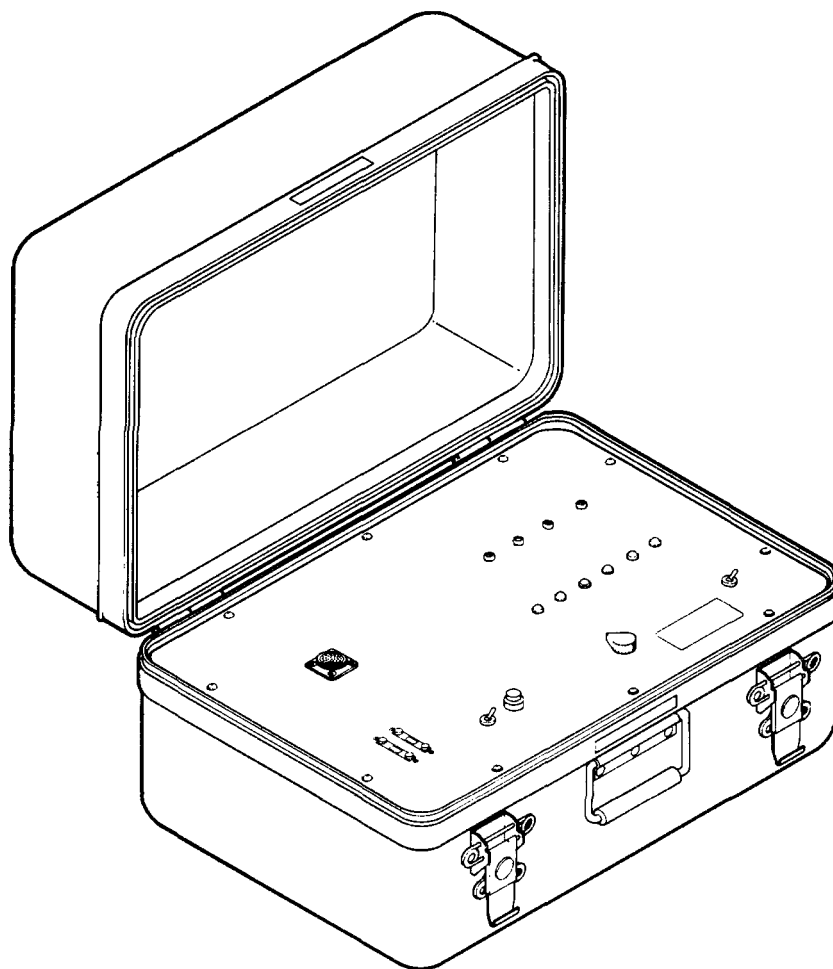


ARMY TM 11-6625-3216-14 & P
NAVY ET906-AB-OMP-010/TS-4256G
AIR FORCE TO 33A1-2-285-1

**OPERATOR, UNIT,
DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL INCLUDING
REPAIR PARTS AND SPECIAL TOOLS LIST**



**TEST SET, POWER AMPLIFIER
TS-4256/G
(NSN 6625-01-267-4416)**

**DEPARTMENTS OF THE ARMY, THE NAVY, AND THE AIR
FORCE**

1 JULY 1991

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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

A/(B Blank)

Technical Manual
TM 11-6625-3216-14&P
Technical Manual
NAVY ET906-AB-OMP-010/TS-4256G
Technical Order
TO 33A1-2-285-1

DEPARTMENTS OF THE ARMY,
THE NAVY, AND THE AIR FORCE

Washington, DC, 1 July 1991

**OPERATOR, UNIT, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL
INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST**

TEST SET, POWER AMPLIFIER TS-4256/G
(NSN 6625-01-267-4416)
Current as of 1 April 1991

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-LM-LT, Fort Monmouth, New Jersey 07703-5000.

For Air Force, submit AFTO Form 22 (Technical Order System Publication Improvement Report and Reply) in accordance with paragraph 6-5, Section VI, T.O. 00-5-1. Forward direct to prime ALC/MST.

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.

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**SECTION I
INTRODUCTION**

1-1. SCOPE.

This manual contains operation and maintenance instructions for the Power Amplifier Test Set TS-4256/G as shown in Figure 1-1. The material includes operating instructions, functional descriptions, maintenance and troubleshooting procedures, Repair Parts and Special Tools Lists, and instructions for preparation for use, storage and shipment.

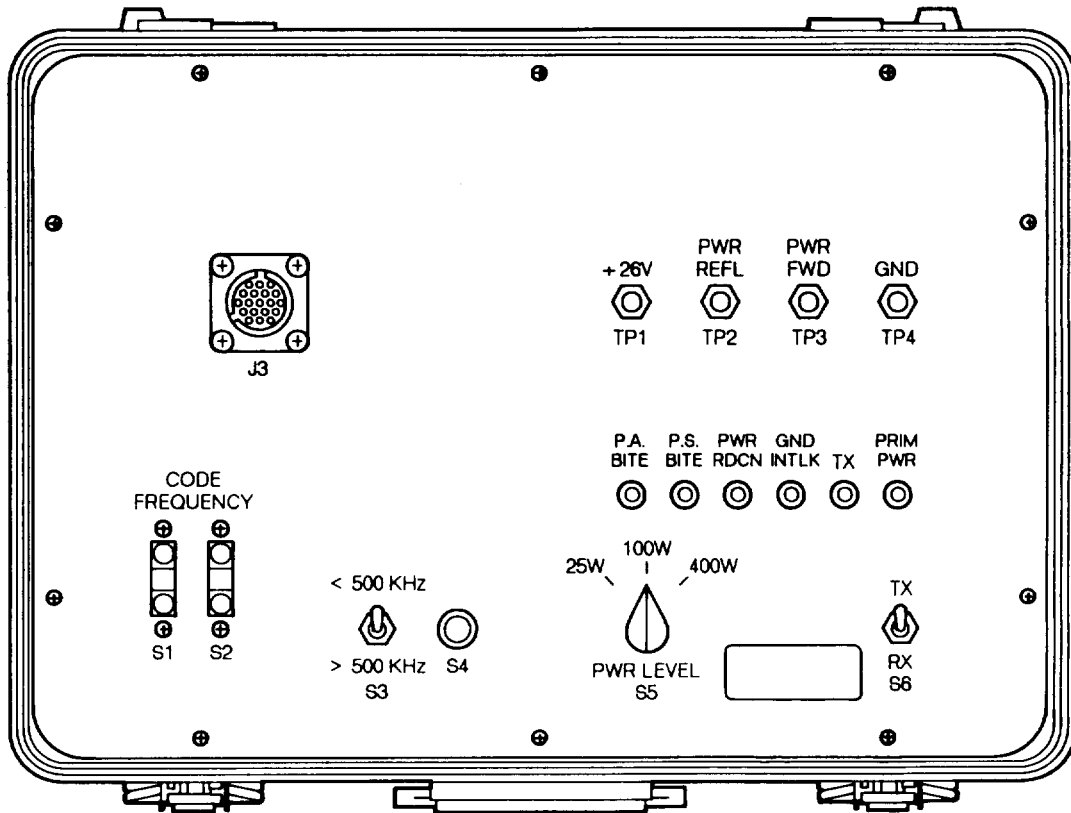


Figure 1-1. Power Amplifier Test Set

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

a. 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, as contained in Maintenance Management Update. Air Force personnel will use AFR 66-1 for maintenance reporting and TO-00-35D54 for unsatisfactory equipment reporting. Navy personnel will report maintenance performed utilizing the Maintenance Data Collection Subsystem (MDCS) IAW OPNAVINST 4790.2, Vol 3 and unsatisfactory material/conditions (UR submissions) IAW OPNAVINST

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS (Cont.)

4790.2, Vol 2, chapter 17.

b. Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 73511-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

c. 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.

1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

a. Army. If your Power Amplifier Test Set 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 Command and Fort Monmouth, ATTN: AMSELED-PH, Fort Monmouth, New Jersey 07703-5000. We'll send you a reply.

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

c. Air Force. Air Force personnel are encouraged to submit EIR's in accordance with AFR 900-4.

1-4. DESTRUCTION OF MATERIAL TO PREVENT ENEMY USE

a. Army. The destruction of Army electronic material to prevent enemy use shall be in accordance with TM 750-244-2.

b. Navy. Navy Personnel comply with the local Command Material Destruction Plan.

c. Air Force. Air Force personnel comply with TM 750-244-2 or the local Emergency Destruction plan.

1-5. EQUIPMENT DATA

a. Electrical Characteristics

Power Source: +26.0 VDC supplied by Unit Under Test

b. Physical Characteristics

Width: 14 in.
Depth: 10 in.

Height: 11 in.
Weight: 12 lbs.

1-6. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

Special tools, TMDE, and support equipment are listed in the Maintenance Allocation Chart (MAC), Appendix B.

1-3/(1-4 Blank)

**SECTION II
FUNCTIONAL DESCRIPTION**

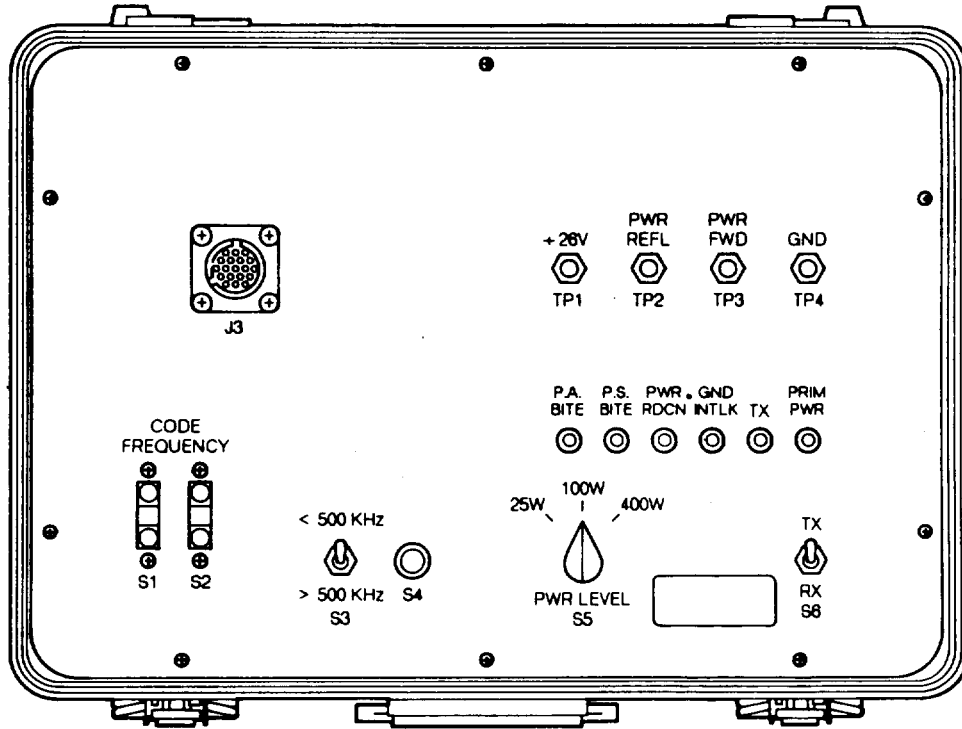
2-1. GENERAL

This section contains a general description and purpose for the Power Amplifier Test Set TS-4256/G, listings of controls, functional descriptions of major components and block diagrams.

2-2. DESCRIPTION

This equipment tests and verifies the operation of the 400 Watt Power Amplifier AM-7296/G to isolate faults to the subassembly level.

The Power Amplifier Test Set allows testing of the output power, VSWR, harmonic attenuation, Off-Line BIT and frequency intermodulation. Intermodulation is the mixing of RF frequencies in the final stage of an amplifier resulting in harmonics that are transmitted along with the fundamental frequency. Front panel switches simulate control signals such as frequency code, power level code, and the Push-To-Talk (PTT) signal that places the Power Amplifier (PA) in receive (RX) or transmit (TX) mode. Front panel test points allow measurement of forward and reflected power levels. Front panel LEDs verify the proper operation of the PA by indicating a fault.



TEST SET, POWER AMPLIFIER TS-4256/G

2-3. CONTROLS AND INDICATORS

Figure 2-1 illustrates the locations of front panel controls. Table 2-1 lists the controls by callout number and gives a description of each control.

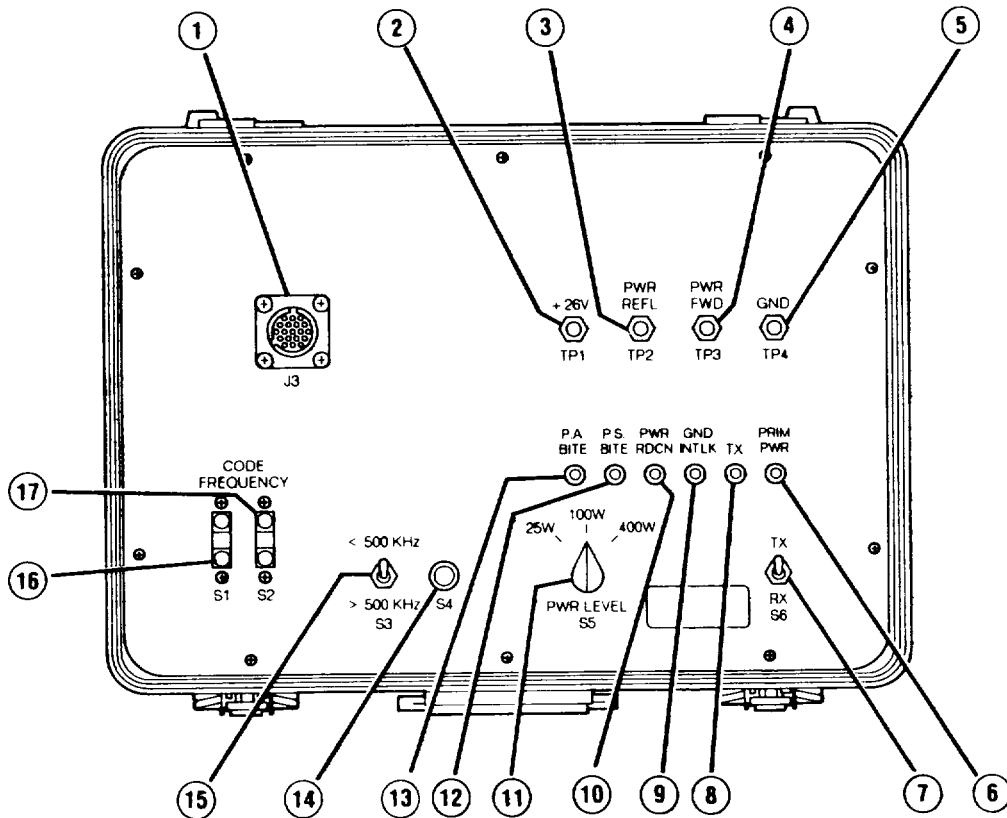


Figure 2-1. Power Amplifier Test Set Front Panel

Table 2-1. Power Amplifier Test Set Controls and Indicators (1 of 2)

Fig. and Index No.	Name	Purpose
2-1 - (1)	J3	Connects control and status signals between test set and Unit Under Test (UUT). Also connects +26.0 VDC to test set.
- (2)	TP1	+26.0 VDC from UUT.
- (3)	TP2	To measure reflected power level of UUT.
- (4)	TP3	To measure forward power level of UUT.
- (5)	TP4	To measure chassis ground.

2-3. CONTROLS AND INDICATORS (Cont.)

Table 2-1. Power Amplifier Test Set Controls and Indicators (2 of 2)

Fig. and Index No.	Name	Purpose
2-1- (6)	DS6	Indicates presence of +26.0 VDC from UUT.
-(7)	S6	Grounds pin 5 of J3 to place the UUT in TX mode.
-(8)	DS1	Indicates that UUT in transmit mode.
-(9)	DS4	Indicates that UUT can not transmit due to interlock.
-(10)	DS5	Indicates the UUT is operating at reduced power level (100 Watts or 25 Watts).
-(11)	S5	Selects the power level that the UUT operates at.
-(12)	DS3	Indicates a UUT Power Supply Fail condition.
-(13)	DS2	Indicates a UUT Fail condition.
- (14)	S4	Momentary contact switch that, when S5 is to the 25 W position, reduces output of UUT to 25 Watts when pressed.
-(15)	S3	Sets the operating frequency of the UUT in 500 KHz increments.
-(16)	S1	Sets the operating frequency of the UUT in 10 MHz increments.
-(17)	S2	Sets the operating frequency of the UUT in 1 MHz increments.

Table 2-2. Power Amplifier Test Set Cable Assemblies

Cable	Part Number	Title
W27	420556-801	None
W30	3-94289//B	None
W73	420557-801	None
W74	422018-1	None

2-4. FUNCTIONAL DESCRIPTION OF POWER AMPLIFIER TEST SET

The Power Amplifier Test Set generates control signals with front panel switches and monitors the operation of the UUT through front panel LEDs and test points. Control signals include the frequency code, which selects the proper harmonic filter within the UUT for the frequency of operation, and the power-level code, which controls the power output level of the UUT. Front panel LEDs indicate fail signals from the UUT and its power supply, operation at a reduced output, and whether the test set is operating in transmit or receive mode. Front panel test points include forward and reflected power samples and the test set operating voltage. The UUT supplies +26.0 VDC operating voltage to the test set through cable W30 to pin 37 of connector J3. (See FO-1.) This brings voltage up on front panel test point TP1 and connects it through resistor R26 on CCA A1 to the anode of LED DS6 to indicate the presence of the operating voltage. Pins 2 and 3 of connector J3 provide a return path to ground.

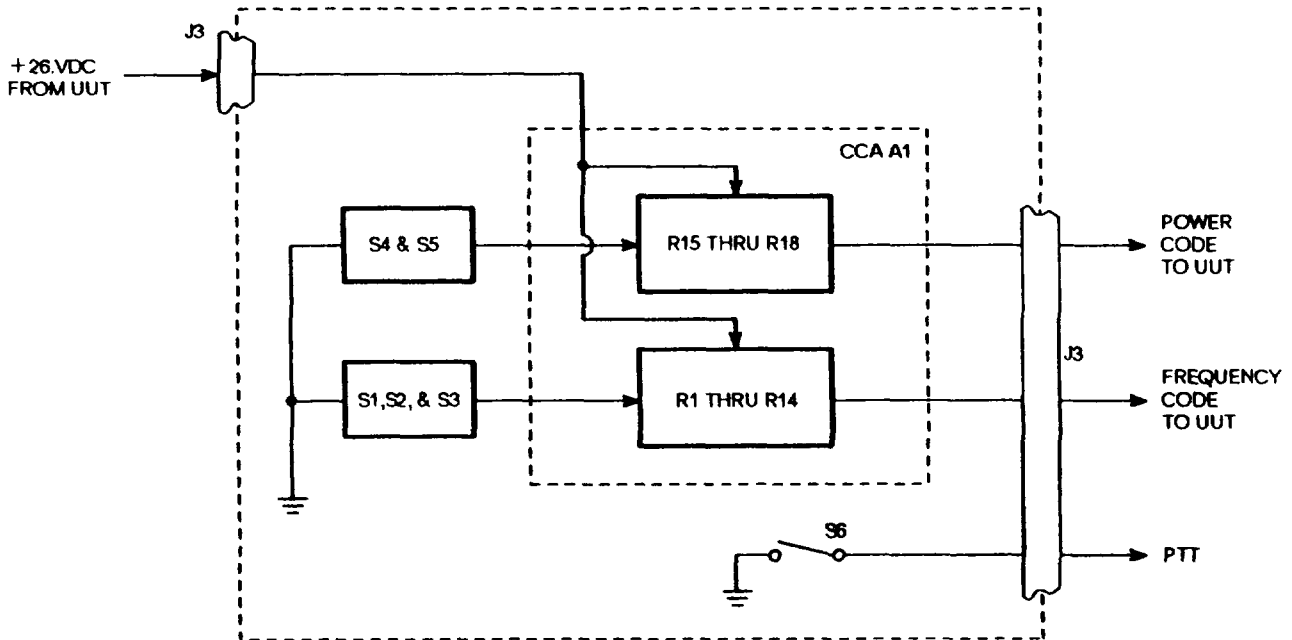


Figure 2-2. Block Diagram

The +26.0 VDC is also connected to the anodes of LEDs DS1 through DS5. With switch S6 set to the TX position, pin 5 of connector J3 is grounded through diode A1CR1 to simulate a PTT signal to the UUT. The cathode of LED DS1 is also grounded by switch S6 through current-limiting resistor R21 to indicate that switch S6 is in the TX position. Similarly, a ground provided by the UUT to pin 6, 4, 1, or 18 of connector J3 will cause one of the front panel LEDs, DS2 through DS5, to light. Resistors R22 through R26 provide current limiting for the LEDs.

2-4. FUNCTIONAL DESCRIPTION OF POWER AMPLIFIER TEST SET (Cont.)

The forward and reflected power samples from the directional coupler module of the UUT connect to pins 27 and 22 of connector J3, respectively. The forward power level sample then connects to TP3, and the reflected power sample connects to TP2 of the Test Set front panel.

The power-level code is a binary code, formed by switches S4 and S5. With switch S5 in the 400W position, both pins 7 and 23 of connector J3 are at a logic level of 1 (+3.5 to +4.5 VDC). The voltage level is provided by voltage divider networks made up of resistors R15 through R18. With switch S5 set to the 100W position, pin 23 of J3 is grounded, logic level 0 (-0.5 to +0.5 VDC), while pin 7 is at a logic level of 1. When switch S5 is in the 25W position, pin 23 of connector J3 is at a logic level of 1 and, when switch S4 is pressed, pin 7 of connector J3 is at logic level of 0. Switch S4 is only functional in the 25W position.

The frequency code, also a binary code, is created in a manner similar to the power code. Switches S1 and S2 set the frequency code in increments of 10 MHz and 1 MHz, respectively. The voltage dividers, formed by resistors R1 through R4, connect to switch S1 and pins 9 and 10 of connector J3. Switch S2 has four output lines, pins 11 through 14 of connector J3, that connect to the voltage dividers formed by resistors R5 through R12. A logic level of 0 is output when the thumbwheel switch connects ground to the junction point of the divider network. Otherwise, the output is a logic level of 1.

Switch S3 is used to set the frequency code in increments of 500KHz. Switch S3 grounds pin 15 of connector J3 in the < 500KHz position to present a logic level of 0 to the UUT. In the > 500KHz position, a logic level of 1 exists at pin 15.

2-5/(2-6 Blank)

**SECTION III
PREPARATION FOR USE**

3-1. GENERAL

This section contains instructions for preparation for use of Power Amplifier Test Set TS-4256/G. These include instructions for unpacking, if any special procedures are required, inspecting unpacked equipment for damage, and any preliminary servicing procedures required to prepare the equipment for operation.

3-2. UNPACKING

No special procedures are required for removing the test set from its shipping container. Use normal care in handling electronic equipment. Avoid jarring test set during removal.

3-3. CHECKING UNPACKED EQUIPMENT

a. Reporting of Item and Packaging Discrepancies. Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 73511-2/DLAR 4140.55/SECNAVINST 4355.18/AFR 400-54/MCO 4430.3J.

b. 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.

c. Refer to DA Pam 25-30 to see if your equipment has had any Modification Work Orders (MWO) applied.

3-4. PRELIMINARY SERVICING OF EQUIPMENT

Prior to placing the Test Set in service, perform the following visual inspection procedures. Do not connect unit to primary power source or any other equipment during these procedures.

- a. Check all front panel connectors for broken, bent or missing pins.
- b. Check all front panel mounted switches, lamps, or other hardware for damage.

3-1/(3-2 Blank)

**SECTION IV
OPERATION**

4-1. GENERAL

This section contains operating procedures for the Power Amplifier Test Set TS-4256/G.

4-2. INITIAL POSITION OF CONTROLS.

Table 4-1 lists the initial positions of the front panel controls prior to operating the equipment. See Figure 2-1 for location of front panel controls.

Table 4-1. Initial Position of Controls

Fig. and Index No.	Control Name	Purpose
2-1 -(16) and (17)	S1 and S2	0
-(15)	S3	> 500KHz
-(11)	S5	400W
-(7)	S6	RX

4-3. OPERATING INSTRUCTIONS

Position the initial control settings, as shown in Table 4-1. The test set lid provides storage for test set cable assemblies. Connect cable W30 to connector J3 on the test fixture. Interconnect the AM-7296/G and the PP-8097/G power supply using cables W27 and W73. Power supply, PP-8097/G gets AC power via cable W74. Follow the test procedures in the technical manual for the UUT. When the test procedures are completed, switch the Power Amplifier to OFF, disconnect cable W30, and return all other switches to their initial positions. Disconnect and store the remaining test set cables.

4-1/(4-2 Blank)

**SECTION V
MAINTENANCE**

5-1. GENERAL

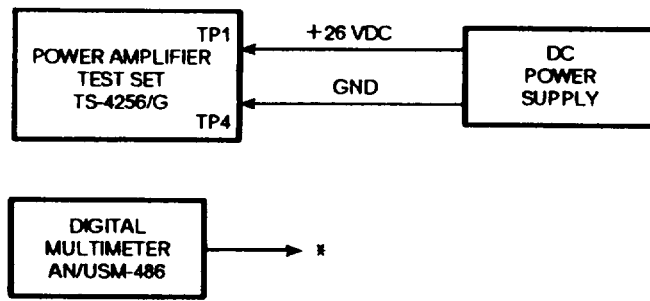
This section contains operational check procedures, the symptom index, troubleshooting flowcharts, and removal/replacement procedures for Power Amplifier Test Set TS-4256/G.

The operational check is performed using the following test equipment.

Test Equipment

Digital Multimeter, AN/USM-486
Power Supply, PP-8202/G

Test Probe to Banana Plug,
Black, ITT Pomona 4410-48-0
Test Probe to Banana Plug,
Red, ITT Pomona 4410-48-2



* CONNECT AS REQUIRED

Figure 5-1. Operational Test Setup

5-2. OPERATIONAL CHECK OF POWER AMPLIFIER TEST SET

a. Continuity and Resistance Check

1. Disconnect the power supply from test set. Measure for less than 1.5 ohms of resistance between the following points:

<u>FROM</u>	<u>TO</u>
J3 pins 2, 3, 19, 21	TP4
J3 pin 37	TP1
J3 pin 27	TP3
J3 pin 22	TP2
TP4	Chassis Ground

2. Measure for 10.0 (9.5 to 10.5) Kohms between TP3 and TP4.
3. Measure for 24.3 (23.09 to 25.51) Kohms between TP2 and TP4.
4. Set S6 to TX and perform a diode check between J3 pin 5 and TP4. (Red lead to J3-5 is forward bias)

b. LED Test

1. Reconnect the test set as shown in figure 5-1 and adjust the PP-8202/G power supply to +26.0 (+25.0 to +27.0) VDC. Verify that LED DS6 (Prim PWR) lights.
2. Set switch S6 as listed below and observe the associated LED.

<u>SET-UP</u>	<u>INDICATION</u>
S6 to RX	LED DS1 (TX) is off
S6 to TX	LED DS1 (TX) lights

3. Ground the following connector pins of J3 and observe the LEDs listed below.

<u>SET-UP</u>	<u>INDICATION</u>
J3 pin 6 grounded	LED DS2 (PA BITE) lights
J3 pin 4 grounded	LED DS3 (PS BITE) lights
J3 pin 1 grounded	LED DS4 (GND INTLK) lights
J3 pin 18 grounded	LED DS5 (PWR RDCN) lights

5-2. OPERATIONAL CHECK OF POWER AMPLIFIER TEST SET (Cont.)

c. Test of Switches S1 and S2

1. Set switch S1 to the position listed below and with the DMM measure for a logic level of 1 or 0 at the following pins of connector J3:

Logic level 0 = 0.0 (-0.5 to +0.5) VDC
 Logic level 1 = +4.0 (+3.5 to +4.5) VDC

<u>S1 SETTING</u>	<u>PIN 9</u>	<u>PIN 10</u>
0	0	0
1	1	0
2	0	1

2. Set switch S2 to the position listed below and with the DMM measure for a logic level of 1 or 0 at the following pins of connector J3:

Logic level 0 = 0.0 (-0.5 to +0.5) VDC
 Logic level 1 = +4.0 (+3.5 to +4.5) VDC

<u>S2 SETTING</u>	<u>PIN 11</u>	<u>PIN 12</u>	<u>PIN 13</u>	<u>PIN 14</u>
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1

d. Test of Switch S3, S4 and S5

1. Set switches as listed below and with the DMM measure for a logic level of 1 or 0 at the following pins of connector J3:

Logic level 0 = 0.0 (-0.5 to +0.5) VDC
 Logic level 1 = +4.0 (+3.5 to +4.5) VDC

<u>SET-UP</u>	<u>PIN 7</u>	<u>PIN 23</u>
S5 to 400W	1	1
S5 to 100W	1	0
S5 to 25W	1	1
S5 to 25W (S4 depressed)	0	1

5-2. OPERATIONAL CHECK OF POWER AMPLIFIER TEST SET (Cont.)

2. Set switch S3 as listed below and measure for a logic level of 1 or 0 at pin 15 of connector J3:

Logic level 0 = 0.0 (-0.5 to +0.5) VDC
Logic level 1 = +4.0 (+3.5 to +4.5) VDC

<u>SET-UP</u>	<u>PIN 15</u>
S3 to < 500KHz	0
S3 to > 500KHz	1

- e. Continuity Testing of Associated Cables.

1. Test continuity of cables W27, W30, W73 and W74 for less than 0.5 ohms resistance with DMM (see FO-3).

5-3. SYMPTOM INDEX



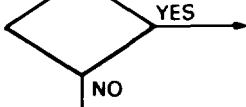
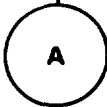
The following chart is intended to assist in rapid identification and replacement of faulty components.

SYMPTOM	TROUBLESHOOTING FLOWCHART PARAGRAPH
LED DS6 Does Not Light	5-6
LED DS1 Does Not Light	5-7
Switch S1 or S2 Faulty	5-8

5-4. FLOWCHARTS AND HOW TO USE THEM

The flowcharts make troubleshooting easier and give maintenance personnel a clear path to follow.

To use the flowchart begin at start and follow the path indicated by the arrow. Perform the task given by the symbol block and then follow the arrow to the next block. At the decision symbol be sure to follow the correct path indicated by YES or NO.

SYMBOL	MEANING
	Start and finish symbol indicates starting and finishing points.
	Task symbol indicates what to do and where to do it.
	Decision symbol (yes or no) indicates that a decision must be made. The direction to go from the decision symbol depends on the decision made.
	Continuation symbol indicates that the path continues to or comes from another flowchart.

5-5. TROUBLESHOOTING

INITIAL SETUP

Test Equipment

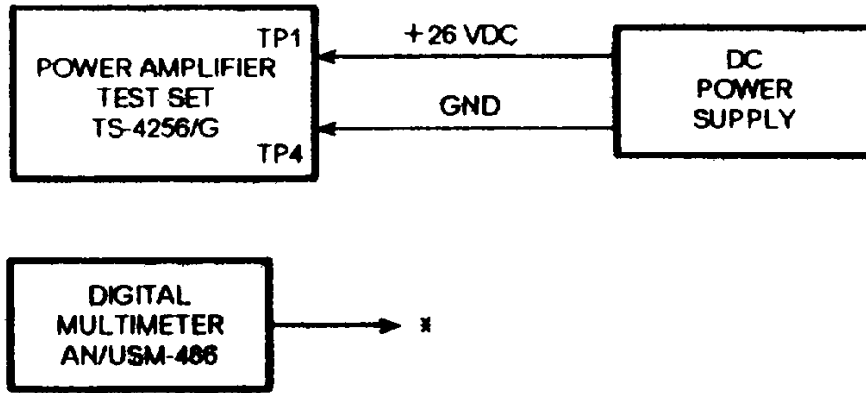
Digital Multimeter, AN/USM-486
 Power Supply, PP-8202/G
 Test Probe to Banana Plug, Black,
 ITT Pomona 4410-48-0
 Test Probe to Banana Plug, Red,
 ITT Pomona 4410-48-2

Equipment Condition

Power Supply adjusted to +26.0
 (+25.0 to +27.0) VDC.
 Test Set Switches:
 S1 and S2 to 0
 S3 to > 500KHz
 S5 to 400W
 S6 to RX

Tools

Tool Kit TK-17

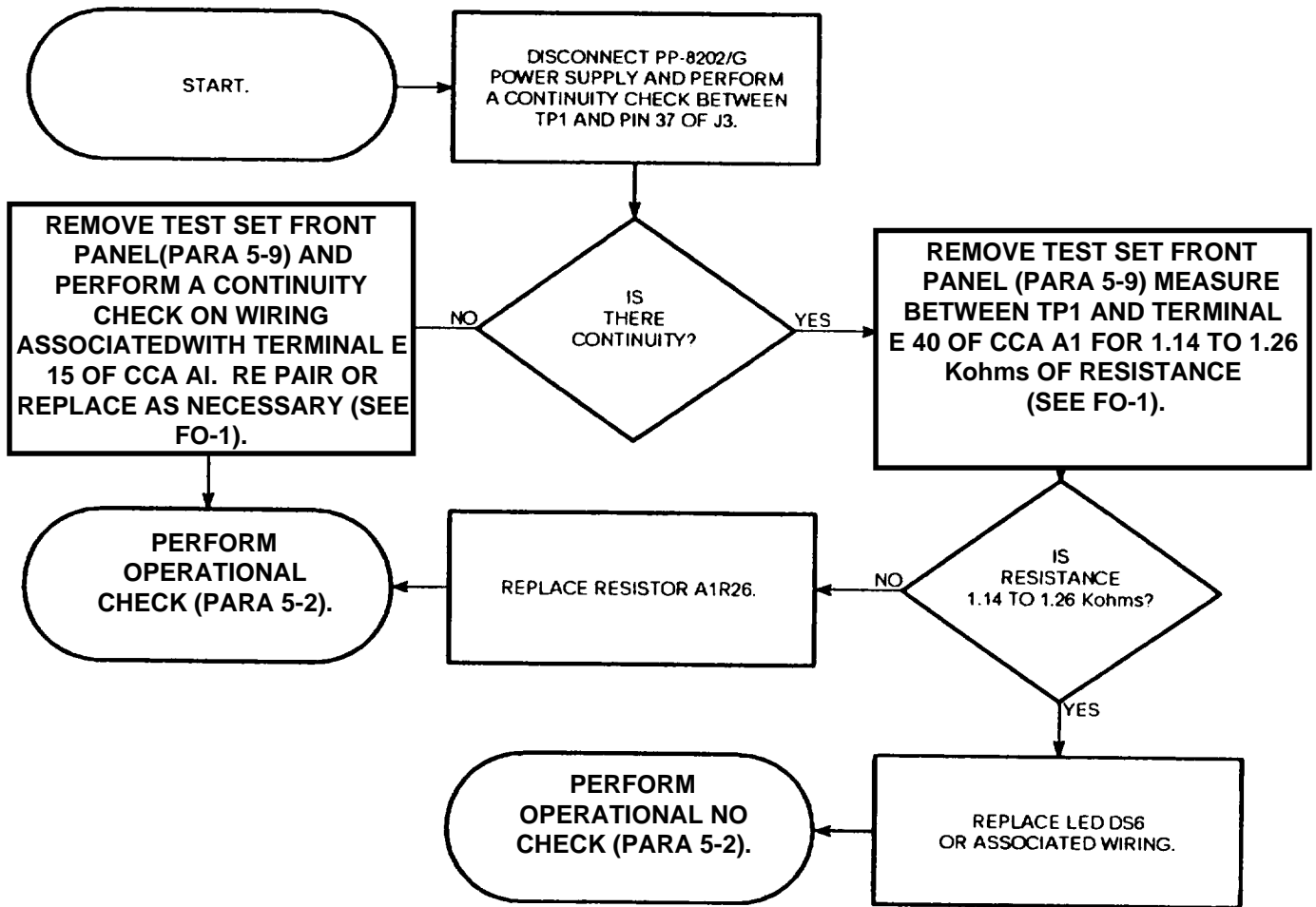


* CONNECT AS REQUIRED

Figure 5-2. Initial Setup

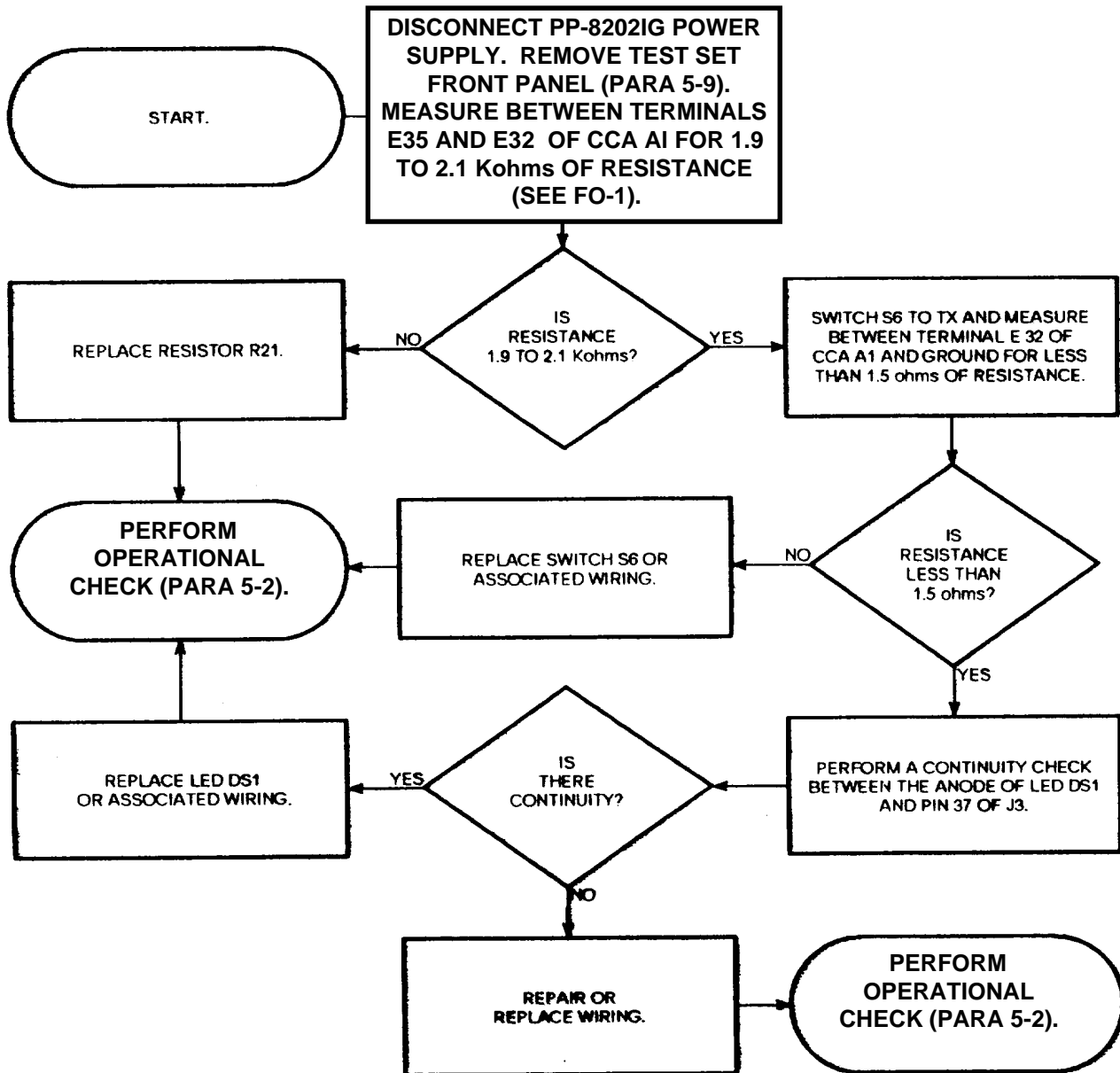
5-6. LED DS6 DOES NOT LIGHT

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



5-7. LED DS1 DOES NOT LIGHT

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.



5-8. SWITCH S1 OR S2 FAULTY

Refer to paragraph 5-5 for initial setup illustration and test equipment listing.

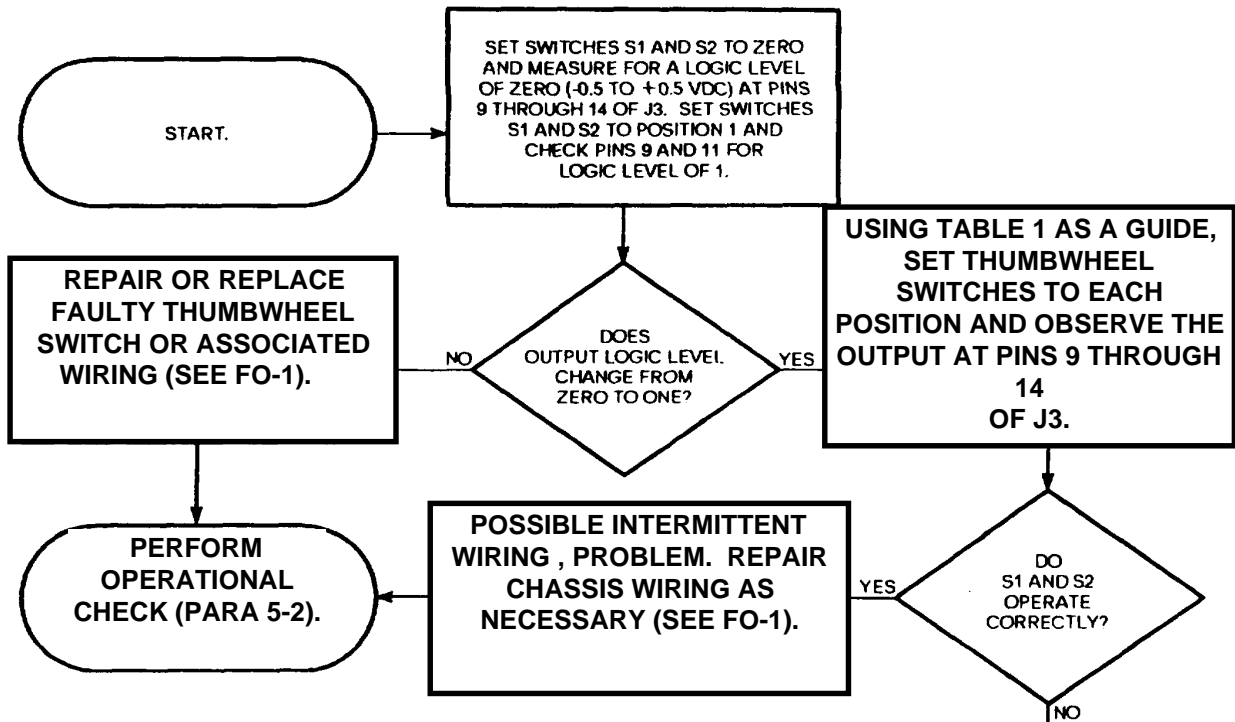


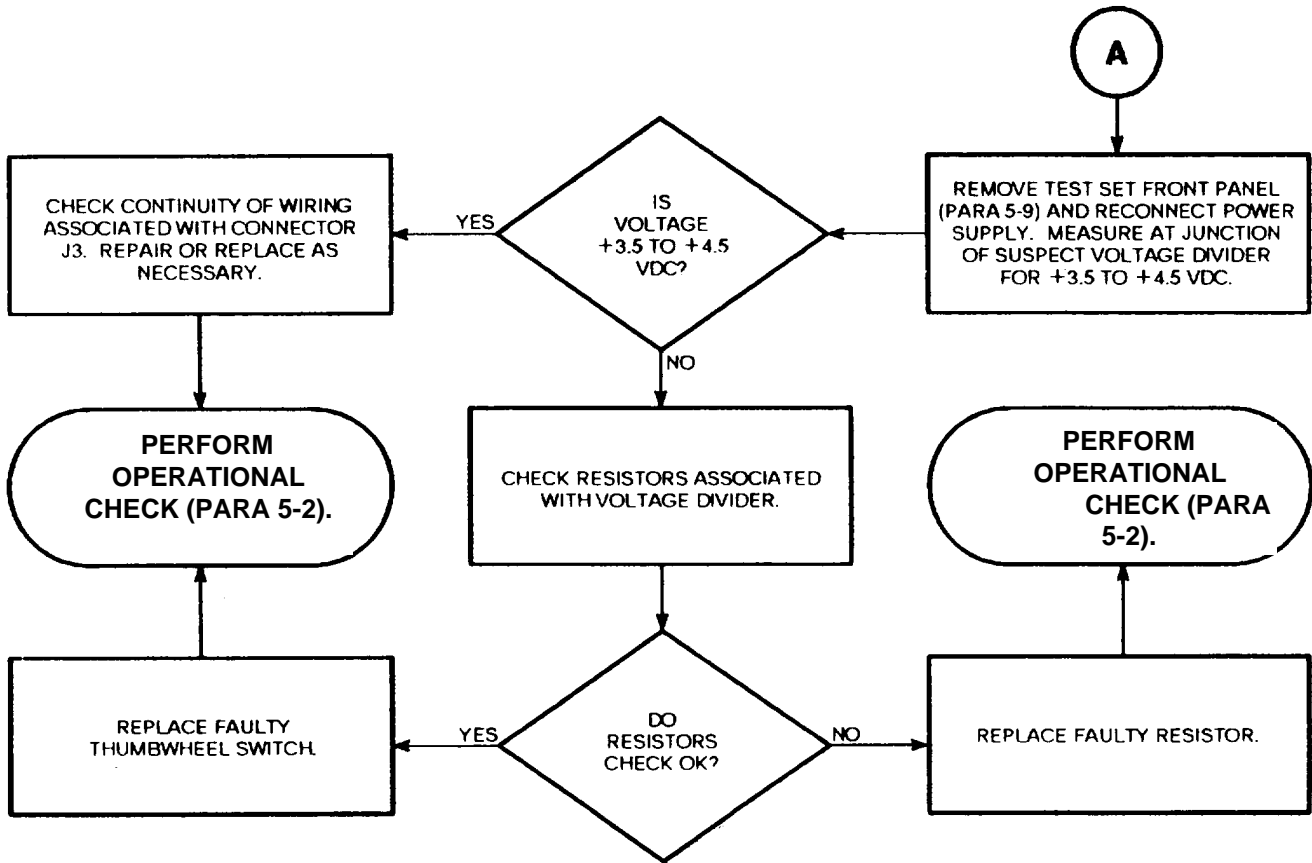
TABLE 1

J3		
S1	PIN 9	PIN 10
0	0	0
1	1	0
2	0	1

J3				
S2	PIN 11	PIN 12	PIN 13	PIN 14
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1

NOTE: 0= -0.5 TO +0.5 VDC
1= +3.5 TO 4.5 VDC

5-8. SWITCH S1 OR S2 FAULTY (Cont.)



**5-9. REMOVAL/REPLACEMENT OF FRONT PANEL AND COMPONENTS
(SEE APPENDIX C)**

WARNING

All Removal/Replacement procedures are performed with power removed. For safety purposes disconnect power cables before beginning procedures.

REMOVAL:

1. Remove 10 cross-tip screws (1) and flatwashers (2) securing front panel (3) to case.
2. Lift front panel (3) away from case (4).
3. Position front panel so component to be replaced is accessible.
4. Tag and unsolder wires from components being replaced.
5. Loosen and remove any hardware securing component.

REPLACEMENT:

1. Position component.
2. Replace and tighten any hardware that secures component.
3. Solder wires to replacement component and remove tags.
4. Position front panel (3) in case (4).
5. Tighten 10 cross-tip screws (1) and flatwashers (2) that attach front panel (3) to case (4).
6. Perform Operational Check (para. 5-2).

5-9. REMOVAL/REPLACEMENT OF FRONT PANEL AND COMPONENTS
(SEE APPENDIX C) (Cont.)

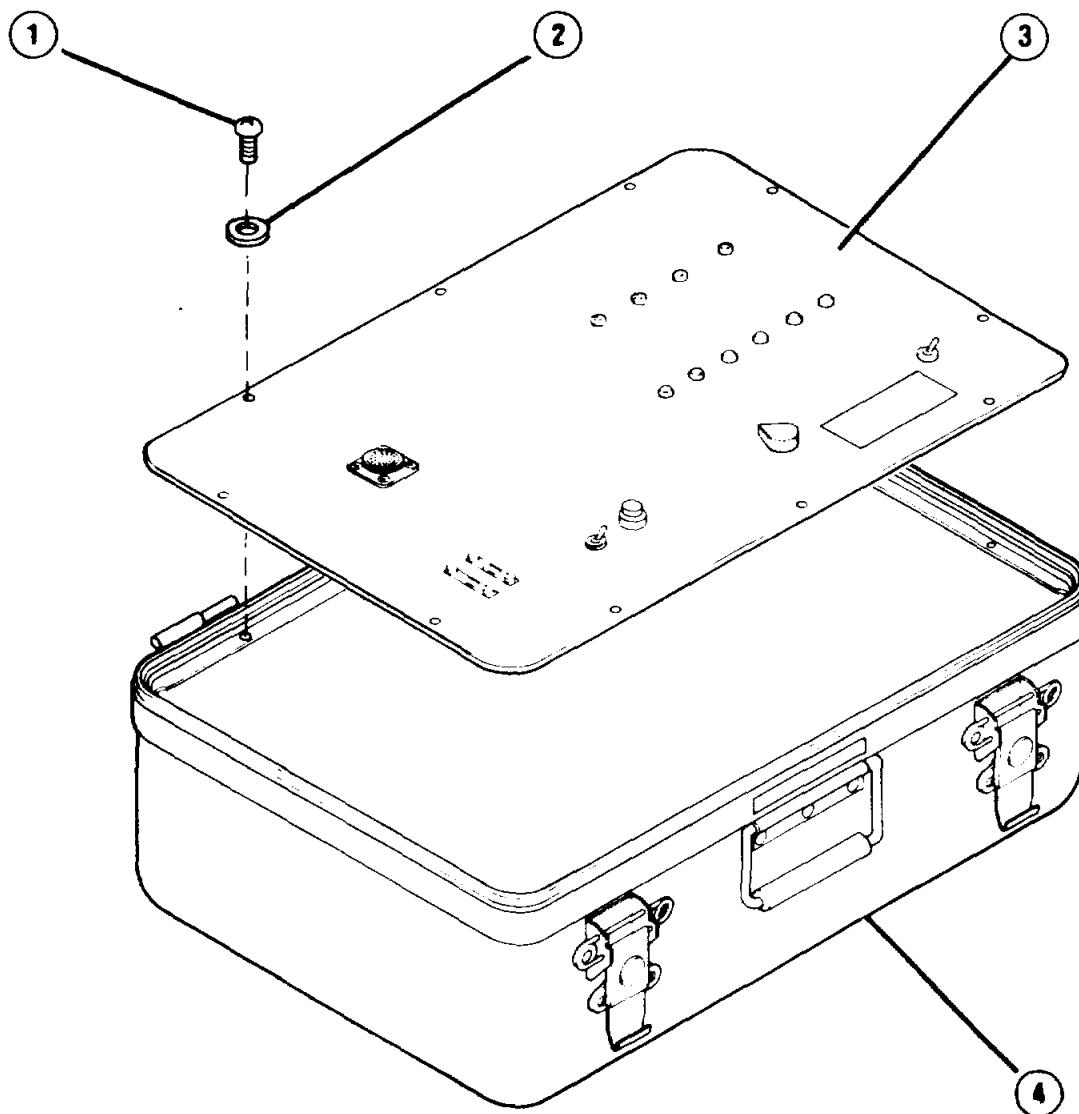


Figure 5-3. Front Panel removal/Replacement

**SECTION VI
PREPARATION FOR STORAGE OR SHIPMENT**

6-1. GENERAL

a. Army. Administrative storage of equipment issued to and used by Army activities will have preventive maintenance performed in accordance with the PMCS charts before storing. When removing the equipment from administrative storage the PMCS should be performed to assure operational readiness.

b. Navy. Refer to NAVSUP PUB 503.

c. Air Force. Refer to AFM 66-267 (storage) and AFR 67-31 (shipment).

6-2. MARKING

The marking on the exterior of the container shall be in accordance with MIL-STD-129H.

6-1/(6-2 Blank)

**APPENDIX A
REFERENCES**

A-1. SCOPE

This appendix lists publications that are referenced in this manual that contain information applicable to the maintenance of the Power Amplifier Test Set TS-4256/G.

A-2. PUBLICATIONS

Air Force Suggestion Program	AFR 900-4
Consolidated Index of Army Publications and Blank Forms	DA Pam 25-30
First Aid for Soldiers	FM 21-11
Maintenance Management Policy	AFR 66-1
Marking for Shipment and Storage	MIL-STD-129H
Procedures for Destruction of Electronics Material to Prevent Enemy Use (Electronics Command)	TM 750-224-2
Product Quality Deficiency Report.....	SF 368
Report of Discrepancy (ROD)	SF 364
Reporting of Item and Packaging Discrepancies	SECNAVINST 4355.18
Reporting of Transportation Discrepancies in Shipment	NAVSUPINST 4610.33C
Ships Maintenance and Material Management (3-M) Manual, Promulgation of	OPNAVINST 4790.2A
The Army Maintenance Management System (TAMMS) . . .	DA Pam 738-750
Transportation Discrepancy Report (TDR).....	SF 361
Unit, Intermediate Direct Support, and General Support Maintenance Manual For Amplifier, Power AM-7296/G (NSN 5895-01-205-0912)	TM 11-5895-1304-24 Navy EE020-FD-MMI-010/WII0-AM7296G Air Force TO 31R2-4-561-2
Unsatisfactory Equipment Reporting	TO-00-35D54

**APPENDIX B
MAINTENANCE ALLOCATION CHART**

B-1. GENERAL

This appendix provides a summary of the maintenance operations for the Power Amplifier Test Set TS-4256/G. It authorizes levels of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations.

B-2. MAINTENANCE FUNCTION

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 incipient failure 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 operating condition, i.e., to 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 the specified parameters.

e. Aline. 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 equipments 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, module (component or assembly) in a manner to allow the proper functioning of the equipment or system.

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

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, 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 (i.e., DMWR) in appropriate technical publications. 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 the 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 in classifying Army equipments/components.

B-3. 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 item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

d. Column 4, Maintenance Level. Column 4 specifies, by the listing of a work time 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 work time figures will be shown for each category. The number of task-hours specified by the work time 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:

UNIT

- C - Operator/Crew
- O - Organizational/Unit

INTERMEDIATE

- F - Direct Support
- H - General Support
- L - Special Repair Activity (SRA)

DEPOT

- 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-4. TOOL AND TEST EQUIPMENT REQUIREMENTS (SECT. 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 tool or test equipment.

c. Nomenclature. This column lists the noun name 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 manufacturers (5-digit) in parentheses.

B-5. REMARKS (SECT. 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

TEST SET, POWER AMPLIFIER TS-4256/G

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Category					(5) Tools and Equipment	(6) Remarks
			C	O	F	H	D		
00	Test Set, Power Amplifier TS-4256/G (900158-801)	Inspect				L(0.1)			A
		Replace				L(0.05)			
		Test				L(1.0)	1,2,4,5		B
		Repair				L(1.0)	3		B
01	Case, Test Set	Repair				L(0.5)	3		
02		Front Panel Assembly (1-94285.0000//A)	Repair				L(1.0)	3	
		Test				L(1.0)	1,2,4,5		
0201	CCA AI (1-94356.0000//8B)	Replace				L(0.3)	3		
		Test				L(0.1)	1		
		Repair				L(1.0)	3		
03	Cable Assembly W30 (3-94289.0000//B)	Replace				L(0.05)			
		Test				L(0.3)	1		D
		Repair				L(0.5)	3,6,7,8		
04	Cable Assembly W27 (420556-801)	Replace				L(0.05)			
		Test				L(0.3)	1		D
		Repair				L(0.5)	3,7		
05	Cable Assembly W73 (420557-801)	Replace				L(0.05)			
		Test				L(0.3)	1		D
		Repair				L(0.5)	3,7,8,9		

**SECTION III. TOOLS AND TEST EQUIPMENT REQUIREMENTS
FOR
TEST SET, POWER AMPLIFIER TS-4256/G**

Ref. Code	Maint. Level	Nomenclature	National/NATO Stock Number	Tool Number
1	L	Multimeter, Digital AN/USM-486	6625-01-145-2430	FLUKE 8050A-01
2	L	Power Supply PP-8202/G *	6130-00-160-0827	HP 6274B
3	L	Tool Kit, Elect. TK-17 (Incl. Metric)	5180-01-195-0855	JENSEN JTK-17RM
4	L	Test Probe to Banana Plug, Black	6625-01-124-5005	ITT POMONA 4410-48-0
5	L	Test Probe to Banana Plug, Red	6625-01-124-5004	ITT POMONA 4410-48-2
6	L	Crimp Tool	5120-00-165-3912	M2252011-01
7	L	Insertion Tool	5120-01-131-0140	ITT CIT-16
8	L	Extraction Tool	5120-00-941-5470	ITT CET-16-4
9	L	Crimp Tool		SORIAU 8457
* PP-8214/G provides identical capability when source power is 230V, 50Hz. Air Force use only.			6130-00-150-0028	
B-5				

**SECTION IV. REMARKS
FOR
TEST SET, POWER AMPLIFIER TS-42561G**

Reference Code	Remarks
A	Inspect unit for visible physical damage.
B	Consists of test/repair to Front Panel assembly and cable assemblies. Cable Assembly W74 (P/N 422018-1) is non-repairable. Includes performance check.
C	Test/repair as part of next higher assembly.
D	Consists of point-to-point continuity checks.
	B-6

APPENDIX C

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST

Section I. INTRODUCTION

C-1. Scope

This appendix lists and authorizes spares and repair parts; special tools; special test, measurement, and diagnostic equipment (TMDE); and other special support equipment required for performance of operator's, organizational, direct support and general support maintenance of Power Amplifier Test Set, TS-4256/G. It authorizes the requisitioning, issue, and disposition of spares, repair parts and special tools as indicated by the source, maintenance and recoverability (SMR) codes.

C-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. The list also includes parts which must be removed for replacement of the authorized parts. Parts lists are composed of functional groups in ascending numeric sequence, with the parts in each group listed in ascending item number sequence. Figure numbers are listed directly beneath the group header.

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 list figure and item numbers in numeric sequence and cross-references National stock number, Commercial and Government Entity Code, and part numbers.

C-3. Explanation of Columns (Section II and III)

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

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:

Source Code	Maintenance Code	Recoverability Code
<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> XX </div>	<div style="border: 1px solid black; width: 80px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> XX </div>	<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> X </div>
1st two positions	3rd position	4 th position
How you get an item	Who can install, replace, or use the item	Who determines disposition action on an unserviceable item

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

- PA
- PB
- PC
- PD
- PE
- PF
- PG

- KB
- KD
- KF

Explanation

Stocked items: use applicable NSN to request and/or requisition items with these source codes. They are authorized to the category indication by the code entered in the third position of the SMR code

NOTE

Items coded PC are subject to deterioration.

Items with these codes are not to be requested and/or 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.

Code

Explanation

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 and/or 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.

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 and/or 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 an "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 item.
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.

<u>Code</u>	<u>Application/Explanation</u>
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.

Code Application/Explanation

- Z - Nonreparable. No repair is authorized.
- B - No repair is authorized. (No parts or special tools are authorized for the maintenance of a 'B' coded item.) However, the item may be reconditioned 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 SNR Code as follows:

Recoverability codes Application/Explanation

- Z - Nonreparable item. When unserviceable, condemn and dispose of the item at the category of maintenance shown in the third position of SMR code.
- 0 - Repairable item. When uneconomically repairable, condemn and dispose of the item at organizational or aviation unit category.
- F - Repairable item. When uneconomically repairable, condemn and dispose of the item at direct support or aviation intermediate category.
- H - Repairable item. When uneconomically repairable, condemn and dispose of the item at general support category.
- D - Repairable item. When beyond lower category repair capability, return to depot. Condemnation and disposal of item not authorized below depot category.
- L - Repairable 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 -ES 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) 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)). Indicates 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 this column in lieu of a quantity indicates that the quantity is variable and the quantity may vary from application to application.

C-4. Explanation of Columns (Section IV)

a. 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).

(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 (CAGIC).

(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 II 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 item.

C-5. Special Information

National stock numbers (NSN's) 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 NSN's are established and published, submit exception requisitions to: Commander, US Army Communications Electronics Command and Fort Monmouth, ATTN: AMSEL-LC-MM, Fort Monmouth, NJ 07703-5000 for the part required to support your equipment.

NOTE

An item SMR coded “H” in the third, fourth, and fifth position is interpreted as intermediate for Air Force Repair.

C-6. How to Locate Repair Parts

a. When National 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 groups.

(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 List 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 C-4a(l)). The part numbers in the part number index are listed in ascending alphameric sequence (para C-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.

C-7. Abbreviations

Not applicable.

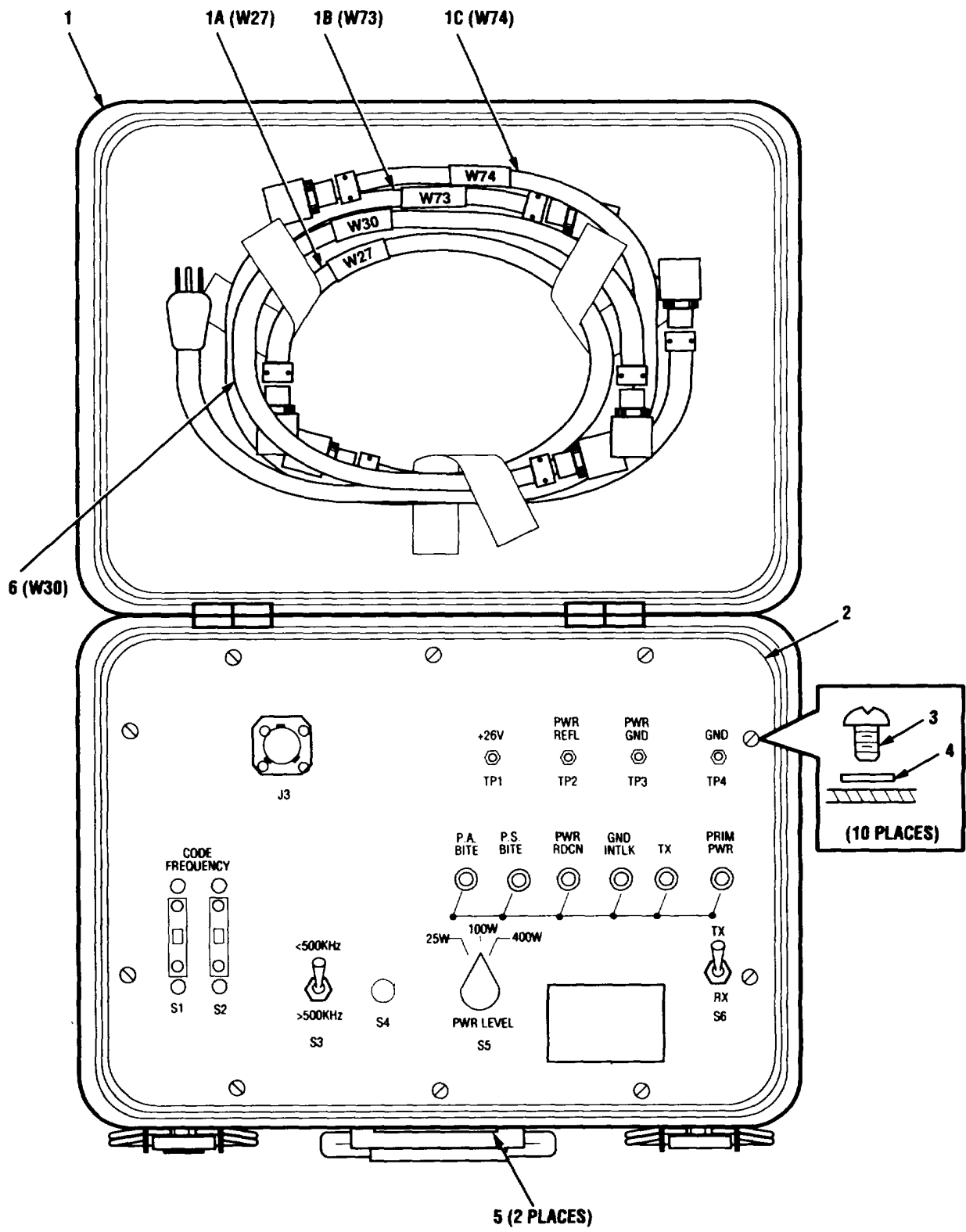


Figure C-1. Test Set, Power Amplifier TS-4256/G (900158-801)

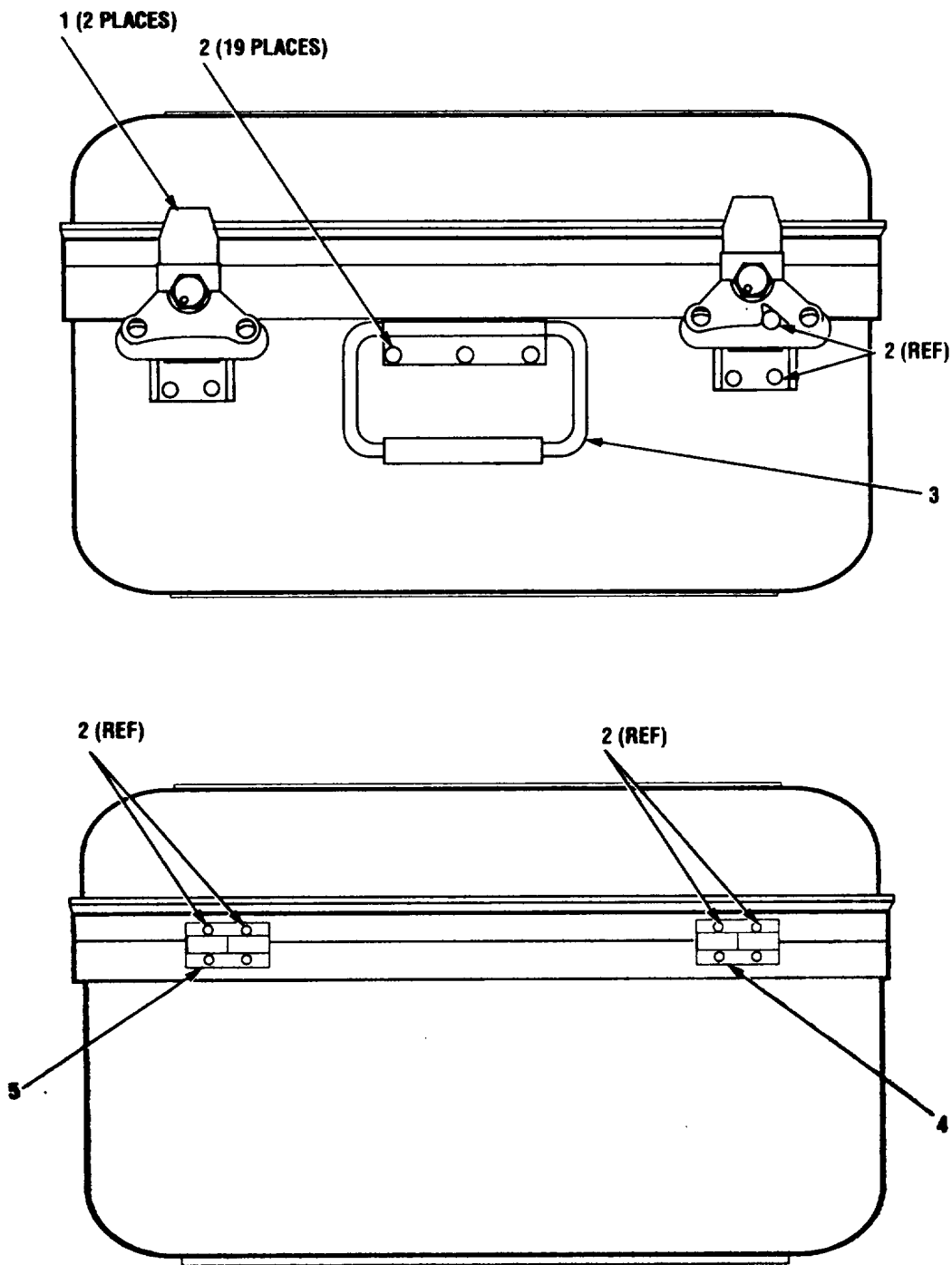
Section II

TM11-6625-3216-14&P

(1) ITEM NO	(2) SMR CODE	(3) CAGEC	(4) PART NUMBER	(5) DESCRIPTION AND USABLE ON CODES(UOC)	(6) QTY
GROUP 00 TEST SET, POWER AMPLIFIER TS-4256/G (900158-801)					
FIG. C-1					
1	XBHLL	A3026	2-B0607.0000//D	CASE, TEST SET (SEE FIG.C-2 FOR PARTS BREAKDOWN)	1
1A	PAHLL	A3026	420556-801	CABLE ASSEMBLY, POWE (SEE FIG. 6 FOR PARTS BREAKDOWN)	1
1B	PAHLL	A3026	420557-801	CABLE ASSEMBLY, POWE (SEE FIG. 7 FOR PARTS BREAKDOWN)	1
1C	PAHZZ	37695	422018-1	CABLE ASSEMBLY, POWE	1
2	XBHLL	A3026	1-94285.0000//A	FRONT PANEL ASSEMBL (SEE FIG.C-3 FOR PARTS BREAKDOWN)	1
3	PAHZZ	96906	MS51957-45	SCREW, MACHINE	10
4	PAHZZ	88044	AN960C8L	WASHER, FLAT	10
5	XBHZZ	A3026	4-A2155.0003//D	PLATE, IDENTIFICATIO	2
6	PAHLL	A3026	3-94289.0000//B	CABLE ASSEMBLY, POWE (SEE FIG.C-5 FOR PARTS BREAKDOWN)	1

END OF FIGURE

C-1-1



CE1VB-002

Figure C-2. Case, Test Set (2-B0607.0000//D)

Section II

TM11-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 01 CASE, TEST SET (2-B0607.0000//D)	
				FIG. C-2	
1	XBHZZ	24995	22002022	LATCH.....	2
2	XBHZZ	24995	33500035	RIVET ASSEMBLY.....	19
3	XBHZZ	24995	31000691	HANDLE, BOW.....	1
4	XBHZZ	24995	24000450	HINGE	1
5	XBHZZ	24995	24000460	HINGE	1

END OF FIGURE

C-2-1

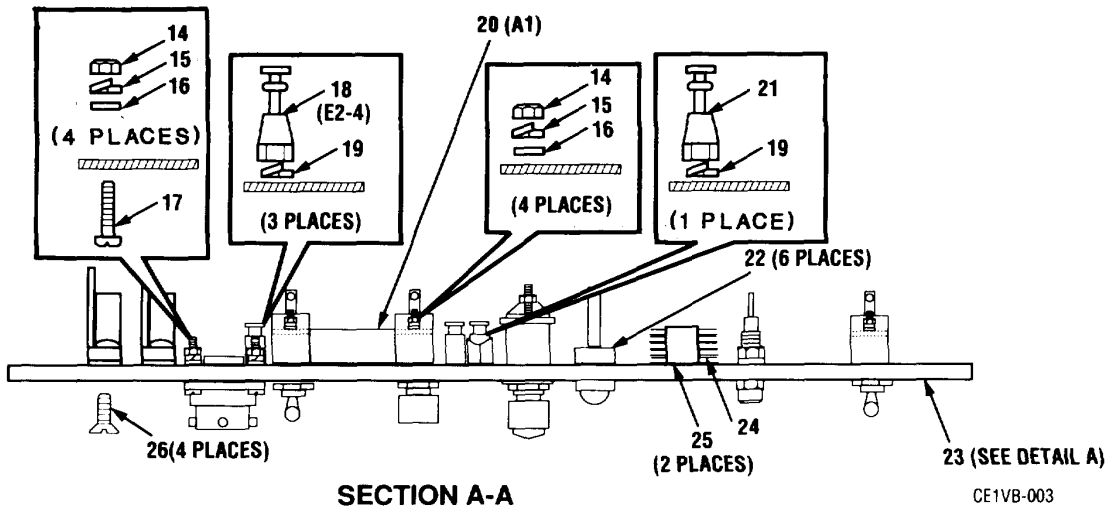
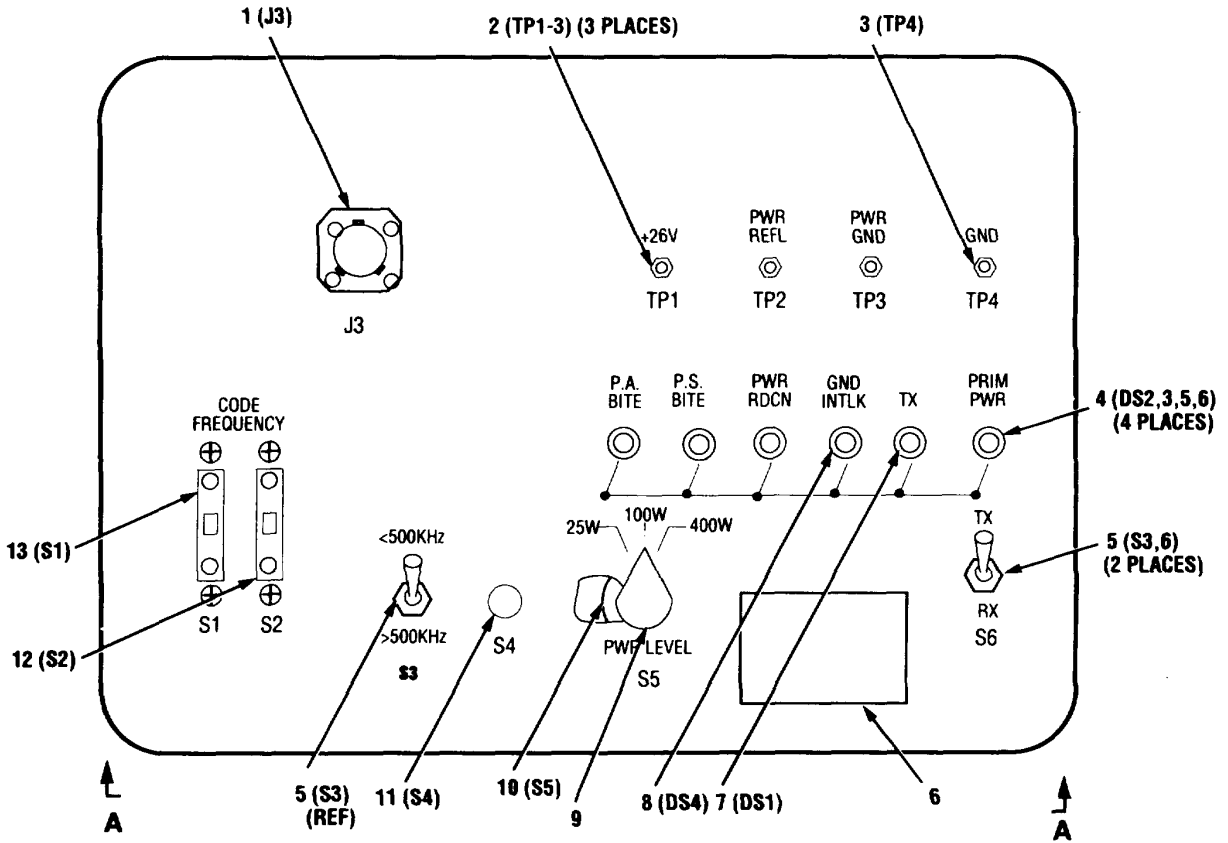
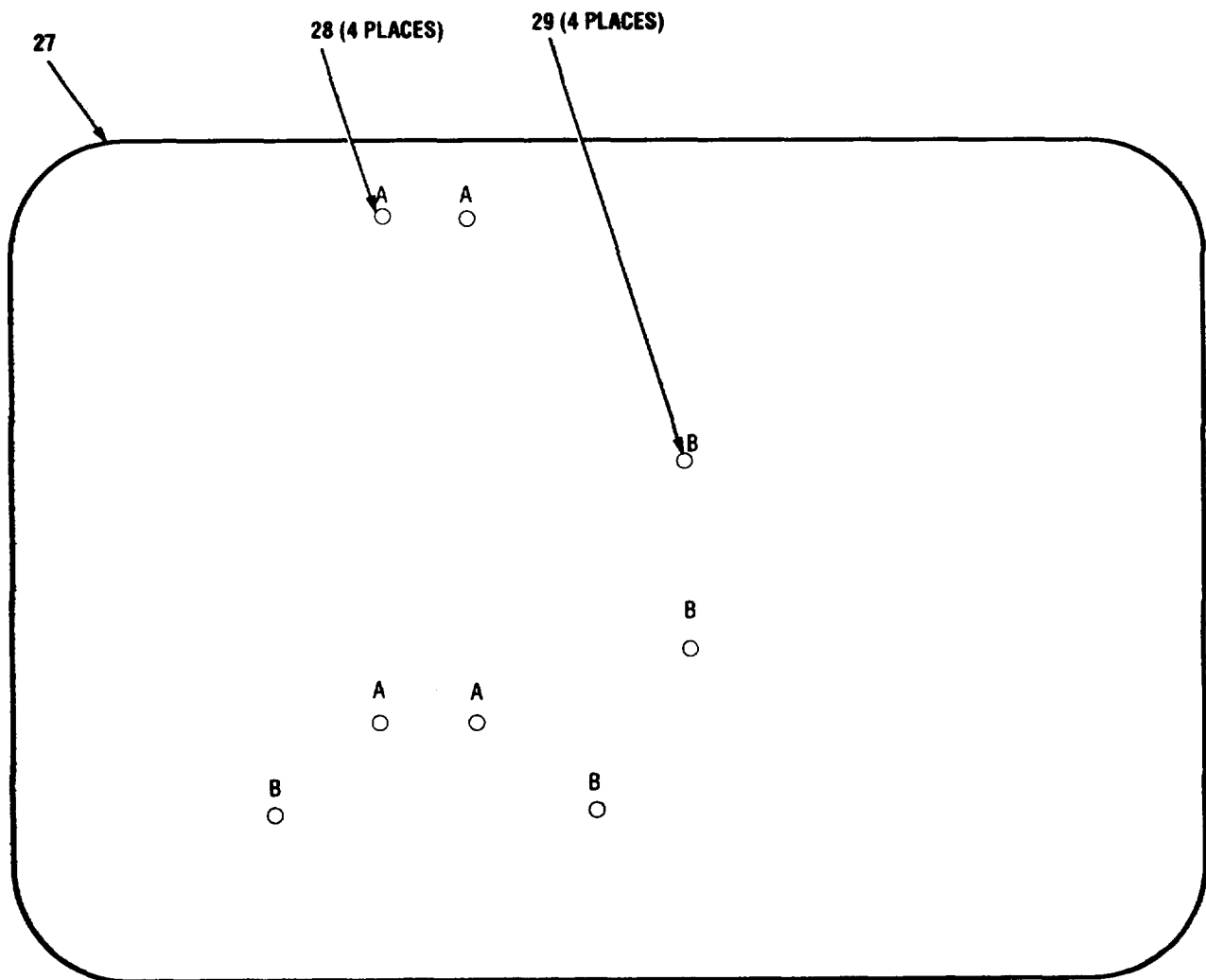


Figure C-3. Front Panel Assembly (1-94285.0000//A) (Sheet 1 of 2)



DETAIL A

CE1VBO04

Figure C-3. Front Panel Assembly (1-94285.0000//A) (Sheet 2 of 2)

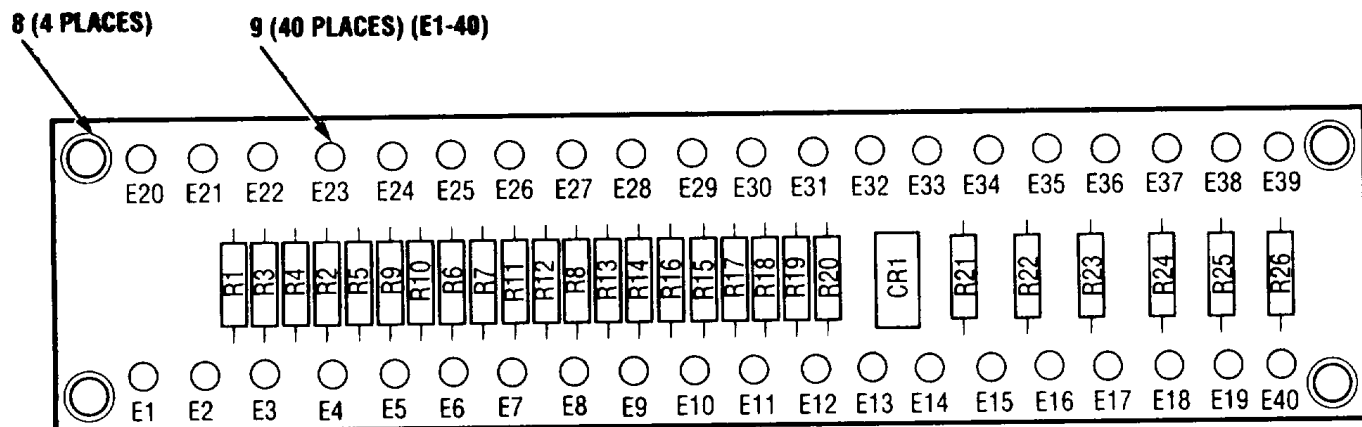
SECTION II

TM11-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 02 FRONT PANEL ASSEMBLY (1-94285.0000//A)					
FIG. C-3					
1	PAHZA	96906	MS27508E14B355	CONNECTOR, RECEPTACL	1
2	PAHZZ	A3026	4-36246.0000//N	JACK, TIP	3
3	PAHZZ	A3026	4-06746.0000//N	JACK, TIP	1
4	PAHZZ	37695	615539-6	LIGHT EMITTING DIOD	4
5	PAHZZ	A3026	4-32151.0004//M	SWITCH, TOGGLE	2
6	XBHZZ	A3026	4-A2155.0003//D	PLATE, IDENTIFICATIO.....	1
7	PAHZZ	50434	HLMP-3401	LIGHT EMITTING DIOD	1
8	PAHZZ	28480	HLMP-3507	LIGHT EMITTING DIOD	1
9	PAHZZ	94033	70-4-2G	KNOB.....	1
10	PAHZZ	A3026	4-22015.0001//M	SWITCH, ROTARY	1
11	PAHZZ	A3026	4-32150.0003//M	SWITCH, PUSH.....	1
12	PAHZZ	91812	28162	SWITCH, PUSH.....	1
13	PAHZZ	91812	28165	SWITCH, PUSH.....	1
14	PAHZZ	A3026	3-75883-001	NUT, PLAIN, HEXAGON	8
15	PAHZZ	A3026	3-10311-004	WASHER, LOCK	8
16	PAHZZ	96906	MS15795-803	WASHER, FLAT	8
17	PAHZZ	96906	MS51957-14	SCREW, MACHINE	4
18	PAHZZ	A3026	3-72284.0002//C	TERMINAL, LUG	3
19	PAHZZ	A3026	3-10336-004	WASHER, LOCK	4
20	PAHLL	A3026	1-94356.0000//B	CIRCUIT CARD ASSEMB (SEE FIG.C-4 FOR PARTS BREAKDOWN).....	1
21	PAHZZ	80063	A3031352-3	POST, ELECTRICAL, MEC	1
22	PAHZZ	A3026	4-34260.0000//M	HOLDER, LAMP	6
23	XBHLL	A3026	2-A2133.0000//D	FRONT PANEL ASSEMBL.....	1
24	XBHHH	A3026	4-94414.0000//B	WIRING HARNESS	1
25	XBHZZ	A3026	4-A2156.0000//D	BAND, MARKER.....	2
26	PAHZZ	96906	MS51959-3	SCREW, MACHINE	4
27	XBHZZ	A3026	2-B1937.0000//D	FRONT PANEL.....	1
28	PAHZZ	46384	FHS-M2.5-12	INSERT, SCREW, THREAD.....	4
29	PAHZZ	46384	FHS-M3-6	STUD, SELF-LOCKING.....	4

END OF FIGURE

C-3-1



LEGEND

REF. DES.	ITEM NO.	REF. DES.	ITEM NO.	REF. DES.	ITEM NO.
CR1	1	R11	3	R22	6
R1	2	R12	3	R23	6
R2	2	R13	2	R24	6
R3	3	R14	3	R25	6
R4	3	R15	2	R26	7
R5	2	R16	3		
R6	2	R17	2		
R7	2	R18	3		
R8	2	R19	4		
R9	3	R20	5		
R10	3	R21	6		

NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY AN A1

CE1VB-005

Figure C-4. Circuit Card Assembly A1 (1-94356.0000//B)

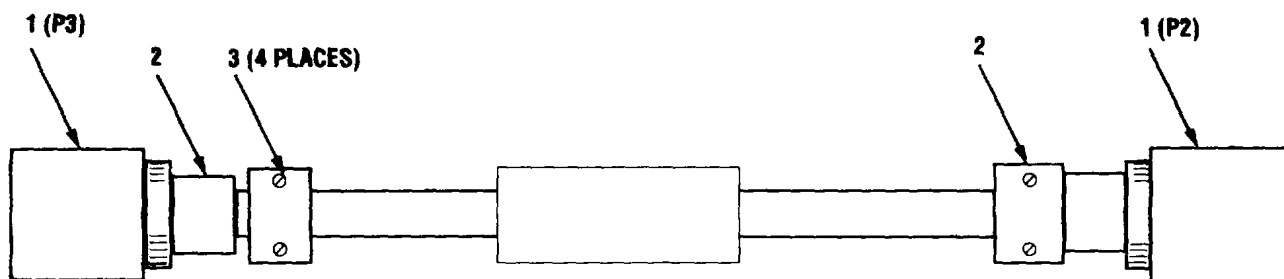
SECTION II

TM11-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
GROUP 0201 CIRCUIT CARD ASSEMBLY (A1) (1-94356.0000//B)					
FIG. C-4					
1	PAHZZ	81349	JANIN3611	SEMICONDUCTOR DEVIC	1
2	PAHZZ	81349	RCR07G273JS	RESISTOR, FIXED, COMP	9
3	PAHZZ	81349	RCR07G512JS	RESISTOR, FIXED, COMP	9
4	PAHZZ	81349	RNC55K2432FS	RESISTOR, FIXED, FILM	1
5	PAHZZ	81349	RNC55K1002FS	RESISTOR, FIXED, FILM	1
6	PAHZZ	81349	RCR20G202JS	RESISTOR, FIXED, COMP	5
7	PAHZZ	81349	RCR20G122JS	RESISTOR, FIXED, COMP	1
8	PAHZZ	A3026	4-54733.0000//C	BUSHING	4
9	PAHZZ	12436	666273-074	TERMINAL, LUG	40

END OF FIGURE

C-4-1



NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED By W3V

CE1VB-06

Figure C-5. Cable Assembly W30 (3-94289.0000//B)

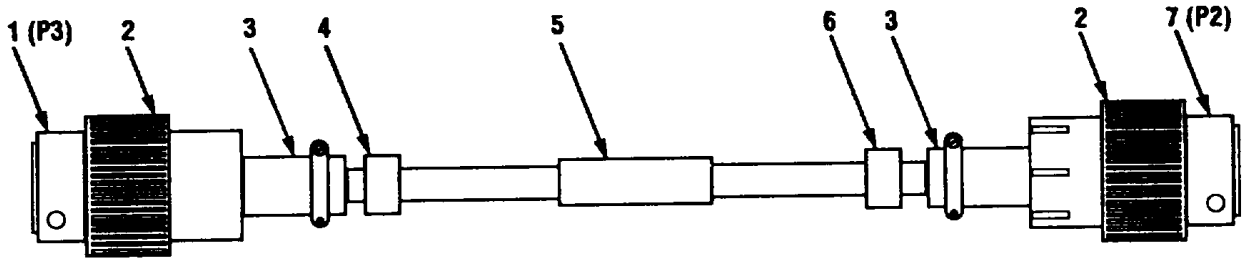
SECTION II

TM11-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 03 CABLE ASSEMBLY (W30) (3-94289.0000/B)	
				FIG. C-5	
1	PAHZZ	96906	MS27473T14F35PN	CONNECTOR, RECEPTACL	2
2	PAHZZ	81349	M85049/49-2-14W	CLAMP, CABLE, ELECTRI.....	2
3	PAHZZ	96906	MS51957-28	SCREW, MACHINE	4

END OF FIGURE

C-5-1



NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W27

CE1VB010

Figure C-6. Cable Assembly W27 (420556-801)

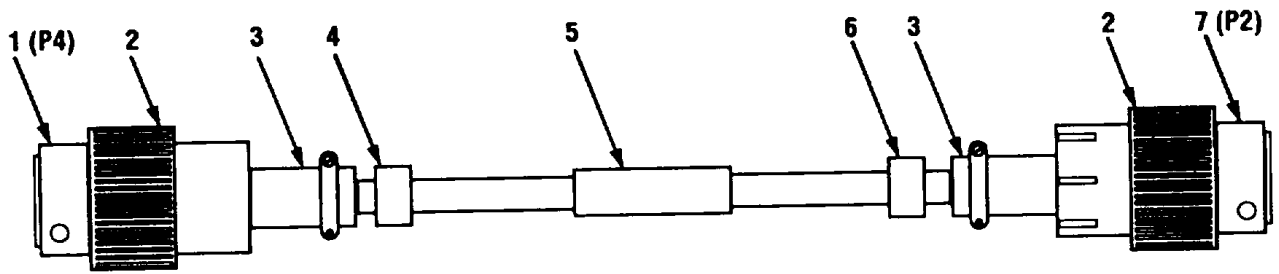
SECTION II

TM11-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 04 CABLE ASSEMBLY (W27) (420556-801)	
				FIG. C-6	
1	PAHZZ	59610	841-34-850-SP4	CONNECTOR, RECEPTACL	1
2	XBHZZ	59610	841-30-003-SP4	BACKSHELL, CONNECAOR.....	2
3	XBHZZ	A3026	4-A2166.0000//D	INSULATION SLEEVING	2
4	XBHZZ	A3026	4-A2109.0011//D	BAND, MARKER.....	1
5	XBHZZ	A3026	4-A2109.0001//D	BAND, MARKER.....	1
6	XBHZZ	A3026	4-A2109.0010//D	BAND, MARKER.....	1
7	PAHZZ	59610	841-34-810-SP4	CONNECTOR, RECEPTACL	1

END OF FIGURE

C-6-1



NOTE: ALL REFERENCE DESIGNATORS SHOULD BE PRECEDED BY A W73

CE1VB011

Figure C-7. Cable Assembly W73 (420557-801)

SECTION II

TMII-6625-3216-14&P

(1)	(2)	(3)	(4)	(5)	(6)
ITEM NO	SMR CODE	CAGEC	PART NUMBER	DESCRIPTION AND USABLE ON CODES(UOC)	QTY
				GROUP 05 CABLE ASSEMBLY (W73) (420557-801)	
				FIG. C-7	
1	PAHZZ	59610	841-31-850-SP4	CONNECTOR, RECEPACL	1
2	XBHZZ	59610	841-30-003-SP4	BACKSHELL, CONNECAOR.....	2
3	XBHZZ	A3026	4-A2166.0000//D	INSULATION SLEEVING	2
4	XBHZZ	A3026	4-A2109.0012//D	BAND, MARKER.....	1
5	XBHZZ	A3026	4-A2109.0002//D	BAND, MARKER.....	1
6	XBHZZ	A3026	4-A2109.0010//D	BAND, MARKER.....	1
7	PAHZZ	59610	841-31-810-SP4	CONNECTOR, RECEPACL	1

END OF FIGURE

C-7-1

SECTION IV**TM11-6625-3216-14&P
CROSS-REFERENCE INDEXES**

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
5305-00-054-5648	C-3	17			
5305-00-054-6652	C-5	3			
5305-00-054-6670	C-1	3			
5905-00-111-1679	C-4	3			
5905-00-119-3504	C-4	2			
5905-00-138-6996	C-4	4			
5905-00-141-0592	C-4	7			
5905-00-479-3990	C-4	5			
5935-00-534-6523	C-3	1			
5310-00-558-6207	C-1	4			
5310-00-595-6211	C-3	16			
5355-00-616-9604	C-3	9			
5305-00-727-8833	C-3	26			
5905-00-935-8539	C-4	6			
5961-00-957-6865	C-4	1			
5980-01-170-1544	C-3	7			
5980-01-178-0898	C-3	8			
5935-01-178-5257	C-5	2			
5930-01-240-4198	C-3	12			
5930-01-241-4623	C-3	13			
5980-01-243-8475	C-3	4			

C-I-1

SECTION IV

TM11-6625-3216-14&P
CROSS-REFERENCE INDEXES

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
88044	AN960C8L	5310-00-558-6207	C-1	4
80063	A3031352-3		C-3	21
46384	FHS-M2.5-12		C-3	28
46384	FHS-M3-6		C-3	29
50434	HLMP-3401	5980-01-170-1544	C-3	7
28480	HLMP-3507	5980-01-178-0898	C-3	8
81349	JAN1N3611	5961-00-957-6865	C-4	1
96906	M515795-803	5310-00-595-6211	C-3	16
96906	M527473T14F35PN		C-5	1
96906	MS27508E14B35S	5935-00-534-6523	C-3	1
96906	MS51957-14	5305-00-054-5648	C-3	17
96906	MS51957-28	5305-00-054-6652	C-5	3
96906	MS51957-45	5305-00-054-6670	C-1	3
96906	MS51959-3	5305-00-727-8833	C-3	26
81349	M85049/49-2-14W	5935-01-178-5257	C-5	2
81349	RCR07G273JS	5905-00-119-3504	C-4	2
81349	RCR07G512JS	5905-00-111-1679	C-4	3
81349	RCR20G122JS	5905-00-141-0592	C-4	7
81349	RCR20G202JS	5905-00-935-8539	C-4	6
81349	RNC55K1002FS	5905-00-479-3990	C-4	5
81349	RNC55K2432FS	5905-00-138-6996	C-4	4
A3026	1-94285.0000//A		C-1	2
A3026	1-94356.0000//B		C-3	20
A3026	2-A2133.0000//D		C-3	23
A3026	2-B0607.0000//D		C-1	1
A3026	2-B1937.0000//D		C-3	27
24995	22002022		C-2	1
24995	24000450		C-2	4
24995	24000460		C-2	5
91812	28162	5930-01-240-4198	C-3	12
91812	28165	5930-01-241-4623	C-3	13
A3026	3-10311-004		C-3	15
A3026	3-10336-004		C-3	19
A3026	3-72284.0002//C		C-3	18
A3026	3-75883-001		C-3	14
A3026	3-94289.0000//B		C-1	6
24995	31000691		C-2	3
24995	33500035		C-2	2
A3026	4-A2109.0001//D		C-6	5
A3026	4-A2109.0002//D		C-7	5
A3026	4-A2109.0010//D		C-6	6
			C-7	6
A3026	4-A2109.0011//D		C-6	4
A3026	4-A2109.0012//D		C-7	4
A3026	4-A2155.0003//D		C-1	5
			C-3	6
A3026	4-A2156.0000//D		C-3	25
A3026	4-A2166.0000//D		C-6	3
			C-7	3
A3026	4-06746.000//N		C-3	3
A3026	4-22015.0001//M		C-3	10

SECTION IV**TM11-6625-3216-14&P
CROSS-REFERENCE INDEXES
STOCK NUMBER**

CAGEC	PART NUMBER	STOCK NUMBER	FIG.	ITEM
A3026	4-32150.0003//M		C-3	11
A3026	4-32151.0004//M		C-3	5
A3026	4-34260.0000//M		C-3	22
A3026	4-36246.0000//N		C-3	2
A3026	4-54733.0000//C		C-4	8
A3026	4-94414.0000//B		C-3	24
A3026	420556-801		C-1	1A
A3026	420557-801		C-1	1B
37695	422018-1		C-1	1C
37695	615539-6	5980-01-243-8475	C-3	4
12436	666273-074		C-4	9
94033	70-4-2G	5355-00-616-9604	C-3	9
59610	841-30-003-SP4		C-6	2
			C-7	2
59610	841-31-810-SP4		C-7	7
59610	841-31-850-SP4		C-7	1
59610	841-34-810-SP4		C-6	7
59610	841-34-850-5P4		C-6	1

C-I-3

SECTION IV

TM11-6625-3216-14&P
CROSS-REFERENCE INDEXES

STOCK NUMBER	FIGURE NO.	ITEM NO.	STOCK NUMBER	FIGURE NO.	ITEM NO.
C-1	1		A3026	2-B0607.0000//D	
C-1	1A		A3026	420556-801	
C-1	1B		A3026	420557-801	
C-1	1C		37695	422018-1	
C-1	2		A3026	1-94285.0000//A	
C-1	3	5305-00-054-6670	96906	MS51957-45	
C-1	4	5310-00-558-6207	88044	AN960C8L	
C-1	5		A3026	4-A2155.0003//D	
C-1	6		A3026	3-94289.0000//B	
C-2	1		24995	22002022	
C-2	2		24995	33500035	
C-2	3		24995	31000691	
C-2	4		24995	24000450	
C-2	5		24995	24000460	
C-3	1	5935-00-534-6523	96906	MS27508E14B35S	
C-3	2		A3026	4-36246.0000//N	
C-3	3		A3026	4-06746.0000//N	
C-3	4	5980-01-243-8475	37695	615539-6	
C-3	5		A3026	4-32151.0004//M	
C-3	6		A3026	4-A2155.0003//D	
C-3	7	5980-01-170-1544	50434	HLMP-3401	
C-3	8	5980-01-178-0898	28480	HLMP-3507	
C-3	9	5355-00-616-9604	94033	70-4-2G	
C-3	10		A3026	4-22015.0001//M	
C-3	11		A3026	4-32150.0003//M	
C-3	12	5930-01-240-4198	91812	28162	
C-3	13	5930-01-241-4623	91812	28165	
C-3	14		A3026	3-75883-001	
C-3	15		A3026	3-10311-004	
C-3	16	5310-00-595-6211	96906	MS15795-803	
C-3	17	5305-00-054-5648	96906	MS51957-14	
C-3	18		A3026	3-72284.0002//C	
C-3	19		A3026	3-10336-004	
C-3	20		A3026	1-94356.0000//B	
C-3	21		80063	A3031352-3	
C-3	22		A3026	4-34260.0000//M	
C-3	23		A3026	2-A2133.0000//D	
C-3	24		A3026	4-94414.0000//B	
C-3	25		A3026	4-A2156.0000//D	
C-3	26	5305-00-727-8833	96906	MS51959-3	
C-3	27		A3026	2-B1937.0000//D	
C-3	28		46384	FHS-M2.5-12	
C-3	29		46384	FHS-M3-6	
C-4	1	5961-00-957-6865	81349	JAN1N3611	
C-4	2	5905-00-119-3504	81349	RCR07G273JS	
C-4	3	5905-00-111-1679	81349	RCR07G512JS	
C-4	4	5905-00-138-6996	81349	RNC55K2432FS	
C-4	5	5905-00-479-3990	81349	RNC55K1002FS	
C-4	6	5905-00-935-8539	81349	RCR20G202JS	
C-4	7	5905-00-141-0592	81349	RCR20G122JS	
C-4	8		A3026	4-54733.0000//C	

SECTION IV**TM11-6625-3216-14&P
CROSS-REFERENCE INDEXES**

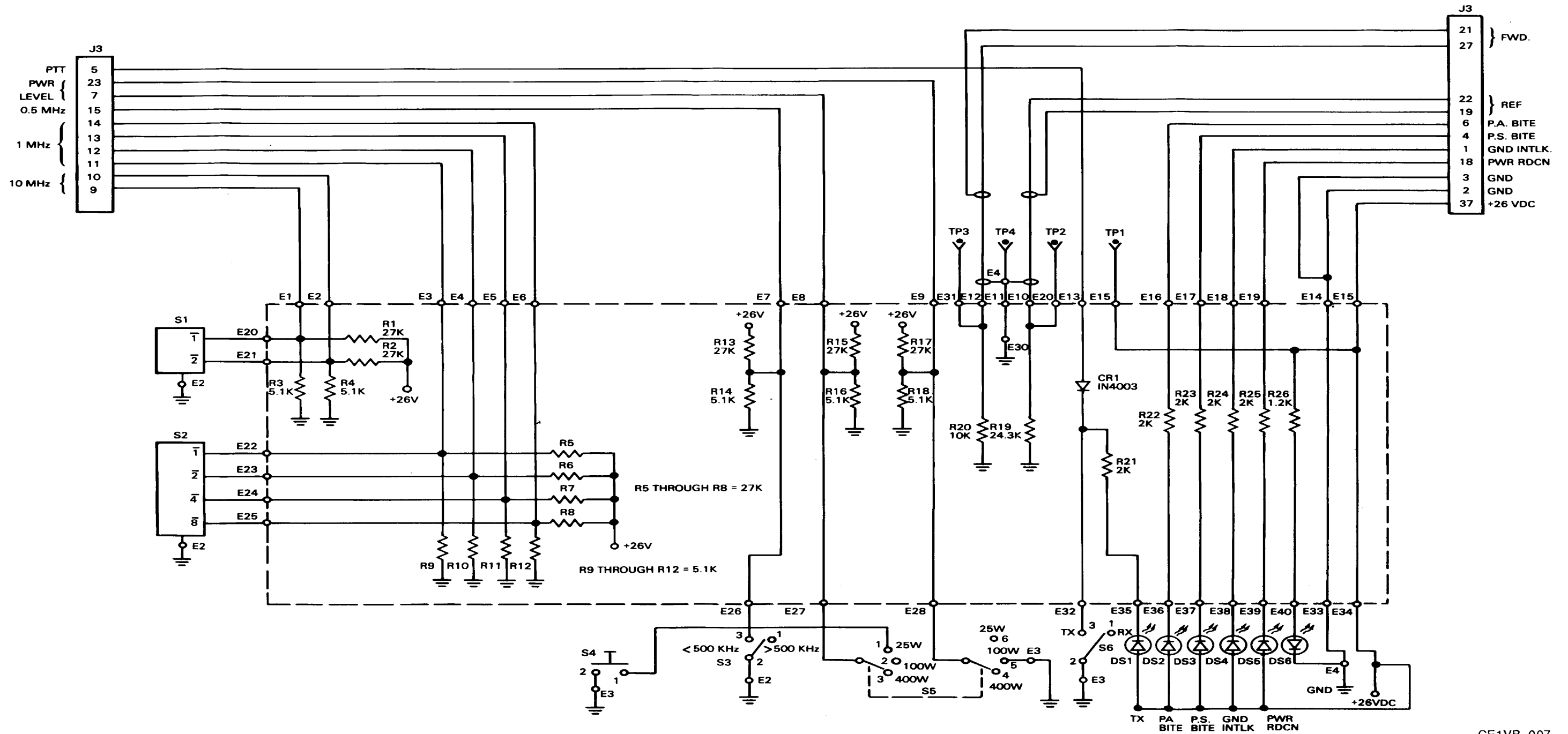
FIGURE AND ITEM NUMBER INDEX				
FIG	ITEM	STOCK NUMBER	CAGEC	PART NUMBER
C-4	9		12436	666273-074
C-5	1		96906	MS27473T14F35PN
C-5	2	5935-01-178-5257	81349	M85049/49-2-14W
C-5	3	5305-00-054-6652	96906	MS51957-28
C-6	1		59610	841-34-850-SP4
C-6	2		59610	841-30-003-SP4
C-6	3		A3026	4-A2166.0000//D
C-6	4		A3026	4-A2109.0011//D
C-6	5		A3026	4-A2109.0001//D
C-6	6		A3026	4-A2109.0010//D
C-6	7		59610	841-34-810-SP4
C-7	1		59610	841-31-850-SP4
C-7	2		59610	841-30-003-SP4
C-7	3		A3026	4-A2166.0000//D
C-7	4		A3026	4-A2109.0012//D
C-7	5		A3026	4-A2109.0002//D
C-7	6		A3026	4-A2109.0010//D
C-7	7		59610	841-31-810-SP4

C-I-5

GLOSSARY

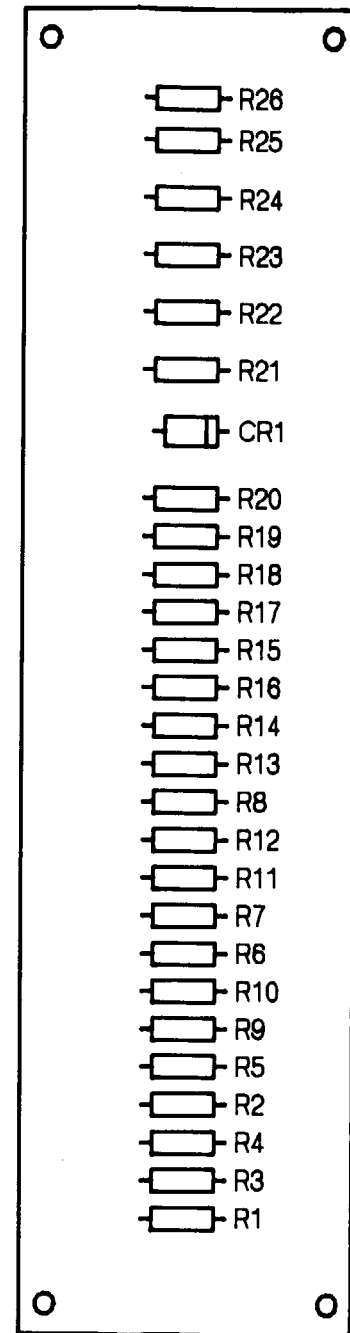
Section I. ABBREVIATIONS AND ACRONYMS

BCD.....	Binary Coded Decimal
BIT.....	Built In Test
BITE.....	Built-In-Test Equipment
CCA.....	Circuit Card Assembly
DMM.....	Digital Multimeter
EIR.....	Equipment Improvement Recommendations
FO.....	Fold-Out
GND.....	Ground
IAW.....	In Accordance With
KHz.....	Kilohertz
LED.....	Light-emitting Diode
MAC.....	Maintenance Allocation Chart
MDCS.....	Maintenance Data Collection Subsystem
MHz.....	Megahertz
MIL STD.....	Military Standard
MWO.....	Modification Work Order
NSN.....	National Stock Number
P/N.....	Part Number
PA.....	Power Amplifier
PTT.....	Push-To-Talk
RF.....	Radio Frequency
ROD.....	Report of Discrepancy
RPSTL.....	Repair Parts and Special Tools List
RX.....	Receive
SRA.....	Special Repair Activity
TDR.....	Transportation Discrepancy Report
TP.....	Test Point
TX.....	Transmit
UUT.....	Unit-Under-Test
VDC.....	Volts Direct Current
VSWR.....	Voltage Standing Wave Ratio
W.....	Watt



CE1VB-007

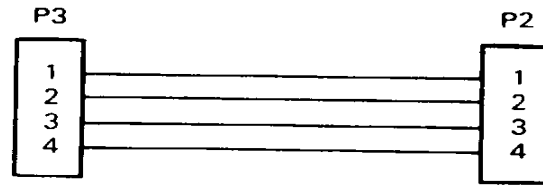
FO-1. SCHEMATIC DIAGRAM, TS-4256/G



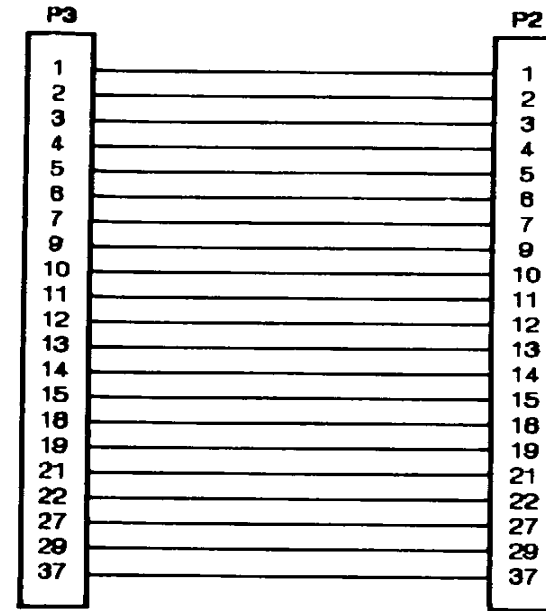
CCA A1

FO-2. TEST SET CCA A1 PARTS LOCATION DIAGRAM

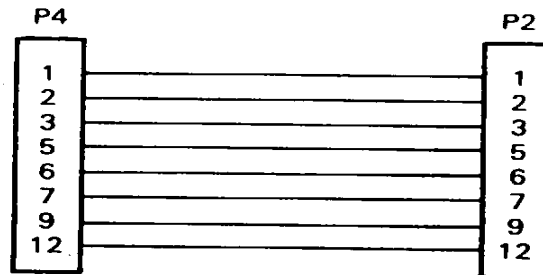
CE1VB-008



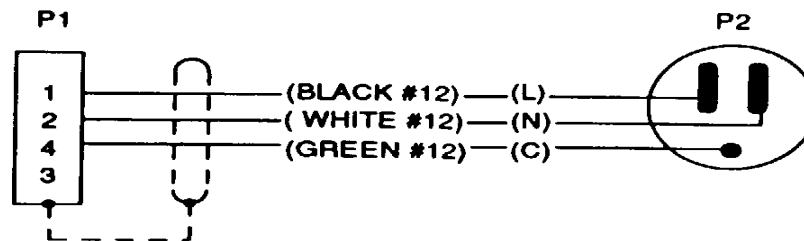
**PIN ASSIGNMENTS FOR
CABLE ASSEMBLY W27**



**PIN ASSIGNMENTS FOR
CABLE ASSEMBLY W30**



**PIN ASSIGNMENTS FOR
CABLE ASSEMBLY W73**



**PIN ASSIGNMENTS FOR
CABLE ASSEMBLY W74**

FO-3. PIN ASSIGNMENTS, CABLE ASSY W27, W30, W73, W74

CE1VB-009

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

WILLIAM J. MEEHAN II
Brigadier General, United States Army
The Adjutant General

By Order of the Secretary of the Navy

JOHN C. WEAVER
Rear Admiral, United States Navy
Commander, Space and Naval Warfare
Systems Command

Official

By Order of the Secretary of the Air Force

LARRY D. WELSH
General, United States Air Force
Chief of Staff

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Logistics Command

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