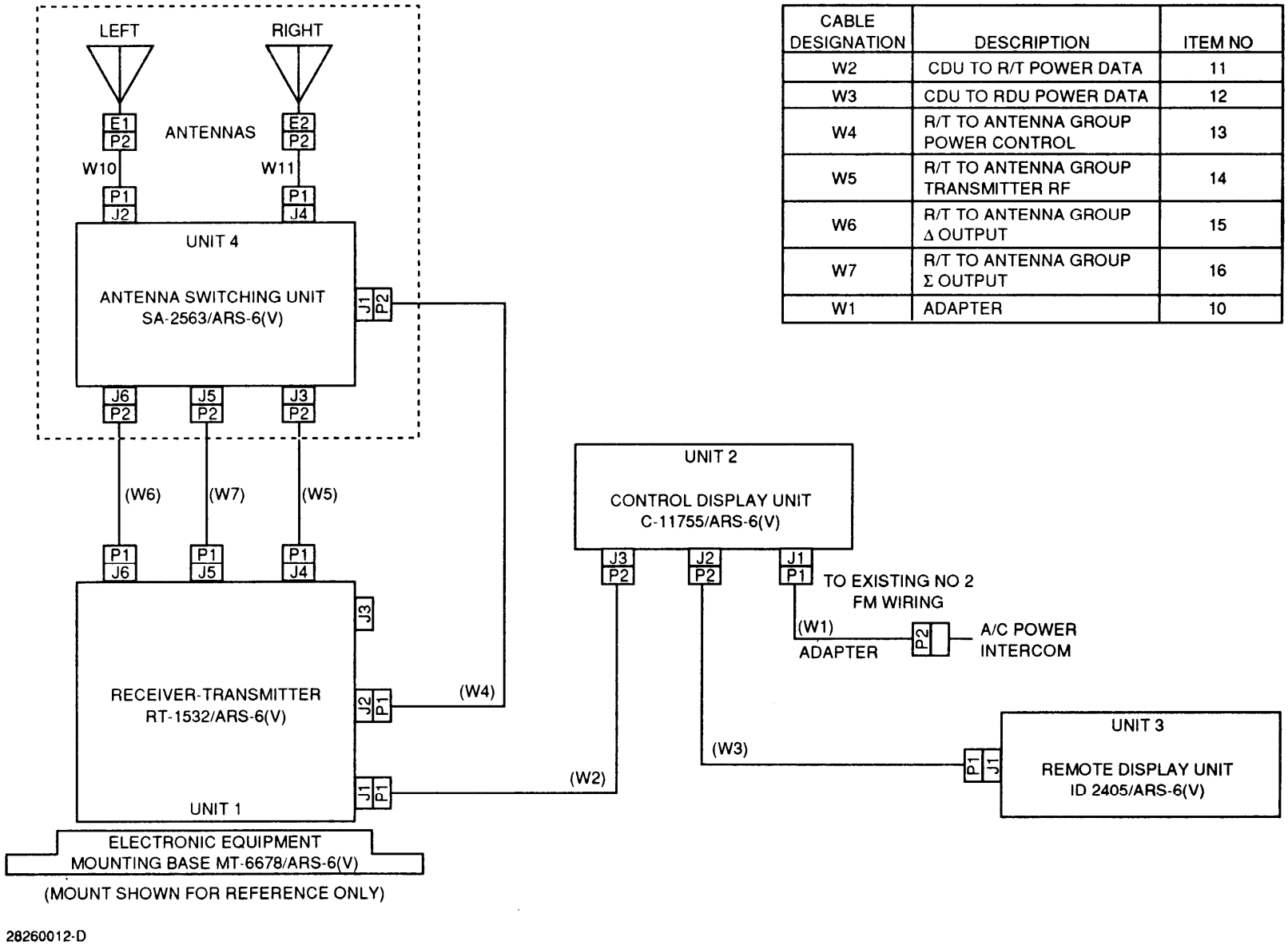
(3) Tag and store any hardware, brackets, panels, and equipment removed and/or replaced during installation according to local standard operating procedures (SOP).

G-4.7 System Checkout and Test. System Checkout and Test shall be accomplished using the PLS operational instructions (Chapter 3) of this technical manual.

G-5.0 Forms and Records. The following entries are to be made in the host aircraft Log and Record books.

G-5.1 Weight and Balance DD Form 365-1 Chart A. Using the data below a supplemental DD Form 365-1 Chart A will be generated and added to the host aircraft's weight and balance records. This form will remain as long as the MK-2683/ARS-6(V)1 is installed.

Compartment Item	Item and Location	Weight Lbs.	Arm	mom /100
B	RDU and Mount	0.6	25	0.2
B	CDU (C-11755)	2.6	45	1.2
B	Cable Assembly	2.4	65	1.6
B	Ant. Group	5.3	72	3.9
C	R/T Assembly	28.2	84	23.7



CABLE DESIGNATION	DESCRIPTION	ITEM NO
W2	CDU TO R/T POWER DATA	11
W3	CDU TO RDU POWER DATA	12
W4	R/T TO ANTENNA GROUP POWER CONTROL	13
W5	R/T TO ANTENNA GROUP TRANSMITTER RF	14
W6	R/T TO ANTENNA GROUP Δ OUTPUT	15
W7	R/T TO ANTENNA GROUP Σ OUTPUT	16
W1	ADAPTER	10

FIGURE 11. AN/ARS-6 System Interconnect Diagram.

G-5.2 Aircraft Maintenance Record DD Form 2408-13. The following entry shall be made in the host aircraft's maintenance record and will remain as long as the MK-2683/ARS-6(V) is installed.

/(Red Diagonal) "MK-2683/ARS-6(V)1 installed for PLS Mission"
"(+) 40 lbs, (+) 30.6 mom, Change not entered on chart C".

G-6.O Removal After Mission. After completion of the PLS Mission the MK-2683/ARS-6(V)1 shall be removed from the host aircraft.

G-6.1 For removal instructions follow the above installation procedures in reverse order.

G-6.2 After the kit removal is completed and prior to return of the host aircraft to normal operating status, perform a complete inventory of the MK-2683/ARS-6(V)1 as per "Table 1 of this appendix. Verify that all the cables and hardware have been returned to the kit container and no loose parts remain in the aircraft.

G-7.O Maintenance. The following periodic maintenance is required on the MK-2683/ARS-6(V)1 Mission Kit, Personnel Locator.

G-7.1 Maintenance Under Normal Conditions. The MK-2683/ARS-6(V)1 shall be checked for frayed cables, broken parts and missing hardware as called out in Table 3,1.

G-7.2 Maintenance Under Unusual Conditions. When prolonged installation of the MK-2683/ARS-6(V)1 is required, the additional maintenance called out in Table 3.11 must be performed.

TABLE 1. KIT INVENTORY LIST

ITEM NUMBER	CAGE	PART NUMBER	DESCRIPTION	QTY
1	50745	D6004212-501	SHROUD ASSEMBLY	1
2	50745	D6004204-1	MOUNTING BRACKET, RDU	1
3	50745	D6004184-501	NUTPLATE	4
4	50745	D6004213-501	MOUNTING BRACKET, ANT.	1
5	50745	D6004205-501	CABLE GUARD	1
6	50745	D6004214-1	NUTPLATE	1
7	50745	D6004207-1	COVER, INTERNAL	1
8	50745	D6004209-1	CONSOLE PANEL	1
9	50745	D6004208-1	COVER, EXTERNAL	1
INSTALLATION CABLES				
10	50745	D6004201-503	ADAPTER CABLE (W1)	1
11	50745	D6004201-502	CABLE, CDU TO RT (W2)	1
12	50745	D6004201-506	CABLE, CDU TO RDU (W3)	1
13	50745	D6004201-501	CABLE, RT TO ASU (W4)	1
14	50745	D6004202-501	CABLE, RF, RT TO ASU (W5)	1
15	50745	D6004202-502	CABLE, RF, RT TO ASU (W6)	1
16	50745	D6004202-503	CABLE, RF, RT TO ASU (W7)	1
17		TM 11-5821-342-13&P	MANUAL FOR ARS-6	
18	50745	D6004202-504	CABLE, RF, ASU TO ANT. (W10)	1
19	50745	D6004202-505	CABLE, RF, ASU TO ANT. (W11)	1
20	50745	D6004188-502	HARDWARE KIT	1

TABLE 1. KIT INVENTORY LIST-CONTINUED

ITEM NUMBER	CAGE	PART NUMBER	DESCRIPTION	QTY
HARDWARE				
ITEM 20, HARDWARE KIT CONSISTS OF THE FOLLOWING:				
21	96906	MS51957-14	SCREW, PAN HEAD	4
22	96906	MS51958-64	SCREW, PAN HEAD	15
23	96906	MS51958-12	SCREW, PAN HEAD	12
24	96906	MS24693-C52	SCREW, CSK HEAD	16
25	96906	MS15795-803	WASHER, FLAT	4
26	96906	MS15795-809	WASHER, FLAT	38
27	96906	MS15795-811	WASHER, FLAT	17
28	96906	MS21083C3	NUT	11
29	96906	MS21919WCJ4	CLAMP	3
30	96906	MS21919WCJ9	CLAMP	3
*31	96906	MS3367-4-9	STRAP, TIE-DOWN	20
*32	96906	MS3367-2-9	STRAP, TIE-DOWN	20
33	88044	AN4-H16A	BOLT	4
34	88044	AN4-H20A	BOLT	4
35	88044	AN4-H22A	BOLT	4

* ITEMS 31 AND 32 ARE CONSUMABLES AND SHOULD BE REPLACED AFTER REMOVAL FROM THE AIRCRAFT.

TABLE 2. AN/ARS-6 ANTENNA GROUP, PARTS LIST

DESCRIPTION	PART NUMBER	ITEM NUMBER	QTY
MOUNTING BRACKET	D6004213-501	4	1
CABLE GUARD	D6004205-501	5	1
NUTPLATE	D6004214-1	6	1
COVER, EXTERNAL	D6004208-1	9	1
CABLE, RT TO ASU (W4)	D6004201-501	13	1
CABLE, RF (W5)	D6004202-501	14	1
CABLE, RF (W6)	D6004202-502	15	1
CABLE, RF (W7)	D6004202-503	16	1
CABLE, RF (W10)	D6004202-504	18	1
CABLE, RF (W11)	D6004202-505	19	1
CLAMP	MS21919WCJ4	29	3
CLAMP	MS21919WCJ9	30	3
SCREW, PAN HEAD	MS51958-64	22	15
SCREW, PAN HEAD	MS51958-12	23	12
NUT	MS21083C3	28	11
WASHER, FLAT	MS15795-809	26	26
WASHER, FLAT	MS15795-811	27	1

Table 3. MK 2683/ARS-6(V)1 Maintenance Schedule

I. NORMAL CONDITIONS

Daily Preventative Maintenance Checks. To be performed while Mission Kit is installed on aircraft.

1.	Completeness	See equipment is complete all components are present and secure.
2.	Exterior Surfaces	Clean the exterior surfaces including Antennas. Check for cracks or other damage.
3.	Connectors	Check for tightness.
4.	Controls and indicators	Observe that knobs, switches indicators are not damaged and operate smoothly.

II. UNUSUAL CONDITIONS

When Mission requirements warrant extended periods of operation with the MK 2683/ARS-6(V)1 installed on the host aircraft the following Monthly Preventative Maintenance Checks MUST also be performed.

1.	Antenna Group	Remove Antenna Group from aircraft. Inspect Protective Grommets and gaskets. Replace if damaged. Perform steps 2 and 3. Reinstall Antenna Group as per G-4.3 this appendix.
2.	Metal Surfaces	Inspect exposed metal surfaces. Touch up paint as required using applicable MIL-STD-454 paint.
3.	Cables	Inspect cables and wires for chafed, cracked or frayed insulation.

APPENDIX H

INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR MK-2684/ARS-6(V)2 MISSION KIT, PERSONNEL LOCATOR ON UH-60A/L HELICOPTER

NOTE

MK-2684/ARS-6(V)2 is a mission kit applique, to be installed prior to PLS mission and to be removed upon mission completion. If mission requirements dictate extended duration of installation then periodic maintenance specified in Table 3.11 of this appendix MUST be performed. This installation is not approved for use in UH-60 aircraft configured with 6 litter carousel 3 seat MEDEVAC system installed.

TABLE OF CONTENTS
APPENDIX H

	Paragraph	Page
Introduction	H-1	H-3
Equipment Location	H-2	H-3
Installation Kit	H-3	H-3
Installation Procedures	H-4	H-3
Forms and Records	H-5	H-21
Operation	Chapter 3	
Parts List		
Removal	H-6	H-21
Maintenance	H-7	H-22

H-1 Introduction. This appendix describes all parts required and a step by step procedure for installing the MK-2684/ARS-6(V)2 Mission Kit, Personnel Locator in a UH-60A/L helicopter.

H-2 AN/ARS-6 Equipment Location. Figure 1 shows the principal components of the AN/ARS-6 as installed in a UH-60A/L helicopter. The system is comprised of:

(1) A Receiver-Transmitter [RT-1532/ARS-6(V)] which contained in a protective shroud and mounted on the cabin floor directly behind the center console.

(2) An Equipment Mounting Base [MT-6678/ARS-6(V)] to provide vibration isolated mounting for the Receiver-Transmitter.

(3) A Control Display Unit [C-11755/ARS-6(V)] installed in the center console.

(4) A Remote Display Unit [ID-2405/ARS-6(V)] installed on the instrument panel.

(5) An Antenna Set (AS-3984/ARC) installed on the bottom of the fuselage directly over the vent screen.

(6) An Antenna Switching Unit [SA-2563/ARS-6(V)] mounted under the RT inside the shroud assembly.

H-3 Mission Kit, UH-60A/L, MK-2684/ARS-6(V)2. All equipment, parts, cables, hardware, etc., that are required to install the AN/ARS-6 system are contained in the Mission Kit. This kit is shipped in a container [CY-8654/ARS-6(V)] approximately 14.75 inches high by 31.25 inches in diameter and weighs approximately 58 pounds. The contents of this kit are listed in Table 1. Provisions for storage of LRU's are included in the shipping and storage container, see Figures 2 and 3.

NOTE

The AN/ARS-6 is warranted by the contractor for depot maintenance on Line Replaceable Units (LRUs) only. These include the Receiver-Transmitter, Control Display Unit, Remote Display Unit, and Antenna Set. Warranty return procedures are specified in TB 11-5821-342-25.

NOTE

When unpacking the Mission Kit, ensure the contents are identical to those items listed in Table 1. Do not start installation unless all parts are present.

H-4 Installation Procedures. Prior to installing the AN/ARS-6 system, read the entire system installation procedure. Installation procedures for AN/ARS-6 equipment should follow the below listed steps:

(1) Pre-Installation Equipment Assembly.
(2) Antenna Group Installation,
(3) Receiver-Transmitter (RT) Installation,
(4) Remote Display Unit (RDU) installation,
(5) Control Display Unit (CDU) installation,
(6) Cable tie down and completion, and
(7) System checkout and test.

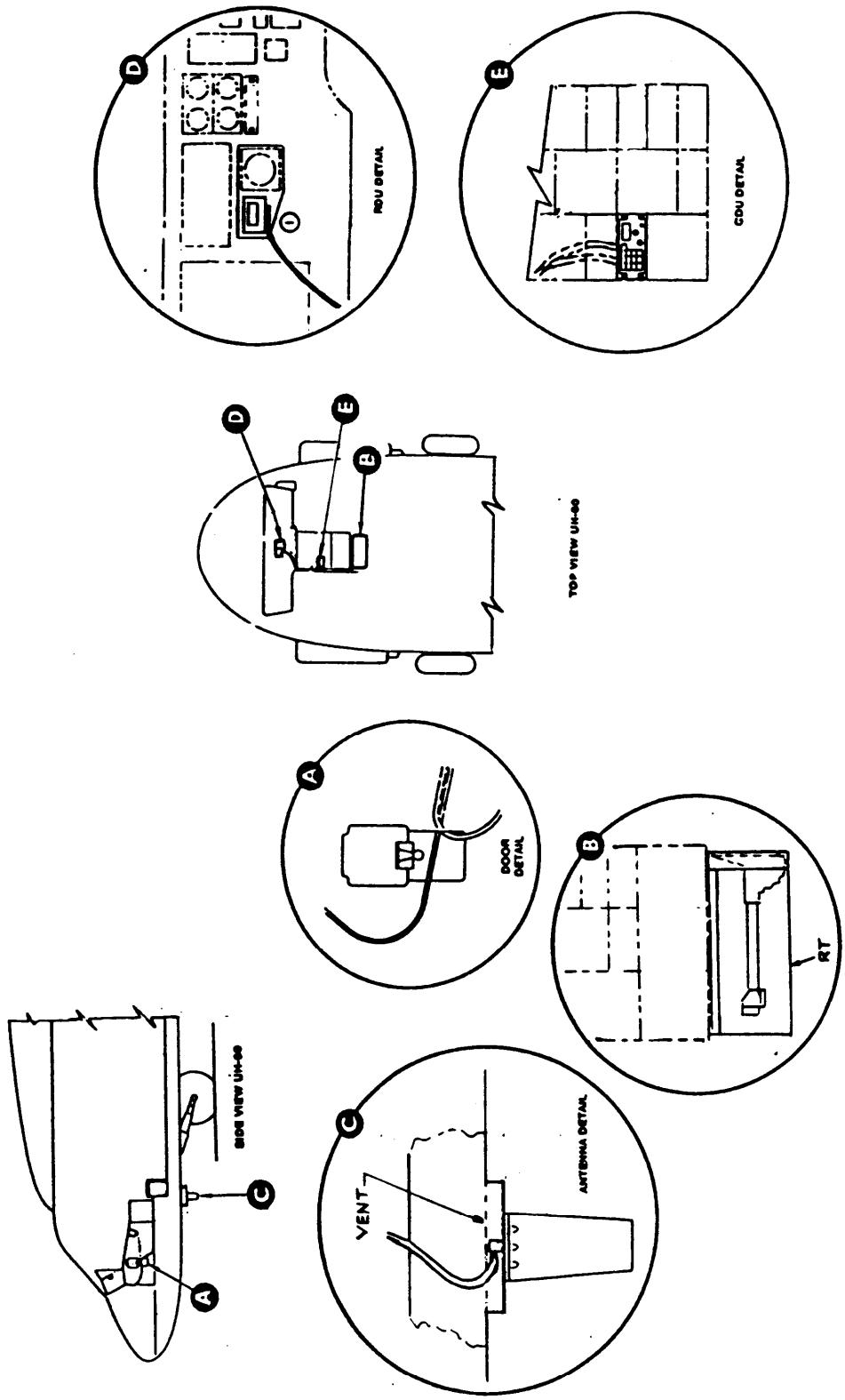


FIGURE 1. AN/ARS-6 Component Location in a UH-60A/L Helicopter

TABLE 1. KIT INVENTORY LIST

	ITEM NUMBER	FSCM	PART NUMBER	DESCRIPTION	QTY
	1	57045	D6004176-1	MOUNTING BRACKET, RDU	1
	1A	57045	D6004187-501	MOUNTING BRACKET, RDU (OPTIONAL)	1
	2	57045	D6004166-501	MOUNTING BRACKET, ANTENNA	1
	3	57045	D6004181-501	SHROUD ASSEMBLY	1
	4	57045	D6004171-501	J BRACKET (FINGER)	1
	5	57045	D6004172-1	BAR, ATTACHMENT	1
	6	57045	D6004182-501	ADAPTER PLATE	1
	7	57045	D6004184-501	NUTPLATE (SHOCKMOUNT)	4
	INSTALLATION CABLES				
	8	57045	D6004174-504	CABLE, ADPT ARC-186 (W1)	1
	9	57045	D6004174-502	CABLE, CDU TO RT (W2)	1
	10	57045	D6004174-506	CABLE, CDU TO RDU (W3)	1
	11	57045	D6004174-501	CABLE, RT TO ASU (W4)	1
	12	57045	D6004167-501	CABLE, RF, RT TO ASU (W5)	1
	13	57045	D6004167-502	CABLE, RF, RT TO ASU (W6)	1
	14	57045	D6004167-503	CABLE, RF, RT TO ASU (W7)	1
	15	57045	D6004174-503	CABLE, ADPT ARC-114 (W14)	1
	16	57045	D6004167-504	CABLE, RF, ASU TO ANT. (W10)	1
	17	57045	D6004167-505	CABLE, RF, ASU TO ANT. (W11)	1
	18	57045	D6004174-505	JUMPER CABLE (W12)	1
	19	57045	D6004188-501	HARDWARE KIT	1
	ITEM 19, HARDWARE KIT, CONSISTS OF THE FOLLOWING:				
	20	96906	MS51957-14	SCREW, PAN HEAD	4
	21	96906	MS51958-64	SCREW, PAN HEAD	2
	22	96906	MS51958-65	SCREW, PAN HEAD	12
	23	96906	MS24693-C52	SCREW, CSK HEAD	16
	24	96906	MS24693-C273	SCREW, CSK HEAD	4
	25	96906	MS15795-803	WASHER, FLAT	4
	26	96906	MS15795-809	WASHER, FLAT	36
	27	96906	MS21912WCJ4	CLAMP	2
*	28	96906	MS20995-NC20	WIRE, LOCK	50 FT
*	29	96906	MS3367-2-9	STRAP, TIE-DOWN	20
*	30	96906	MS3367-4-9	STRAP, TIE-DOWN	20
	31	88044	AN3-H3A	BOLT	7
	32	88044	AN3-H5A	BOLT	7
	33	88044	AN3-H7A	BOLT	4
	34	88044	AN3-H10A	BOLT	2
	35	88044	AN3-H14A	BOLT	2
	36	88044	AN3-H16A	BOLT	2
	37	96906	MS21083C3	NUT	4
+	38	78286	559013-2633	PLACARD (DUAL ENG TORQ)	1
	39		TM11-5821-342-13&P	MANUAL FOR ARS-6	1

* ITEMS 28, 29, AND 30 ARE CONSUMABLES AND SHOULD BE REPLACED AFTER REMOVAL FROM THE AIRCRAFT.
+ FOR USE IN CERTAIN UH-60L AIRCRAFT.

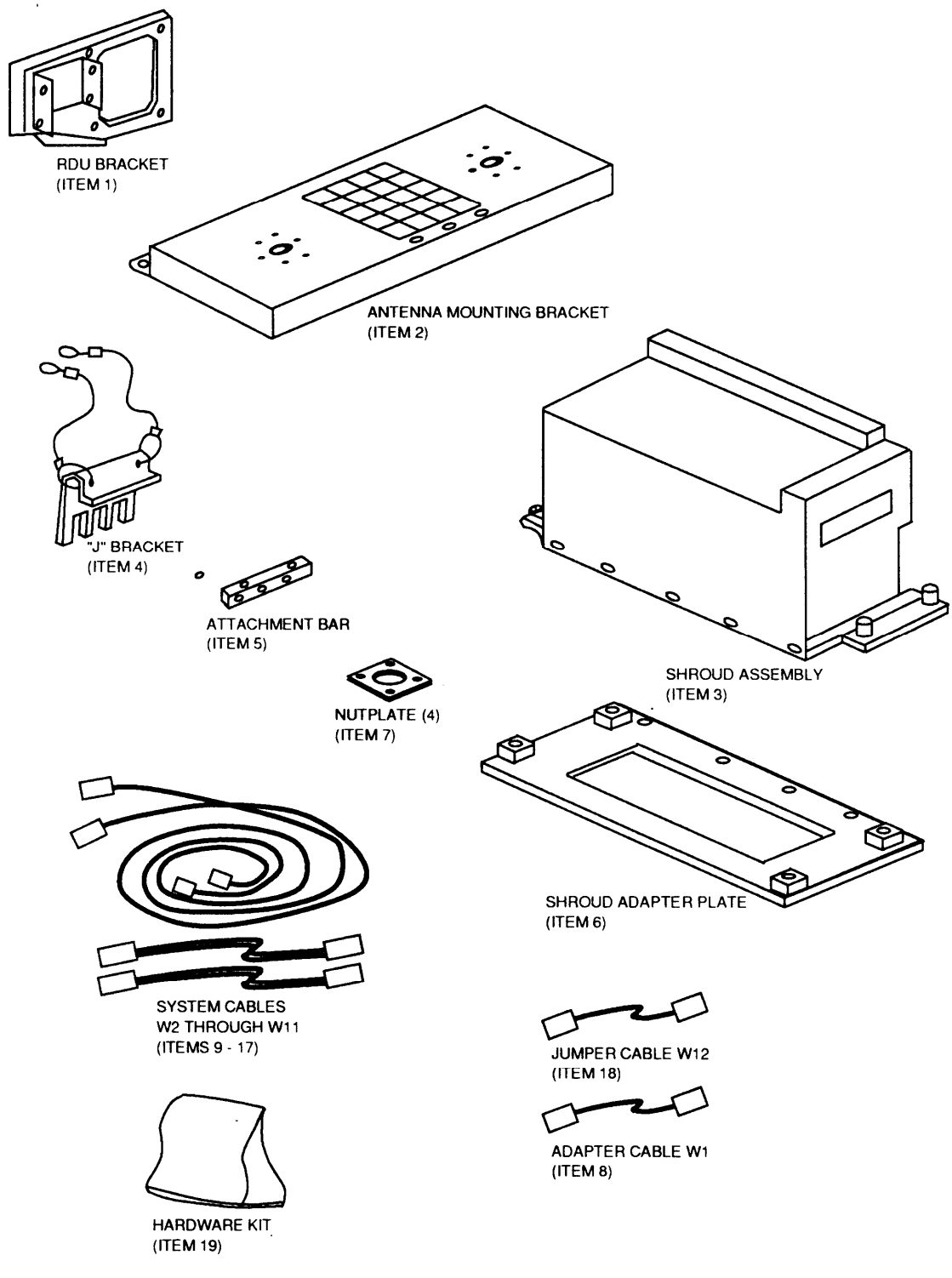
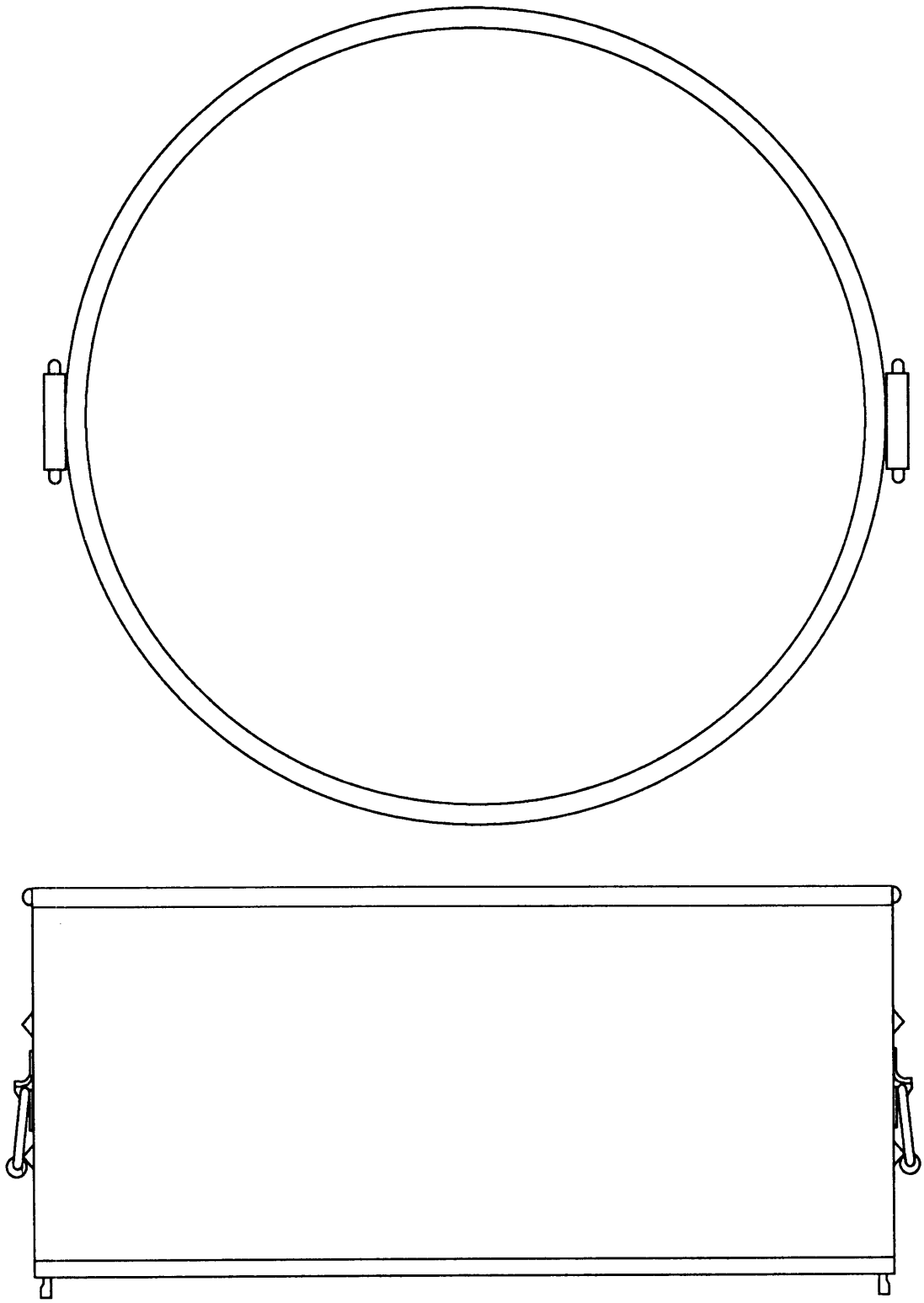


FIGURE 2. Mission Kit, UH-60A/L, MK-2684/ARS-6(V)2.



2 8 2 6 0 0 0 5 - D

FIGURE 3. Shipping Container, Mission Kit.

CAUTION

Aircraft power must be OFF before installation of the AN/ARS-6 System or damage to AN/ARS-6 equipment and/or aircraft may result.

NOTE

If the MK-2684/ARS-6(V)2 Mission Kit has been received in an assembled condition and/or has been previously installed in an aircraft, proceed to paragraph H-4.2. If however, the Mission Kit and LRUs are received as separate parts, then the Preinstallation Assembly Instructions of paragraph H-4.1 should be performed before transporting the kit to the aircraft.

H-4.1 Pre-Installation Assembly Instructions.

(1) Disassemble the shroud assembly (Item 3) cover from the base, see Figure 4.

(2) Assemble the Antenna Switching Unit (ASU) SA-2563/ARS-6(V), to the base of the shroud assembly, using screws (Item 24), washers (Item 26), and nuts (Item 37).

(3) Connect Cables W4, W5, W6, and W7 to the ASU. Refer to the reference designation of the cables, see Figure 5.

(4) Assemble the Equipment Mounting Base, MT-6678/ARS-6(V), to the base of the shroud assembly using screws (Item 23) and nutplates (Item 7), see Figure 4. Secure the ground strap between the nutplate and vibration isolator.

(5) Install the Receiver-Transmitter (RT) RT-1532/ARS-6(V) onto the Mounting Base by tightening the retainers. Connect the cables installed in Step 2) to the RT. Refer to the reference designation of the cables, see Figure 5.

(6) Reassembly of the shroud assembly cover onto the base will be performed in paragraph H-4.3.

(7) Assemble The Remote Display Unit, ID-2405/ARS-6(V), to the W3 cable (Item 1.0) and tighten the connector jack screws. Do not over tighten the jack screws, Attach the mounting bracket (Item 1) using screws (Item 20) and washers (Item 25), see Figure 6.

(8) Assemble the matched set of blade antennas (AS-3984/ARC) to antenna mounting bracket (Item 2) using screws (Item 22) and washers (Item 26). Attach cables W1O (Item 16) and W11 (Item 17) to the appropriate antenna.

NOTE

Use care to ensure that the left and right cables are connected to the proper antenna or the AN/ARS-6 will not function as specified.

(9) Secure the cables to the mounting bracket using clamps (Item 27), screws (Item 21) and washers (Item 26), see Figure 7.

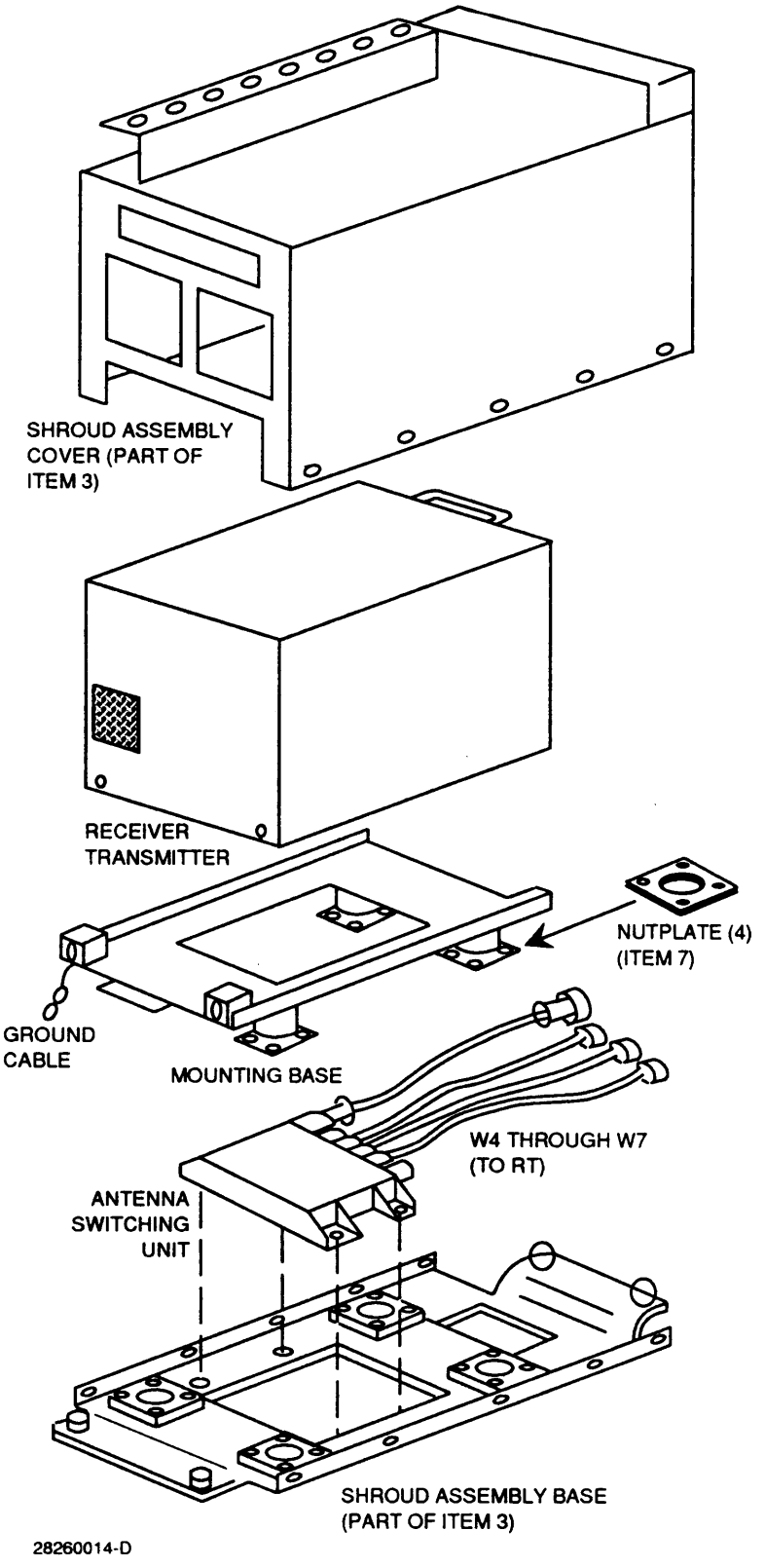
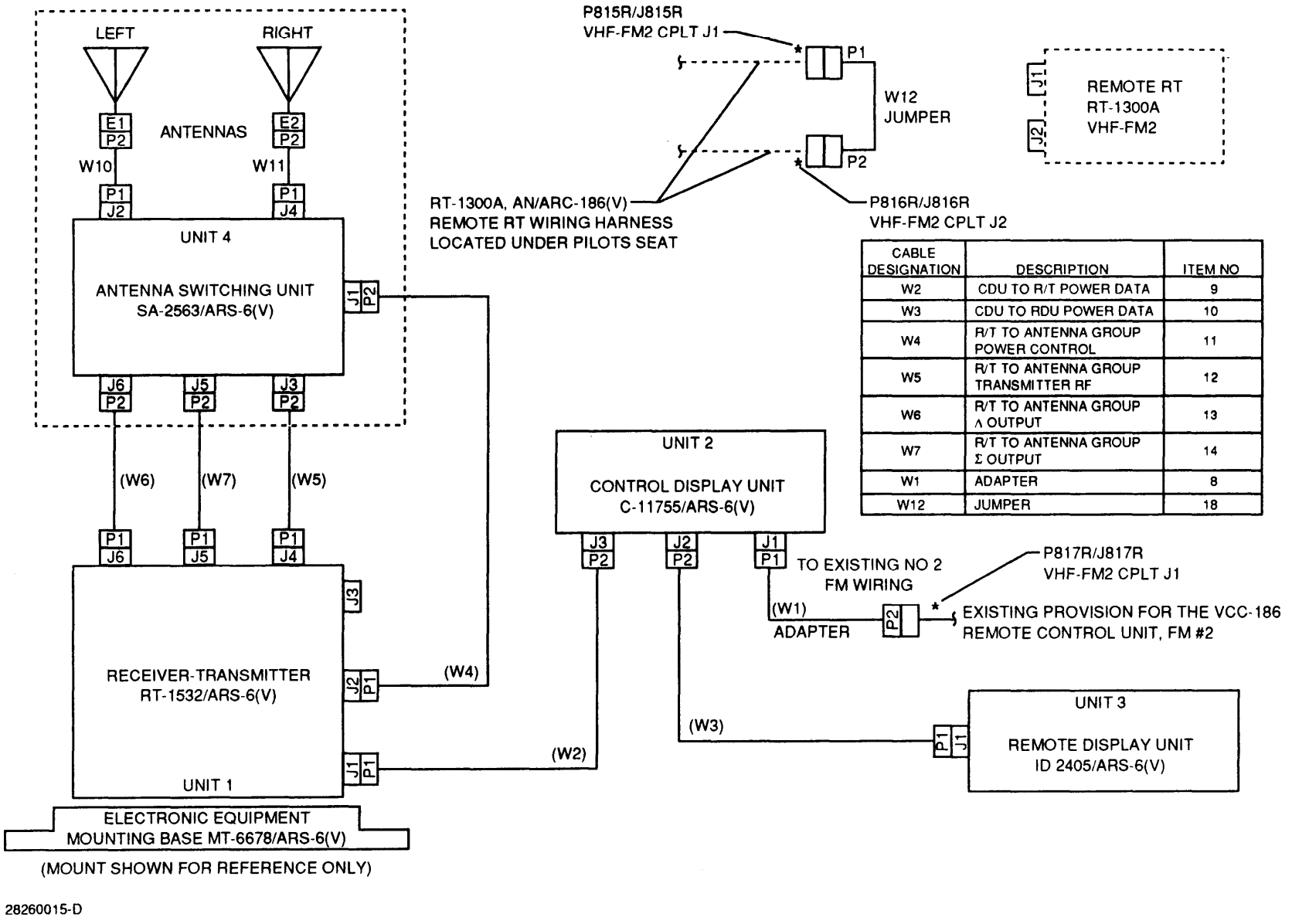


FIGURE 4. Receiver-Transmitter and Antenna Switching Unit Mounted in Protective Shroud (Pre-Installation Assembly).



CABLE DESIGNATION	DESCRIPTION	ITEM NO
W2	CDU TO R/T POWER DATA	9
W3	CDU TO RDU POWER DATA	10
W4	R/T TO ANTENNA GROUP POWER CONTROL	11
W5	R/T TO ANTENNA GROUP TRANSMITTER RF	12
W6	R/T TO ANTENNA GROUP Λ OUTPUT	13
W7	R/T TO ANTENNA GROUP Σ OUTPUT	14
W1	ADAPTER	8
W12	JUMPER	18

FIGURE 5. AN/ARS-6 Interconnect Diagram.

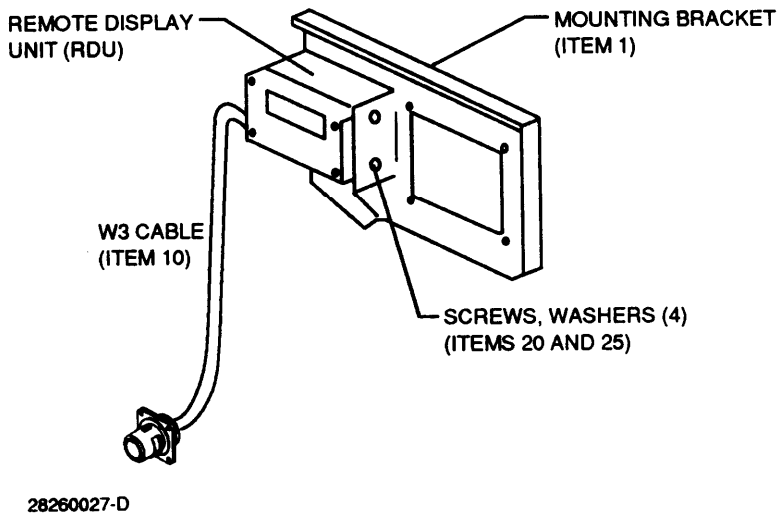


FIGURE 6. Remote Display Unit, (Pre-Installation Assembly).

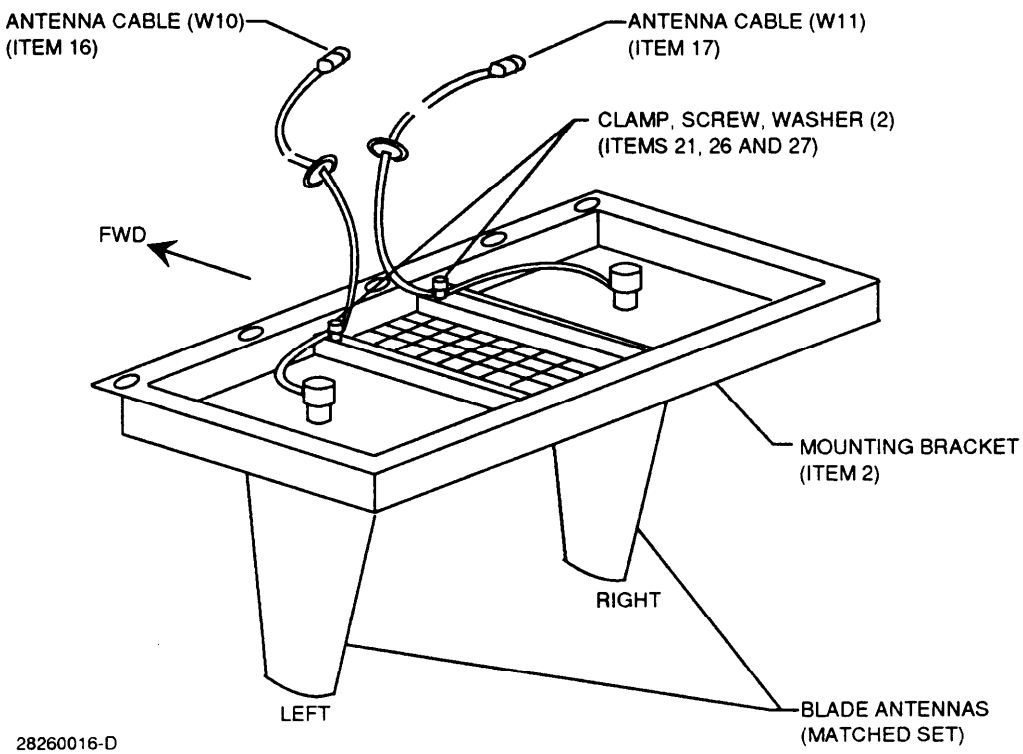


FIGURE 7. Antenna Group (AG), (Pre-Installation Assembly).

NOTE

Pre-installation assembly instruction steps 8 and 9 makes up an assembly herein referred to as the UH-60 Antenna Group (AG). See Table 2 for a complete parts list for the AG.

H-4.2 Antenna Group Installation. The Antenna Group is attached to the bottom of the fuselage over the vent opening using a special "J" bracket and existing antenna attachment screw locations, see Figure 8.

(1) Working inside the aircraft, open the aft access door of the center console (3 captive fasteners along the top of the door). Lower the "J" bracket (Item 4) to the vent screen on the bottom of fuselage using the attached lanyards.

NOTE

Access to the SAS computer reset knob may be obtained by removing the ash tray assembly.

(2) Working from the bottom of the fuselage manipulate the "J" bracket (Item 4) to the aft part of the vent and hook over the reinforcement angle, see Figure 8.

(3) Note the position markings ("FWD and DOWN") on the bar (Item 5) and attach the bar to the "J" bracket (Item 4) using bolts (Item 31) and washers (Item 26). After the bolt heads contact the bracket surface, tighten with a wrench. Lock these 4 bolts using safety wire (Item 28).

(4) Remove the aft row of screws (quantity 5) from the FLUSH/QUAD antenna.

(5) Pass the left (W1O) and right (W11) antenna cables (Items 16 and 17) up through the vent and work the grommets (part of the cable), into place on the vent.

(6) Position the forward flange of the AG over the holes for the screws removed in step 4 and attach using bolts (Items 32 and 34) and washers (Item 26). Secure the aft edge to the attachment bar that was installed in step 3 using bolts (Item 31) and washers (Item 26) in 3 places. After the bolt heads contact the bracket surface, tighten with a wrench. Lock these 3 bolts using safety wire (Item 28), see Figure 8.

(7) Working from inside the aircraft feed the W1O and W11 cables through the grommeted hole located at the bottom aft left side of the center console.

(8) Tie up the lanyards attached to the 'J" bracket (Item 4) using straps (Item 29 or 30) to aid in retrieval of the "J" bracket during disassembly.

H-4.3 Receiver-Transmitter Installation. The RT is installed aft of the center console. It is housed in a protective shroud that is attached with screws (Item) to an adapter plate secured to the cabin floor, see Figure 9.

NOTE

For this installation, the antenna switching unit is installed in the shroud assembly under the RT.

TABLE 2. AN/ARS-6 ANTENNA GROUP PARTS LIST

ITEM NUMBER	PART NUMBER	DESCRIPTION	QTY
2	D6004166-501	MOUNTING BRACKET, ANT	1
16	D6004167-504	CABLE (RF) ASU/ANT (W10)	1
17	D6004167-505	CABLE (RF) ASU/ANT (W11)	1
27	MS21919WCJ4	CLAMP	2
21	MS51958-64	SCREW	2
22	MS51958-65	SCREW	12
26	MS15795-808	WASHER	14

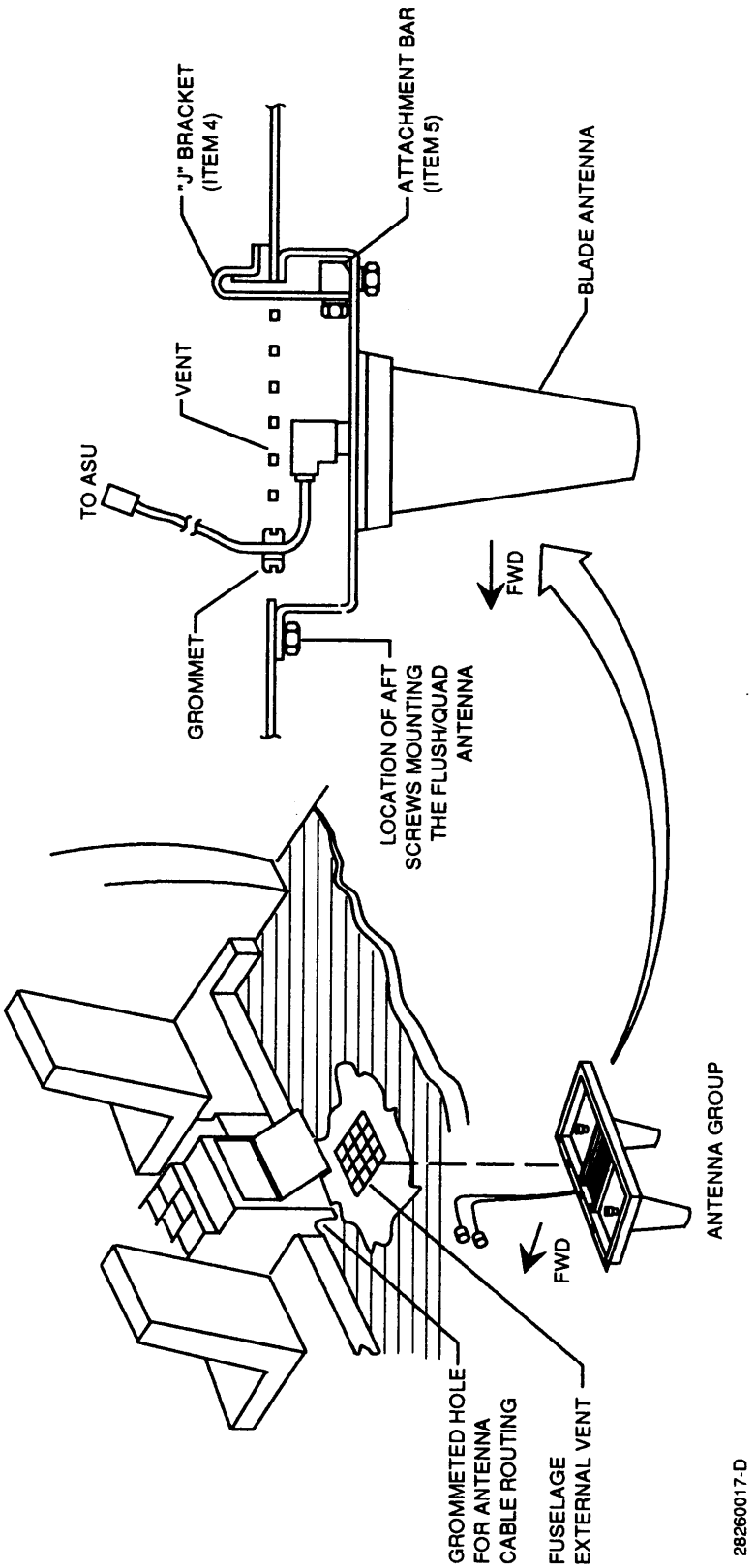


FIGURE 8. Antenna Group (AG) Installation.

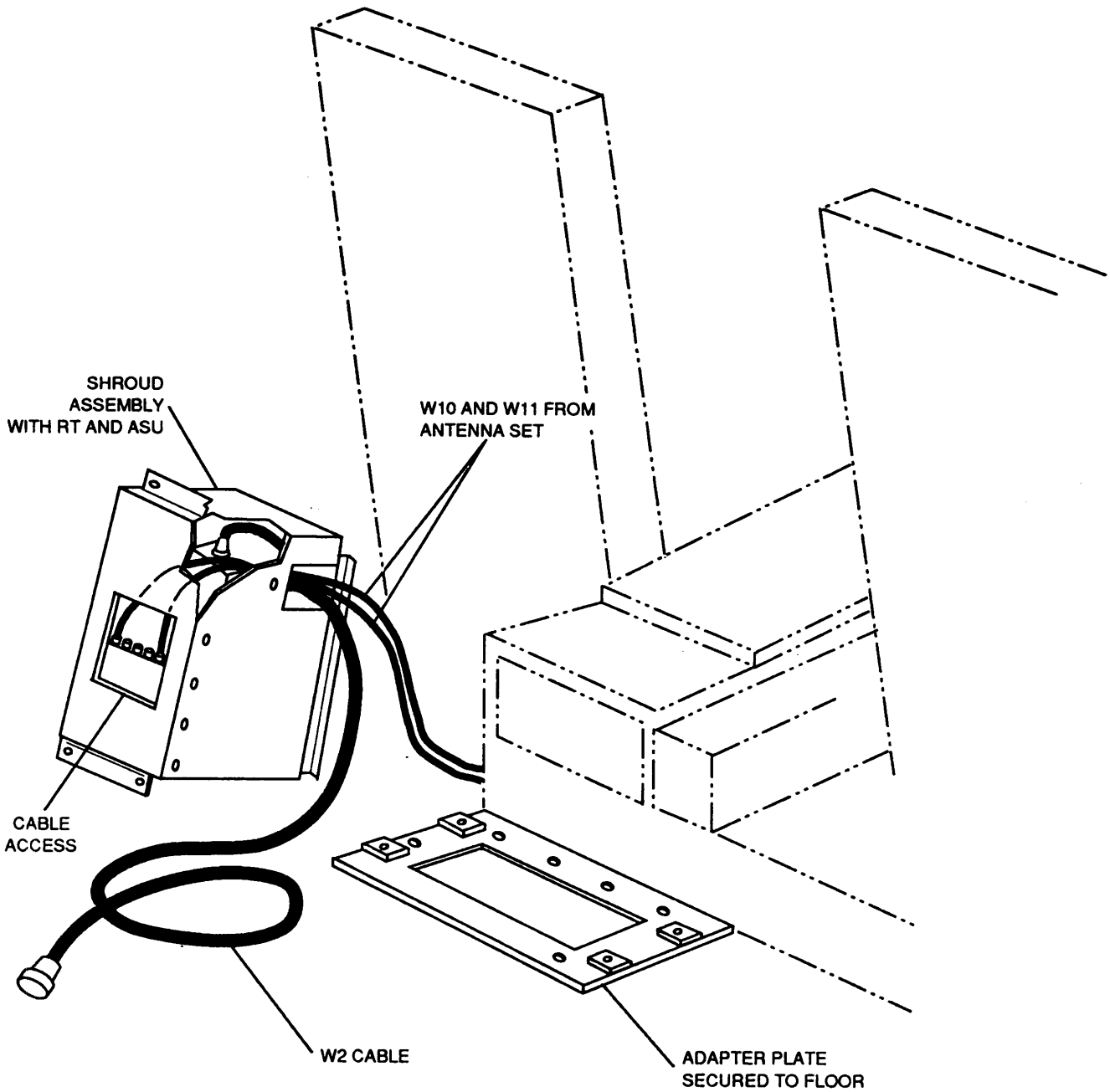


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FIGURE 9. RT and ASU Installation.

(1) Working from inside the aircraft immediately aft of the center console, remove the axe from its holder.

(2) Remove the six screws from the floor that align with the shroud adapter plate (Item 6) mounting holes.

NOTE

Due to variances in aircraft, the mounting holes in the adapter plate may not line up with existing screw locations in the cabin floor. Minor alteration to the adapter plate is permitted providing secure attachment of the plate to the aircraft is not compromised.

(2) Install the shroud adapter plate (Item 6) to the cabin floor using screws [Items 32, 33, 35, or 36 (length as required)] and washers (Item 26).

(3) Place the shroud assembly (Item 3) with the RT and ASU installed on end as shown in Figure 9. Route the antenna cables W1O and W11 from the grommeted hole in the side of the console and into the shroud terminating at their appropriate connector on the ASU. Refer to the reference designation marked on the cables. Access to the ASU can be made from the bottom of the shroud assembly. Connect the W2 cable (Item 9) to RT J1, routing through the opening and cable clamp in the shroud. Bundle cable with W1O and W11 antenna cables and secure to the shroud using the clamp on the inside of the shroud.

(4) Reassemble the shroud assembly onto the base using the screws and washers removed in paragraph H-4.1.

(5) Route the W2 Cable P2 to the CDU mounting location in the center console as shown in Figure 10.

(6) Position the shroud on the adapter plate. Route W2, W1O, and W11 cables along the channel on top of the shroud and attach the shroud to the adapter plate using the four captive screws.

(7) Attach the axe (removed in step 1), in the holder on the shroud using the velcro strap to secure in place.

H-4.4 Remote Display Unit (RDU) Installation. The RDU is installed on the instrument panel, see Figure 12.

(1) Remove the screws from the blanking panel or AN/APR-39 indicator (if so equipped).

(2) Install the RDU with mounting bracket. If the AN/APR-39 indicator was removed, disconnect its cable and install the bracket over the body of the indicator. Reconnect the AN/APR-39's cable and install the indicator back into the instrument panel securing the bracket and the indicator using screws removed in step (1).

(3) Route the W3 cable (Item 10) from the RDU mounting location through the side access door of the center console then aft as shown in Figure 10.

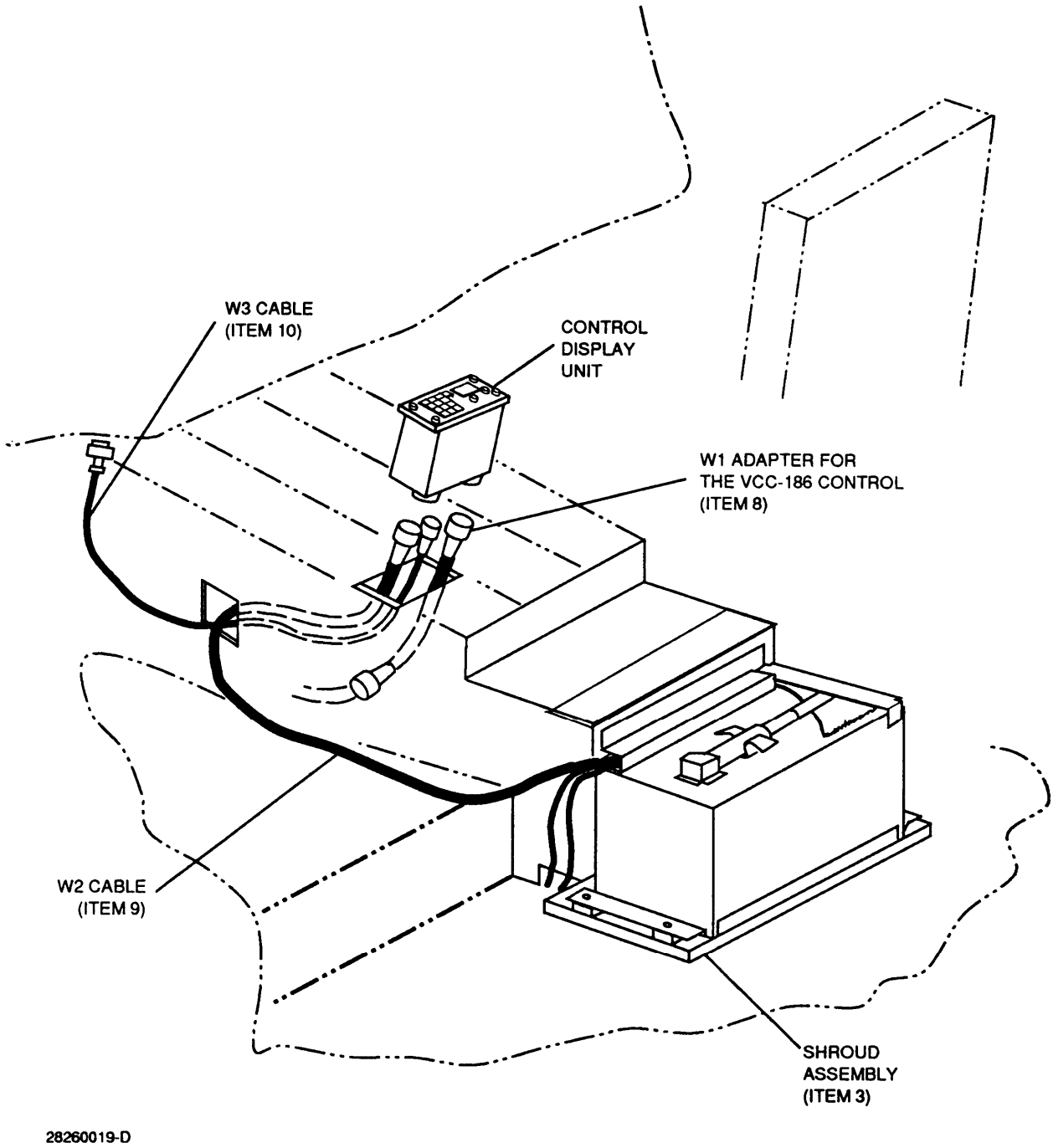


FIGURE 10. Control Display Unit Installation.

H-4.5 Control Display Unit (CDU) Installation. The CDU is installed in the center console, and uses the power and intercom provisions for the Number 2 FM Radio. Interface to the aircraft power, intercommunications, and instrument lighting is accomplished as follows:

CAUTION

Before installing the CDU, aircraft power must be OFF and the CDU Mode Switch must be in the OFF position or damage to the AN/ARS-6 equipment may result.

NOTE

If the host aircraft is equipped with AN/ARC-201 Sincgars radios W1 or W14 adapter is not required.

(1) If installed, remove the 2nd FM Radio. Install adapter cable (WI) or (W14) between the existing FM2 cable and the CDU.

NOTE

If the radio removed is a panel mount AN/ARC-186(V) or similar, install W14 (Item 15) and proceed to step 3.

NOTE

If the radio removed is a remote control unit and a RT-1300A configuration or similar, proceed to step 2.

(2) Install the W1 adapter cable (Item 8) on the remote radio's interface cable. Tilt the pilot's seat aft to gain access to the seat well and locate the RT-1300A Receiver-Transmitter, see Figure 11. Disconnect the 2 cables from the RT-1300A and install the W12 jumper cable (Item 18) between the 2 disconnected cables, see Figure 5.

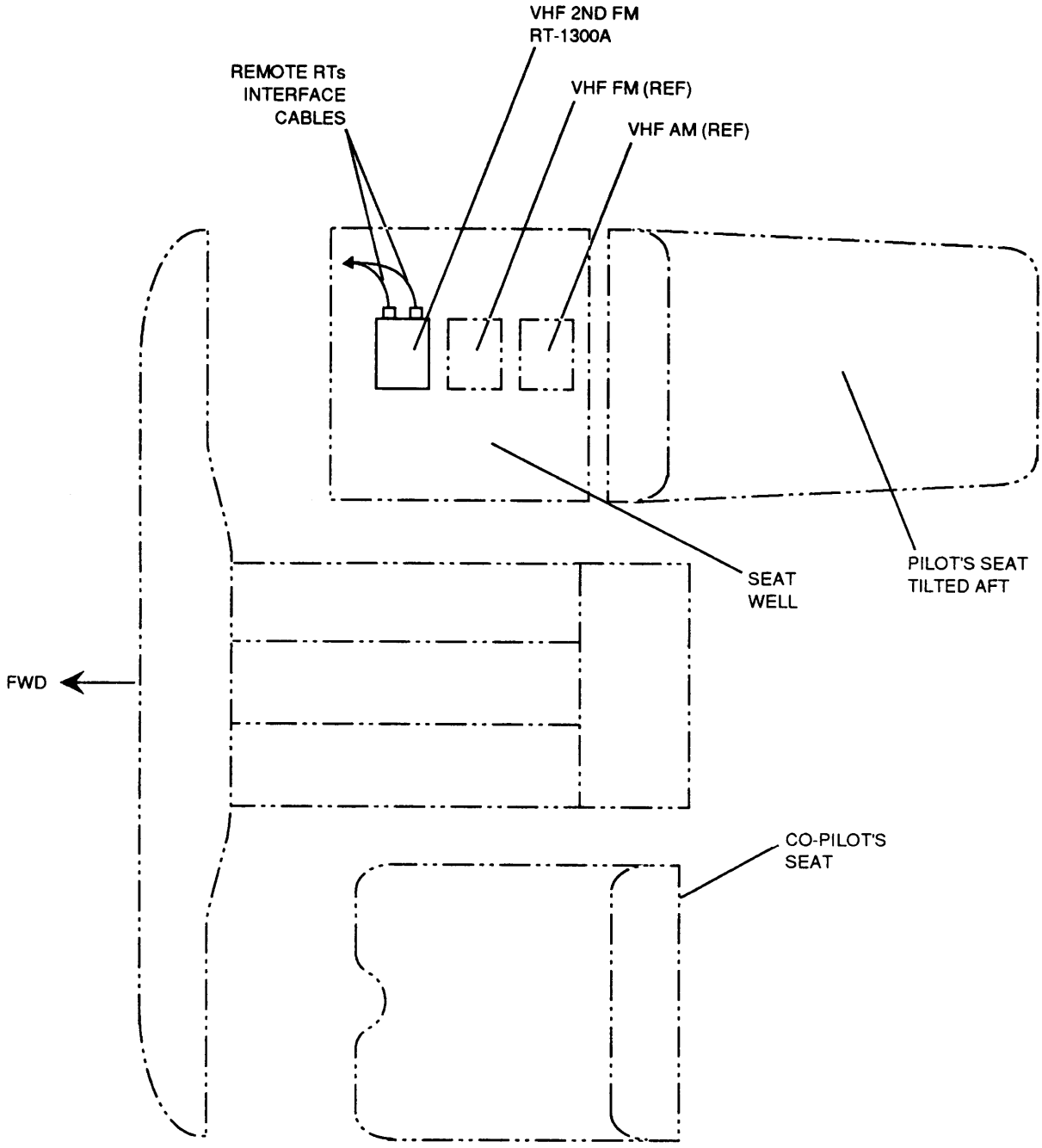
CAUTION

The W12 jumper cable must be removed when removing AN/ARS-6 from the aircraft or damage to the ARC-186 control unit will result.

(3) Connect the AN/ARC-186(V) Radio harness (disconnected in step 1) or the W1 adapter cable (Item 8) (installed in step 2), the W2 cable (Item 9) and the W3 cable (Item 10) to the CDU. Refer to the reference designation on the cable and Figure 5. Mount the CDU into the center console, see Figure 10.

H-4.6 Installation Completion.

(1) Secure all cables using straps (Item 29 or 30).



VIEW OF COCKPIT LOOKING DOWN

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FIGURE 11. Location of the RT-1300A.

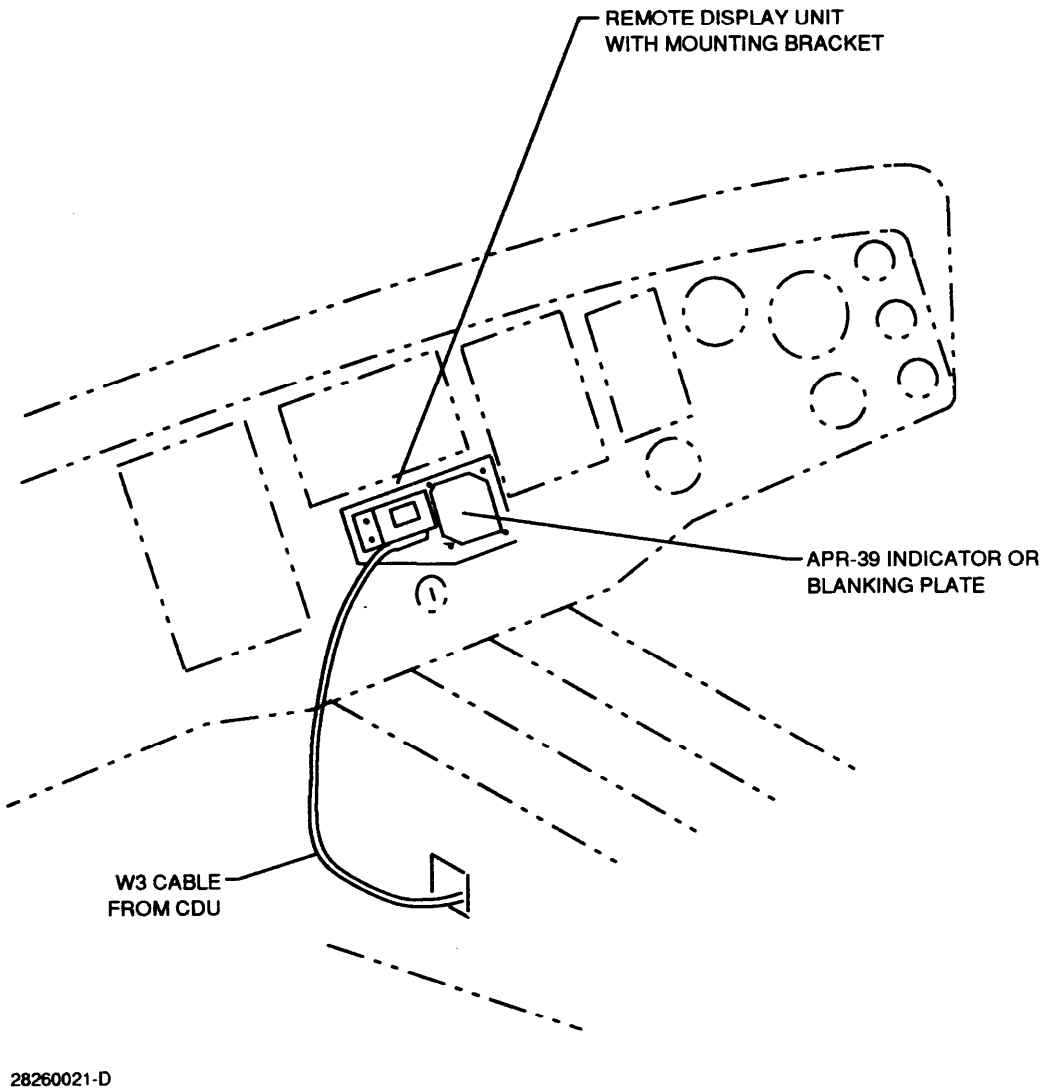


FIGURE 12. RDU Installation.

(2) Replace access panels removed during this installation.

(3) Tag and store any hardware, brackets, panels, and equipment removed and/or replaced during installation in accordance with local standard operating procedure (SOP).

H-4.7 System Checkout and Test. System Checkout and Test shall be accomplished using the PLS Operational Instructions (Chapter 3) of this technical manual.

H-5.0 Forms and Records. The following entries are to be made in the host aircraft Log and Record books.

H-5.1 Weight and Balance DD Form 365A Chart A. Prepare a supplemental DD Form 356-1 chart A, using the data below and insert it in the host aircraft's weight and balance records. This form shall remain as long as the MK 2684/ARS-6(V)2 is installed.

Compartment Item No.	Item and Location	Weight lbs.	Arm	mom /100
B	RDU and Mount	0.6	206	0.1
B	CDU (C-11755)	2.6	226	0.6
c	Cable Assembly	0.8	240	0.2
c	Ant. Group	4.3	254	1.1
c	R/T Assembly	31.5	257	8.1

H-5.2 Aircraft Maintenance Record DA Form 2408-13. The following entry shall be made into the host aircraft's maintenance record and will remain as long as the MK-2684/ARS-6(V)2 is installed.

/(Red Diagonal) "MK-2684/ARS-6(V)2 installed for PLS Mission"
"(+) 40 lbs., (+) 10.1 mom, change not entered on Chart C"

H-6.O Removal After Mission. After completion of the PLS Mission the MK-2684/ARS-6(V)2 shall be removed from the host aircraft.

H-6.1 For removal instructions follow the above installation procedures in reverse order.

H-6.2 After the kit removal is completed and prior to return of the host aircraft to normal operating status. Perform a complete inventory of the MK-2684/ARS-6(V)2 as per Table 1 in this appendix. Verify that all the cables and hardware have been returned to the Kit container and no loose parts remain in the host aircraft.

H-7.O Maintenance. The following periodic maintenance is required on the MK-2684/ARS-6(V)2 Mission Kit, Personnel Locator.

H-7.1 Maintenance Under Normal Conditions. The MK 2684/ARS-6(V)2 shall be checked for frayed cables, broken parts and missing hardware as called out in Table 3.1.

H-7.2 Maintenance Under Unusual Conditions. When prolonged installation of the MK 2684/ARS-6(V)2 is required, the additional maintenance called out in Table 3.II MUST be performed.

Table 3. MK 2684/ARS-6(V)2 Maintenance Schedule

I. NORMAL CONDITIONS

Daily Preventative Maintenance Checks. To be performed while Mission Kit is installed on aircraft.

1.	Completeness	See equipment is complete all components are present and secure.
2.	Exterior Surfaces	Clean the exterior surfaces including Antennas. Check for cracks or other damage.
3.	Connectors	Check for tightness.
4.	Controls and indicators	Observe that knobs, switches indicators are not damaged and operate smoothly.

II. UNUSUAL CONDITIONS

When Mission requirements warrant extended periods of operation with the MK 2684/ARS-6(V)2 installed on the host aircraft the following Monthly Preventative Maintenance Checks MUST also be performed.

1.	Antenna Group	Remove Antenna Group from aircraft. Inspect Protective Grommets and gaskets. Replace if damaged. Perform steps 2 and 3. Reinstall Antenna Group as per H-4.2 this appendix.
2.	Metal Surfaces	Inspect exposed metal surfaces. Touch up paint as required using applicable MIL-STD-454 paint.
3.	Cables	Inspect cables and wires for chafed, cracked or frayed insulation.

APPENDIX J

INSTALLATION INSTRUCTIONS
AN/ARS-6 RADIO SET, PERSONNEL LOCATOR
FOR
DOWNED AIRCREW LOCATING SYSTEM (DALS)
ON
SH-3H HELICOPTERS

GROUP B
INSTALLATION

J-1 Introduction. This appendix describes a step-by-step procedure for installing the AN/ARS-6 Radio Set, Personnel Locator (DALS) in a SH-3H helicopter that has been modified by the installation of Group A. See Appendix XX for installation of Group A. See Figure 1 for a system interconnect diagram.

J-2 DALS Equipment Location. Figure 2 shows the principal components of the DALS as installed in a SH-3H helicopter. The system is comprised of:

(1) A Receiver-Transmitter [RT-1532/ARS-6(V)] which is mounted to the upper shelf of the forward electronic equipment bay.

(2) An Equipment Mounting Base [MT-6678/ARS-6(V)] to provide vibration isolated mounting for the Receiver-Transmitter.

(3) A Control Display Unit [C-11755/ARS-6(V)l installed in the center console.

(4) Two Remote Display Units [ID-2405/ARS-6(V)] installed on brackets at each end of the instrument panel.

(5) An Antenna Set (AS-3984/ARC) installed on brackets mounted on the forward electronic equipment bay door.

(6) An Antenna Switching Unit [SA-2563/ARS-6(V)] installed on a bracket mounted on the inside of the forward equipment bay door adjacent to the antenna set.

J-3 Group B Installation Procedures. Prior to installing the DALS equipment, read the entire installation procedure. Installation procedures for the DALS equipment should follow the steps listed below:

(1) Receiver-Transmitter (RT) installation,

(2) Antenna Set installation,

(3) Antenna Switching Unit (ASU) installation,

(4) Remote Display Unit (RDU) installation,

(5) Control Display Unit (CDU) installation,

(6) System checkout and test.

CAUTION

Aircraft power must be OFF before installation of the DALS or damage to DALS equipment and/or aircraft may result.

J-3.1 Receiver-Transmitter (RT) Installation. The RT is mounted to the equipment mounting base which is mounted to the upper shelf in the forward electronic equipment bay, see Figure 3.

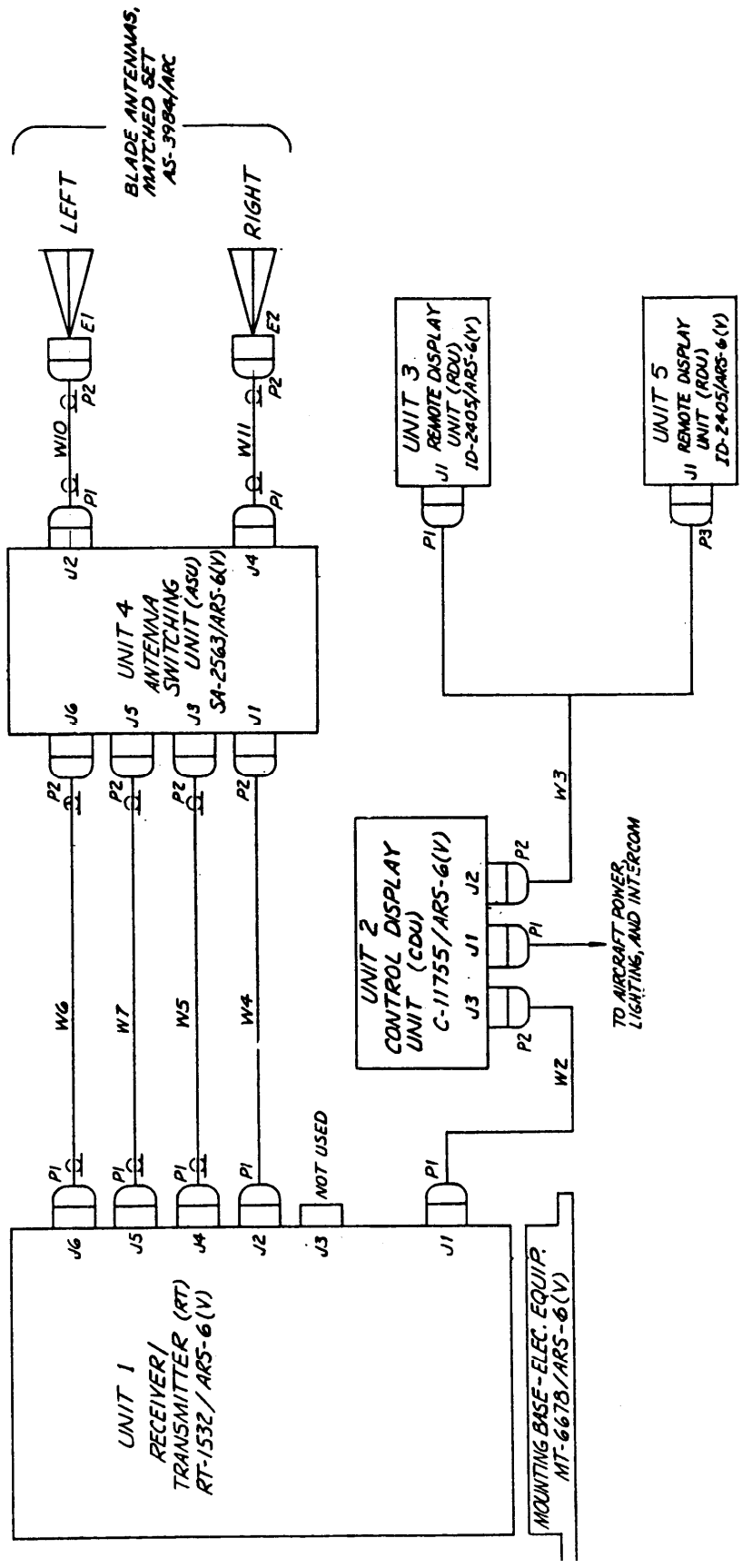


FIGURE 1. DALS System Interconnect Diagram.

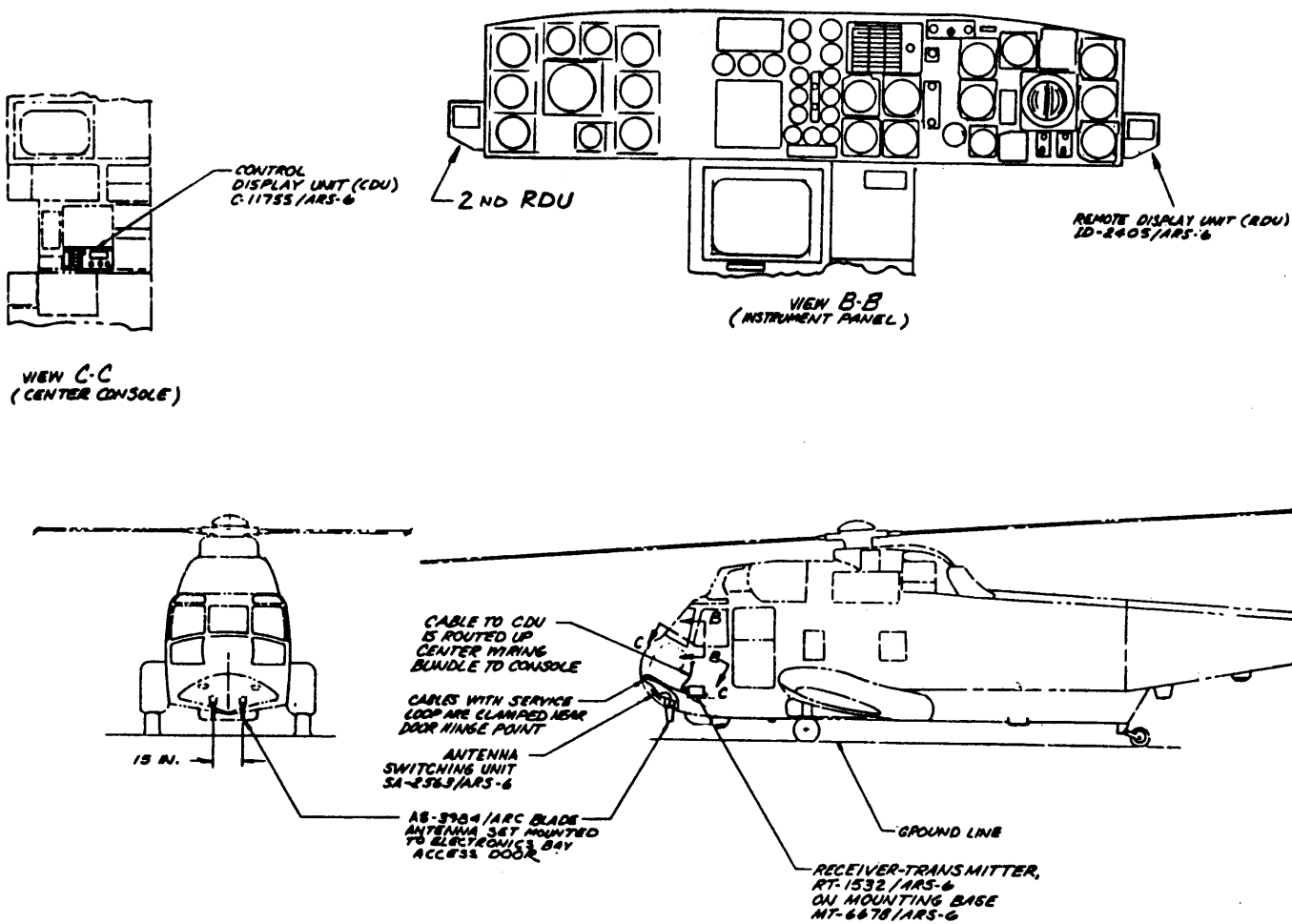


FIGURE 2. DALS Component Location

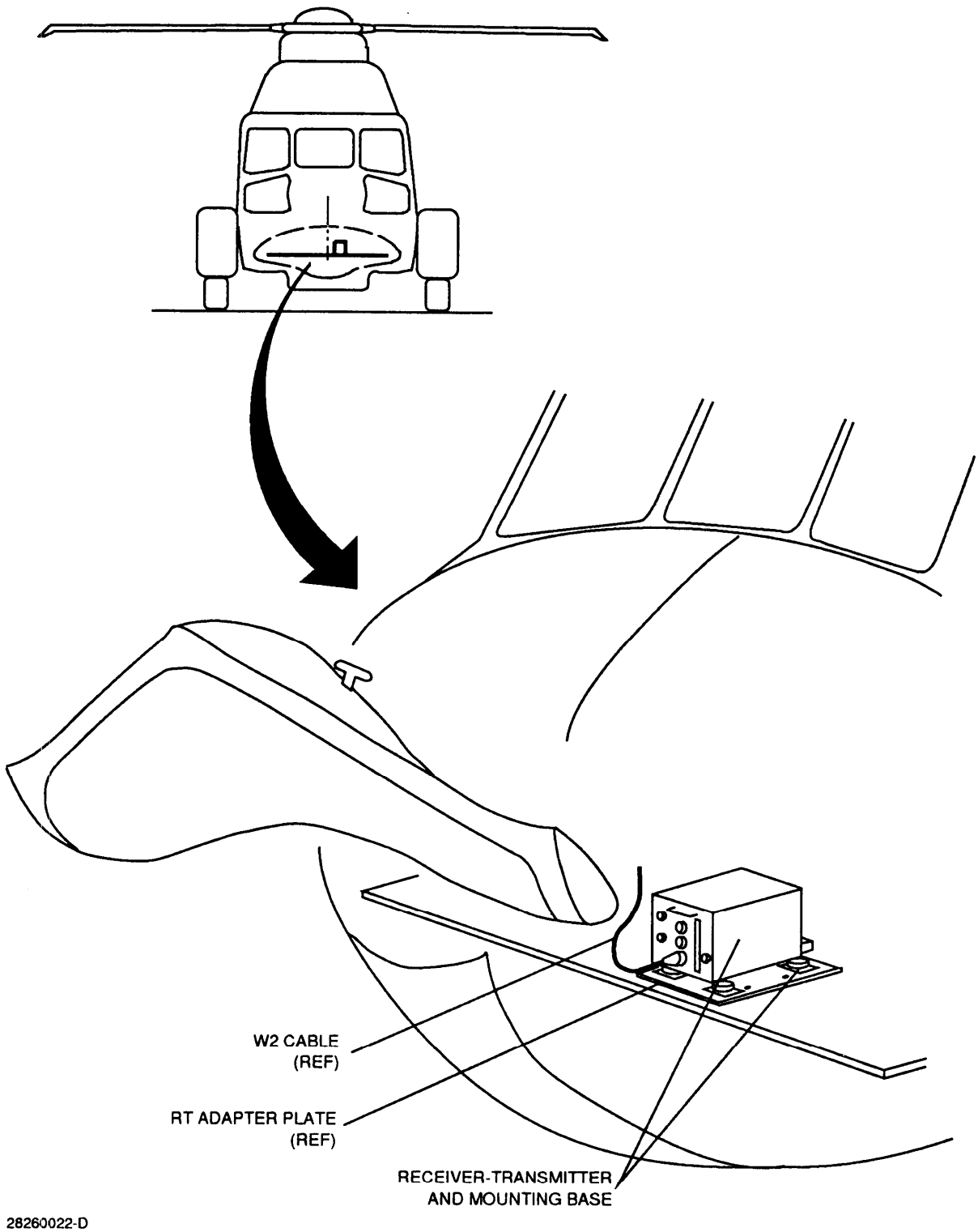


FIGURE 3. RT Installation.

(1) Open the forward equipment bay door. Locate and remove the RT adapter plate (part of Group A) mounted to the upper shelf, right of the center, as viewed looking aft.

(2) Remove the 4 nut plates from the adapter plate and attach the equipment mounting base to the adapter plate as shown in Figure 4. Ensure that the grounding strap is secured between the nut plate and vibration isolator.

(3) Re-attach the adapter plate (with the mounting base installed) to the shelf using the hardware removed in step 1. Ensure that the ground strap disconnected in step 1 has been re-attached.

(4) Place the RT on the mounting base and tighten the retainers.

(5) Locate cable W2 and remove the protective bag from connector P1. Connect W2 P1 to RT J1.

J-3.2 Antenna Set Installation. The Antenna Set consists of two blade antennas which are mounted to brackets installed on the lower part of the forward electronic equipment bay door, see Figure 5.

(1) Remove the cover plates from the antenna brackets and attach them to the Antenna Switching Unit (ASU) mounting bracket located on the inside of the door, see Figure 5.

(2) Connect antenna cables W1O and W11 to the blade antennas. Cable W10 connects to the left blade and W11 connects to the right. Tighten the connectors and install the antennas using the hardware removed in step 1.

NOTE

The W1O and W11 cables are part of Group A and are secured to the door. Remove the plastic bags from the connectors and any additional tie straps used to secure the loose cable. Retain the cable clamps.

J-3.3 Antenna Switching Unit (ASU) Installation. The ASU is mounted to a bracket installed on the inside of the forward electronic equipment bay door, see Figure 5.

(1) Remove the 4 mounting screws and washers from the mounting bracket and attach the ASU using the same hardware.

(2) Remove the plastic bags from the connectors at both ends of cables W4, W5, W6, and W7. Connect the cables to the ASU as follows:

W4 P2 to ASU J1
W5 P2 to ASU J3
W6 P2 to ASU J6
W7 P2 to ASU J5
W1O P1 to ASU J2
W11 P1 to ASU J4

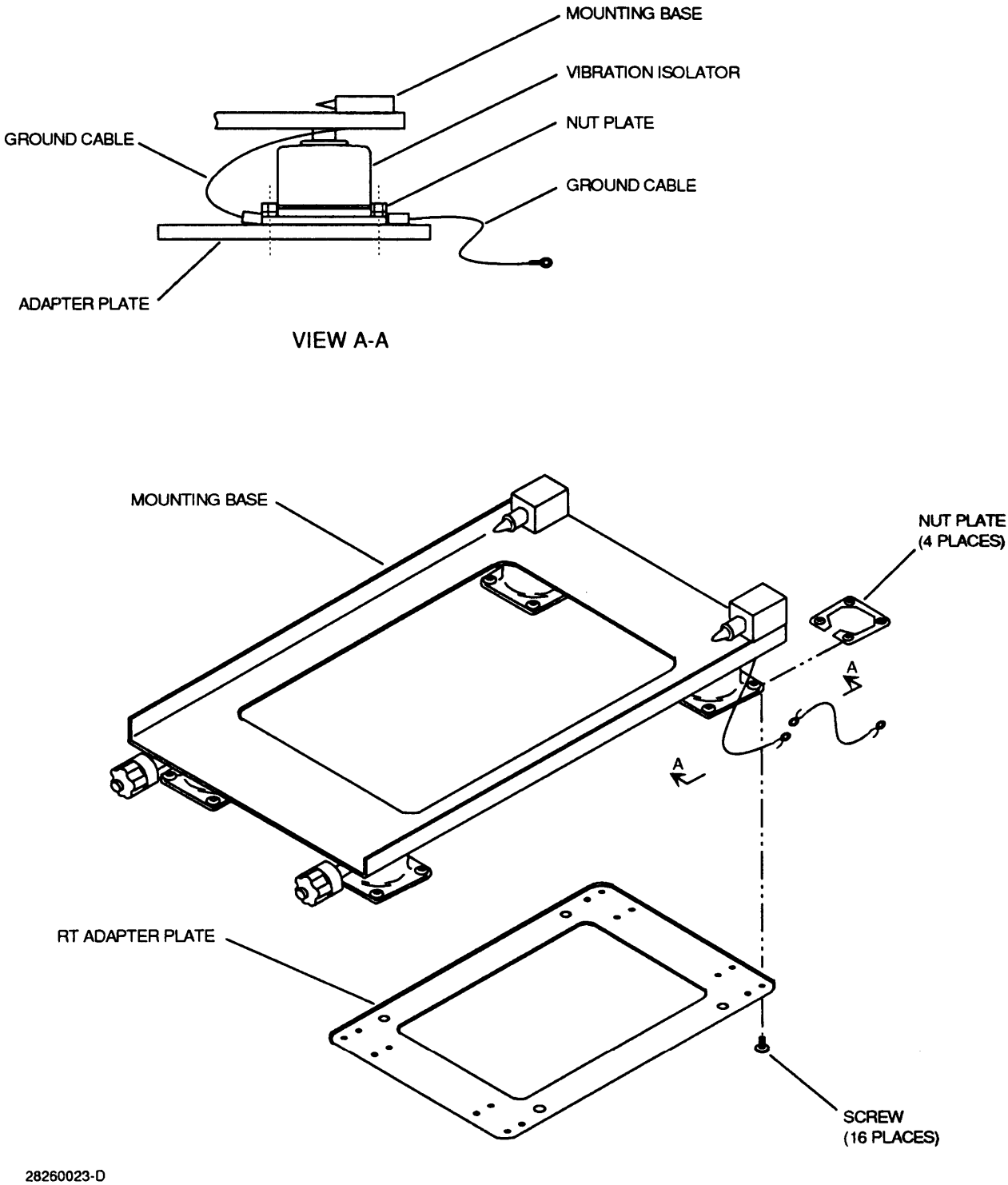


FIGURE 4. Equipment Mounting base to Adapter Plate Installation.

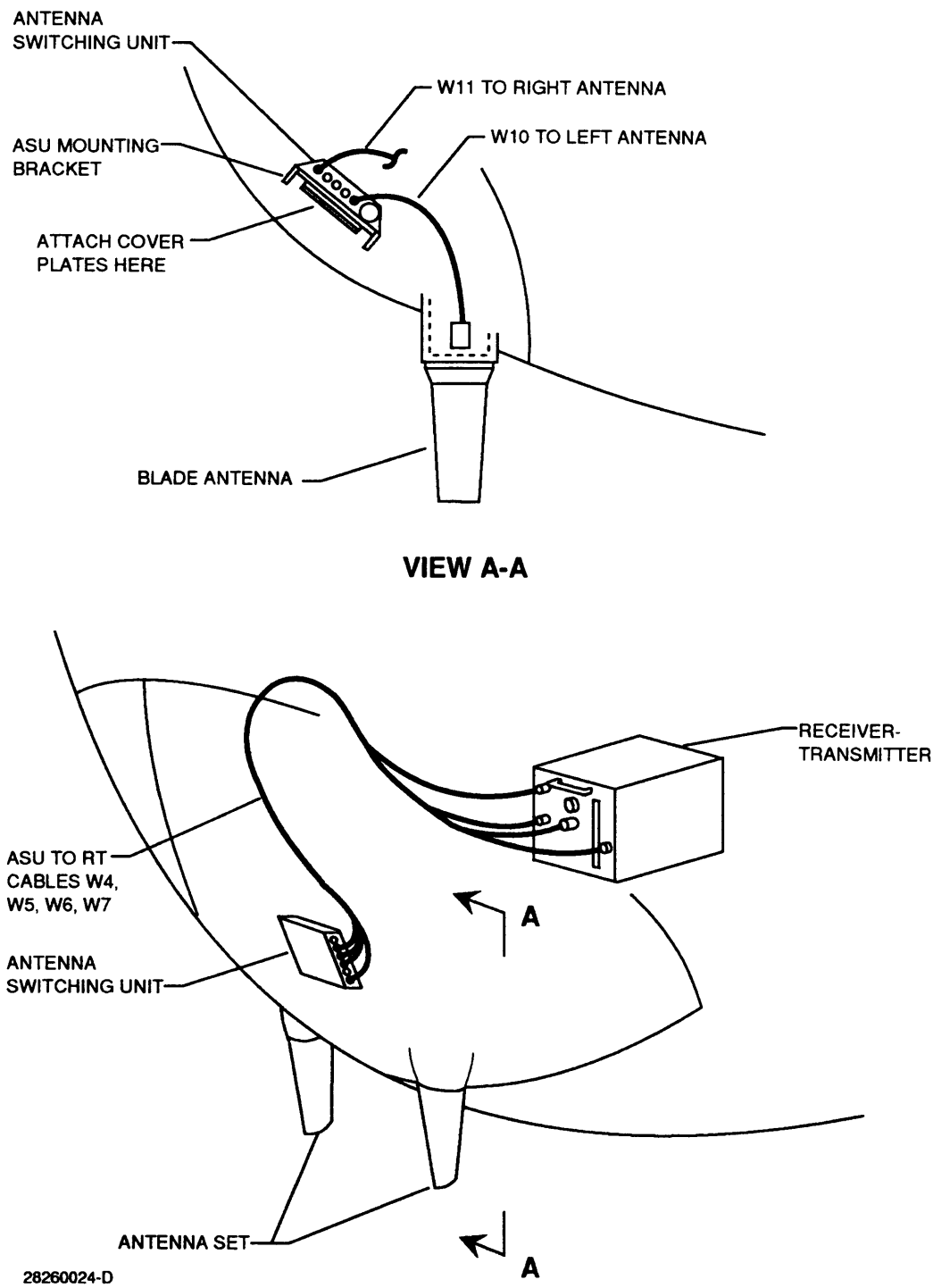


FIGURE 5. Antenna Set and Antenna Switching Unit Installation.

(3) Connect the cables to the RT as follows:

W4 P1 to RT J2
W5 P1 to RT J4
W6 P1 to RT J6
W7 P1 to RT J5

J-3.4 Remote Display Unit (RDU) Installation. There are 2 RDUs in the DALS equipment. One RDU is mounted on a bracket at each end of the instrument panel, see Figure 6.

(1) Locate the W3 cable at each end of the instrument panel. Remove the plastic bag protecting the connector.

NOTE

Inside these protective bags is a bag of hardware used to attach the RDU to its mounting bracket.

(2) Remove the 4 screws and washers attaching the secondary RDU bracket from it's mount. Attach the RDU to this secondary bracket using the hardware removed from the bags noted in step 1.

(3) Connect the W3 P1 or P3 connector to the RDU and tighten the jack screws. Do not over tighten the jack screws.

(4) Install the RDU with the cable and bracket attached using the hardware removed in step 2.

NOTE

The above listed steps are identical for installing either the right or left RDUs.

J-3.5 Control DisplayUnit (CDU) Installation. The CDU is installed in the center console, see Figure 7.

NOTE

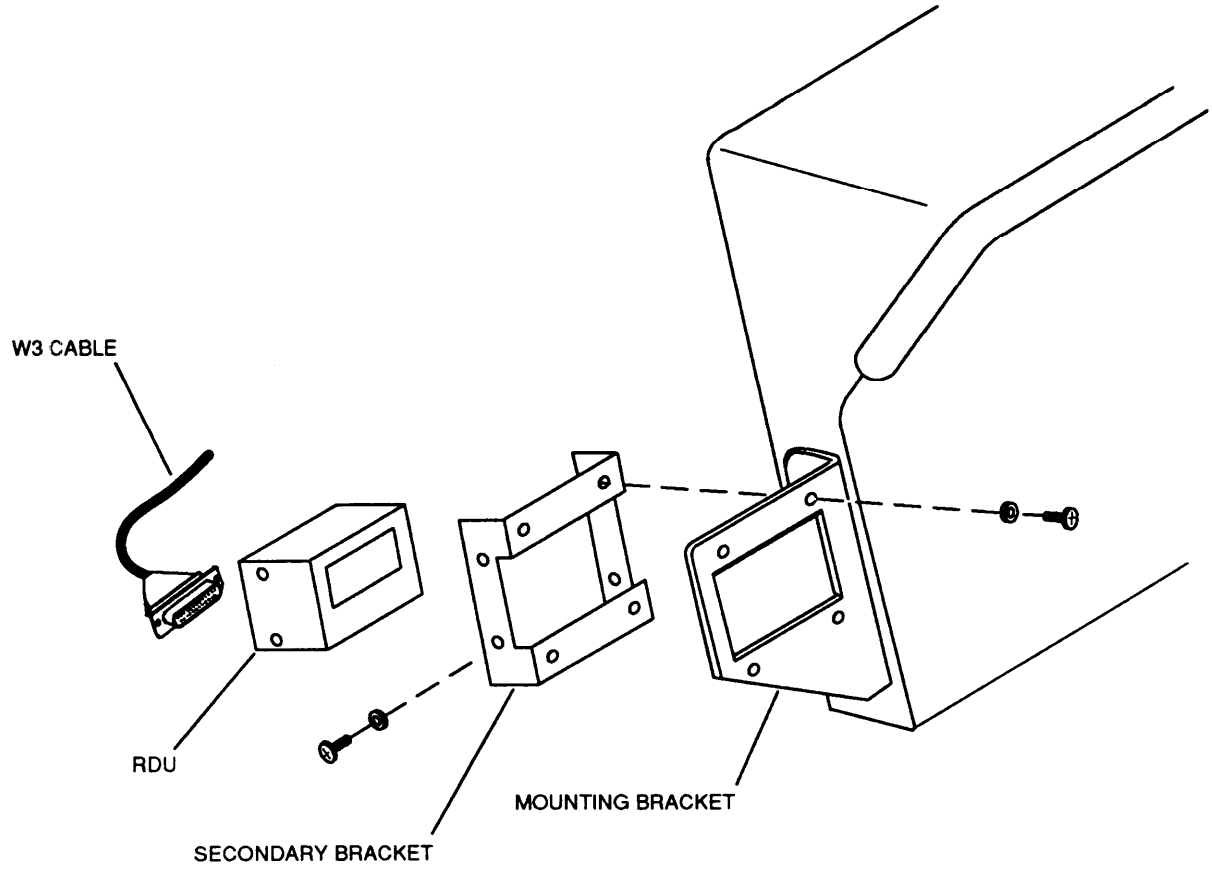
Due to variances in placement of avionics in the center console, the available space for placement of the CDU may not be as shown in Figure 1-6 and an alternate location must be provided.

(1) Remove the blanking panel from the sonobuoy launcher control bracket assembly located on the port side of the center console.

(2) Remove the 61902-60265-041 sonobuoy launcher control from the center console and route cables to the 42138-1 bracket assembly.

(3) Install the 61902-60265-041 sonobuoy launcher control in the bracket assembly and connect the cables.

(4) Locate the CDU interface cables below the avionics in the console and remove the plastic bags from the connectors.



VIEW A-A

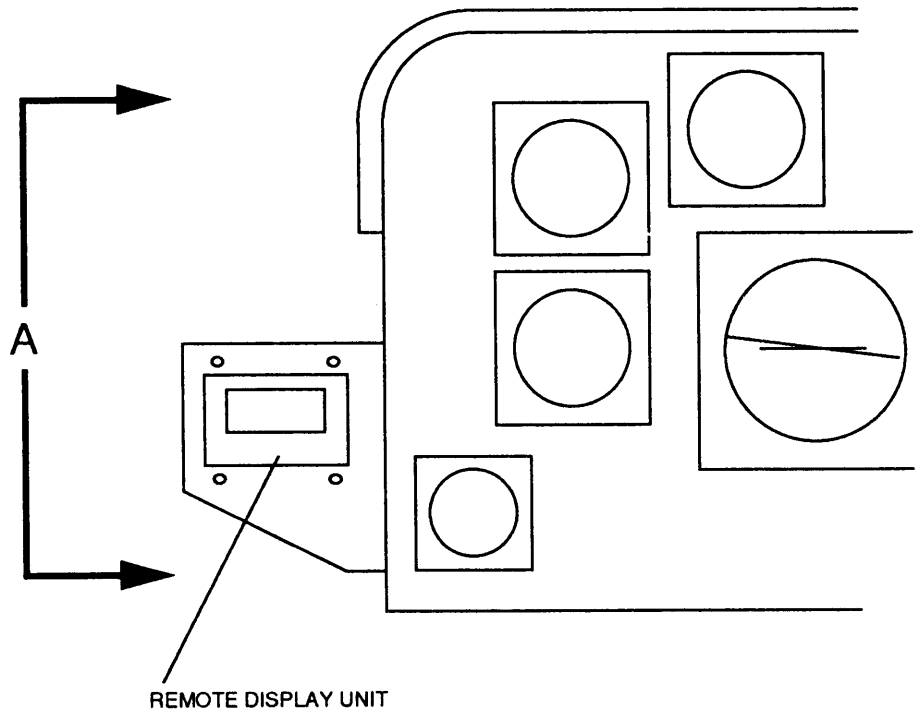


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FIGURE 6. Remote Display Unit Installation.

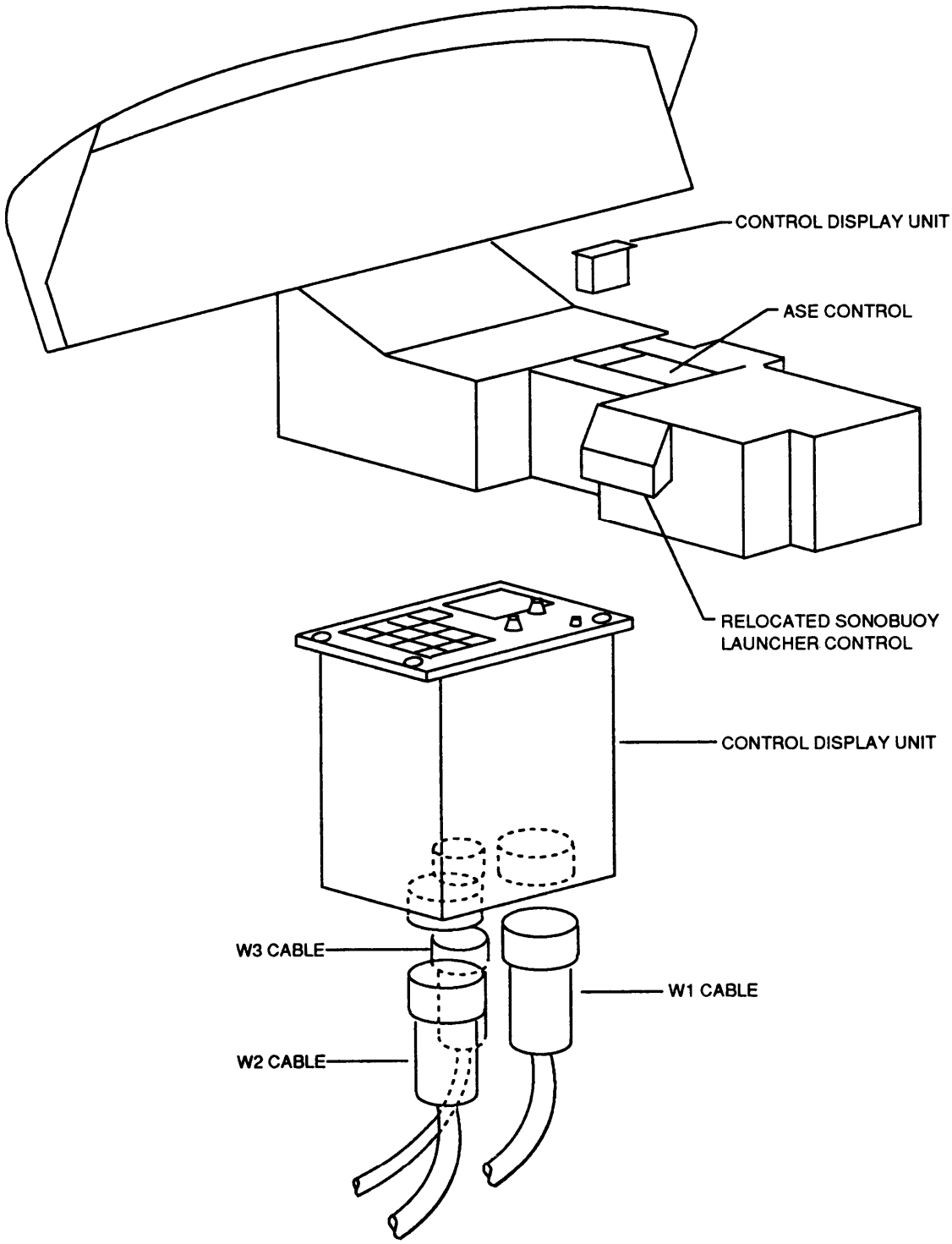

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FIGURE 7. Control Display Unit Installation.

(3) Connect the cables to the CDU as follows:

W1 P1 to CDU J1
W2 P2 to CDU J3
W3 P2 to CDU J2

(4) Mount the CDU to the console.

J-3.6 System Checkout and Test. System checkout and test shall be accomplished using the PLS operational instructions (Chapter 3) of this technical manual.

APPENDIX K

CHECKOUT PROCEDURE
FOR
TEST SET, PERSONNEL LOCATOR
TS-4360/AYD-l
PART NUMBER; D6003070

APPENDIX K

K-1.0 INTRODUCTION

This document contains the procedures necessary to determine the operability of the Test Set, Personnel Locator TS-4360/AYD-1, US Army P/N D6003070.

K-1.1 Functional Description. The TS-4360/AYD-l is a test set that enables operator and maintenance personnel to provide simulated steering signals to the Radio Set-Personnel Locator AN/ARS-6.

K-1.2 System Usage. The TS-4360/AYD-l Test Set is used to provide bench test requirements for the airborne AN/ARS-6.

K-2.0 TEST EQUIPMENT REQUIRED

The following list of test equipment, or equivalent, is required to complete the test procedures listed herein:

Model Number	Description
AN/GRM-114A	Test Set, Radio NSN 6625-01-144-4481
AN/PSM-45	Digital Multimeter, NSN 6625-01-039-1488

K-3.0 CHECKOUT PROCEDURES

K-3.1 Environmental Conditions. All checkout procedures are to be conducted at the normal environmental conditions of the field repair facility where tests are conducted.

K-3.2 Test Personnel. These checkout procedures may be conducted by AVIM personnel.

K-3.3 Checkout Procedures

K-3.3.1 Test Set Current Output

a. Plug the TS-4360/AYD-1 into a 120 Vat, 60 Hz power receptacle and turn the power ON. Note that the green Power On indicator is illuminated.

b. With power on, turn switch S2 on the TS-4360/AYD-1 Test Set to the left, boresight and right positions. Note the DC current reading on the TS-4360/AYD-l for each switch position.

NOTE

The DC current meter will read between 100 and 200 milliamperes when S2 is in the left or right positions and should read between zero and 50 milliamperes current in the boresight position.

K-3.3.2 Voltage Level Measurements

a. Connect the test configuration as shown in Figure 1.

b. Using the digital multimeter, check the DC voltage at the AN/PRC-112 battery adapter on the TS-4360/AYD-1 Test Set. The ground terminal will be on the right of the adapter. Measured voltage should be +11.7 ±0.3 Vdc. Record the measured voltage on the test data sheets.

K-3.3.3 TS-4360/AYD-1 Test Set Insertion Loss Measurements

K-3.3.3.1 Reference Power Levels

a. Connect the test configuration as shown in the top figure of Figure 2.

b. Setup the AN/GRM-114A as a spectrum analyzer as follows:

Switch/Control	Position
BFO-RF LEVEL Control	Fully CCW
GEN/RCVR Switch	"RCVR"
BFO/OFF Switch	"OFF"
ANALY DISPR Control	Fully CW
INTENSITY Control	Midrange
FOCUS Control	Midrange
PWR/OFF/BATT Switch	"PWR" or "BATT"
RF FREQUENCY	10 MHZ

c. Obtain a reference power output level of the 10 MHz reference signal using the spectrum analyzer display on the AN/GRM-114A. Note the value.

d. Connect the TS-4360/AYD-1 Test Set to the AN/GRM-114A Test Set as shown in Figure 2 while maintaining the same test configuration on the AN/GRM-114A Test Set as described in 3.3.3.1.b.

e. Obtain power level measurements for the reference level measurement obtained in step c at each of the TS-4360/AYD-1 Switch S2 settings. Note the values.

f. Disconnect TS-4360/AYD-1 Jack J2 from the AN/GRM-114A, and connect TS-4360/AYD-1 J4 to the AN/GRM-114A configured as a repeat step e. Note the values.

g. Calculate the TS-4360/AYD-1 insertion loss.

Insertion Loss = Actual Measured Value [step e (J2) or f (J4)] -reference value (step c).

Acceptable Value of Insertion Loss = 57 ±3 dB.

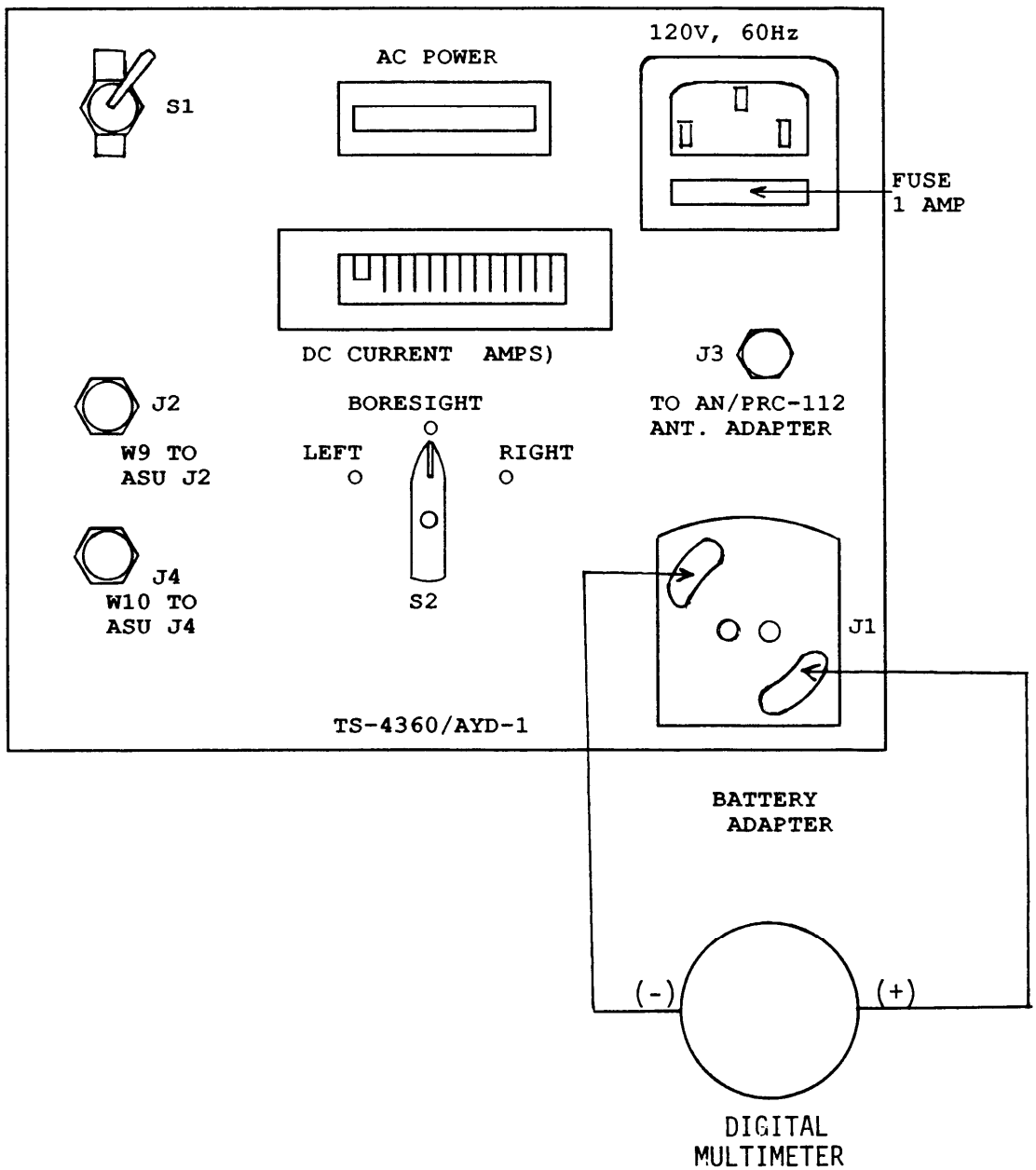
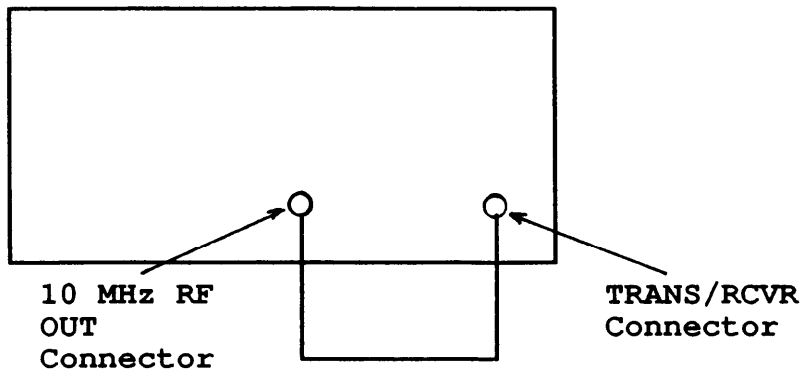


FIGURE 1. Voltage Level Measurement, Test Setup.



AN/GRM-114A (Configured as Spectrum Analyzer)

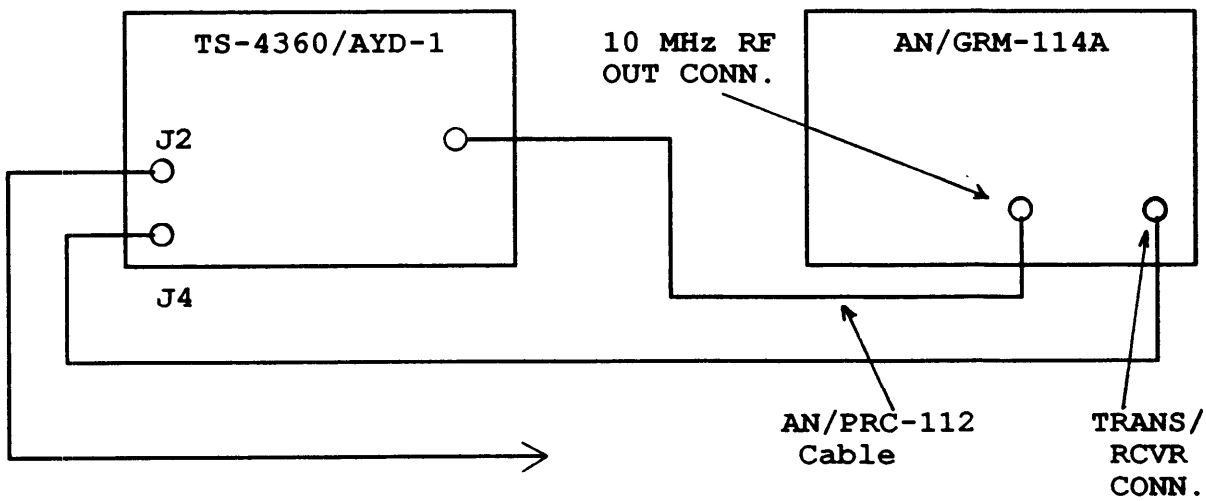


FIGURE 2. PLS Test Set Attenuation Measurement, Test Setup.

GLOSSARY OF TERMS

AG	-	Antenna Group
AM	-	Amplitude Modulated
ASU	-	Antenna Switching Unit
AVIM	-	Aviation Intermediate Maintenance
AVUM	-	Aviation Unit Maintenance
BFO	-	Beat Frequency Oscillator
BIT	-	Built In Test
BRST	-	Burst
CDU	-	Control Display Unit
CHAN	-	Channel
CLR	-	Clear
CONT	-	Continuous
°C	-	Degrees Celsius
CW	-	Continuous Wave
DEV	-	Deviation
EIR	-	Equipment Improvement Recommendations
EL	-	Electroluminescent (backlighting)
ENT	-	Enter
°F	-	Degrees Fahrenheit
FM	-	Frequency Modulation
ID	-	Identification Code (Survivor)
IF	-	Intermediate Frequency
INTG	-	Interrogate
LCD	-	Liquid Crystal Display
LRU	-	Line Replaceable Unit
MAC	-	Maintenance Allocation Chart
MT	-	Mounting Base, MT-6673/ARS-6(V)
NM	-	Nautical Miles
NO UPDT	-	No Update
NVG	-	Night Vision Goggles
OOK	-	On/Off Keying
PMCS	-	Preventive Maintenance Checks and Services
PLS	-	Personnel Locator System
PN	-	Pseudorandom Noise
PSK	-	Phase Shift Keying
PTT	-	Push to talk
PWR	-	Power

RCM	-	Range Computation Module
RCVR	-	Receiver
ROD	-	Report of Discrepancy
RPSTL	-	Repair Parts and Special Tools List
RT	-	Receiver-Transmitter
SPM	-	System Processor Module
SRU	-	Shop Replaceable Unit
SVR	-	Survivor
TDR	-	Transportation Discrepancy Report
VOL	-	Volume

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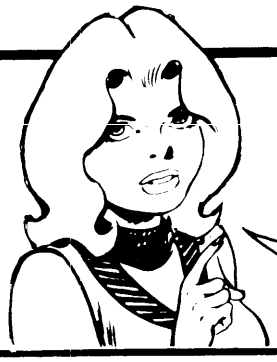

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Stateside Army pot
ATTN: AMSTA-US
Stateside, N.J. 07703-5007

DATE SENT: 4 April 1978

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5840-340-14&P	23 Jan 74	Radar Set AN/PRC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
2-25	2-28			Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°. REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.
3-10	3-3		3-1	Item 5, Function column. Change "2 db" to "3db." REASON: The adjustment procedure for the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.
5-6	5-8			Add new step f.1 to read, "Replace cover plate removed in step e.1, above." REASON: To replace the cover plate.
E-5				For item 2, change the NSN to read: 5835-00-134-9186. REASON: Accuracy.
E-8		E-3		Identify the cover on the junction box (item no. 5). REASON: It is a separate item and is not called out on figure 19.
E-9				Add the cover of the junction box as an item in the listing for figure 19. REASON: Same as above.

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SSG I. M. DeSpiritof 999-1776

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