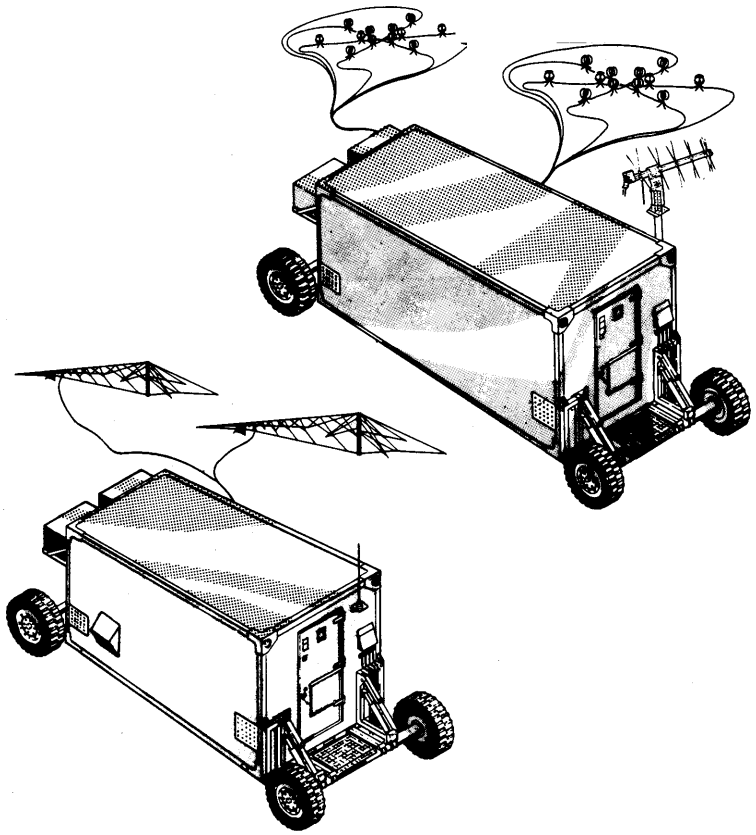
TECHNICAL MANUAL

UNIT MAINTENANCE MANUAL

This copy is a reprint which includes current pages from Change 1.



COMMUNICATION CENTRAL AN/TSC-99
(NSN 5895-01-121-4485)
TRANSMITTER GROUP OT-118/TSC-99
(NSN 5895-01-121-1986)
RECEIVER GROUP OR-218/TSC-99
(NSN 5895-01-121-4585)

H E A D Q U A R T E R S , D E P A R T M E N T O F T H E A R M Y

15 JUNE 1987

CHANGE

NO. 1

HEADQUARTERS
DEPARTMENT OF THE ARMY,
WASHINGTON, DC, 15 July 1993

UNIT MAINTENANCE MANUAL
COMMUNICATION CENTRAL AN/TSC-99
(NSN 5895-01-121-4485) (EIC: GLS)
TRANSMITTER GROUP OT-1 18/TSC-99
(NSN 5895-01-121-1986) (EIC: NA)
RECEIVER GROUP OR-218/TSC-99
(NSN 5895-01-121-4585) (EIC: NA)

TM 11-5895-1160-20-1, 15 June 1987 is changed as follows:

1. Remove old pages and insert new pages as indicated below. New or changed material is indicated by a vertical bar in the margin of the page. Added or revised changes to illustrations are indicated by a vertical bar adjacent to the identification number or by miniature pointing hands.

Remove pages	Insert pages
1-3 and 1-4	1-3 and 1-4
1-7 through 1-16	1-7 through 1-16
2-29 through 2-32	2-29 through 2-32
2-45 and 2-46	2-45 and 2-46
2-77 through 2-80	2-77 and 2-80
None	2-80.1 and 2-80.2
2-109 and 2-110	2-109 and 2-110
None	2-112.1 through 2-112.4
2-131 and 2-132	2-131 and 2-132
None	2-132.1 and 2-132.2
2-133 and 2-134	2-133 and 2-134
B-5 through B-8	B-5 through B-7/(B-8 Blank)
None	B-8.1 and B-8.2
B-23 through B-26	B-23 through B-26
B-29 through B-32	B-29 through B-31 (B-32 Blank)
None	B-32.1 and B-32.2
B-45 and B-46	B-45 and B-46

2. File this change sheet in the front of the publication for reference purposes.

By Order of the Secretary of the Army:

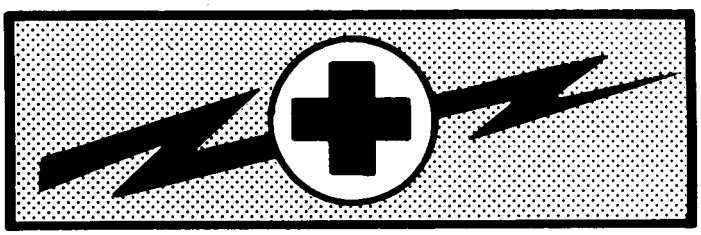
GORDON R. SULLIVAN
General, United States Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army
04353

DISTRIBUTION:

To be distributed in accordance with DA Form 12-51-E, block 1636, requirements for TM 11-5895-1160-20.



WARNING

HIGH VOLTAGE

is used in the operation of this equipment

DEATH ON CONTACT

may result if personnel fail to observe safety precautions

A periodic review of the safety precautions in TB 385-4 is recommended.

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 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 of 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 vital organs of 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.

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

RADIATION HAZARD

ELECTROMAGNETIC RADIATION

NOT STAND IN THE DIRECT PATH OF THE ANTENNA WHEN POWER IS ON. DO NOT WORK ON CABLES WHILE POWER IS ON.

Transmit antenna cables conduct radio frequency energy that can cause fatal internal burns and electrical shock. Insure that power is before working on antenna or connectors.

When transmit antenna is in transmit mode an rf radiation hazard exists to personnel within 8 feet of the radiating elements and within 1 foot of the antenna transmission line or matching feed network.

If you feel the slightest warming effect while near this equipment, MOVE AWAY QUICKLY!

WARNING

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide thorough ventilation whenever used; do not breathe the fumes. Do not use near open flame or hot surface. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the fumes into a harmful and deadly gas. Try not to get it on your skin. When necessary, use gloves, sleeves, and an apron which solvent cannot go through.

WARNING

When operating equipment in enemy territory, bright lights will make it easy for the enemy to detect your equipment. Use blackout lights and a blackout curtain to prevent detection by the enemy.

WARNING

Use great care to avoid contact with nitrogen being discharged from any container under pressure. Sudden and irreversible tissue damage can result from freezing. Wear thermal protective gloves and a face protector or safety glasses in any situation where skin or eye contact is possible. Prevent contact of nitrogen with flame or hot metal surfaces. Heat causes nitrogen to break down and form a highly toxic and corrosive gas.

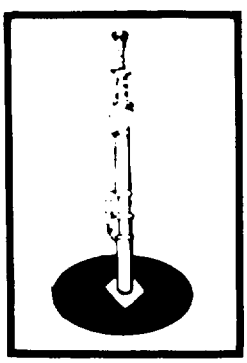
WARNING

Lifting heavy equipment incorrectly can cause serious injury. Do not try to lift more than 35 pounds by yourself. Get a helper. Bend legs while lifting. Don't support heavy weight with your back .

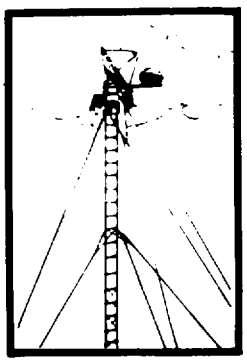
WARNING

CBR (NBC) AGENTS CAN KILL YOU. Do not service air filters and vents after CBR (NBC) attack. Decontaminate the shelter first.

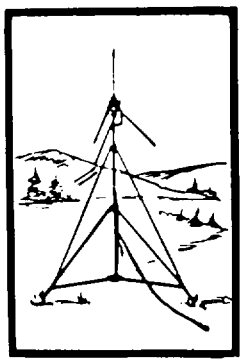
OPERATION WITH LONG RANGE ANTENNAS
WARNING



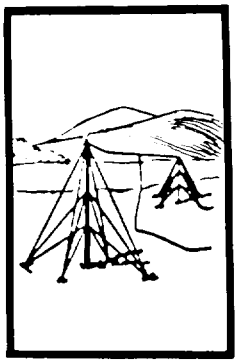
TELESCOPING ANTENNA MAST



TYPICAL TOWER



EXTENDED RANGE ANTENNA



DOUBLET ANTENNA

NEVER ERECT THESE LONG RANGE ANTENNAS DIRECTLY UNDER POWERUNES.

IF YOU MUST ERECT THESE LONG RANGE ANTENNAS NEAR POWERLINES. POWERLINE POLES OR TOWERS. OR BUILDINGS WITH OVERHEAD POWERLINE CONNECTIONS. NEVER PUT THE ANTENNA CLOSER THAN TWO TIMES THE ANTENNA HEIGHT FROM THE BASE OF THE POWERLINE, POLE, TOWER OR BUILDINGS.

NEVER ATTEMPT TO ERECT ANY LONG RANGE ANTENNA WITHOUT A FULL TEAM.

BEFORE ERECTING ANY LONG RANGE ANTENNA, INSPECT ALL THE PARTS MAKING UP THE ANTENNA KIT. DO NOT ERECT THE ANTENNA IF ANY PARTS ARE MISSING OR DAMAGED.

DO AS MUCH OF THE ASSEMBLY WORK AS POSSIBLE ON THE GROUND.

WHEN ERECTING THE ANTENNA, ALLOW ONLY TEAM PERSONNEL IN THE ERECTION AREA.

MAKE SURE THAT THE AREA FOR THE ANCHORS IS FIRM. IF THE GROUND IS MARSHY OR SANDY, GET SPECIFIC INSTRUCTIONS FROM YOUR CREW CHIEF OR SUPERVISOR ON HOW TO REINFORCE THE ANCHORS.

WHEN SELECTING LOCATIONS FOR ANCHORS, AVOID TRAVELED AREAS AND ROADS. IF YOU CANNOT AVOID THESE AREAS, GET SPECIFIC INSTRUCTIONS FROM YOUR SUPERVISOR AS TO WHAT CLEARANCE YOUR GUY WIRES AND ROPES MUST HAVE OVER THE TRAVELED AREAS AND ROAD.

CLEARLY MARK ALL GUY WIRES AND ROPES WITH THE WARNING FLAGS OR SIGNS SUPPLIED BY YOUR UNIT. IN AN EMERGENCY, USE STRIPS OF WHITE CLOTH AS WARNING STREAMERS.

IF YOU SUSPECT THAT POWERLINES HAVE MADE ACCIDENTAL CONTACT WITH YOUR ANTENNA, STOP OPERATING, ROPE OFF THE ANTENNA AREA, AND NOTIFY YOUR SUPERIORS.

IF THE WEATHER IN YOUR AREA CAN CAUSE ICE TO FORM ON YOUR LONG RANGE ANTENNA AND ITS GUY WIRES AND ROPES, ADD EXTRA GUYS TO SUPPORT THE SYSTEM. ROPE OFF THE AREA AND POST IT WITH WARNING SIGNS LIKE BEWARE OF FALLING ICE.

DO NOT TRY TO ERECT ANY ANTENNA DURING AN ELECTRICAL STORM.

KEEP A SHARP EYE ON YOUR ANCHORS AND GUYS. CHECK THEM DAILY AND IMMEDIATELY BEFORE AND AFTER BAD WEATHER.

TECHNICAL MANUAL

N0. 11-5895-1160-20

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 15 June 1987

Unit Maintenance Manual
COMMUNICATION CENTRAL AN/TSC-99
(NSN 5895-01-121-4485)
TRANSMITTER GROUP OT- 118/TSC-99
(NSN 5895-01-121-1986)
RECEIVER GROUP OR-218/TSC-99
(NSN 5895-01-121-4585)

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 and Fort Monmouth, ATTN: AMSEL-ME-MP, Fort Monmouth, New Jersey 07703-5007.

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

LIST OF FOLDOUTS

HOW TQ USE THIS MANUAL

Spend a few minutes looking through this manual. It has a new look that is very different from the manuals you've been using. You'll find the new look is a lot easier to use, and you can find what you're looking for a lot faster. We got rid of as many words as we could and put in lots of pictures to show just about everything you'll be doing to troubleshoot and maintain your equipment. So HOW DO YOU USE THIS MANUAL?

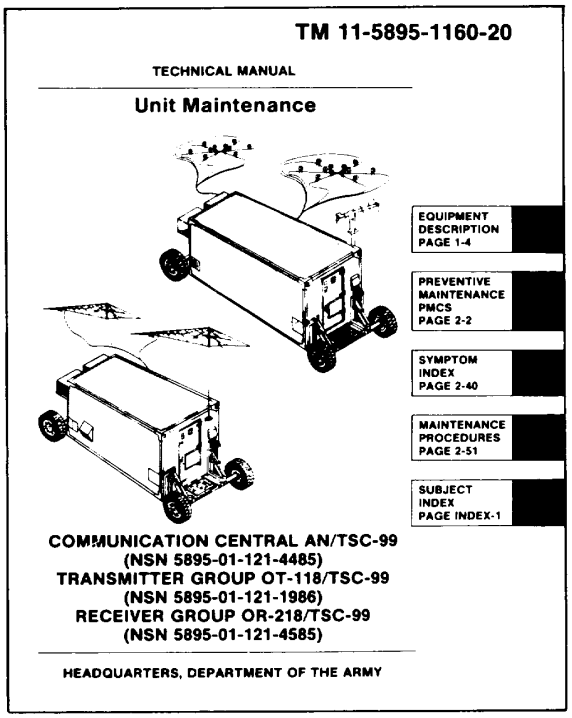
Like this:

1. Suppose you want to fix one of the transmitters in the transmitter group.

2. **Look at the cover and you'll see index boxes near the right-hand edge with subject titles in them. You'll find "SYMPTOM INDEX PAGE 2-40." You can skip over to page 2-40.**

   OR

3. Bend the pages a bit and look at the edges. You'll see black bars on some of the pages that are lined up with the index boxes on the cover.

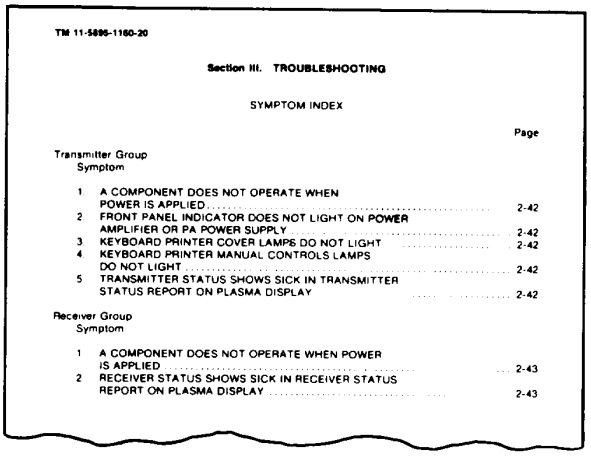


EL8IV014

4. If you put your thumbnail on the black bar that is lined up with the box on the cover for SYMPTOM INDEX and open the manual, you'll be on page 2-40.

5. On page 2-40, you'll find the troubleshooting symptom index. Now you're ready to begin.

6. Look down the Equipment column until you find Transmitter Group. Now look for the symptom, in this case "Keyboard printer cover lamps do not light", and it gives you page 2-42.



TM 11-5895-1160-20

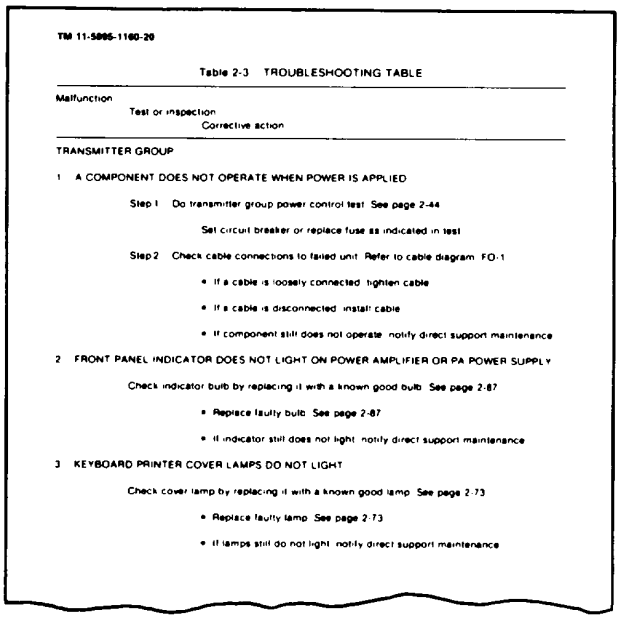
Section III. TROUBLESHOOTING

SYMPTOM INDEX

EL8IV015

7. Turn to page 2-42 and find the symptom "KEYBOARD PRINTER COVER LAMPS DO NOT LIGHT," and it will tell you what to do to fix it.

8. As you do the tests and corrective actions in the order listed, you get to "Replace bulbs."



TM 11-5895-1160-20

Table 2-3 TROUBLESHOOTING TABLE

Malfunction / Test or inspection / Corrective action
TRANSMITTER GROUP
1 A COMPONENT DOES NOT OPERATE WHEN POWER IS APPLIED
Step 1. Do transmitter group power control test. See page 2-44.
Set circuit breaker or replace fuse as indicated in test.
Step 2. Check cable connections to failed unit. Refer to cable diagram FO-1.
• If a cable is loosely connected, tighten cable.
• If a cable is disconnected, install cable.
• If component still does not operate, notify direct support maintenance.
2 FRONT PANEL INDICATOR DOES NOT LIGHT ON POWER AMPLIFIER OR PA POWER SUPPLY
Check indicator bulb by replacing it with a known good bulb. See page 2-87.
• Replace faulty bulb. See page 2-87.
• If indicator still does not light, notify direct support maintenance.
3 KEYBOARD PRINTER COVER LAMPS DO NOT LIGHT
Check cover lamp by replacing it with a known good lamp. See page 2-73.
• Replace faulty lamp. See page 2-73.
• If lamps still do not light, notify direct support maintenance.

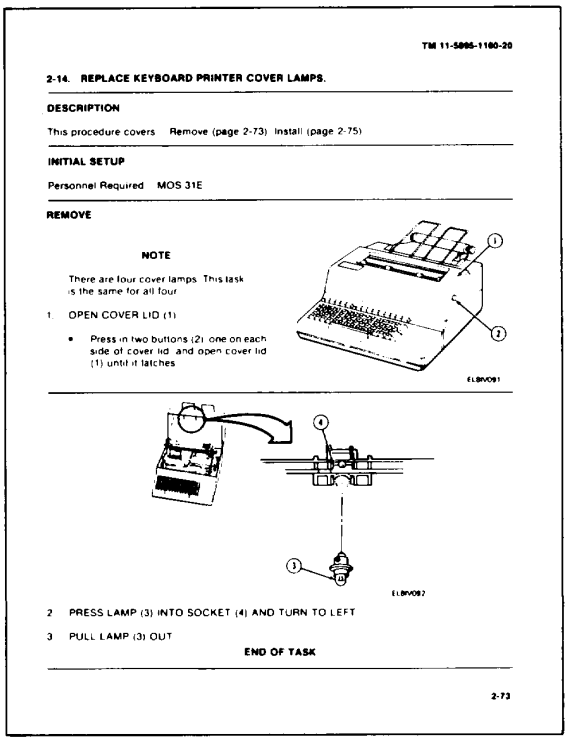
EL8IV016

9. Turn to page 2-73 and look at the procedure. The procedure is divided into modules with one or more steps and a picture to show you where to look and what to look at.

10. Notice the numbered arrows. These are called index numbers. As you reach each step, we tell you where to look by including the index number (in parentheses) after the name of each thing we call out.

11. Do the procedure, then check to see if you have fixed the symptom.

You can also use the Table of Contents in the front of the manual or the Subject Index in the back to find the information you want. Either one will lead you to the page number of the procedure you need.



TM 11-5895-1160-20

2-14. REPLACE KEYBOARD PRINTER COVER LAMPS.

DESCRIPTION

This procedure covers Remove (page 2-73) Install (page 2-75)

INITIAL SETUP

Personnel Required MOS 31E

REMOVE

NOTE

There are four cover lamps. This task is the same for all four

1. OPEN COVER LID (1)
   - Press in two buttons (2), one on each side of cover lid, and open cover lid (1) until it latches

EL8IV091

EL8IV092

2. PRESS LAMP (3) INTO SOCKET (4) AND TURN TO LEFT
3. PULL LAMP (3) OUT

END OF TASK

2-73

EL8IV017

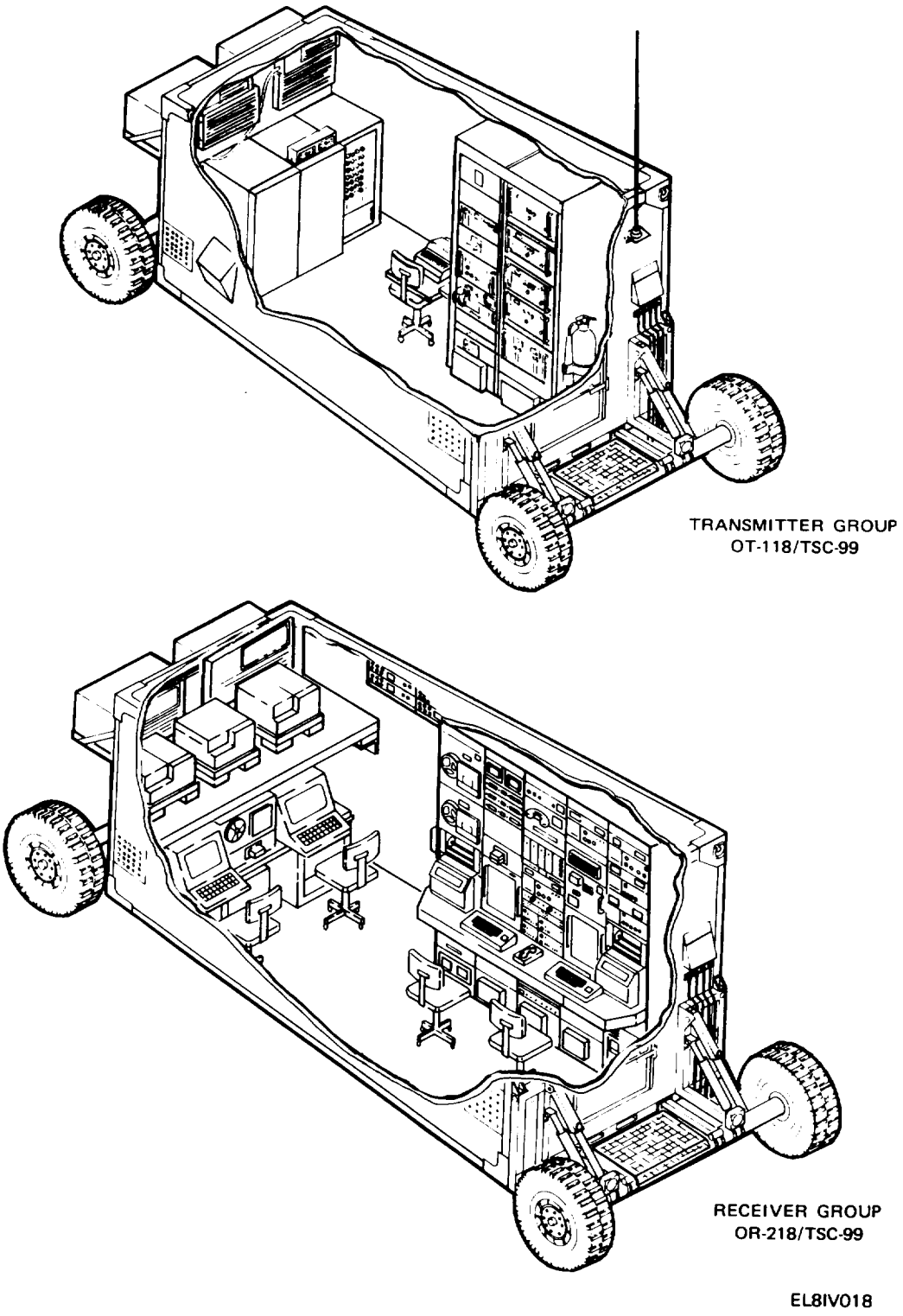


Figure 1-1. Communication Central AN/TSC-99

CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE.

This manual contains operation and maintenance instructions for Receiver Group OR-218/ TSC-99 (figure 1-1), which is part of Communication Central AN/TSC-99 along with Transmitter Group OT-118/TSC-99. This manual includes procedures for assembly, disassembly, operation, cleaning, inspection, testing, and servicing of the equipment as authorized by the Maintenance Allocation Chart (MAC). Information is provided for maintenance of the communication central that is beyond the scope of tools, equipment, personnel, or supplies normally available to the operator.

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. DESTRUCTION OF ARMY ELECTRONICS MATERIEL.

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

1-4. QUALITY ASSURANCE/QUALITY CONTROL.

Maintenance standards for Communication Central AN/TSC-99 are given in the unit maintenance chapter of this manual. By performing preventive maintenance checks and services (PMCS) and the maintenance procedures, quality control of the equipment will be maintained.

1-5. NOMENCLATURE CROSS-REFERENCE LIST.

Common names will be used when major components of the communication central are mentioned in this manual.

NOTE

Official nomenclature must be used when filling out report forms or looking up technical manuals.

Common Name	Official Nomenclature
air conditioner	Horizontal, Compact, 18,000 BTU/HR Cooling, Air Conditioner F1 8H
antenna matrix	Radio Frequency Transmission Line Switch SA-2350/U
antenna power supply	Power Supply PP-7626/TSC-99
audio matrix	Interior Communication Switchboard SB-4112/TSC-99
audio panel	Monitor Panel SB-411 1/TSC-99
audio recorder	Sound Recorder-Reproducer RD-484/U
central processor unit (CPU)	Data Processing Set AN/UYK-19
combiner	Combiner, Radio Frequency, CU-2271 /TSC-99
communication central	Communication Central AN/TSC-99
COMSEC terminal	Display Set AN/FYQ-90

Common Name	Official Nomenclature
CPU modem	Digital Data Receiver-Transmitter RT-1392/U
data modem	Digital Data Modem MD-1 126-U
dummy load	Electrical Dummy Load DA-713/U
exciter	Radio-Transmitter T-1449/URC
field phone	Telephone Set TA-312/PT
handset	Handset H-2500/U
intercom	Intercommunication Station LS-633/TSC-99
keyboard printer	Computer Printer Terminal TT-766/U
KWX-1 1	Adapter Unit KWX-1 1 /TSEC
KW-7	Secure Electronic Typewriter KW-7/TSEC
log periodic antenna	Antenna Group OE-317A/TSC-99 or OE-317/TSC-99
loop antenna	Antenna AS-3441A/TSC-99 (P/O OE-316A/TSC-99) or Antenna AS-3441/TSC-99 (P/O OE-316/TSC-99)
mag tape power supply	**Power Supply PP-7713/U**
mag tape power supply	Power Supply PP-7715/tU
mag tape unit	Data Recorder-Reproducer RD-485/U
mass memory	Computer Memory Unit MU-720/UYK-19
mobilizer	Lift Transportable Shelter Dolly Set M-832/U
multicoupler	Multicoupler CU-2272/TSC-99
pa power supply	Power Supply PP-7717/URC
peripheral switch	Data Communications Channel Selector SA-22349/U
plasma display	Plasma Display Control-Indicator C-1 1033/UYK
power amplifier	Radio Frequency Amplifier AM-7130/URC
power cable	Electrical Power Cable Assembly CX-131 70/TSC-99
power transformer	Power Distribution Transformer TF-59 1 /TSC-99
power transformer	Power Distribution Transformer TF-592/TSC-99
printer	High Speed Printer RP-265A/G
radio interface, rcvr	Digital Data Comparitor-Corrector SN-544/TSC-99
radio interface, xmtr	Digital Data Comparitor-Corrector SN-545/TSC-99
reader/punch	Punched Tape Reader-Perforator ,RD-486/U
receiver	Radio Receiver R2210/URC
receiver	Radio Receiver R221 1/URC
receiver group	Receiver Group OR-218/TSC-99
shelter	Electrical Equipment Shelter S-634/TSC-99
shelter	Electrical Equipment Shelter S-635/TSC-99
spectrum monitor	HF Spectrum Monitor R-2093/TRQ-35(V)
switch control	Control-Power Supply C-1 1034/U
tape punch	Punched Tape Perforator RO-534/U or RO-534A/U
tape reader	Punched Tape Reader RP-278/U or RP-278/U

Common Name	Official Nomenclature
telephone	Telephone Set TA-938
transmitter group	Transmitter Group OT-1 1 8/TSC-99
tty-modem	Telegraph Terminal TH-22/TG
tty-Morse converter	Teletype to Morse Code Converter CV-371 1/U
uhf radio	Radio Set ANNSC-7
uninterruptible power supply (UPS)	Uninterruptible Power Supply PP-7714/U
uninterruptible power supply (UPS)	Uninterruptible Power Supply PP-7716/U or PP-7716A/U

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR).

If your 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 the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: AMSEL-PA-MA-D, Fort Monmouth, New Jersey 07703-5000. We'll send you a reply.

1-7. WARRANTY INFORMATION.

The communication central is warranted by Rockwell International Corporation for 1 year. It starts on the date found in block 23, DA form 2408-9, in the logbook. Report all defects in material or workmanship to your supervisor, who will take appropriate action.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

For information on equipment characteristics, capabilities, and features for the equipment covered in this manual, refer to TM 11-5895-1160-10-1 for the receiver group and TM 11-5895-1160-10-2 for the transmitter group.

1-9. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS.

For information on the location and description of the major components in the transmitter group, refer to TM 11-5895-1160-10-2. For information on the location and description of the major components in the receiver group, refer to TM 11-5895-1160-10-1.

1-10. EQUIPMENT DATA.

For equipment data on the equipment covered in this manual, refer to TM 11-5895-1160-10-1 for the receiver group and TM 11-5895-1160-10-2 for the transmitter group.

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.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward SF 364 (Report of Discrepancy (ROD)) as prescribed in AR 735-11-2/DLAR 4140.55/NAVMATINST 4355.73B/AFR 400-54/MCO 4430.3H.

c. *Discrepancy in Shipment Report (DISREP) (SF 361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF 361) as prescribed in AR 55-38/NAVSUPINST 4610.33C/AFR 75-18/MCO P4610.19D/DLAR 4500.15.

ADMINISTRATIVE STORAGE

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. Disassembly and repacking of equipment for shipment or limited storage are covered in paragraph 2-1.

1-11. SAFETY, CARE, AND HANDLING.

Observe all WARNINGS, CAUTIONS, and NOTES in this manual. This equipment can be extremely dangerous if these instructions are not followed.

Section III. PRINCIPLES OF OPERATION

1-12. GENERAL.

Communication Central AN/TSC-99 (figure 1-1) is part of the Special Forces Burst Communication System. The AN/TSC-99 is a burst communication base station which provides high frequency (hf) radio reception and transmission, ultra high frequency (uhf) satellite communication capabilities, and processor control of the aforementioned functions. The equipment is housed in two shelters, one for Receiver Group OR-218/TSC-99 and one for Transmitter Group OT-118/TSC-99. The receiver shelter functions as an hf/uhf radio net control, a message relay between the radio and teletype components, and a remote control center for the transmitter shelter. All of these functions are controlled by the AN/UYK-19 Data Processing Set, which also performs message handling, control of equipment status, control of radio operations (selection of frequency, mode, level, antenna), and maintenance diagnostics. The receiver shelter processor acts as a remote control device for the transmitter shelter processor, which controls the devices in the transmit shelter in a similar fashion as the receiver shelter processor. Both shelters contain a spare, on-line processor which is automatically switched over in case of a processor failure. Block diagrams and descriptions of the AN/TSC-99 and its components are contained in the following paragraphs.

1-13. COMMUNICATION CENTRAL AN/TSC-99, MASTER FUNCTIONAL BLOCK DIAGRAM.

Figure 1-2 is a master functional block diagram of the AN/TSC-99, which illustrates the interaction between the two shelters. Each shelter contains a high frequency subsystem to receive (in the receiver shelter) and transmit (in the transmitter shelter) hf and uhf radio signals. The shelters each contain a computer subsystem which uses the AN/UYK-19 Data Processors to send and receive control signals between the shelters and to monitor and control the hf subsystems. Both shelters also contain ancillary subsystems which allow telephone and intercommunication signals to travel between the shelters. The receiver shelter contains a COMSEC message subsystem which sends and receives secure data to the tactical operations center (TOC) through wire lines.

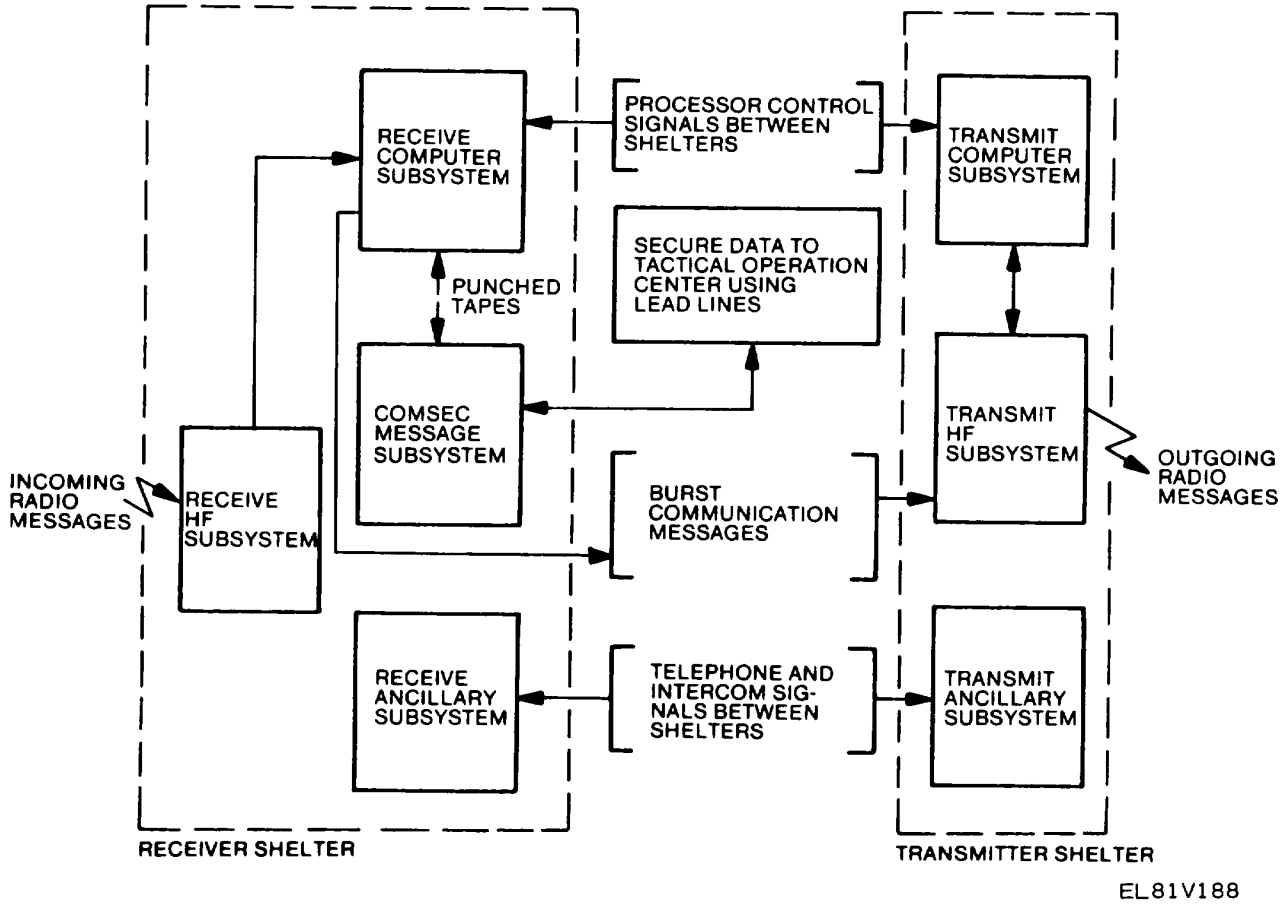


Figure 1-2.. Communication Central AN/TSC-99, Master Functional Block Diagram

1-14. TRANSMITTER GROUP OT-1 18/TSC-99 MASTER FUNCTIONAL BLOCK DIAGRAM.

See figure 1-3. Transmitter Group OT-1 18/TSC-99 consists of three subsystems: Transmit Computer Subsystem, Transmit HF Subsystem, and Transmit Ancillary Subsystem.

1-15. TRANSMIT COMPUTER SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-4.

(1) The signal entry panel provides a shelter entry or exit path for control and message signals. Transmit message signals from the receiver shelter are routed through the signal entry panel to the intermediate distribution frame.

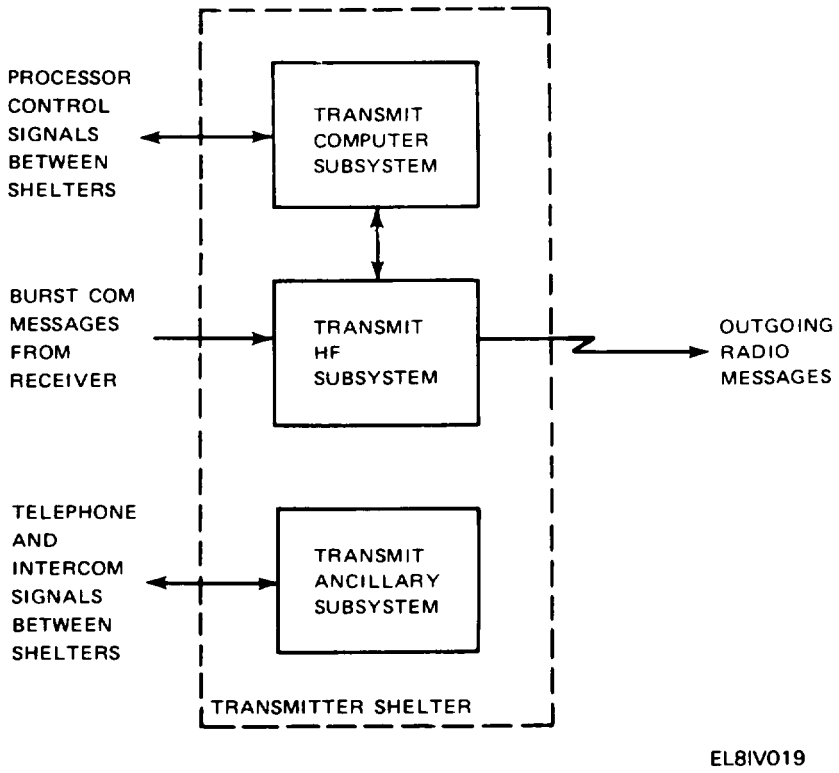


Figure 1-3. Transmitter Group OT-118/TSC-99 Master Functional Block Diagram

(2) The intermediate distribution frame (IDF) distributes control and message signals to and from the other units. Transmit message signals enter the I DF and are sent to the dual line amplifiers.

(3) The two dual line amplifiers amplify the signals to overcome any signal loss from transmission over the intershelter wirelines.

(4) A power supply supplies power to the line amplifiers.

(5) The amplified signals are sent through the IDF to the interior communication switchboard. Interior Communication Switchboard SB-4112/TSC-99 switches the four transmit message signals onto any one of four transmitter lines and the signals are sent to the transmit hf subsystem.

(6) Control signals to and from the receiver shelter are sent through the signal entry panel and IDF to the receiver-transmitters. The two Digital Data Receiver-Transmitters RT-1392/U interface the processors in the transmitter shelter with the receiver shelter processors for remote control operation.

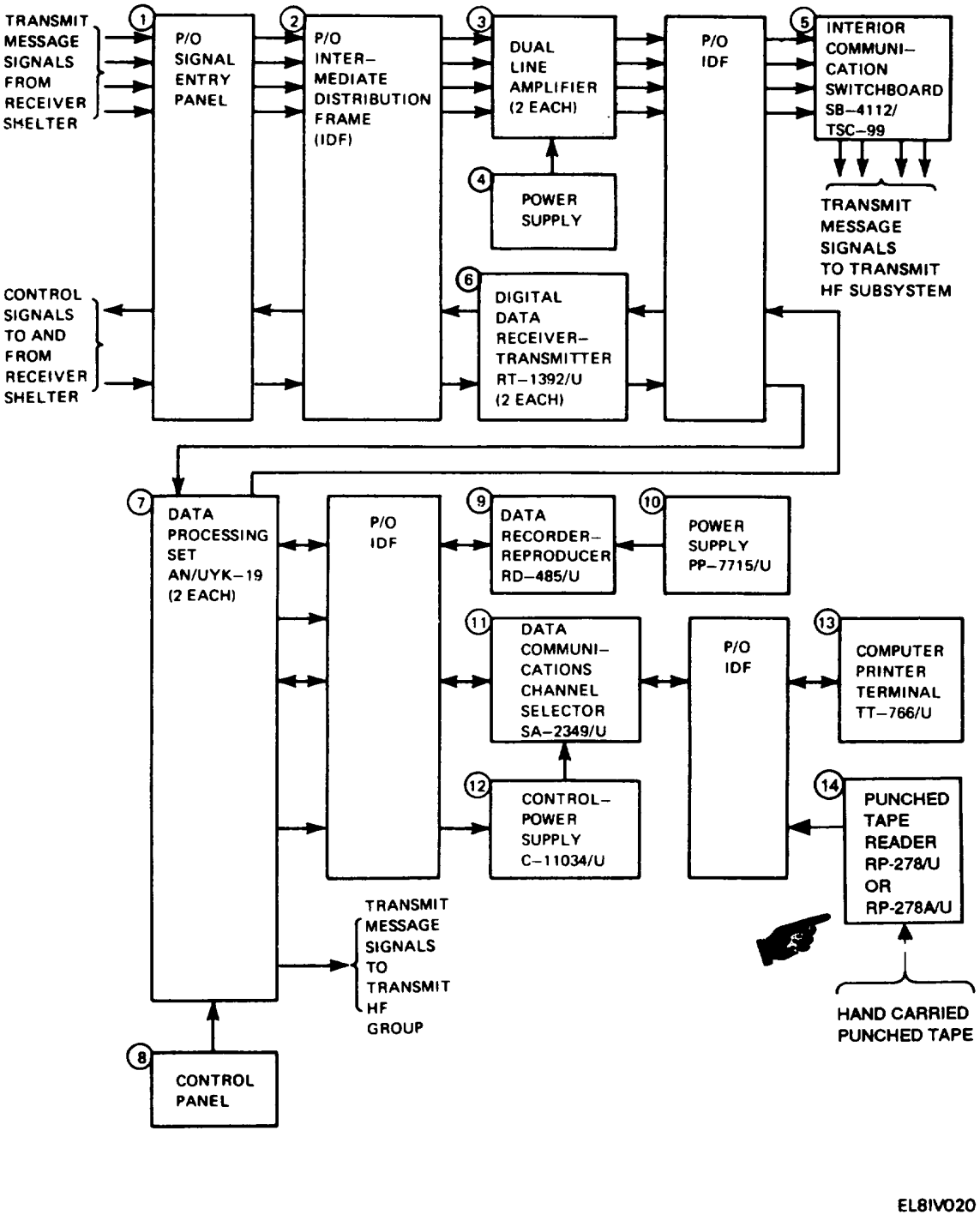


Figure 1-4. Transmit Computer Subsystem Functional Block Diagram

(7) Data Processing Sets AN/UYK-19 provide control of the transmitter shelter. The control signals from the receiver shelter control the processors during normal unmanned operation. The processors can also be controlled by operator input from the keyboard/printer during manned operation. All signals going into and out of the processors are routed through the IDF except those from the control panel.

(8) The control panel provides an interface to the processors for status information and control during maintenance.

(9) Data Recorder-Reproducer RD-485/U is used to load the software programs and diagnostics into the processors. The recorder-reproducer is also used to store the data base when the processors are shut down.

(10) Power Supply PP-7715/U provides power for the data recorder-reproducer.

(11) Data Communications Channel Selector SA-2349/U allows the operator to manually select either one of the two data processing sets for control of the shelter. It also acts as an interface between the processors and the input/output devices used during manned operation.

(12) Control-Power Supply C-1 1034/U controls and provides power for the data communications channel selector.

(13) Computer Printer Terminal TT-766/U provides operator control of the processors during manned operation using the keyboard. A hard copy of operator input and processor output is provided by the printer.

(14) Punched Tape Reader RP-278/U (or) RP-278A/U is used during manned operation to enter transmit messages from paper tape into the processor. The message is read by the tape reader and sent through the IDF to the data communications channel selector. the data communications channel selector forwards it through the IDF to the on-line processor. The message is processed for transmission to the transmit hf subsystem.

1-16. TRANSMIT HF SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-5.

(1) The intermediate distribution frame (IDF) distributes control and message signals to and from the other units. Transmit message signals from the transmit computer subsystem are routed through the IDF to the four transmitter systems.

(2) Each transmitter system consists of a radio transmitter, radio frequency amplifier, and power supply. Radio Transmitter T-1449/URC is a controllable exciter with bandwidth, frequency, and operating modes selected either from the front panel or upon processor command.

(3) Radio Frequency Amplifier AM-7130/URC provides 1-kW radio frequency power output for the transmitter system.

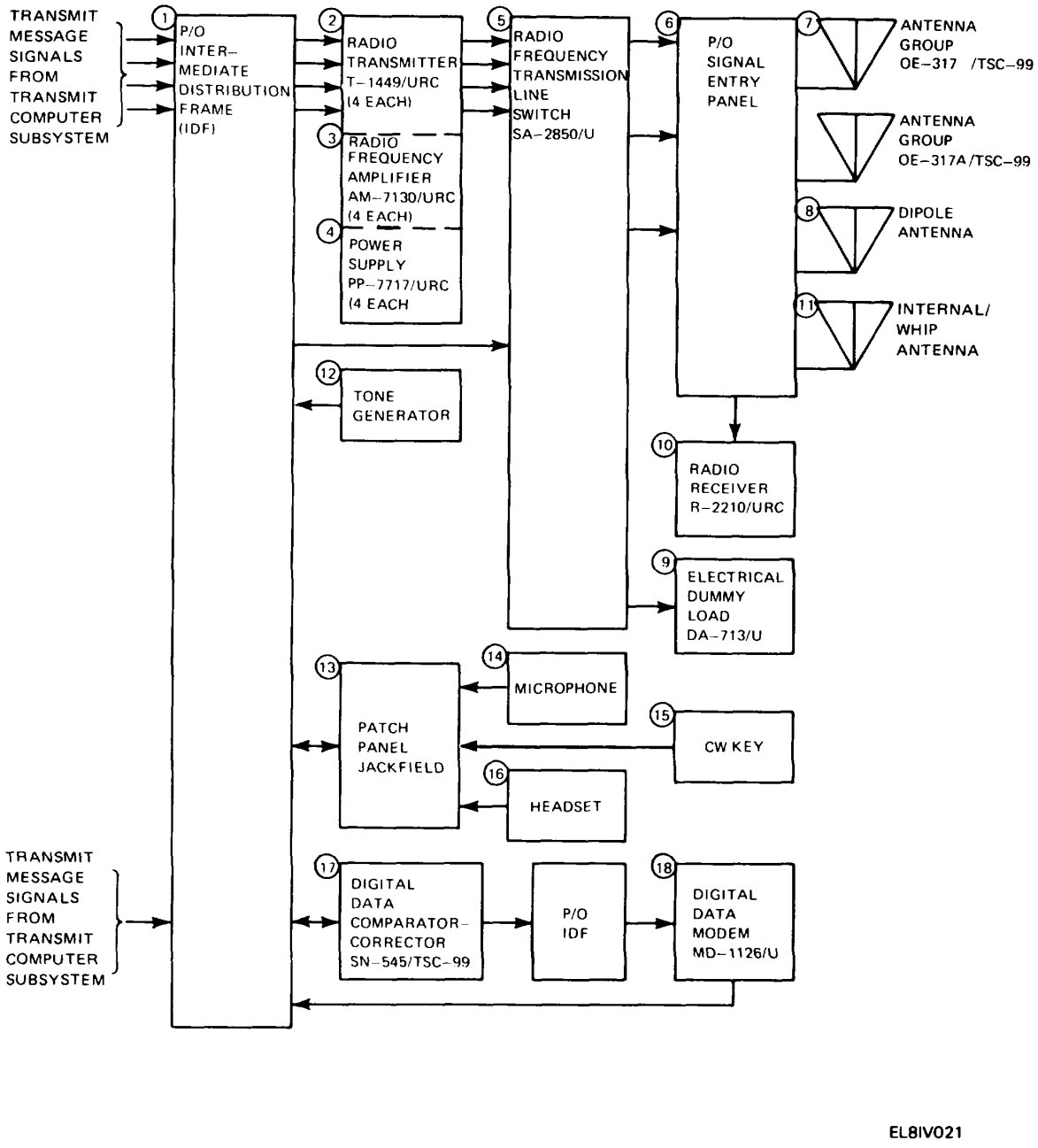


Figure 1-5. Transmit HF Subsystem Functional Block Diagram

(4) Power Supply PP-7717/URC supplies power to the radio frequency amplifier.

(5) Radio Frequency Transmission Line Switch SA-2350/U switches any one of the four transmitters to one of six possible antennas or the dummy load. Transmit message signals from the transmitters go through the transmission line switch and are sent to the signal entry panel.

(6) The signal entry panel provides a shelter exit or entry path for the message signals to/from the antennas.

(7) Two Antenna Groups OE-31 7A/TSC-99 and a dipole antenna are used to transmit the burst message
(8) signals to the outstations. Antenna Group OE-317/TSC-99 may be used also.

(9) Electrical Dummy Load DA-713/U provides for termination of the transmitters during testing and adjustment.

(10) Radio Receiver R-2210/URC is used for monitoring transmitted radio signals either from other stations using the whip antenna or from the transmitter shelter itself using the internal antenna.

(11) The internal antenna is the cable running between the receiver and the signal entry panel and serves to pick up signals from the transmitters for monitoring and troubleshooting. The whip antenna is installed and used only when required to receive signals from other stations (normally during installation). The whip antenna should be disconnected during the periods when the transmitters are operating.

(12) The tone generator generates a single-tone frequency which is used for cw (Morse code) transmission.

(13) The patch panel jackfield provides access to the message signals for both operation and maintenance purposes.

(14) The microphone can be patched into the patch panel to transmit voice messages.

(15) The cw key is patched into the patch panel to key the tone generator and transmit cw (Morse code) messages.

(16) The headset can be patched into the patch panel to monitor outgoing transmit message signals.

(17) During manned operation of the transmitter shelter, transmit message signals from the transmit computer subsystem processor are sent through the IDF to the digital data comparator-corrector. Digital Data Comparator-Corrector SN-545/TSC-99 checks and corrects the message signals which are then sent through the IDF to the data modem.

(18) Digital Data Modem MD-1 126/U modulates or converts the signals to frequency shift keying (fsk) signals. These signals are then sent through the IDF to the transmitters to be transmitted.

1-17. TRANSMIT ANCILLARY SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-6.

(1) The signal entry panel provides a shelter entry and exit path for auxiliary function signals.

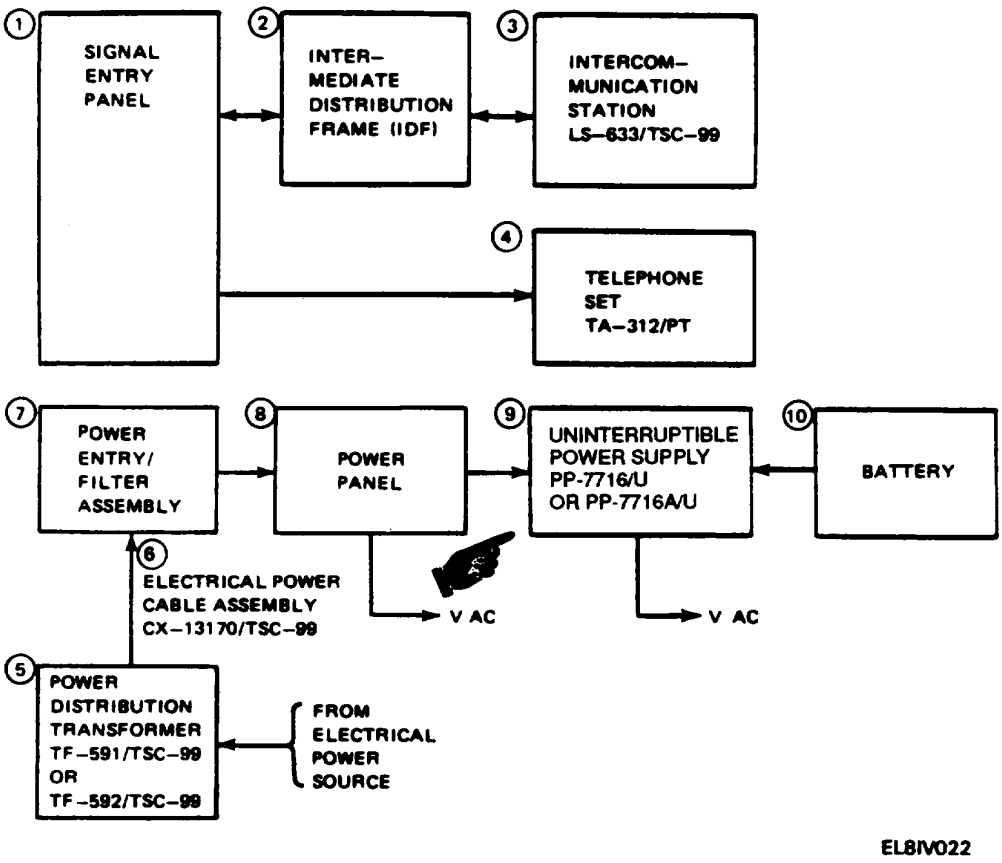


Figure 1-6. Transmit Ancillary Subsystem Functional Block Diagram

(2) The intermediate distribution frame connects the input and output signals between the signal entry panel and the intercommunication station.

(3) Intercommunication Station LS-633/TSC-99 transmits and receives voice signals between the receiver shelter and the transmitter shelter.

(4) Telephone Set TA-312/PT is a field-use telephone used with a field telephone system when required. Normally it is stowed in the transmitter shelter.

(5) Power Distribution Transformers TF-591/TSC-99 and TF-592/TSC-99 are multitap transformers which allow the shelter to be connected to the line voltage of any commercial power system in the world, if desired. One transformer is used for single-phase power the other is used for three-phase power.

(6) Electrical Power Cable Assembly CX-13170/TSC-99 is a 100-foot cable used to connect the shelter to an electrical power source (either commercial or engine generator) or one of the power transformers. The cable contains seven conductors and three of the seven are used in

parallel to serve as the neutral in order to carry the current when operating from a single-phase source of power. The cable can be connected to a three-phase source of power or to a singlephase source. When connected to a single-phase source, all the phase conductors are connected in parallel and all the neutral conductors remain in parallel.

(7) The power entry/filter assembly provides a shelter entry path for ac input power. Filters within the assembly minimize noise on the ac input lines.

(8) The power panel distributes power to the uninterruptible power supply (UPS) and all other equipment which is not connected to the UPS.

(9) Uninterruptible Power Supply PP-7716/U (or PP-7716A/U) is a continuous source of ac power to critical equipment without interruption during a power failure. It supplies operating ac power to the intercom, peripheral switch, digital data receiver-transmitters, both data processor sets, and the emergency light.

(10) The battery is a +84 volt dc battery pack used to operate the uninterruptible power supply if needed during a power failure. A total of 14 batteries is used.

1-18. RECEIVER GROUP OR-218/TSC-99 MASTER FUNCTIONAL BLOCK DIAGRAM.

See figure 1-7. Receiver Group OR-218/TSC-99 consists of four subsystems: Receive Computer Subsystem, Receive HF Subsystem, COMSEC Message Subsystem, and Receive Ancillary Subsystem.

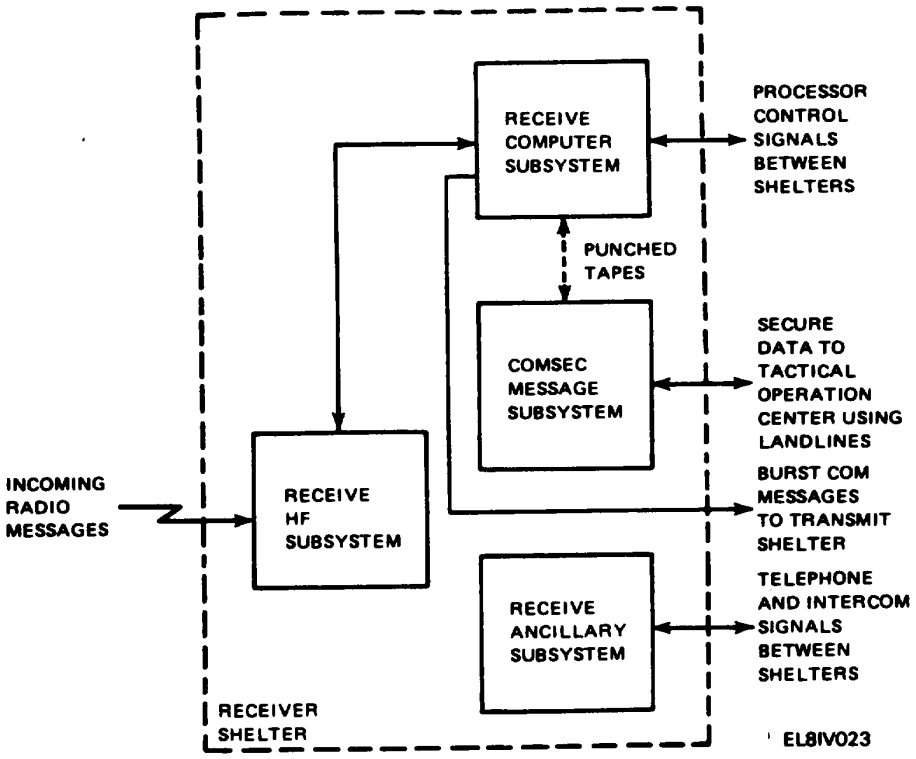


Figure 1-7. Receiver Group OR-218/TSC-99 Master Functional Block Diagram

1-19. RECEIVE COMPUTER SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-8.

(1) The intermediate distribution frame (IDF) distributes control and message signals to and from the other units. Receive message signals from the receive hf subsystem enter the IDF and are sent to the I/O chassis.

(2) The I/O chassis interfaces the input/output equipment with the data processing set.

(3) The I/O bus switch panel allows the operator to manually select either one of the two data processing sets for on-line control of the system and displays the status of both processors. Selection of a processor is normally under software program control.

(4) Data Processing Set AN/UYK-19 processes the messages under control of software programs stored in memory.

(5) Data Recorder-Reproducer RD-485/U is used to load the software programs and diagnostics into the processors. It is also used to store the data base if the data processing set is to be shut down.

(6) Power Supply PP-7713/U supplies power to the data recorder-reproducers.

(7) The control panel provides an interface to the processors for status information and control during maintenance.

(8) After processing, the messages are sent back through the I/O chassis to the output devices to be stored in Computer Memory Unit MU-720/UYK-19. The memory unit also stores the data base.

(9) High Speed Printer RP-265A/G provides a hard copy printout of selected output data.

(10) From the I/O chassis, the messages are routed through the IDF and are punched onto paper tape by Punched Tape Perforator RD-534/U. The punched tapes are then hand carried to the COMSEC message subsystem.

(11) Plasma Display Control-Indicator C-1 1033/UYK provides an operator interface with the data processing sets. Information from the data processing set is displayed on the plasma display screen. Information can also be entered from the keyboard and displayed.

(12) Punched tapes from the COMSEC message subsystem are hand carried to Punched Tape Reader RP-278/U or RP-278A/U which reads the message. The message is then routed through the IDF and I/O chassis to the data processing set. After processing, it is routed back through the I/O chassis and stored in the computer memory unit until time of transmit (TOT). At TOT, the message is sent to the receiver hf subsystem to be forwarded to the transmitter shelter and transmitted.

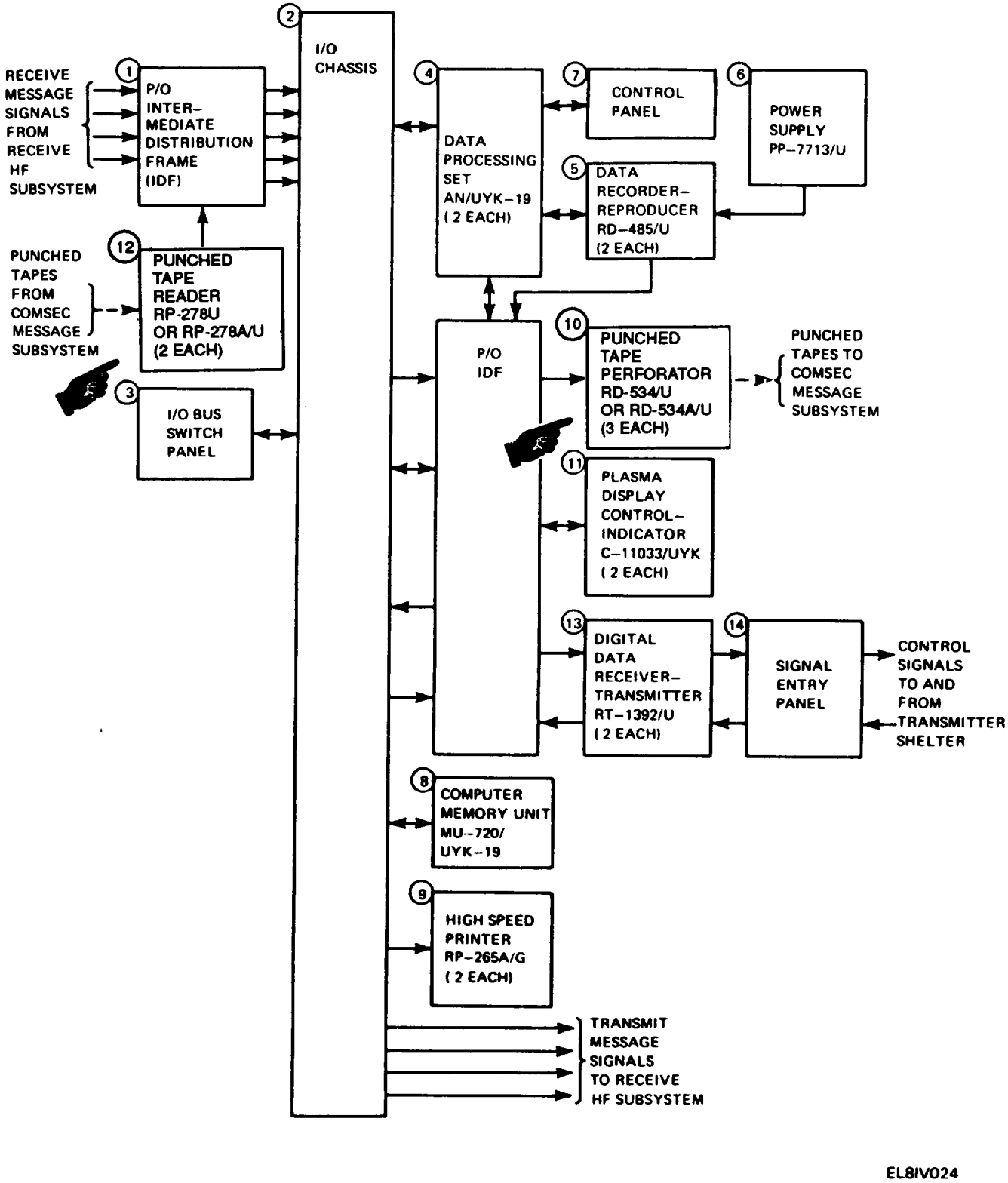


Figure 1-8. Receive Computer Subsystem Functional Block Diagram

(13) Two Digital Data Receiver-Transmitters RT-1392/U interface the processors in the transmitter shelter with the receiver shelter processors for remote control of the transmitter shelter. Control signals to and from the transmitter shelter are sent through the signal entry panel.

(14) The signal entry panel provides a shelter exit or entry path for control and message signals.

1-20. RECEIVE HF SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-9 (Sheet 1 of 2).

(1) Two Antennas AS-3441 ( )/TSC-99 receive high frequency radio message signals. They may be used independently or together for space diversity reception.

(2) signal entry panel provides a shelter exit or entry path for control and message signals.

(3) burst message signals are routed through the signal entry panel to two Multicouplers CU

(4) 2272/TSC-99. The multicouplers match impedance of the antennas to rf combiners. Each of

(5) two RF Combiners CU-2271/TSC-99 couples the signal from the multicoupler to two radio W receivers. Power Supplies PP-7626/TSC-99 supply power to the multicouplers and rf combiners.

(6) The dipole antenna receives radio message signals and routes them through the signal entry panel to the general purpose antenna multicoupler.

(7) The antenna multicoupler couples the signals to the radio receivers and hf spectrum monitor.

(8) Five Radio Receivers R-2211/URC process the incoming radio signals into frequency shift keying (fsk) tones, cw (Morse code), or voice. The receivers may be operated in pairs for space diversity reception by making patch panel connections. A spare radio receiver is included in the system.

(9) HF Spectrum Monitor R-2093/TRQ-35(V) monitors different frequencies and outputs the frequency data on a CRT for operator use.

(10) SATCOM antenna receives and transmits satellite message signals. The signals are routed through the signal entry panel to the SATCOM radio set.

(11) Radio Set AN/VSC-7 receives and transmits the SATCOM signals using voice, burst, or Morse
(12) code information. Handset H-250( )/U is used for two-way voice communication using the radio set. A spare SATCOM radio set is included in the system.

See figure 1-9 (Sheet 2 of 2).

(13) The intermediate distribution frame (IDF) distributes message signals to and from the other units. Burst message signals from the hf radio receivers and SATCOM uhf radio are routed through the IDF.

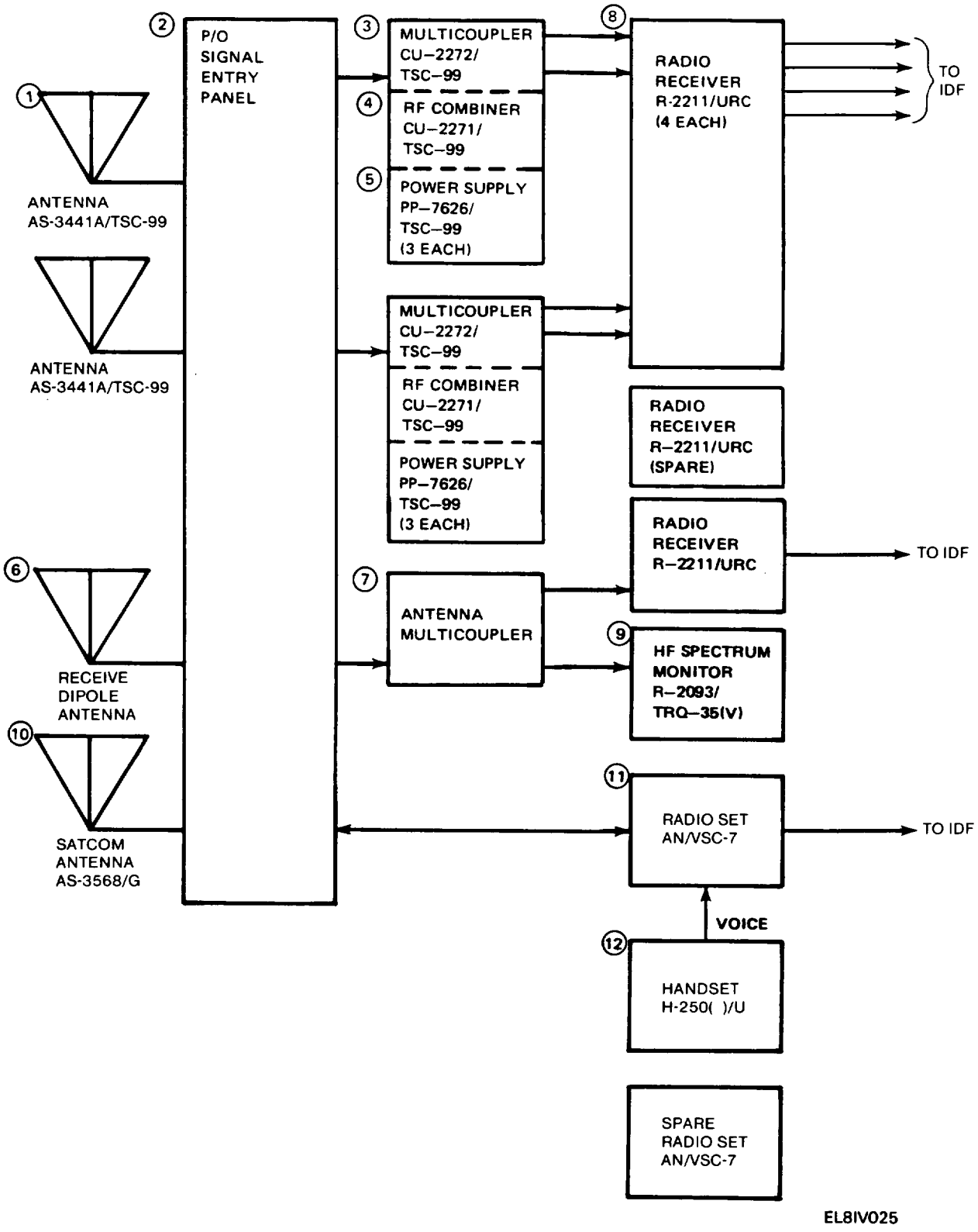


Figure 1-9. Receive HF Subsystem Functional Block Diagram (Sheet 1 of 2)

(14) Four Digital Data Modems MD-1126/U demodulate or convert fsk tone message signals to the logic level signals used in the system. A spare data modem is included in the system. The receive message signals are then routed through the IDF to the digital data comparator-corrector.

(15) Digital Data Comparator-Corrector SN-544/TSC-99 performs error correction and decoding of message data, checks for and corrects data errors, and sends data to the receive computer subsystem.

(16) Sound Recorder-Reproducer RD-484/U records voice and Morse code signals by connecting the recorder to the various receivers at the patch panel. The signals can then be played back and transcribed.

(17) Four recorder controls allow for remote control of the sound recorder deck modules.

(18) The path panel jackfield provides access to the message signals for both operation and
(19) purposes.

(20)Monitor Panel SB-41 1 1/TSC-99 allows the operator to monitor any of the five receiver outputs.
(21)Two output jacks are supplied for connecting a headset. Input jacks are supplied for a cw key
(22)and microphone for transmitting cw (Morse code) and voice messages.

(23) to Morse Code Converter CV-3711/U converts teletype transmit message signals from the receive computer group to Morse code signals for transmission. These signals are routed through the IDF to the monitor panel.

(24) Transmit message signals from the receive computer group are routed through the IDF to the digital data comparator-corrector. Digital Data Comparator-Corrector SN-544/TSC-99 performs error correction and coding of message data. The signals are then sent through the IDF to the data modem.

(25) Digital Data Modem MD-1126/U modulates or converts the signals to frequency shift keying (fsk) signals. The signals are then routed through the IDF to the signal entry panel and out to the transmitter shelter over the intershelter wire lines.

1-21. COMSEC MESSAGE SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-10.

(1) Two COMSEC Facilities AN/FGA-21 A encrypt teletype messages from the Tactical Operations Center (TOC) and decrypt radio messages to the TOC. Each facility consists of a display set and a reader-perforator. Punched Tape Reader-Perforator RD-486/U reads data from punched tapes into the display set and punches data from the display set onto paper tape.

(2) Display Set AN/FYQ-90 encrypts or decrypts the data read into it from the reader-perforator and displays it on the video display screen.

(3) A third Punched Tape Reader-Perforator RD-486/U transmits and receives decrypted messages to/from the Tactical Operations Center (TOC) over a secure teletype line.

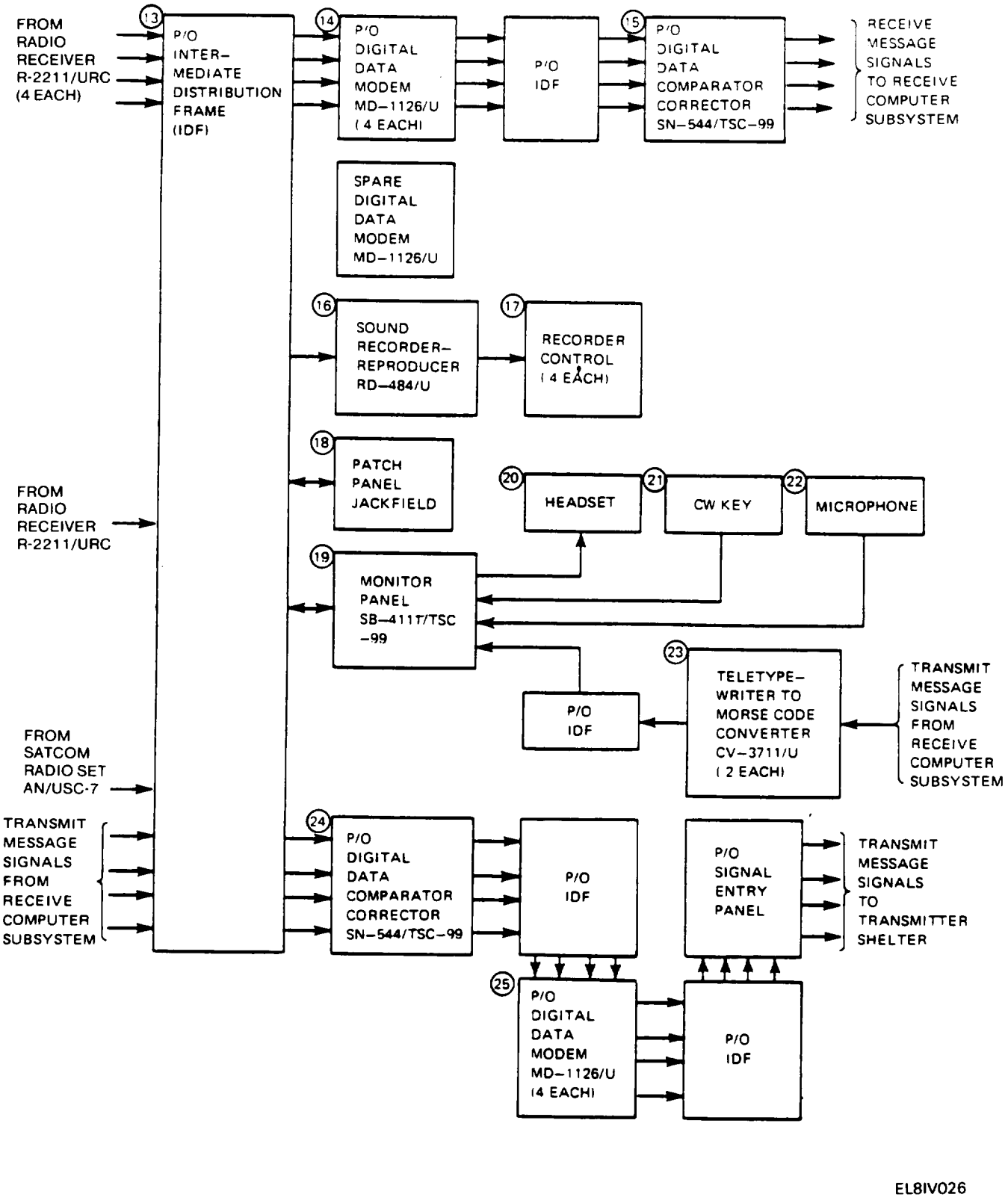


Figure 1-9. Receive HF Subsystem Functional Block Diagram (Sheet 2 of 2)

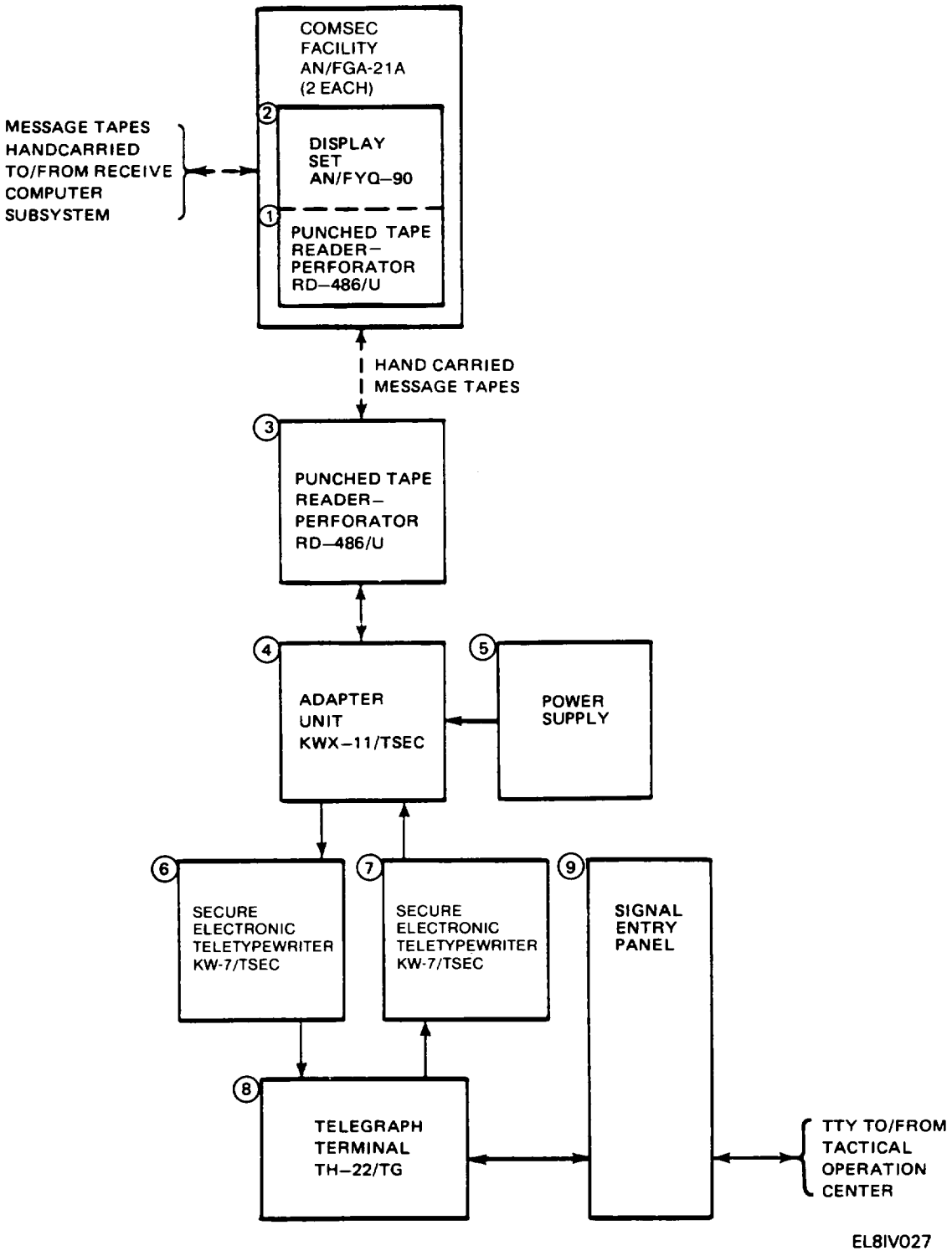


Figure 1-10. COMSEC Message Subsystem Functional Block Diagram

(4)
(5) ⎫ Adapter Unit KWX-1 1 /TSEC (with power supply) and two Secure Electronic Teletypewriters KW-
(6) ⎬ 7/TSEC are used to make the teletype line secure.
(7) ⎭

(8) Telegraph Terminal TH-22/TG interfaces the COMSEC equipment with the teletype line.
(9) The signal entry panel provides a shelter entry and exit path for the teletype message signals.

1-22. RECEIVE ANCILLARY SUBSYSTEM FUNCTIONAL BLOCK DIAGRAM.

See figure 1-11.

(1) The signal entry panel provides a shelter entry and exit path for auxiliary function signals.

(2) The intermediate distribution frame connects the input and output signals between the signal entry panel and the intercommunication station.

(3) Intercommunication Station LS-633/TSC-99 transmits and receives voice signals between the receiver shelter and the transmitter shelter.

(4) Telephone Set TA-312/PT is a field-use telephone used with a field telephone system when required.

(5) Telephone Set TA-938/TT is a desk-mounted telephone and is compatible with commercial telephones.

(6) Power Distribution Transformers TF-591/TSC-99 and TF-592/TSC-99 are multitap transformers which allow the shelter to be connected to the line voltage of any commercial power system in the world, if desired. One transformer is used for single-phase power the other is used for three-phase power.

(7) Electrical Power Cable Assembly CX-13170/TSC-99 is a 100-foot cable used to connect the shelter to an electrical power source (either commercial or engine generator) or one of the power transformers. The cable contains seven conductors and three of the seven are used in parallel to serve as the neutral in order to carry the current when operating from a single-phase source of power. The cable can be connected to a three-phase source of power or to a singlephase source. When connected to a single-phase source, all the phase conductors are connected in parallel and all the neutral conductors remain in parallel.

(8) The power entry/filter assembly provides a shelter entry path for ac input power. Filters within the assembly minimize noise on the ac input lines.

(9) The power panel distributes power to the uninterruptible power supply (UPS) and all other equipment which is not connected to the UPS.

(10) Uninterruptible Power Supply PP-7714/U is a continuous source of ac power to critical equipment without interruption during a power failure. It supplies operating ac power to the intercom, digital data comparator-correctors, digital data modems, digital data receiver transmitter, data processing sets, I/O chassis, computer memory unit, and the emergency light.

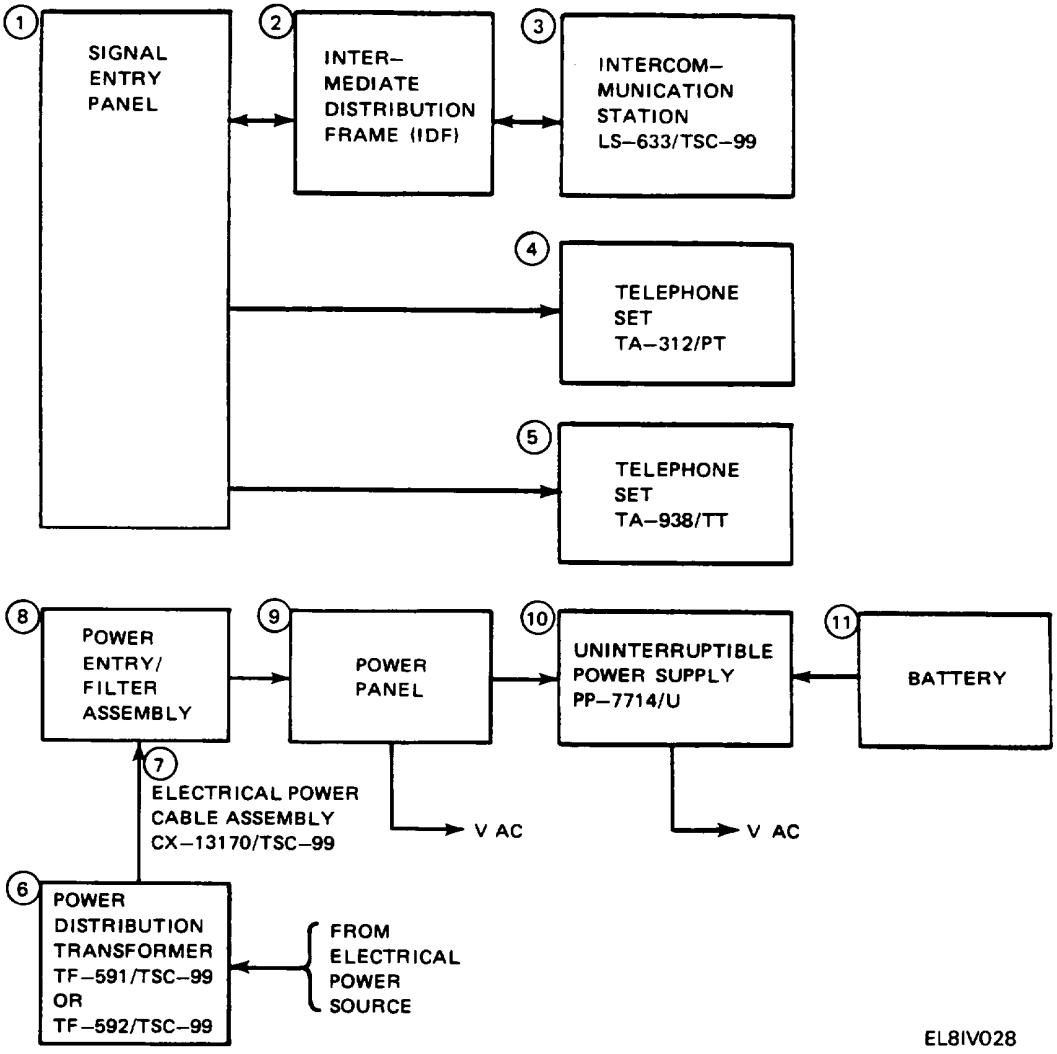


Figure 1-11. Receive Ancillary Subsystem Functional Block Diagram

(11) The battery is a +84 volt dc battery pack used to operate the uninterruptible power supply if needed during a power failure. A total of 21 batteries are used.

Section IV. REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

1-23. COMMON TOOLS AND EQUIPMENT.

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

1-24. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT.

There are no special tools required for unit maintenance of the communication central.

1-25. REPAIR PARTS.

Repair parts are listed and illustrated in the repair parts and special tools list, TM 11-5895-1160-23P, covering unit maintenance for this equipment.

CHAPTER 2

MAINTENANCE INSTRUCTIONS

TOOLS, TEST EQUIPMENT, AND MATERIALS
TOOLS: Tool Kit TK100
Tool Kit TK106
Vacuum Cleaner

TEST EQUIPMENT: Punched Test Tape, Appendix D

MATERIALS: Refer to Appendix C

Section I. LUBRICATION INSTRUCTIONS

Refer to TM 9-2330-275-14&P for lubrication of the mobilizer.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

2-1. GENERAL.

Preventive maintenance checks and services (PMCS) are done to find and to fix problems before they can cause major damage to the equipment. These checks and services are done by organizational maintenance personnel at regular intervals according to the PMCS tables. To save time and make sure that all items are checked, do the PMCS in the order given in the tables. Write down any problems on the proper forms. Refer to DA Pam 738-750.

2-2. PROCEDURES FOR SERVICES AND INSPECTIONS.

The following general procedures are for unit maintenance PMCS and for all inspections. They are just as important as the specific procedures. In addition to the specific procedures, any of these general procedures that apply to PMCS items will be done automatically.

a. Check to see if items are in good condition, properly assembled or stowed, not leaking, loose, or excessively worn, and properly lubricated.

   (1) Checking that items are in good condition is usually a visual check to see if the items are safe and usable. Good condition means not bent or twisted, not chafed or burred, not broken or cracked, not bare or frayed, not dented or collapsed, not torn or cut, not rusted or rotted, and not leaking.

   (2) Checking that items are properly assembled or stowed usually is a visual inspection also. See if the items are in normal positions in the shelters, and if all parts are present.

   (3) Excessively worn means worn beyond usable limits and likely to fail before the next scheduled inspection. This includes too much play (lash or lost motion) in linkages and mating parts. This also includes unreadable markings, data and caution plates, and other printed matter.

b. The specific PMCS procedures do not say "adjust if necessary" or "replace if necessary." It is understood that whenever inspection shows the need for adjustment, repairs, or replacement, that work will be done.

c. Any special cleaning instructions for certain items are in the maintenance sections for those items. General cleaning instructions are as follows:

(1) Remove dust or loose dirt with a clean, soft cloth or brush.

WARNING

Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide thorough ventilation whenever used; do not breathe the fumes. Do not use near open flame or hot surface. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the fumes into a harmful and deadly gas. Try not to get it on your skin. When necessary, use gloves, sleeves, and an apron which solvent cannot penetrate.

(2) Remove grease, fungus, and ground-in dirt with a clean, soft cloth dampened (not wet) with trichlorotrifluoroethane.

(3) Clean meter faces and control panels with water and a mild detergent.

d. Steel nameplates, caution plates, and instruction plates may rust rapidly. If rusty, clean plates well and coat heavily with clear lacquer. Refer to TM 43-0139.

e. General precautions for cleaning are in the maintenance sections.

f. The equipment operator usually helps organizational maintenance personnel in doing the PMCS. The operator should make sure the equipment is fairly clean. However, the equipment should not be washed right before inspection. Certain problems, such as loose parts or oil leaks, may not show up after a wash.

g. The only organizational maintenance services are those general procedures listed below, unless approval is given for other services.

(1) Adjust. Make all adjustments by following the procedures given in this manual or in bulletins.
(2) Clean. Clean items by following the general cleaning procedures given in paragraph 2-2.c.
(3) Service. Normally, service includes filling the tires with air and changing or cleaning the air filters.

(4) Tighten. Tighten items with enough force on the wrench handle to tighten according to good mechanical practice. Do not over tighten; this may strip threads or cause distortion. Tightening includes using lockwashers, locknuts, lock wire, or cotter pins when needed.
Use a torque wrench when the procedure calls for one.

(5) Modification work order application. Write all needed modification work orders (MWO) for the equipment on DA Form 2407.

h. When it is hard to do all of the PMCS procedures at one time, they can sometimes be done in parts. If possible, plan to do all the procedures within 24 hours. All available time at halts and in bivouac areas must be used, if needed, to make sure that the PMCS is done.

2-3. PMCS PROCEDURES.

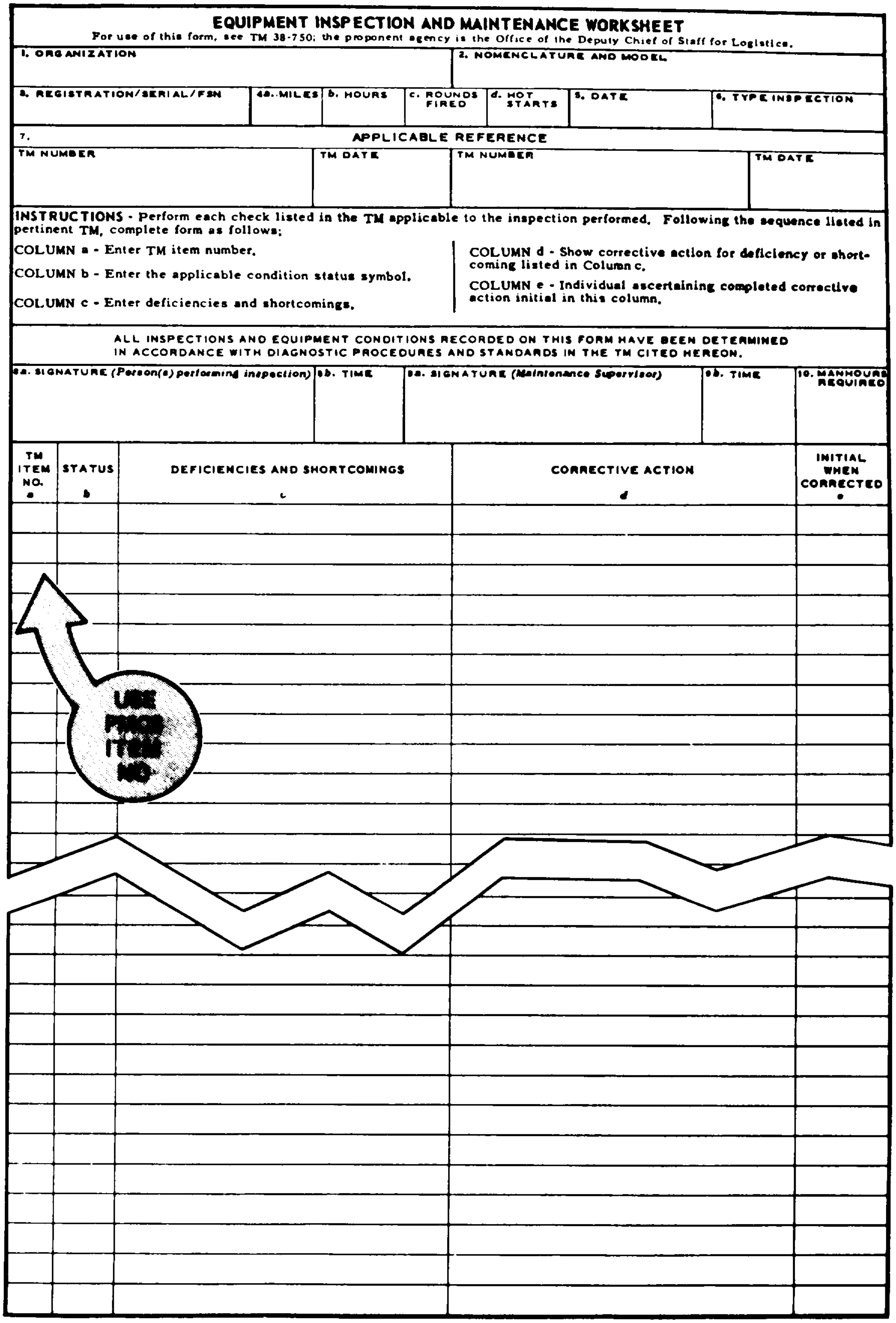
Figure 2-1 gives location of components and table 2-1 gives PMCS procedures for the transmitter group. Figure 2-2 gives location of components and table 2-2 gives PMCS procedures for the receiver group. The PMCS tables are made up of the following columns:

a. Item No. This column gives the order in which the checks and services are to be done. Use these item numbers when filling out the TM Item No. column on DA Form 2404, Equipment Inspection and Maintenance Worksheet.

b. Interval. These columns state how often the checks and services are to be done. A dot (e) or number is placed in the column that applies to each procedure.

c. Item To Be Inspected. This column names the item to be checked or serviced.

d. Procedures. This column gives the checks and services that need to be done on the item.



EQUIPMENT INSPECTION AND MAINTENANCE WORKSHEET

For use of this form, see TM 38-750; the proponent agency is the Office of the Deputy Chief of Staff for Logistics.

1. ORGANIZATION	2. NOMENCLATURE AND MODEL

3. REGISTRATION/SERIAL/FSN	4a. MILES	b. HOURS	c. ROUNDS FIRED	d. HOT STARTS	5. DATE	6. TYPE INSPECTION

7. APPLICABLE REFERENCE

TM NUMBER	TM DATE	TM NUMBER	TM DATE

INSTRUCTIONS - Perform each check listed in the TM applicable to the inspection performed. Following the sequence listed in pertinent TM, complete form as follows:

COLUMN a - Enter TM item number.

COLUMN b - Enter the applicable condition status symbol.

COLUMN c - Enter deficiencies and shortcomings.

COLUMN d - Show corrective action for deficiency or shortcoming listed in Column c.

COLUMN e - Individual ascertaining completed corrective action initial in this column.

ALL INSPECTIONS AND EQUIPMENT CONDITIONS RECORDED ON THIS FORM HAVE BEEN DETERMINED IN ACCORDANCE WITH DIAGNOSTIC PROCEDURES AND STANDARDS IN THE TM CITED HEREON.

8a. SIGNATURE (Person(s) performing inspection)	8b. TIME	9a. SIGNATURE (Maintenance Supervisor)	9b. TIME	10. MANHOURS REQUIRED

TM ITEM NO. a	STATUS b	DEFICIENCIES AND SHORTCOMINGS c	CORRECTIVE ACTION d	INITIAL WHEN CORRECTED e

EL8IV029

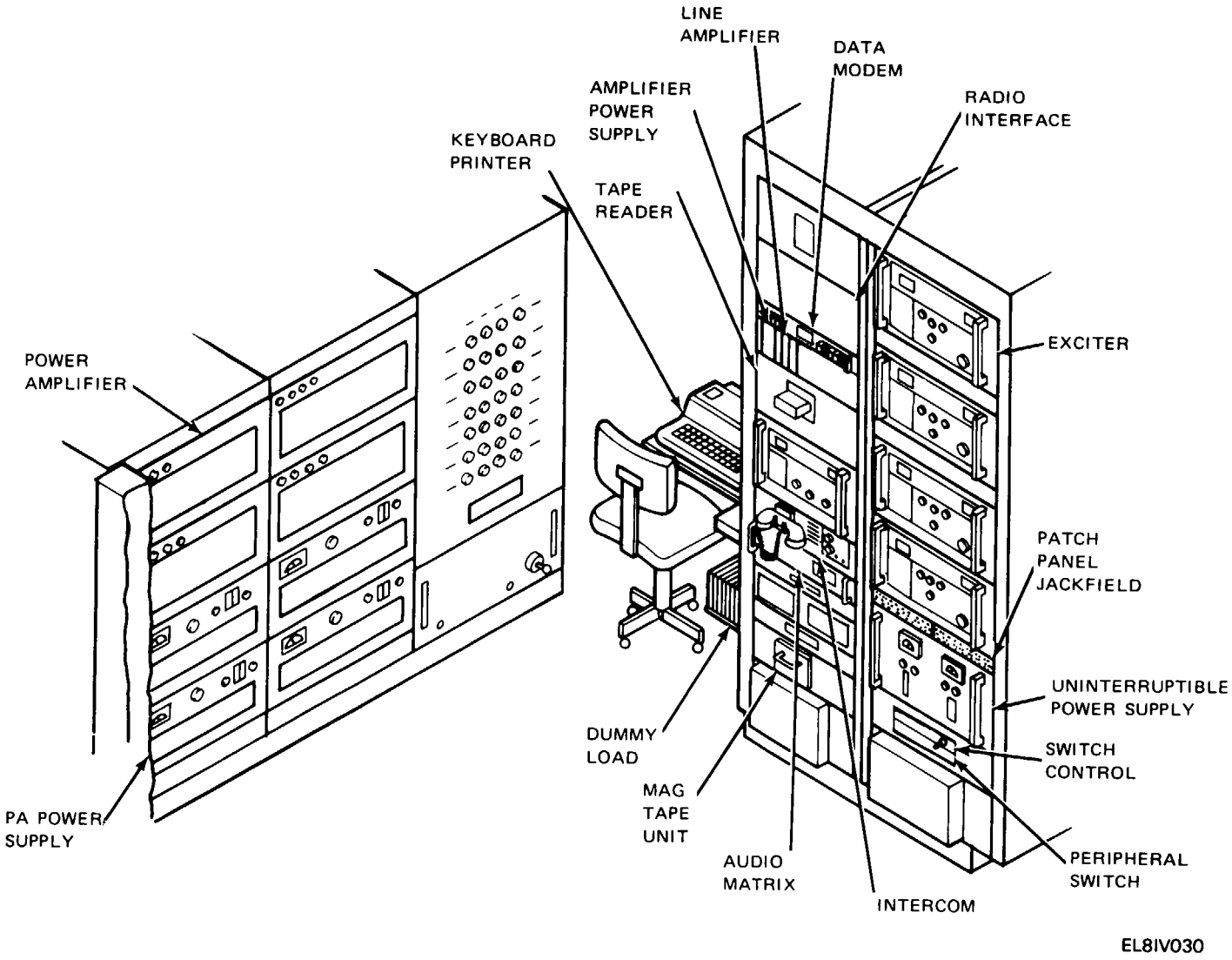


Figure 2-1. Transmitter Group Components

Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES

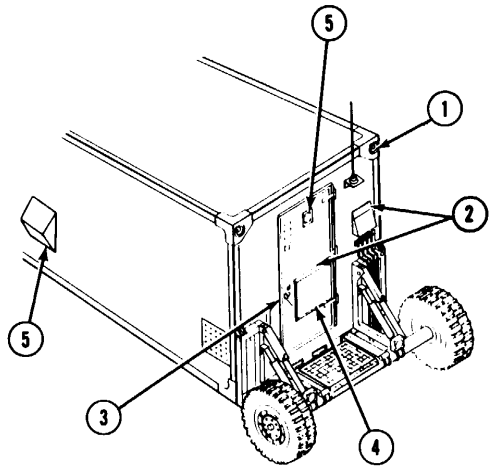
NOTE

These checks are to be made in the order listed, within the designated interval.

If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down.

B - Before Operation
W - Weekly
M - Monthly
Q - Quarterly
S - Semiannually
A - Annually
H - Hours

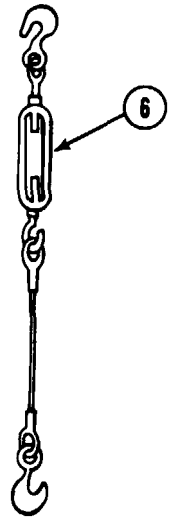
Item no.	Interval							Item to be inspected	Procedures
	B	W	M	Q	S	A	H		
1		•						Shelter	1. Inspect shelter outside for punctures, chipped or flaking sealer or paint, lifting and towing eye (1) cracks, rubber rain flap (2) deterioration, and all hardware defects.



EL8IV031

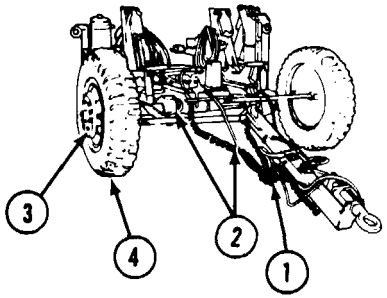
Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
1 (cont)		•						Shelter (cont)	2. Inspect door (3) and vent (4) gaskets.
		•							3. Lubricate door (3) hinges and latches and vent (4) hinges, if required, with low temperature lubrication oil.
		•							4. Inspect air filters (5) and clean as required.
		•							5. Touch up paint as required. Use a paint that matches the rest of the shelter.
		•							6. Inspect sling assembly (6) for completeness.



EL8IV032

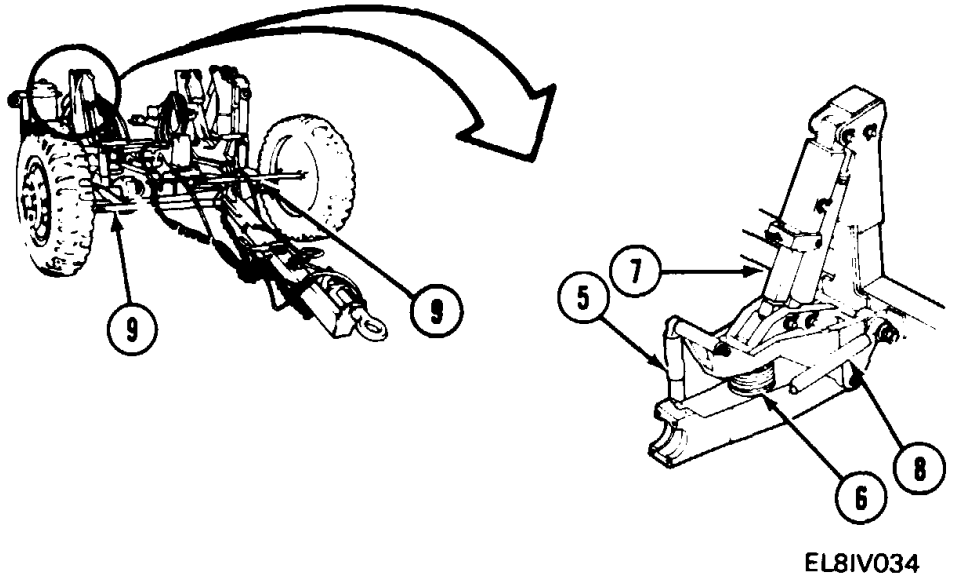
				•					7. Inspect shelter interior for floor mat wear and general interior condition.
2					•			Mobilizer	1. Check that services called for in the LO have been done.
					•				2. Check safety chain (1) for damaged or broken links and mounting.
					•				3. Check air hoses (2) for kinks and presence of mounting clips. **NOTE** **Lug nuts (3) should be torqued to 450 to 500 pound-feet.**
					•				4. Check torque of lug nuts (3).
					•				5. Inspect tires (4) for damage and excessive wear.
					•				6. Rotate and match tires (4) according to tread design and degree of wear.



EL8IV033

Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

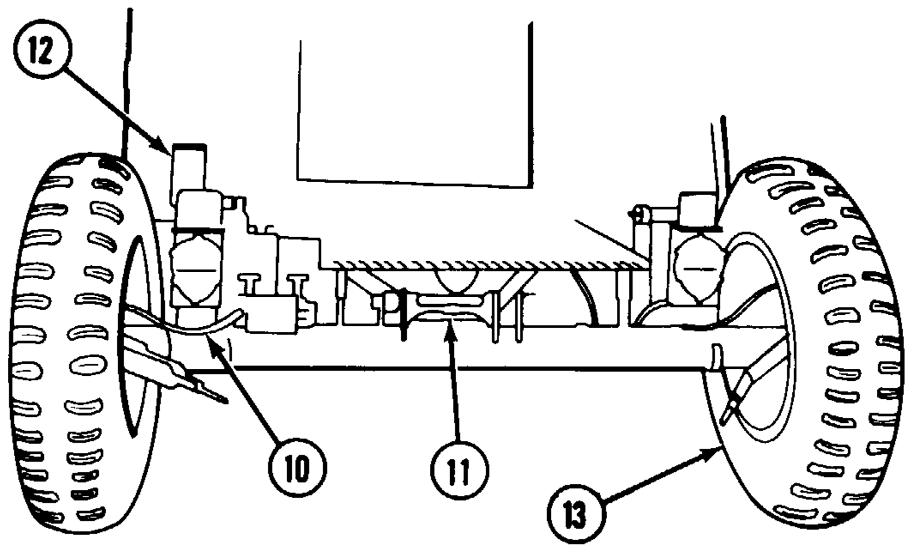
Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
2 (cont)								Mobilizer (cont)	
					•				7. Inspect shock absorbers (5) for security, condition of rubber dust covers, and fluid leakage.
					•				8. Check air springs (6), suspension (7), stabilizers (8), and tie rods (9) to see if they have been damaged. Check for tightness of all assemblies and mounting bolts.



EL8IV034

•

9. Check that brake hoses (10) are securely connected, in good condition, and do not leak.



EL8IV035

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10. Check power cluster (11) for secure mounting.

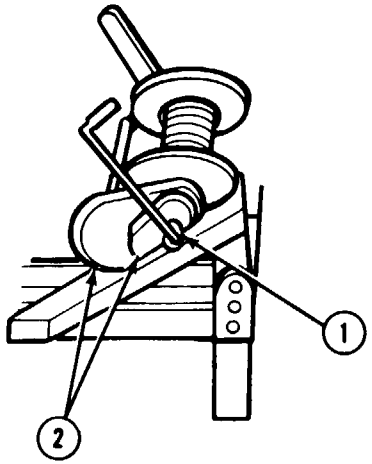
•

11. Check junction box (12), wiring harness, clips, shells, and grommets for damage.

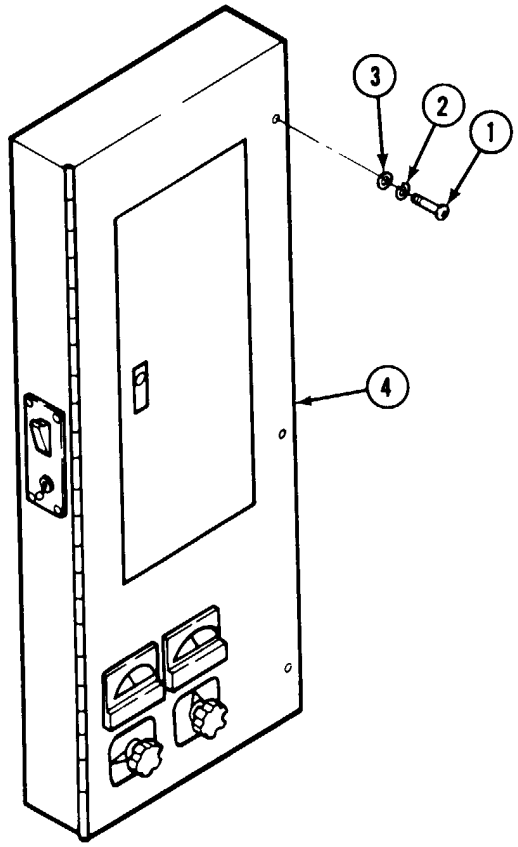
•

12. Remove wheels (13) and hubs and check brake internal components. Adjust brakes as necessary.

Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

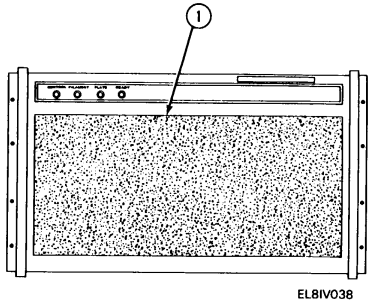
Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
3					•			Log Periodic Antenna	**WARNING** Do not work on or in close proximity to the antenna when transmitter power is on. Contact with high rf voltages can be fatal, and electromagnetic radiation can cause severe or fatal internal burns. Particularly dangerous areas are in the vicinity of the antenna coupler and rear radiator ground anchors. 1. Apply four to five drops VV-0-526 lightweight machine oil in tower winch crank shaft (1) oil hole. Apply general purpose light grease to face of all gear teeth (2) and verify ease of cranking.  EL8IV036

	•	•	•	•	•	•			2. Refer to TM 11-5985-362-13 or TM 11-5985-380-13 for remaining preventive maintenance procedures on the log periodic antennas.
					•			Power Panel	1. Remove three screws (1), lockwashers (2), and flat washers (3) and open front panel (4). Check power panel components for broken connections and damaged parts. Close front panel and install three screws, lockwashers, and flat washers.



EL8IV037

Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
5	•							Power Amplifier	1. Inspect power amplifier. See page 2-84.
		•							2. Pull air filter (1) out through front panel. Rinse filter in warm water, wring out, and let dry. Press filter into front panel.  EL8IV038
6	•							PA Power Supply	1. Inspect pa power supply. See page 2-88.

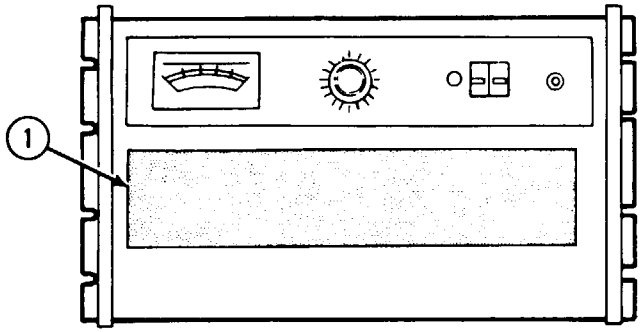
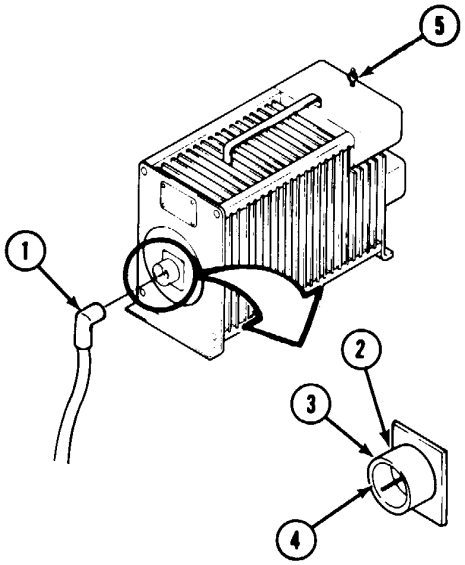
		•							2. Pull air filter (1) out through front panel. Rinse filter in warm water, wring out, and let dry. Press filter into front panel.  EL8IV039
7	•							Keyboard Printer	1. Inspect keyboard printer. See page 2-66.

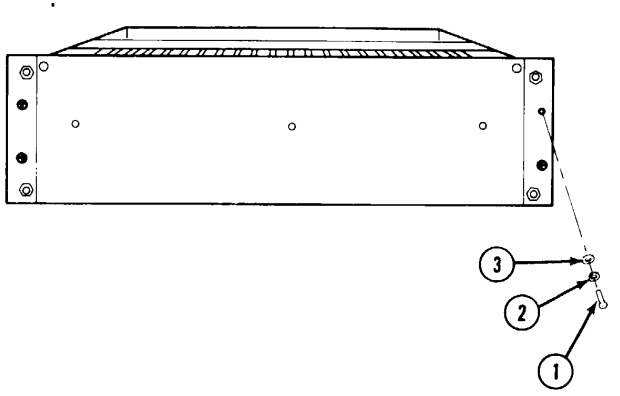
Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
8								Dummy Load	**WARNING** Fumes of TRICHLOROTRIFLUOROETHANE are poisonous. Provide thorough ventilation whenever used; do not breathe the fumes. Do not use near open flame or hot surface. TRICHLOROTRIFLUOROETHANE will not burn, but heat changes the fumes into a harmful and deadly gas. Try not to get it on your skin. When necessary, use gloves, sleeves, and an apron which solvent cannot go through.
			•						1. Disconnect rf input cable (1) and clean connector (2) with trichlorotrifluoroethane on a cotton swab. Make sure to clean metal contact (3) and Teflon insulator (4). Connect rf input cable.
									NOTE Coolant should not be more than 1/8 inch (3.175 mm) above bottom surface when at room temperature.
				•					2. Unscrew vent plug (5) and check that coolant covers bottom surface of tank.



EL8IV040

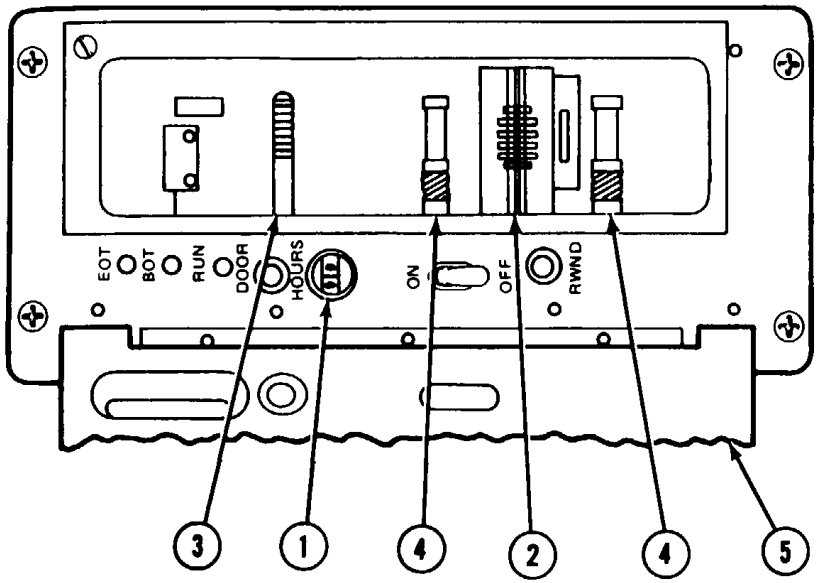
				•				Radio Interface	1. Remove four screws (1), lockwashers (2), and flat washers (3) and slide radio interface out of rack. Vacuum inside of radio interface. Slide radio interface into rack and install four screws, lockwashers, and flat washers.



EL8IV041

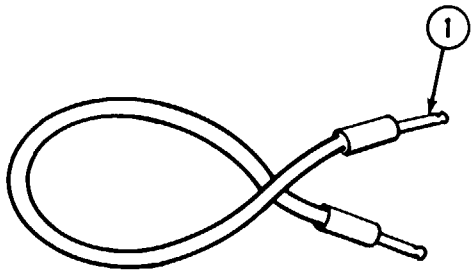
Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
10	•							Data Modem	1. Inspect data modem. See page 2-93.
11	•							Line Amplifier and Line Amplifier Power Supply	1. Inspect line amplifier and amplifier power supply. See page 2-99.
12	•							Tape Reader	1. Inspect tape reader. See page 2-77.
13	•							Intercom	1. Inspect intercom. See page 2-105.
14	•							Audio Matrix	1. Inspect audio matrix. See page 2-80.
15								Mag Tape Unit	**NOTE** **All cleaning is done when HOURS meter (1) shows that 10 hours have elapsed.**
							10		1. Clean magnetic head face (2), capstan shaft (3), and tape guides (4).
							10		2. Vacuum inside front cover (5) and mag tape unit. Use soft-bristled brush to remove any remaining dirt.



EL8IV042

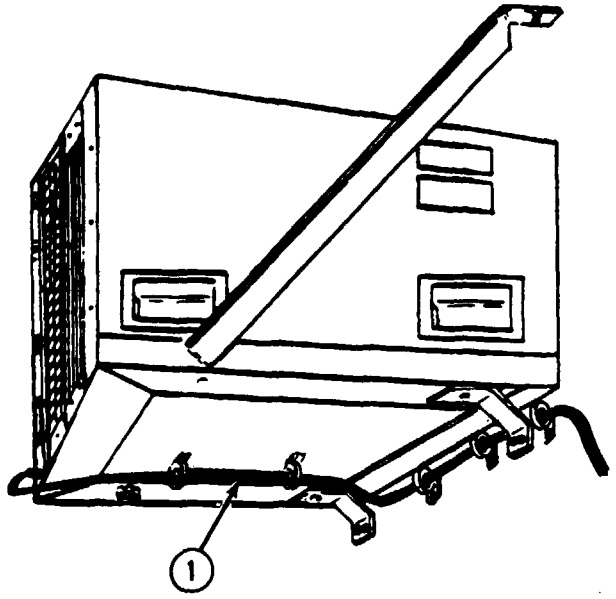
16	•							Exciter	1. Inspect exciter. See page 2-81.
17			•					Patch Panel Jackfield	1. Clean patch cord connectors (1) with a burnishing cloth.



EL8IV043

Table 2-1. TRANSMITTER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
18	•							Uninterruptible Power Supply	1. Inspect uninterruptible power supply. See page 2-109.
19	•							Switch Control	1. Inspect switch control. See page 2-65.
20		•						Air Conditioner Drain Hose	1. Inspect drain hose (1) for deterioration. 2. Check that drain hose is not clogged.



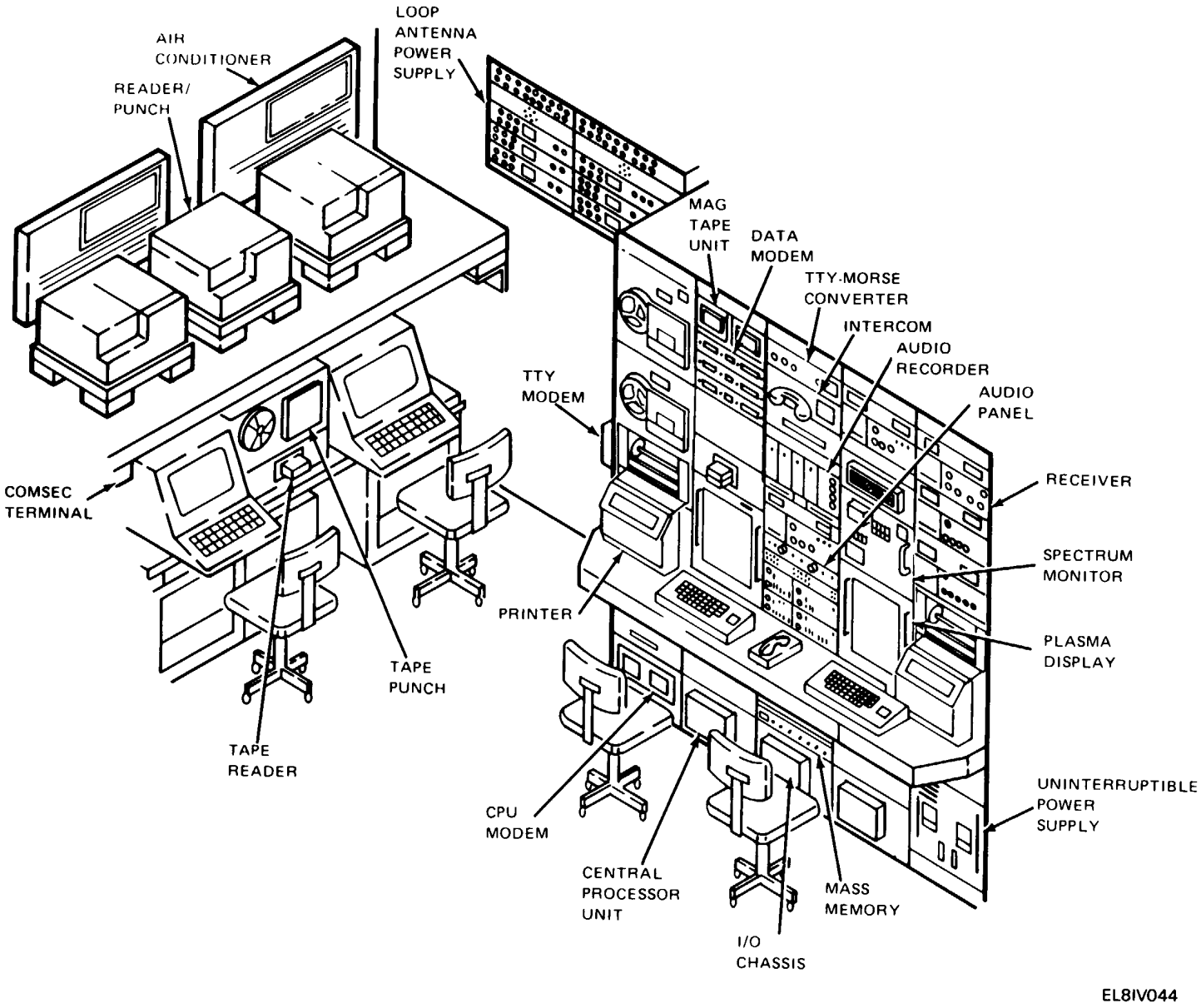


Figure 2-2. Receiver Group Components

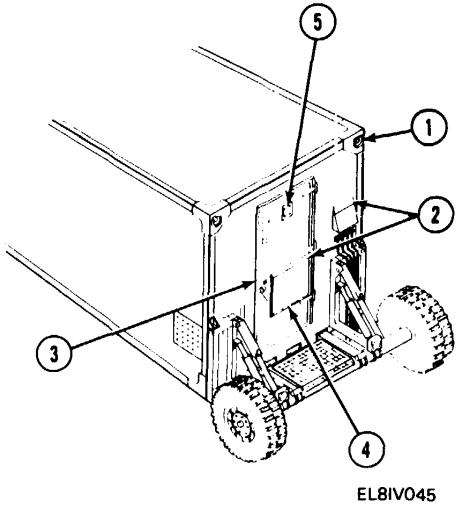
Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES

NOTE

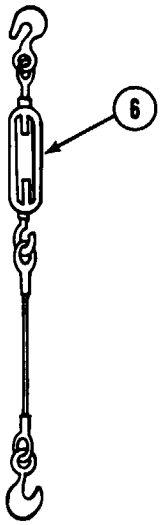
These checks are to be made in the order listed, within the designated interval.

If the equipment must be kept in continuous operation, check and service only those items that can be checked and serviced without disturbing operation. Make the complete checks and services when the equipment can be shut down.

B - Before Operation
W - Weekly
M - Monthly
Q - Quarterly
S - Semiannually
A - Annually
H - Hours

Item no.	Interval							Item to be inspected	Procedures
	B	W	M	Q	S	A	H		
1		•						Shelter	1. Inspect shelter outside for punctures, chipped or flaking sealer or paint, lifting and towing eye (1) cracks, rubber rain flap (2) deterioration, and all hardware defects.  EL8IV045

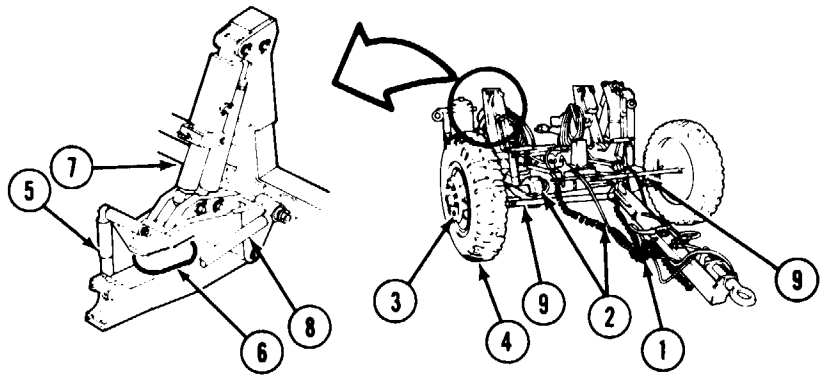
		•							2. Inspect door (3) and vent (4) gaskets.
		•							3. Lubricate door (3) hinges and latches and vent (4) hinges, if required, with low temperature lubrication oil.
		•							4. Inspect air filters (5) and clean as required.
		•							5. Touch up paint as required. Use a paint that matches the rest of the shelter.
		•							6. Inspect sling assembly (6) for completeness.
		•							7. Inspect shelter interior for floor mat wear and general interior condition.
2					•			Mobilizer	1. Check that services called for in the LO have been done.



EL8IV032

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval							Item to be inspected	Procedures
	B	W	M	Q	S	A	H		
2 (cont)					•			Mobilizer (cont)	2. Check safety chain (1) for damaged or broken links and mounting.
					•				3. Check air hoses (2) for kinks and presence of mounting clips.
									NOTE **Lug nuts (3) should be torqued to 450 to 500 pound-feet.**
					•				4. Check torque of lug nuts (3).
					•				5. Inspect tires (4) for damage and excessive wear.
					•				6. Rotate and match tires (4) according to tread design and degree of wear.



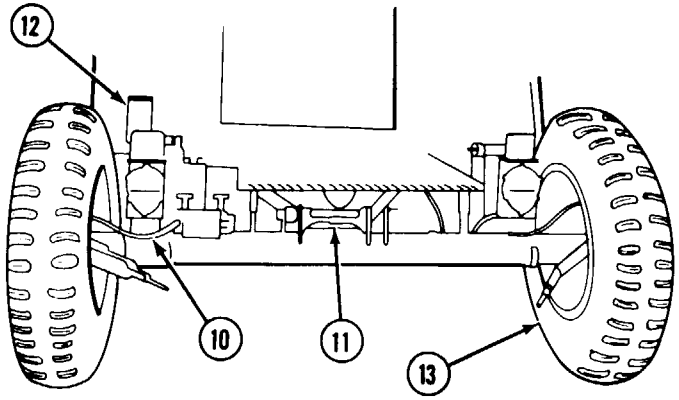
EL8IV046

					•			
					•			
					•			
						•		

7. Inspect shock absorbers (5) for security, condition of rubber dust covers, and fluid leakage.

8. Check air springs (6), suspension (7), stabilizers (8), and tie rods (9) to see if they have been damaged. Check for tightness of all assemblies and mounting bolts.

9. Check that brake hoses (10) are securely connected, in good condition, and do not leak.



EL8IV047

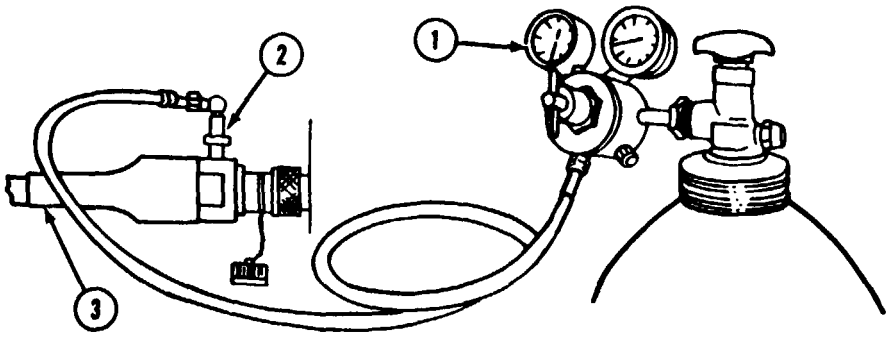
10. Check power cluster (11) for secure mounting.

11. Check junction box (12), wiring harness, clips, shells, and grommets for damage.

12. Remove wheels (13) and hubs and check brake internal components. Adjust brakes as necessary.

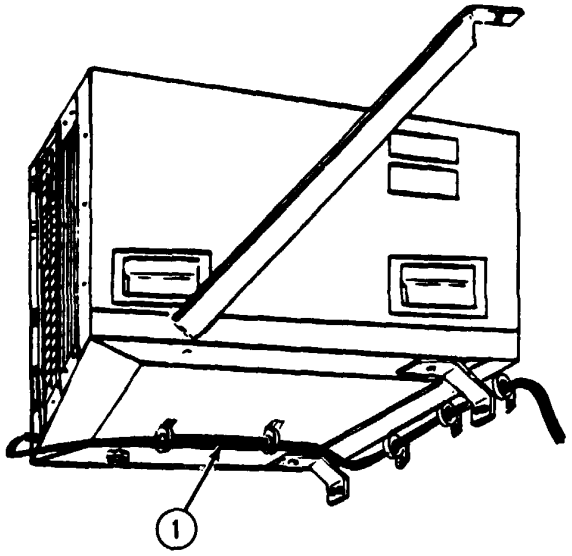
Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval							Item to be inspected	Procedures
	B	W	M	Q	S	A	H		
3								Loop Antenna	**WARNING** **Use great care to avoid contact with nitrogen being discharged from any container under pressure. Sudden and irreversible tissue damage can result from freezing. Wear thermal protective gloves and a face protector or safety glasses in any situation where skin or eye contact is possible. Prevent contact of nitrogen with flame or hot metal surfaces. Heat causes nitrogen to break down and form a highly toxic and corrosive gas.** **NOTE** **Pressurization should be 5 +2 psi (32.98 +13.2 kPa).** 1. Connect nitrogen tank with pressure gage (1) attached to transmission line Shraeder valves (2). Check pressurization of transmission lines (3).
			•						
	•	•	•	•	•	•			2. Refer to TM 11-5985-361-23 for remaining preventive maintenance procedures on the loop antennas.



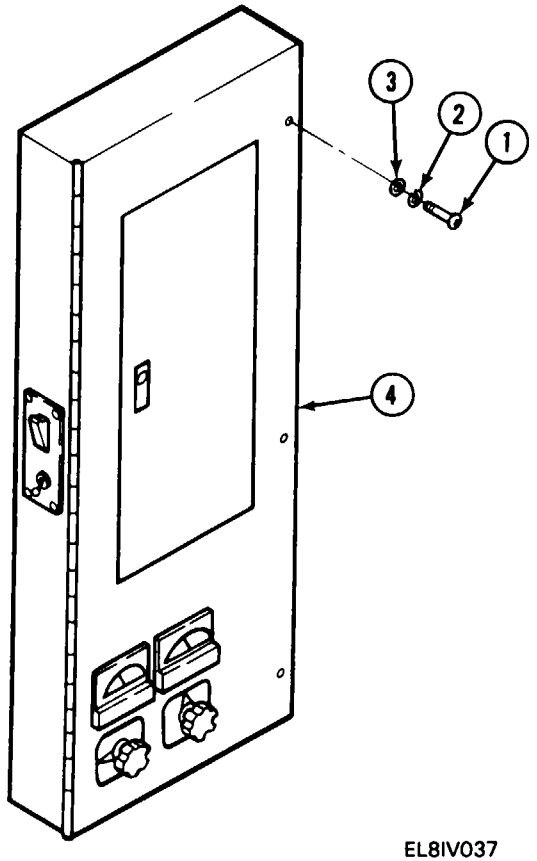
EL8IV048

3.1		•						Air Conditioner Drain Hose	1. Inspect drain hose (1) for deterioration. 2. Check that drain hose is not clogged.



EL81V186

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
4					•			Power Panel	1. Remove three screws (1), lockwashers (2), and flat washers (3) and open front panel (4). Check power panel components for broken connections and damaged parts. Close front panel and install three screws, lockwashers, and flat washers 

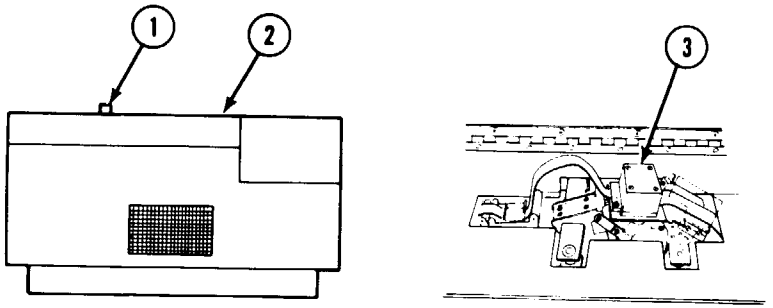
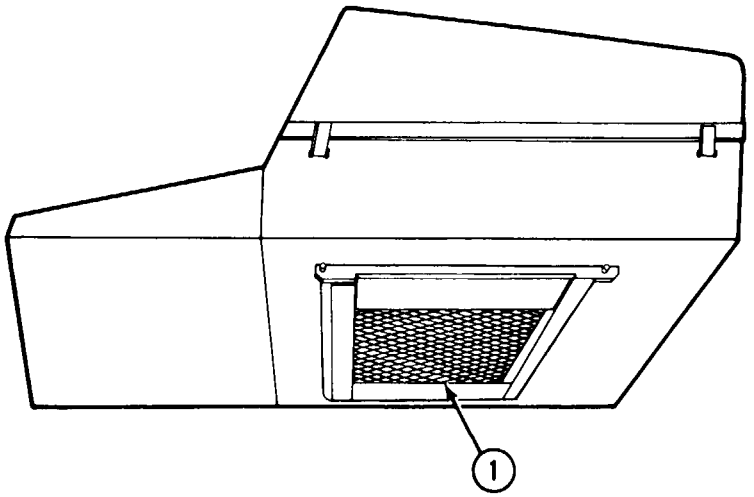
5		•						Reader Punch	1. Loosen captive screw (1) and open punch cover (2). Vacuum dust and dirt from punch assembly (3). Use a soft-bristled brush to remove excess lubricant and any remaining dirt. Close punch cover.  EL8IV050
6			•					COMSEC Terminal	1. Remove intake (1) filter. See TM 11-5815-613-13&P Vacuum filter to remove loose dirt. Use a stiff brush to remove any remaining dirt. Install intake filter.  EL8IV051

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

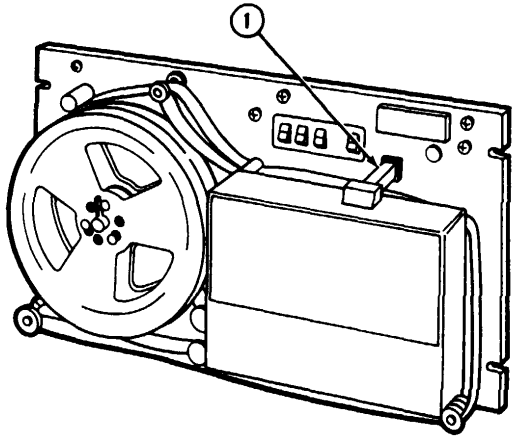
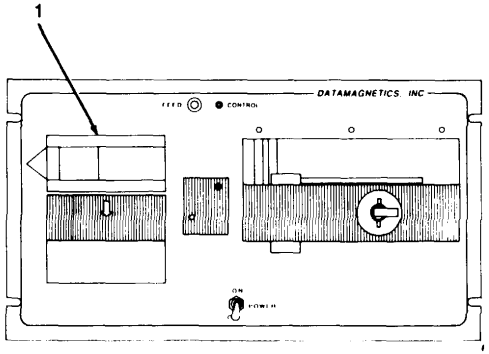
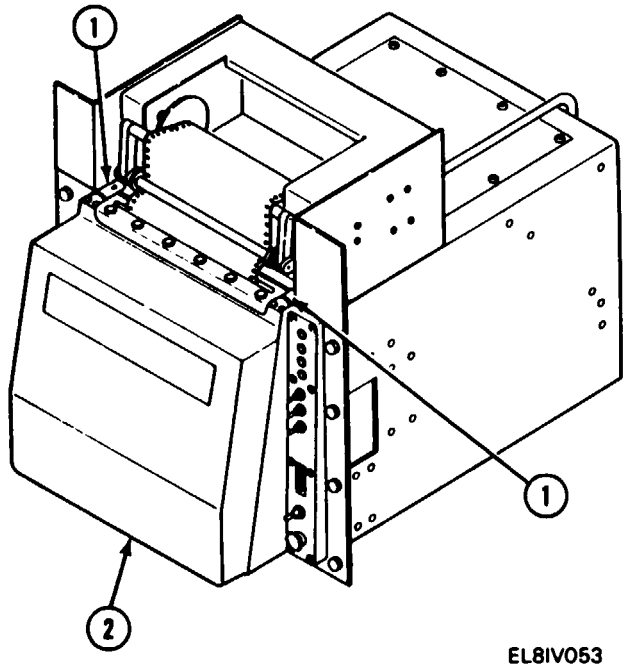
Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
7	•							Tape Punch	1. Remove paper lint, chad, and excess lubricant from punch assembly (1) with a soft-bristled brush  

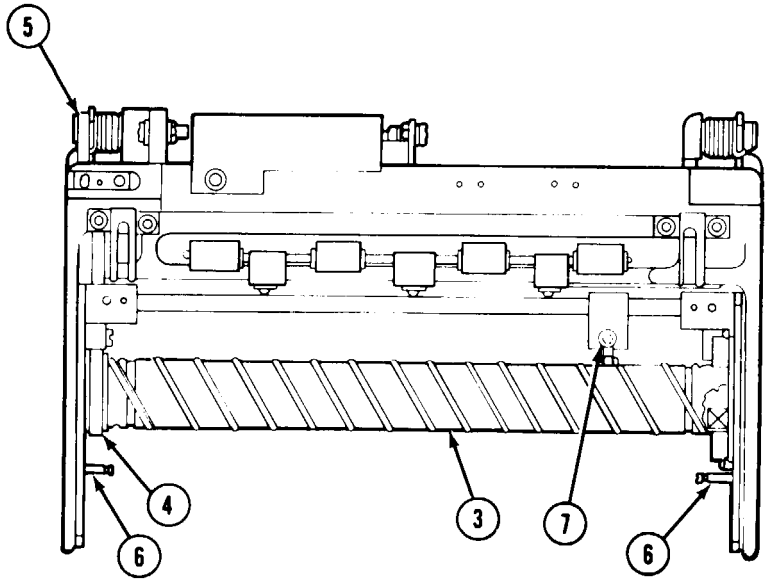
Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
8	•							Tape Reader	1. Inspect tape reader. See page 2-77
9	•	•	•	•	•			Tty Modem	1. Refer to TM 11-5805356-12 for preventive maintenance procedures on the tty modem.
10							40	Printer	1. Release two latches (1) and open front cover (2). Vacuum paper dust from inside printer.



EL8IV053

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
10							40	Printer (cont)	2. Remove paper. See TM 11-5895-1160-10-1. Turn helix assembly (3) and check (cont)that it moves freely. Check helix drive belt (4) and paper feed drive belt (5) for damage, cracks, or tears. Install paper. See TM 11-5895-1160-10-1.  EL8IV054
						•			3. Lubricate grooves on forms thickness control cams (6) and threads on adjustment screw (7) with lubricating grease.

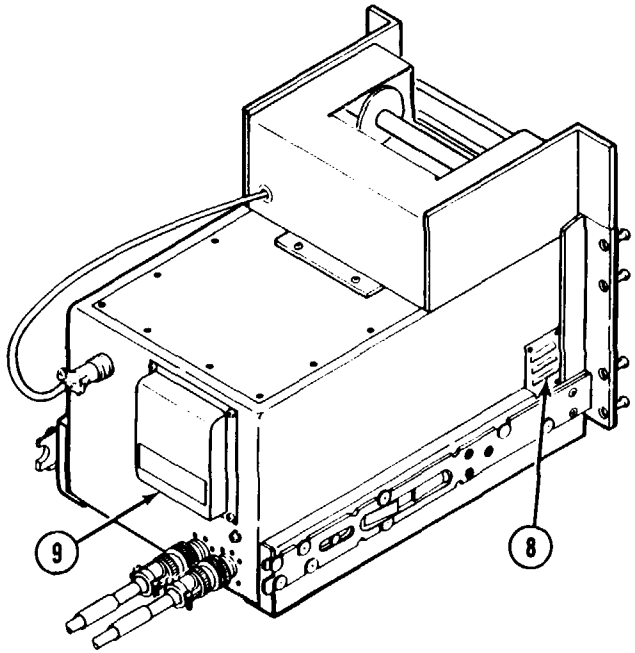
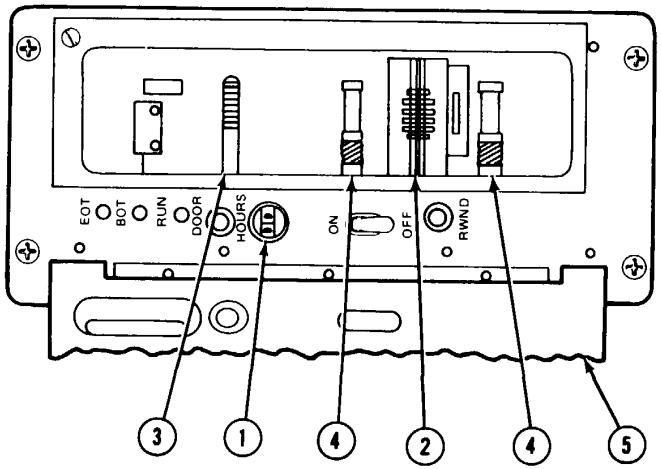
							80		4. Remove left side (8) and rear intake (9) filters. Vacuum dust from filters. Install left side and rear intake filters.  EL8IV055
11	•							Data Modem	1. Inspect data modem. See page 2-93.

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
12								Mag Tape Unit	**NOTE** **All cleaning is done when HOURS meter (1) shows that 10 hours have elapsed.**
							10		1. Clean magnetic head face (2), capstan shaft (3), and tape guides (4).  EL8IV056
							10		2. Vacuum inside front cover (5) and mag tape unit. Use soft-bristled brush to remove any remaining dirt.

13	•		•					Plasma Display	1. Inspect plasma display. See page 2-116. 2. Remove intake (1) and exhaust (2) filters. See page 2-129. Vacuum filters to remove loose dirt. Install intake and exhaust filters. See page 2-129.

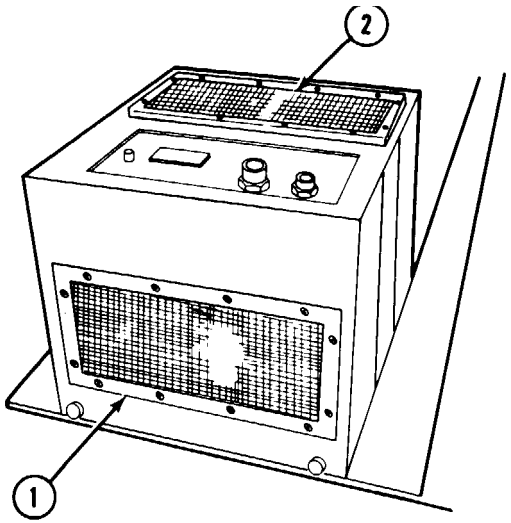


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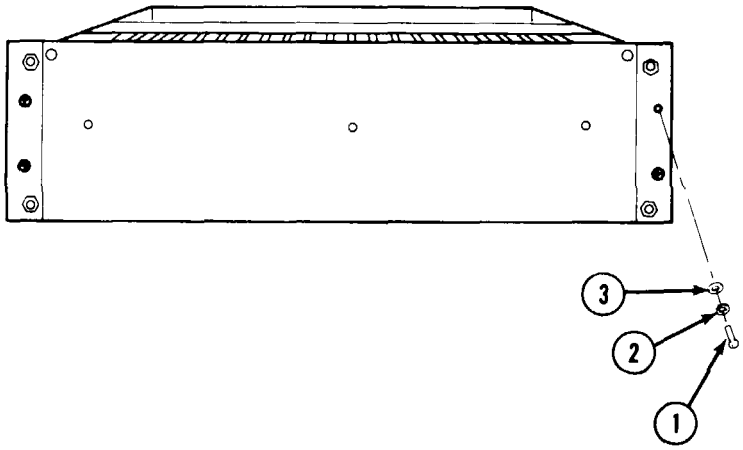
Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
14	•							Tty-Morse Converter	1. Inspect tty-Morse converter. See page 2-130.
15					•			Radio Interface	1. Remove four screws (1), lockwashers (2), and flat washers (3) and slide radio interface out of rack. Vacuum inside of radio interface. Slide radio interface into rack and install four screws, lockwashers, and flat washers.  EL8IV058
16	•							Intercom	1. Inspect intercom. See page 2-105.

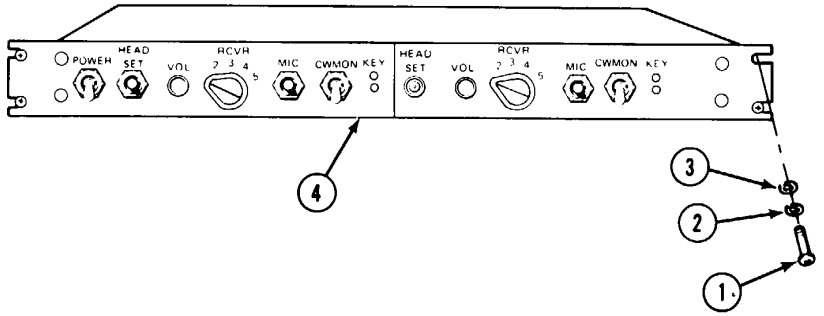
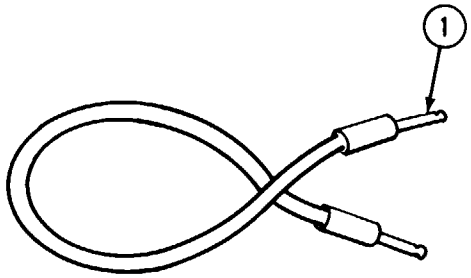
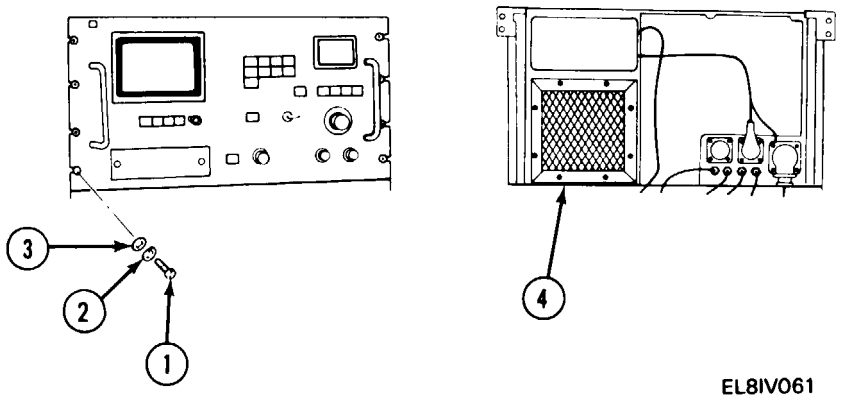
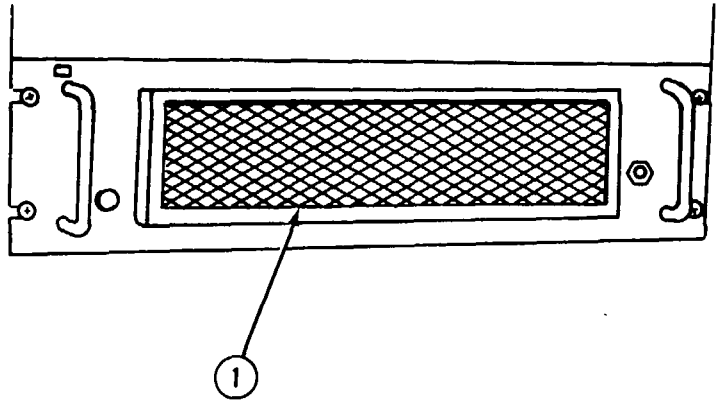
17					•			Audio Panel	**CAUTION** **Do not pull audio panel completely out of rack or equipment will be damaged**. 1. Remove four screws (1), lockwashers (2), and flat washers (3) and pull audio panel partly out of rack. Vacuum inside of audio panel. Inspect front panel (4) components for broken connections and damaged parts. Push audio panel into rack and install four screws, lockwashers, and flat washers.  EL8IV059
18				•				Patch Panel Jackfield	1. Clean patch cord connectors (1) with a burnishing cloth.  EL8IV060

Table 2-2. RECEIVER GROUP PREVENTIVE MAINTENANCE CHECKS AND SERVICES - Continued

Item no.	Interval B	W	M	Q	S	A	H	Item to be inspected	Procedures
19	•							Mass Memory	1. Inspect mass memory. See page 2-113.
20		•						Spectrum Monitor	1. Remove eight screws (1), lockwashers (2), and flat washers (3) and pull spectrum monitor out of rack. Place a piece of paper over intake filter (4) and check that suction of fan is strong enough to hold paper in place. Remove paper. Push spectrum monitor into rack and install eight screws, lockwashers, and flat washers.  EL8IV061

21	•							Spectrum Monitor Receiver	1. Place a piece of paper over intake filter (1) and check that suction of fan is strong enough to hold paper in place. Remove paper.  EL8IV062
22								Uninterruptible	1. Inspect uninterruptible power supply. See Power Supply page 2-109.

Section III. TROUBLESHOOTING

SYMPTOM INDEX

2-4. GENERAL.

Troubleshooting at the unit maintenance level requires you to locate any trouble as quickly as possible. The amount of troubleshooting you can do is based on what the Maintenance Allocation Chart says you can fix. Because of this, the only trouble symptoms you will find here are those that could be caused by faulty things you can fix.

NOTE

Before using the troubleshooting table, check your work order and talk to the operator, if possible, for a description of symptoms if trouble occurred while equipment was in operation.

2-5. TROUBLESHOOTING TABLE.

Table 2-3 lists common malfunctions which may be found during operation or maintenance of the communication central or its components. You should perform the tests/inspections and corrective actions in the order listed.

NOTE

This manual cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed or is not corrected by listed corrective actions, notify intermediate direct support maintenance.

2-6. USING THE TROUBLESHOOTING TABLE.

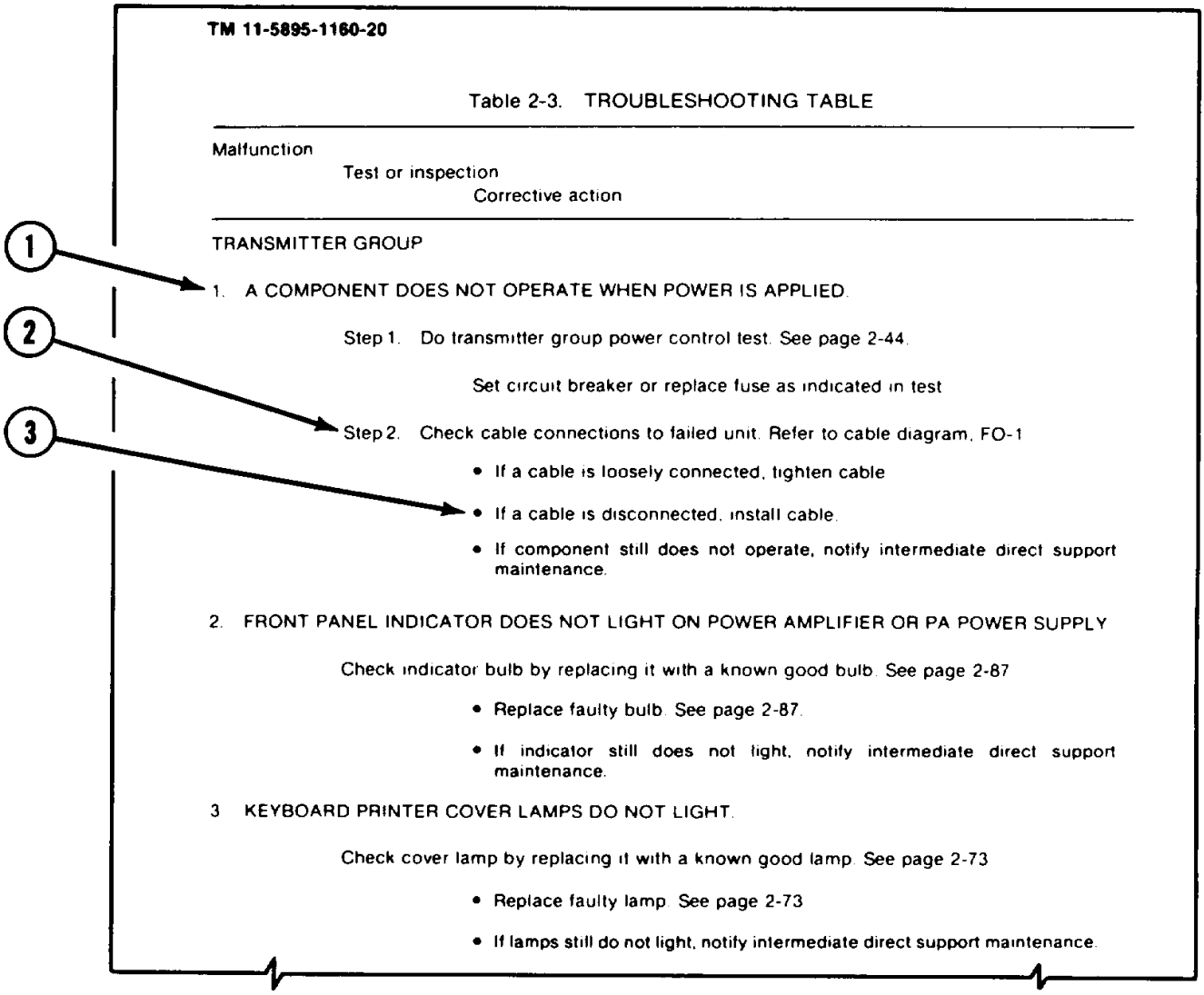


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Table 2-3. TROUBLESHOOTING TABLE

Malfunction	Test or inspection	Corrective action
TRANSMITTER GROUP		
1. A COMPONENT DOES NOT OPERATE WHEN POWER IS APPLIED.	Step 1. Do transmitter group power control test. See page 2-44.	Set circuit breaker or replace fuse as indicated in test
	Step 2. Check cable connections to failed unit. Refer to cable diagram, FO-1	• If a cable is loosely connected, tighten cable • If a cable is disconnected, install cable. • If component still does not operate, notify intermediate direct support maintenance.
2. FRONT PANEL INDICATOR DOES NOT LIGHT ON POWER AMPLIFIER OR PA POWER SUPPLY	Check indicator bulb by replacing it with a known good bulb. See page 2-87	• Replace faulty bulb. See page 2-87. • If indicator still does not light, notify intermediate direct support maintenance.
3 KEYBOARD PRINTER COVER LAMPS DO NOT LIGHT.	Check cover lamp by replacing it with a known good lamp. See page 2-73	• Replace faulty lamp. See page 2-73 • If lamps still do not light, notify intermediate direct support maintenance.

1. Malfunctions are those that cause symptoms seen or heard at the equipment without using test equipment.
2. Tests or inspections are procedure steps that isolate the damaged part.
3. Corrective action tells technician what needs to be done to correct the problem.

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Table 2-3. TROUBLESHOOTING TABLE

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

TRANSMITTER GROUP

1. A COMPONENT DOES NOT OPERATE WHEN POWER IS APPLIED.

   Step 1. Do transmitter group power control test. See page 2-44.

   Set circuit breaker or replace fuse as indicated in test.

   Step 2. Check cable connections to failed unit. Refer to cable diagram, FO-1.

   - If a cable is loosely connected, tighten cable.
   - If a cable is disconnected, install cable.
   - If component still does not operate, notify intermediate direct support maintenance.

2. FRONT PANEL INDICATOR DOES NOT LIGHT ON POWER AMPLIFIER OR PA POWER SUPPLY.

   Check indicator bulb by replacing it with a known good bulb. See page 2-87.

   - Replace faulty bulb. See page 2-87.
   - If indicator still does not light, notify intermediate direct support maintenance.

3. KEYBOARD PRINTER COVER LAMPS DO NOT LIGHT.

   Check cover lamp by replacing it with a known good lamp. See page 2-73.

   - Replace faulty lamp. See page 2-73.
   - If lamps still do not light, notify intermediate direct support maintenance.

4. KEYBOARD PRINTER MANUAL CONTROLS LAMPS DO NOT LIGHT.

   Check manual controls lamp by replacing it with a known good lamp. See page 2-75.

   - Replace faulty lamp. See page 2-75.
   - If lamps still do not light, notify intermediate direct support maintenance.

5. TRANSMITTER STATUS SHOWS SICK IN TRANSMITTER STATUS REPORT ON PLASMA DISPLAY.

   Step 1. Do transmitter group power control test. See page 2-44.

   Set circuit breaker or replace fuse as indicated in test.

Table 2-3. TROUBLESHOOTING TABLE - Continued

MALFUNCTION TEST OR INSPECTION CORRECTIVE ACTION

Step 2. Check cable connections to failed unit. Refer to cable diagram, FO-1.

- If a cable is loosely connected, tighten cable.
- If a cable is disconnected, install cable.
- If component still does not operate, notify intermediate direct support maintenance.

RECEIVER GROUP

1. A COMPONENT DOES NOT OPERATE WHEN POWER IS APPLIED.

Step 1. Do receiver group power control test. See page 2-47.

Set circuit breaker or replace fuse as indicated in test.

Step2. Check cable connections to failed unit. Refer to cable diagram, FO-2.

- If a cable is loosely connected, tighten cable.
- If a cable is disconnected, install cable.
- If component still does not operate, notify intermediate direct support maintenance.

2. RECEIVER STATUS SHOWS SICK IN RECEIVER STATUS REPORT ON PLASMA DISPLAY.

Step 1. Do receiver group power control test. See page 2-47.

Set circuit breaker or replace fuse as indicated in test.

Step 2. Check cable connections to failed unit. Refer to cable diagram, FO-2.

- If a cable is loosely connected, tighten cable.
- If a cable is disconnected, install cable.
- If receiver still does not operate, notify intermediate direct support maintenance.

2-7. TRANSMITTER GROUP POWER CONTROL TEST.

DESCRIPTION

This test is to insure that circuit breakers are set correctly, that open fuses are not installed in equipment, and that uninterruptible power supply is not faulty.

NOTE

- **If failed equipment is one of the following, go to step 3: intercom, peripheral switch, CPU modem, CPU, emergency light.**
- **If failed equipment is not listed above, go to step 1.**
- **If all equipment fails to operate, go to step 8.**

1. CHECK THAT POWER PANEL CIRCUIT BREAKER FOR FAILED UNIT IS IN ON POSITION. REFER TO TABLE 2-4.

   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker will not stay in ON position, notify intermediate direct support maintenance.

2. CHECK FUSE OF FAILED UNIT. REFER TO TABLE 2-4.

   - If fuse is bad, replace fuse. See page 2-57.
   - If new fuse blows, notify intermediate direct support maintenance.
   - If fuse is good and circuit breaker stays in ON position, test is complete.

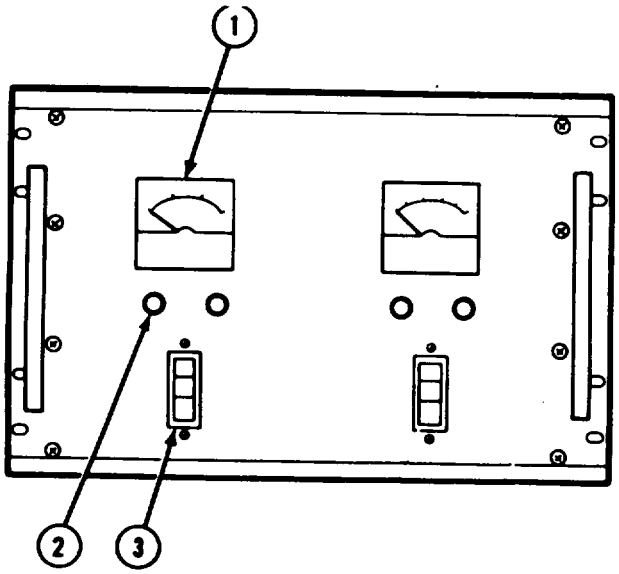
Table 2-4. CIRCUIT BREAKERS AND FUSES

Component	Circuit breaker	Fuse location
Keyboard printer	CB2	-
Radio interface	CB2	-
Data modem	CB2	-
Line amplifier	CB2	-
Tape reader	CB2	Rear panel
Receiver	C82	Rear panel
Audio matrix	CB2	-
Mag tape unit	CB2	-
Exciter (all)	CB8	Rear panel
Pa and pa power supply 1	CB7	Front panel
Pa and pa power supply 2	CB1	Front panel
Pa and pa power supply 3	CB3	Front panel
Pa and pa power supply 4	CB5	Front panel
Antenna matrix	CB6	-

TRANSMITTER GROUP POWER CONTROL TEST (CONT)

3. ON UNINTERRUPTIBLE POWER SUPPLY, CHECK OUTPUT VOLTAGE METER (1) FOR READING BETWEEN 108 AND 132 V AC.

   - If reading is within limits given, go to step 7.
   - If reading is not within limits given, go to step 4.



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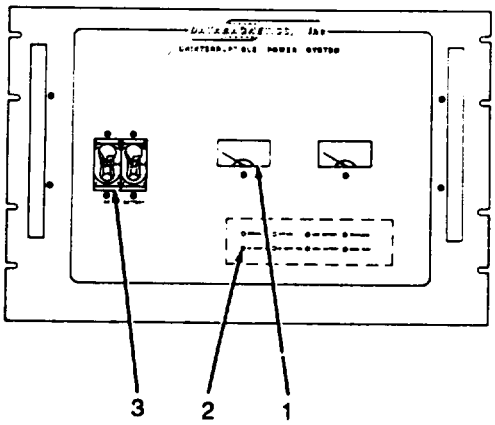

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4. CHECK CONDITION OF AC POWER ON INDICATOR (2).

   - If indicator is not lit, go to step 5.
   - If indicator is lit, notify intermediate direct support maintenance.

5. CHECK POSITION OF AC POWER CIRCUIT BREAKER (3).

   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker is in ON position, go to step 6.

6. AT SHELTER POWER PANEL, CHECK POSITION OF CB14.

   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker is in ON position, notify intermediate direct support maintenance.

TRANSMITTER GROUP POWER CONTROL TEST (CONT)

7. CHECK FUSE OF FAILED UNIT. REFER TO TABLE 2-5.

   - If fuse is bad, replace fuse. See page 2-57.
   - If new fuse blows, notify intermediate direct support maintenance.

Table 2-5. FUSES OF COMPONENTS USING UPS OUTPUT

Component	Fuse location
CPU modem 1	Rear panel
CPU modem 2	Rear panel
CPU 1	Front panel
CPU 2	Front panel
Intercom	Front panel

8. AT SHELTER POWER PANEL, CHECK POSITION OF MAIN CIRCUIT BREAKER.

   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker is in ON position, notify intermediate direct support maintenance.

END OF TEST

2-8. RECEIVER GROUP POWER CONTROL TEST.

DESCRIPTION

This test is to insure that circuit breakers are set correctly, that open fuses are not installed in equipment, and that uninterruptible power supply is not faulty.

INITIAL SETUP

Personnel Required: MOS 18E

NOTE

- **If failed equipment is one of the following, go to step 3: intercom, CPU modem, data modem, radio interface, CPU, I/O chassis, mass memory, emergency light.**
- **If failed equipment is not listed above, go to step 1.**
- **If all equipment fails to operate, go to step 8.**

1. CHECK THAT POWER PANEL CIRCUIT BREAKER FOR FAILED UNIT IS IN ON POSITION. REFER TO TABLE 2-6.
   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker will not stay in ON position, notify intermediate direct support maintenance.
2. CHECK FUSE OF FAILED UNIT. REFER TO TABLE 2-6.
   - If fuse is bad, replace fuse. See page 2-57.
   - If new fuse blows, notify intermediate direct support maintenance.
   - If fuse is good and circuit breaker stays in ON position, test is complete.

RECEIVER GROUP POWER CONTROL TEST (CONT)

Table 2-6. CIRCUIT BREAKERS AND FUSES

Component	Circuit breaker	Fuse location
Tape punch 1	CB1	-
Tape punch 2	CB1	-
Printer 1	CB1	Front panel
Tty modem	CB1	Front panel
Mag tape unit 1	CB2	-
Mag tape unit 2	CB2	-
Uhf radio	CB2	-
Tape reader 1	CB2	Rear panel
Plasma display 1	CB2	-
Tty-Morse converter 1	CB2	Rear panel
Tty-Morse converter 2	CB6	Rear panel
Audio recorder	CB6	Front panel
Receiver 5	CB6	Rear panel
Audio panel	CB6	-
Receiver 4	CB9	Rear panel
Spectrum monitor	CB9	Rear panel
Plasma display 2	CB9	-
Uhf radio, spare	CB9	-
Receiver 1	CB10	Rear panel
Receiver 2	CB10	Rear panel
Receiver 3	CB10	Rear panel
Printer 2	CB10	Front panel

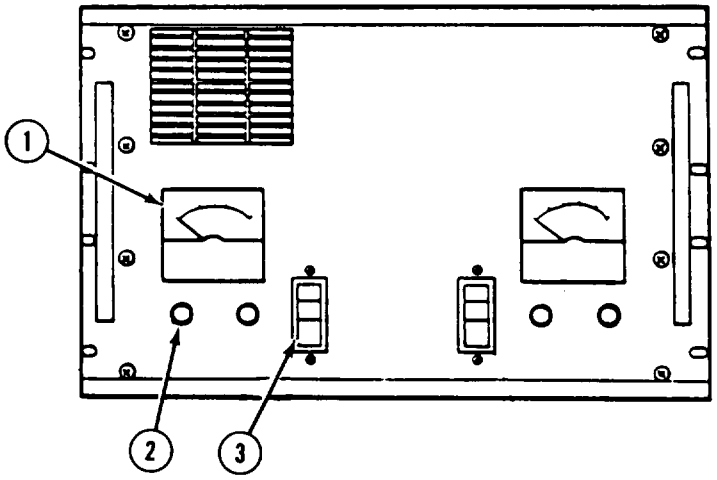
3. ON UNINTERRUPTIBLE POWER SUPPLY, CHECK OUTPUT VOLTAGE METER (1) FOR READING BETWEEN 108 AND 132 V AC.

   - If reading is within limits given, go to step 7.
   - If reading is not within limits given, go to step 4.

4. CHECK CONDITION OF AC POWER ON INDICATOR (2).

   - If indicator is not lit, go to step 5.
   - If indicator is lit, notify intermediate direct support maintenance.

RECEIVER GROUP POWER CONTROL TEST (CONT)



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5. CHECK POSITION OF AC POWER CIRCUIT BREAKER (3).
   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker is in ON position, go to step 6.
6. AT SHELTER POWER PANEL, CHECK POSITION OF CB14.
   - If circuit breaker is in OFF position, set it to ON.
   - If circuit breaker is in ON position, notify intermediate direct support maintenance.
7. CHECK FUSE OF FAILED UNIT. REFER TO TABLE 2-7.
   - If fuse is bad, replace fuse. See page 2-57.
   - If new fuse blows, notify intermediate direct support maintenance.

RECEIVER GROUP POWER CONTROL TEST (CONT)

Table 2-7. FUSES OF COMPONENTS USING UPS OUTPUT

Component	Fuse location
CPU modem 1	Rear panel
CPU modem 2	Rear panel
CPU 1	Front panel
CPU 2	Front panel
Mass memory	Rear panel
Intercom	Front panel

8. AT SHELTER POWER PANEL, CHECK POSITION OF MAIN CIRCUIT BREAKER.

- If circuit breaker is in OFF position, set it to ON.
- If circuit breaker is in ON position, notify intermediate direct support maintenance.

END OF TEST

Section IV. MAINTENANCE PROCEDURES

2-9. REPLACE SHELTER LIGHT SHADE AND BULB.

DESCRIPTION

This procedure covers: Remove (page 2-51). Install (page 2-52).

NOTE

There are five light fixtures in the transmitter shelter and six light fixtures in the receiver shelter. This procedure is the same for all 11.

INITIAL SETUP

Personnel Required: MOS 18E

REMOVE

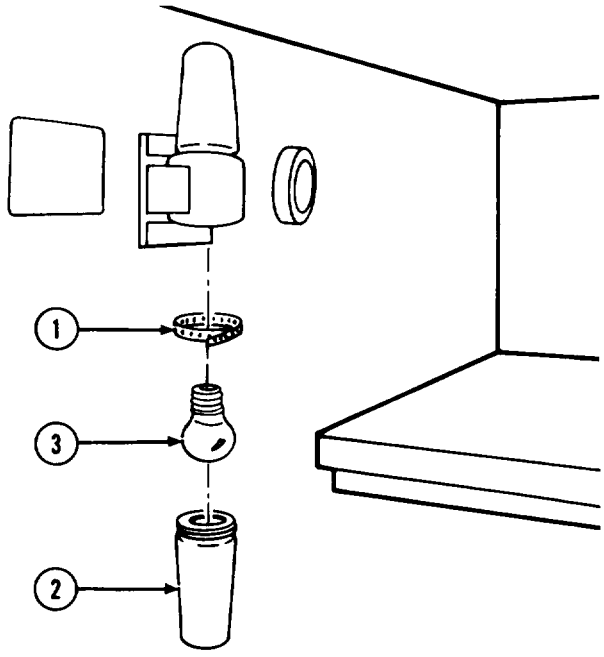
CAUTION

Shade may be very hot and may shatter upon contact with cooler surface.

NOTE

- **This task is the same for top bulbs and bottom bulbs except where noted. Bottom bulb is shown.**
- **If removing shade, do step 1.**
- **If removing bulb, do steps 1 and 2.**

1. LOOSEN CLAMP SCREW (1) AND REMOVE SHADE (2) BY TURNING TO LEFT.
2. UNSCREW LIGHT BULB (3) TO LEFT TO REMOVE.



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END OF TASK

INSTALL

NOTE

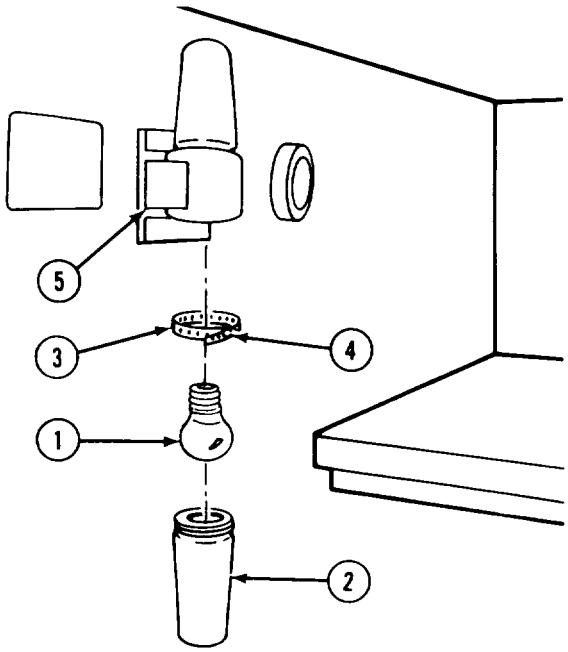
- **This task is the same for top bulbs and bottom bulbs except where noted. Bottom bulb is shown.**
- **If installing bulb, do steps 1 thru 3.**
- **If installing shade, do steps 2 and 3.**

1. PLACE A 75-WATT HEAVY-DUTY LIGHT BULB (1) IN SOCKET AND TURN TO RIGHT UNTIL FINGER TIGHT.
2. PLACE LIGHT SHADE (2) IN HOLDER AND TURN TO RIGHT UNTIL TIGHT.

NOTE

On top lamp, screw (3) should be placed next to mount (4) on right side.

3. POSITION CLAMP (5) NEXT TO HOLDER AND SCREW (3) NEXT TO MOUNT (4) ON LEFT SIDE AND TIGHTEN SCREW.



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END OF TASK

2-10. ACCESS RACK-MOUNTED EQUIPMENT.

DESCRIPTION

This procedure covers: Access (page 2-53). Secure (page 2-55).

NOTE

Procedures given are typical and cover the different types of rack mounting you will find in the transmitter and receiver shelters. Power amplifier is shown.

INITIAL SETUP

Personnel Required: MOS 18E

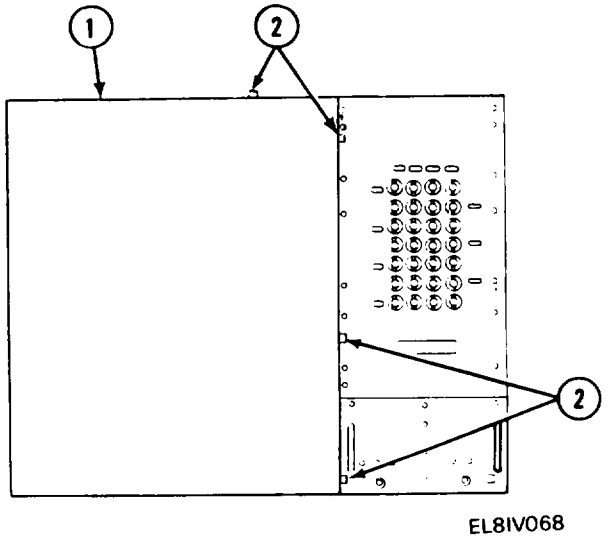
ACCESS

NOTE

- **If accessing power amplifier, pa power supply, CPU, CPU Modem, or I/O chassis, go to step 1.**
-
- **If accessing any other rack-mounted equipment, go to step 2.**
-
- **CPU, CPU Modem and I/O chassis have two captive thumbscrews to loosen to open door (1).**

1. OPEN DOOR (1).

   - Release four latches (2) to open door**.**



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ACCESS (CONT)

NOTE

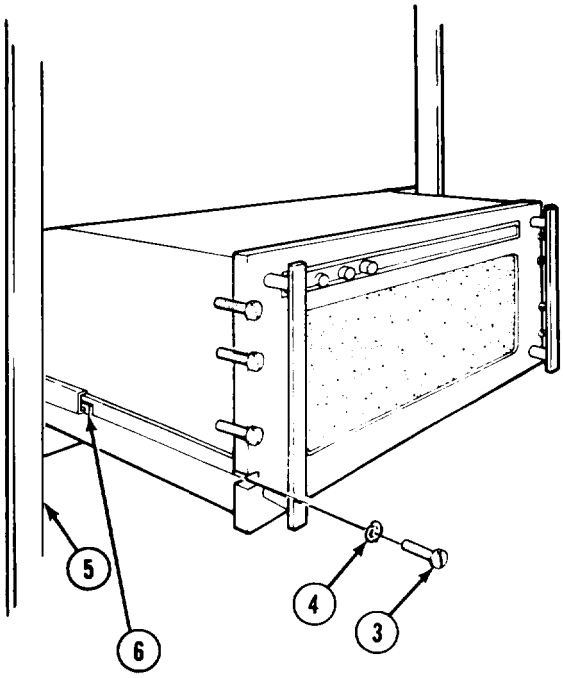
- **The number of screws (3) and lockwashers (4) securing the equipment in the rack (5) will change depending on the piece of equipment.**
- **Some equipment does not have screws (3) and lockwashers (4) but uses captive thumbscrews for securing in the rack (5).**

2. REMOVE EIGHT SCREWS (3) AND LOCKWASHERS (4).

CAUTION

Some equipment is not on slides (6) and will come completely out of rack (5) If pulled out too far. Do not pull equipment completely out of rack or equipment will be damaged.

3. PULL EQUIPMENT PARTLY OUT OF RACK (5).



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END OF TASK

SECURE

NOTE

- **If securing power amplifier, pa power supply, CPU, CPU modem, or I/O chassis, do steps 1, 2 and 4.**
- **If securing any other equipment on slides (1), do steps 1 thru 3.**
- **If securing any other equipment not on slides (1), do steps 2 and 3.**

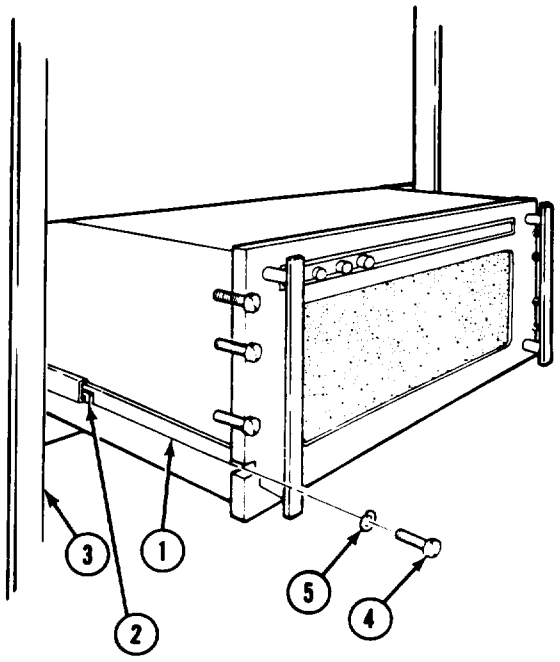
1. RELEASE TWO LATCHES (2), ONE ON EACH SIDE OF EQUIPMENT.
2. PUSH EQUIPMENT BACK INTO RACK (3).

NOTE

- **The number of screws (4) and lockwashers (5) to secure the equipment in the rack (3) will change depending on the piece of equipment.**
- **Some equipment does not have screws (4) and lockwashers (5) but uses captive thumbscrews for securing the rack.**

3. INSTALL EIGHT SCREWS (4) AND LOCKWASHERS (5).

4.



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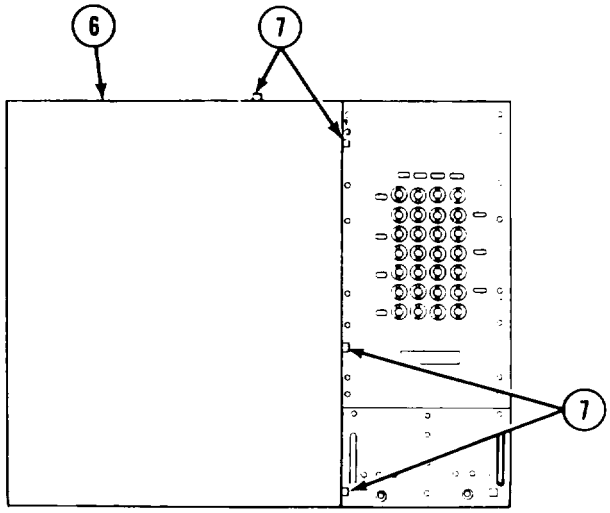
SECURE (CONT)

NOTE

CPU, CPU modem and I/O chassis have two captive thumbscrews to tighten after closing door (6).

4. CLOSE DOOR (6) AND SECURE FOUR LATCHES (7).



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END OF TASK

2-11. REPLACE FUSE.

DESCRIPTION

This procedure covers: All Equipment Except Keyboard Printer, Mass Memory, and Audio Recorder. Remove (page 2-58).
Install (page 2-61).
Keyboard Printer and Audio Recorder. Remove (page 2-59). Install (page 2-63).
Mass Memory. Remove (page 2-60). Install (page 2-64).

NOTE

Procedures given are typical and cover all the different equipment in the transmitter and receiver shelters.

INITIAL SETUP

Personnel Required: MOS 18E

NOTE

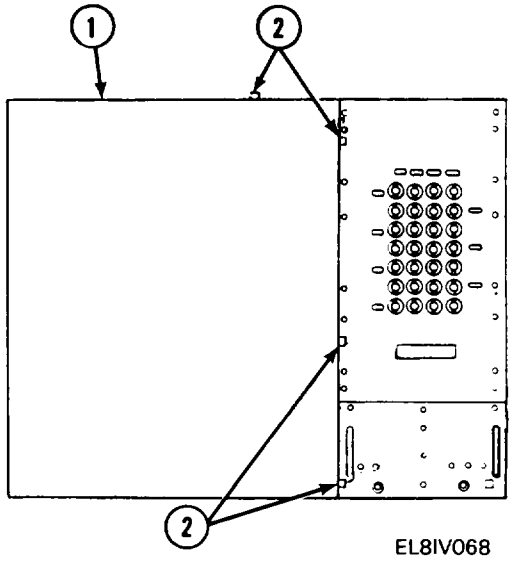
PRELIMINARY PROCEDURE: If replacing fuse in switch control, tape reader, CPU modem, exciter, data modem, receiver, antenna matrix, uninterruptible power supply, mass memory, tape punch, or tty-Morse converter, access rackmounted equipment. See page 2-52.

REMOVE

a. All Equipment Except Keyboard Printer, Mass Memory, and Audio Recorder.

NOTE

- **This task is the same for all equipment except keyboard printer, mass memory, and audio recorder except where noted. Pa power supply is shown.**
- **If removing fuse in a pa power supply, go to step 1.**
- **If removing fuse in all other equipment, go to step 2.**



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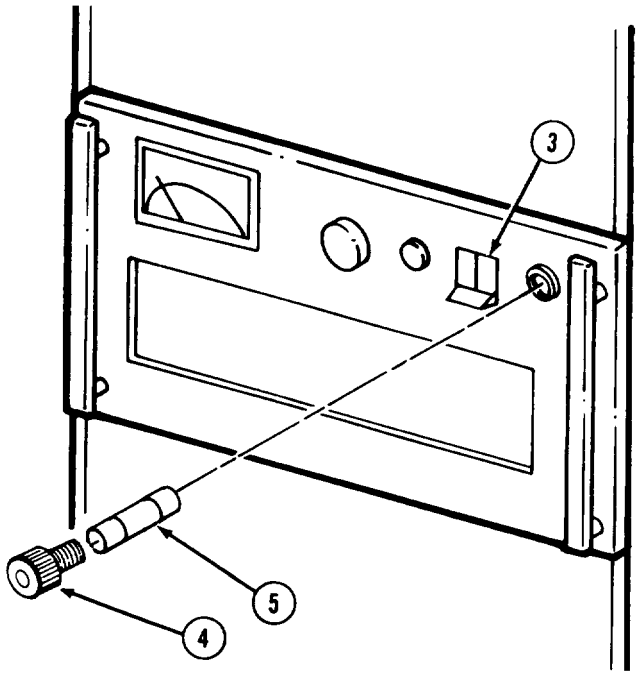
1. OPEN DOOR (1).
   - Release four latches (2) to open door.



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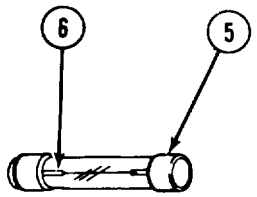
2. SET POWER SWITCH (3) TO OFF.
3. REMOVE FUSEHOLDER CAP (4).
   - Press in fuseholder cap, turn cap to left, and remove.
4. REMOVE FUSE (5) FROM FUSEHOLDER CAP (4).

REMOVE (CONT)

NOTE
If fuse (5) is damaged, throw it away and get a new one.

5. INSPECT FUSE (5).

   - **Check that fuse link (6) is not broken or fuse is not discolored.**



EL8IV073

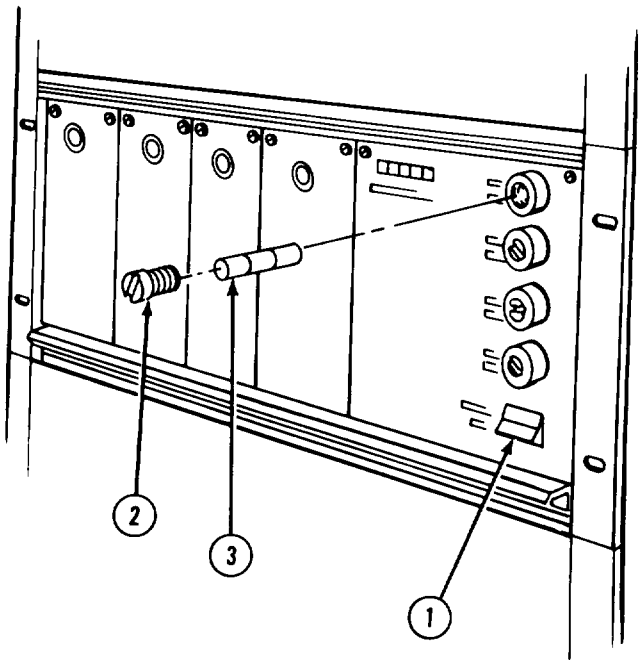
END OF TASK

b. Keyboard Printer and Audio Recorder.

NOTE
- **This task is the same for keyboard printer and audio recorder except where noted. Audio recorder is shown.**

- **If removing fuse in audio recorder, go to step 1.**
- **If removing fuse in keyboard printer, go to step 2.**

1. SET POWER SWITCH (1) TO OFF AND GO TO STEP 3.
2. HAVE INTERMEDIATE DIRECT SUPPORT MAINTENANCE REMOVE KEYBOARD PRINTER COVER.
3. REMOVE INSULATOR CAP (2).
   - Push in and turn insulator cap 1/4 turn to left.
   - Pull out insulator cap and fuse (3).
4. REMOVE FUSE (3) FROM INSULATOR CAP (2).



EL8IV074

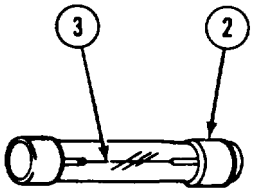
REMOVE (CONT)

NOTE

If fuse (2) is damaged, throw it away and get a new one.

5. INSPECT FUSE (2).

   - Check that fuse link (3) is not broken or fuse is not discolored.

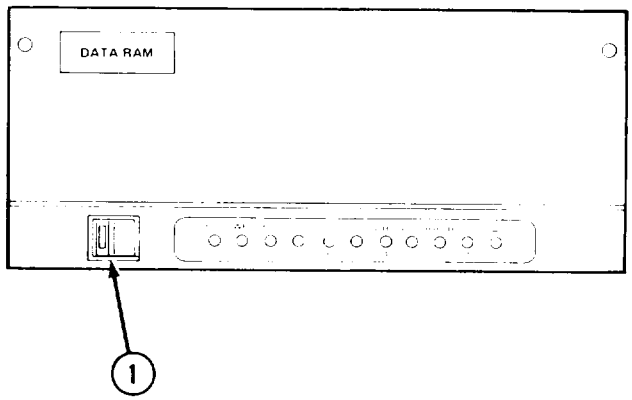


EL8IV075

END OF TASK

c. Mass Memory.

1. WORKING AT FRONT PANEL, SET POWER SWITCH (1) TO OFF.

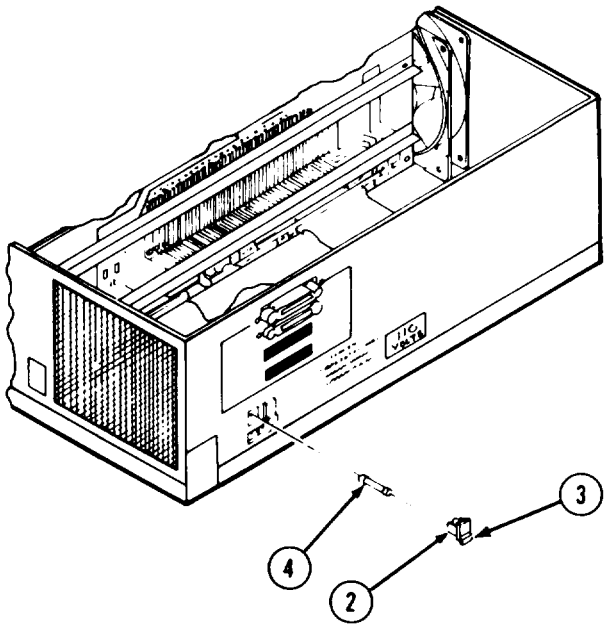


EL8IV076

2 WORKING AT REAR PANEL, REMOVE FUSEHOLDER CAP (2).

   - Press in on lower raised area (3) of fuseholder cap.
   - Pull out fuseholder cap and fuse (4).

(3) FROM FUSEHOLDER CAP (3).

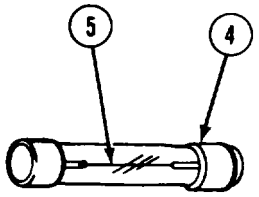


EL8IV077

REMOVE (CONT)

NOTE
If fuse (4) is damaged, throw it away and get a new one.

4. INSPECT FUSE (4).
   - Check that fuse link (5) is not broken or fuse is not discolored.



EL8IV078

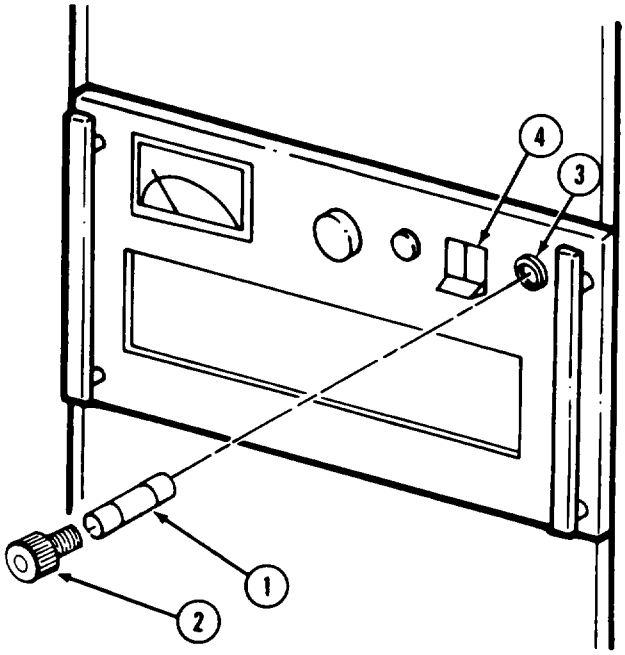
END OF TASK

INSTALL

a. All Equipment Except Keyboard Printer, Mass Memory, and Audio Recorder.

NOTE
- **This task is the same for all equipment except keyboard printer, mass memory, and audio recorder except where noted. Pa power supply is shown.**
- **If installing fuse in pa power supply, do steps 1 thru 4.**
- **If installing fuse in all other equipment, do steps 1 thru 3.**

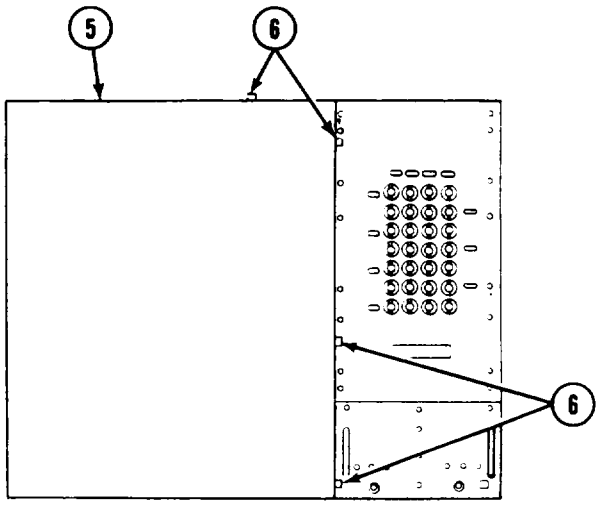
1. INSERT FUSE (1) IN FUSEHOLDER CAP (2).
2. INSTALL FUSEHOLDER CAP (2).
   - Insert fuseholder cap in fuseholder (3).
   - Press in fuseholder cap and turn to right.
3. SET POWER SWITCH (4) TO ON.



EL8IV079

INSTALL (CONT)

4. CLOSE DOOR (5) AND SECURE FOUR LATCHES (6).



EL8IV080

NOTE

FOLLOW-ON MAINTENANCE: If installing fuse in switch control, tape reader, CPU modem, exciter, data modem, receiver, antenna matrix, uninterruptible power supply, tape punch, or tty-Morse converter, secure rack-mounted equipment. See page 2-52.

END OF TASK

INSTALL (CONT)

b. Keyboard Printer and Audio Recorder.

NOTE

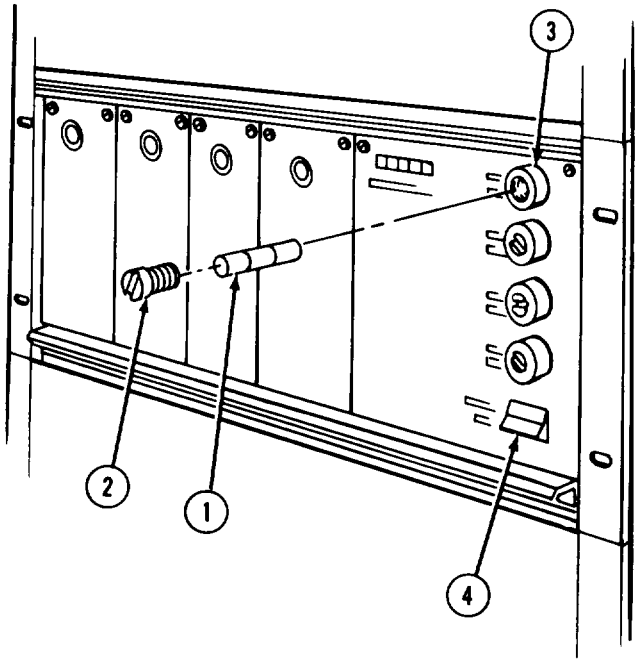
This task is the same for keyboard printer and audio recorder except where noted. Audio recorder is shown.

1. INSERT FUSE (1) IN INSULATOR CAP (2).
2. INSTALL INSULATOR CAP (2).
   - Insert insulator cap in socket (3).
   - Push in and turn insulator cap 1/4 turn to right.

NOTE

- **If installing fuse in audio recorder, do step 3.**
- **If installing fuse in keyboard printer, do step 4.**

3. SET POWER SWITCH (4) TO ON.
4. HAVE INTERMEDIATE DIRECT SUPPORT MAINTENANCE INSTALL KEYBOARD PRINTER COVER.



EL8IV081

END OF TASK

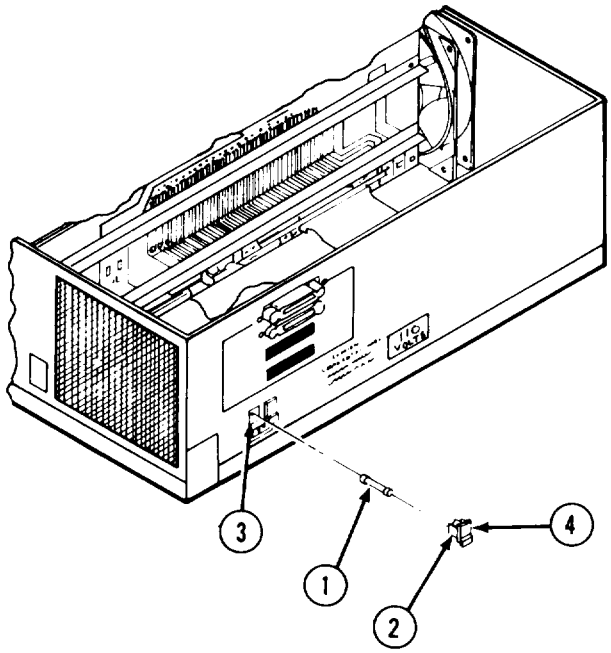
INSTALL (CONT)

c. Mass Memory.

1. INSERT FUSE (1) IN FUSEHOLDER CAP (2).

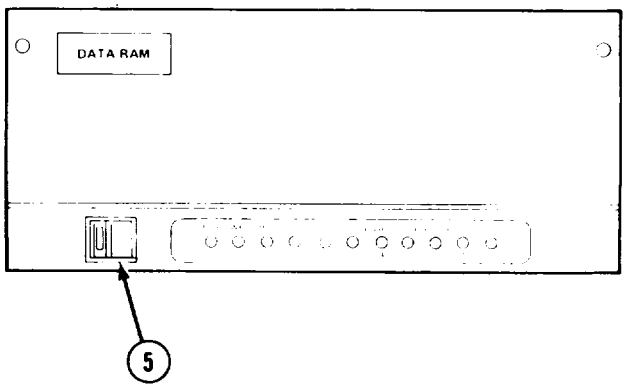
2. WORKING AT REAR PANEL, INSTALL FUSEHOLDER CAP (2).

   - Insert fuseholder cap in socket (3).
   - Press in on top flat area (4) of fuseholder cap until it snaps in place.



EL8IV082

3. WORKING AT FRONT PANEL, SET POWER SWITCH (5) TO ON.



EL8IV083

NOTE

FOLLOW-ON MAINTENANCE: Secure mass memory. See page 2-52.

END OF TASK

2-12. INSPECT SWITCH CONTROL.

INITIAL SETUP

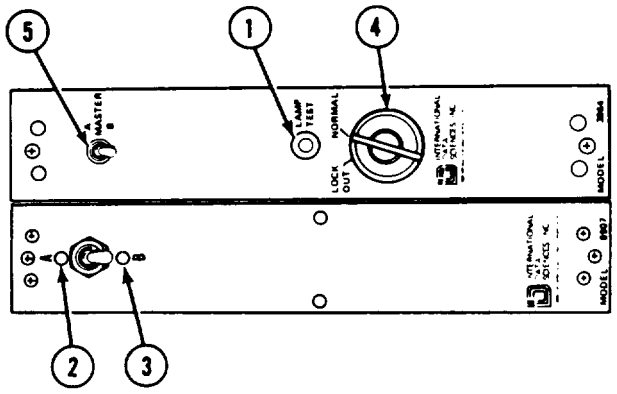
Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

NOTE

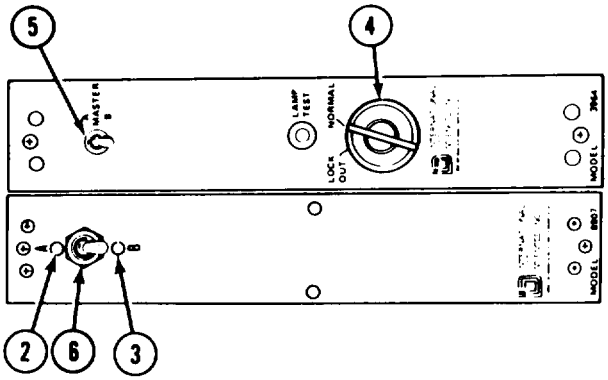
PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-2.

1. PRESS SWITCH CONTROL LAMP TEST SWITCH (1) AND CHECK THAT A (2) AND B (3) INDICATORS ON PERIPHERAL SWITCH ARE LIT.
2. RELEASE LAMP TEST SWITCH (1).
3. SET KEYLOCK SWITCH (4) TO NORMAL.
4. SET MASTER SWITCH (5) TO A AND CHECK THAT A (2) INDICATOR IS LIT.
5. SET MASTER SWITCH (5) TO B AND CHECK THAT B (3) INDICATOR IS LIT.



EL8IV084

6. SET KEYLOCK SWITCH (4) TO LOCK OUT.
7. SET MASTER SWITCH (5) TO A AND B ALTERNATELY AND CHECK THAT A (2) AND B (3) INDICATORS ARE NOT AFFECTED.
8. SET A/B SWITCH (6) TO A AND B ALTERNATELY AND CHECK THAT A (2) AND B (3) INDICATORS ARE NOT AFFECTED.



EL8IV085

END OF INSPECTION

2-13. INSPECT KEYBOARD PRINTER.

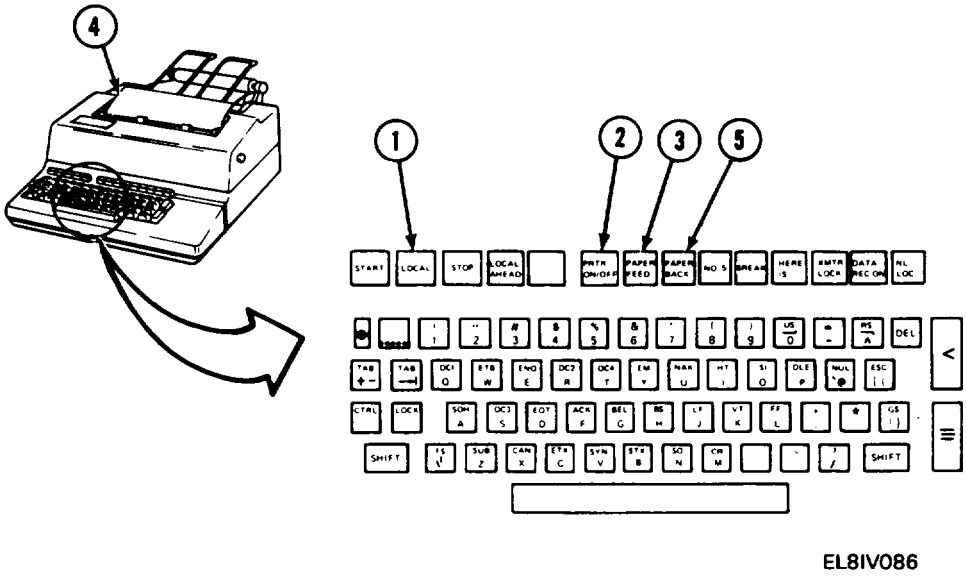
INITIAL SETUP

Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

NOTE

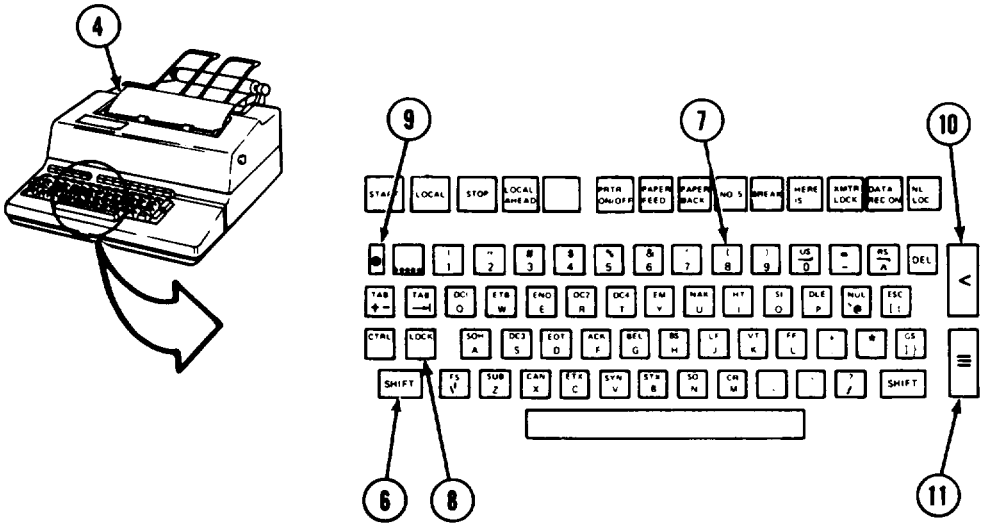
PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-2.



EL8IV086

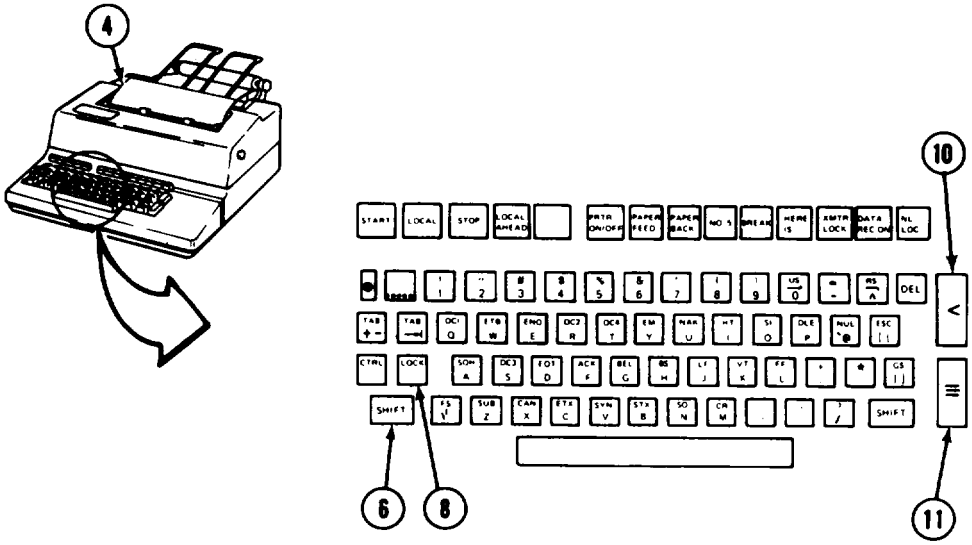
1. PRESS LOCAL KEY (1) AND CHECK THAT KEY LIGHTS UP.
2. PRESS PRTR ON/OFF KEY (2) AND CHECK THAT KEY LIGHTS UP.
3. PRESS PAPER FEED KEY (3) AND CHECK THAT PAPER (4) FEEDS OUT AS LONG AS KEY IS PRESSED.
4. PRESS PAPER BACK KEY (5) AND CHECK THAT PAPER (4) FEEDS BACK 1/4 LINE.

INSPECT KEYBOARD PRINTER (CONT)



5. HOLDING DOWN SHIFT KEY (6), PRESS 8 KEY (7) AND CHECK THAT (IS PRINTED ON PAPER (4).
6. WHILE HOLDING DOWN SHIFT KEY (6), PRESS LOCK KEY (8) AND CHECK THAT ⊕KEY (9) LIGHTS UP.
8. PRESS 8 KEY (7) AND CHECK THAT (IS PRINTED ON PAPER (4).
9. PRESS AND RELEASE SHIFT KEY (6) AND CHECK THAT ⊕ KEY (9) IS NO LONGER LIT.
10. PRESS 8 KEY (7) AND CHECK THAT 8 IS PRINTED ON PAPER (4).
11. PRESS < KEY (10) AND ≡ KEY (11) AND TYPE ANY CHARACTER.
12. CHECK THAT CHARACTER IS PRINTED AT LEFT SIDE AND ONE LINE LOWER ON PAPER (4).

INSPECT KEYBOARD PRINTER (CONT)



EL8IV088

13. PRESS EACH KEY LISTED IN KEY COLUMN OF TABLE 2-8.

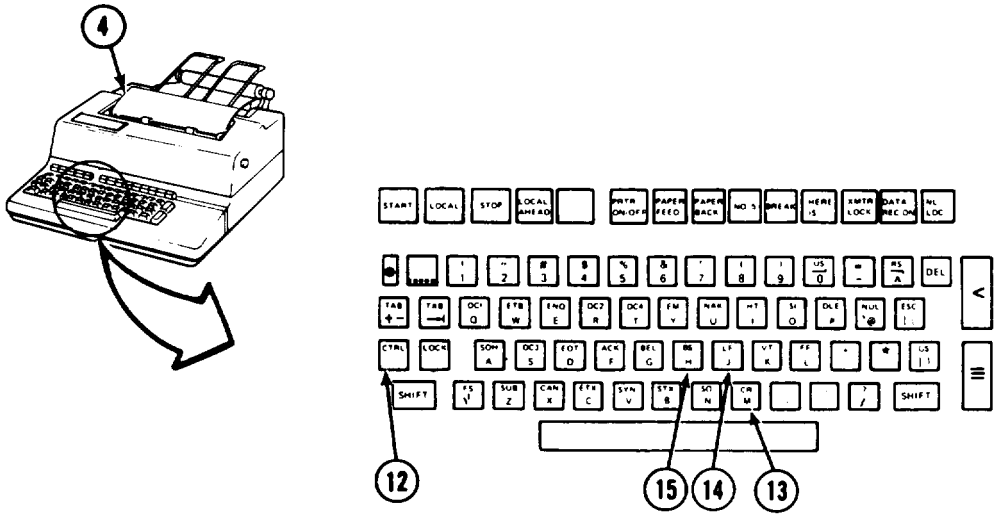
14. CHECK THAT CHARACTERS SHOWN IN NONSHIFT COLUMN OF TABLE 2-8 ARE PRINTED ON PAPER (4).

15. PRESS < KEY (10) AND ð KEY (11).

16. PRESS SHIFT KEY (6) AND LOCK KEY (8).

17. REPEAT STEPS 13 THRU 16, CHECKING THAT CHARACTERS SHOWN IN SHIFT COLUMN OF TABLE 2-8 ARE PRINTED ON PAPER (4).

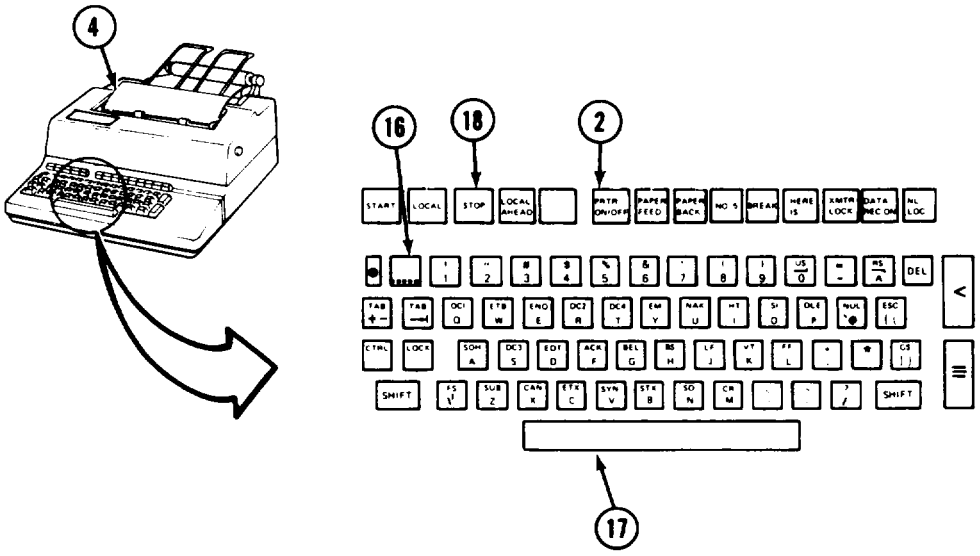
INSPECT KEYBOARD PRINTER (CONT)



EL8IV089

18. WHILE HOLDING DOWN CTRL KEY (12), PRESS M KEY (13).
19. TYPE ANY CHARACTER AND CHECK THAT CHARACTER IS PRINTED AT LEFT SIDE OF PAPER (4).
20. WHILE HOLDING DOWN CTRL KEY (12), PRESS J KEY (14).
21. TYPE ANY CHARACTER AND CHECK THAT CHARACTER IS PRINTED ONE LINE LOWER ON PAPER (4).
22. WHILE HOLDING DOWN CTRL KEY (12), PRESS H KEY (15).
23. TYPE ANY CHARACTER AND CHECK THAT CHARACTER IS PRINTED OVER TOP OF LAST CHARACTER PRINTED ON PAPER (4).

INSPECT KEYBOARD PRINTER (CONT)



24 TYPE ANY CHARACTER.

25 PRESS .. KEY (16) AND CHECK THAT CHARACTER IS REPEATED AS LONG AS KEY IS HELD DOWN.

26. PRESS SPACE BAR (17).

27. TYPE ANY CHARACTER AND CHECK THAT CHARACTER IS PRINTED ONE SPACE TO RIGHT ON PAPER (4).

28. PRESS PRT ON/OFF KEY (2) AND CHECK THAT KEY IS NO LONGER LIT.

29. PRESS STOP KEY (18) AND CHECK THAT LOCAL KEY (1) IS NO LONGER LIT.

INSPECT KEYBOARD PRINTER (CONT)

Table 2-8. KEYBOARD PRINTER CHARACTER TABLE

Key	Non-shift	Shift	Key	Non-shift	Shift
! 1	1	!	ETB W	W	W
" 2	2	"	ENG E	E	E
# 3	3	#	DC2 R	R	R
$ 4	4	$	DC4 T	T	T
% 5	5	%	EM Y	Y	Y
& 6	6	&	NAK U	U	U
' 7	7	'	HT I	I	I
(8	8	(	SI 0	0	0
) 9	9	)	DLE P	P	P
US 0	ϕ	‾	NUL @	@	@
= -	-	=	ESC { [	[	}
RS ^	^	‾	SOH A	A	A
DC1 Q	Q	Q	DC3 S	S	S
			EOT D	D	D
			ACK F	F	F

INSPECT KEYBOARD PRINTER (CONT)

Table 2-8. KEYBOARD PRINTER CHARACTER TABLE - Continued

Key	Non-shift	Shift	Key	Non-shift	Shift
			BEL G	G	G
BS H	H	H	SYN V	V	V
LF J	J	J	STX B	B	B
VT K	K	K	SO N	N	N
FF L	L	L	CR M	M	M
+			<		
;	;	+	‘	‘	<
GS]	]	}	? /	/	?
FS \ |	\	I			
SUB Z	Z	Z			
CAN X	X	X			
EXT C	C	C			
		END OF INSPECTION			

2-14. REPLACE KEYBOARD PRINTER COVER LAMPS.

DESCRIPTION

This procedure covers: Remove (page 2-73). Install (page 2-74).

INITIAL SETUP

Personnel Required: MOS 18E

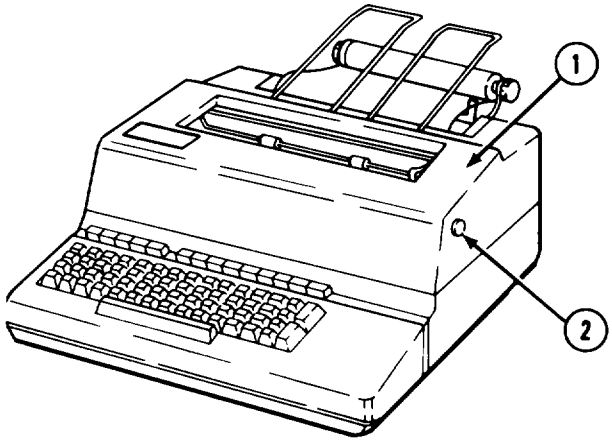
REMOVE

NOTE

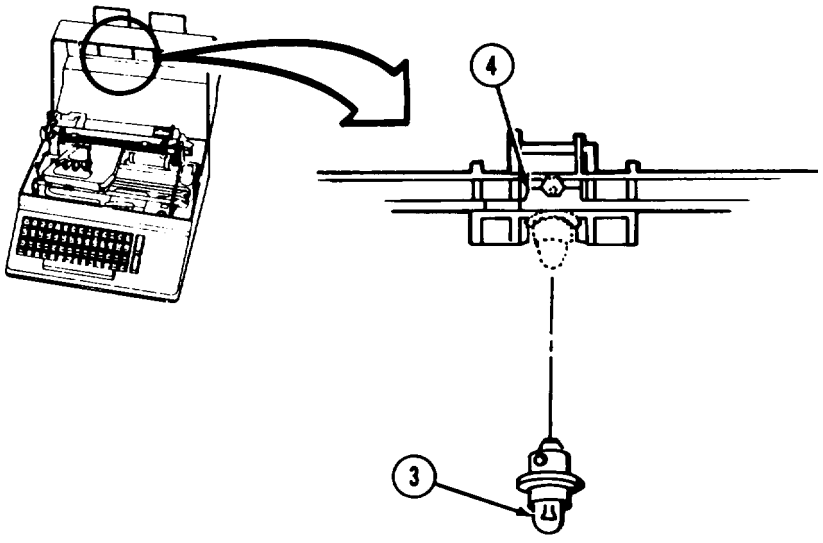
There are four cover lamps. This task is the same for all four.

1. OPEN COVER LID (1).

   - **Press in two buttons (2), one on each side of cover lid, and open cover lid (1) until it latches.**



EL8IV091



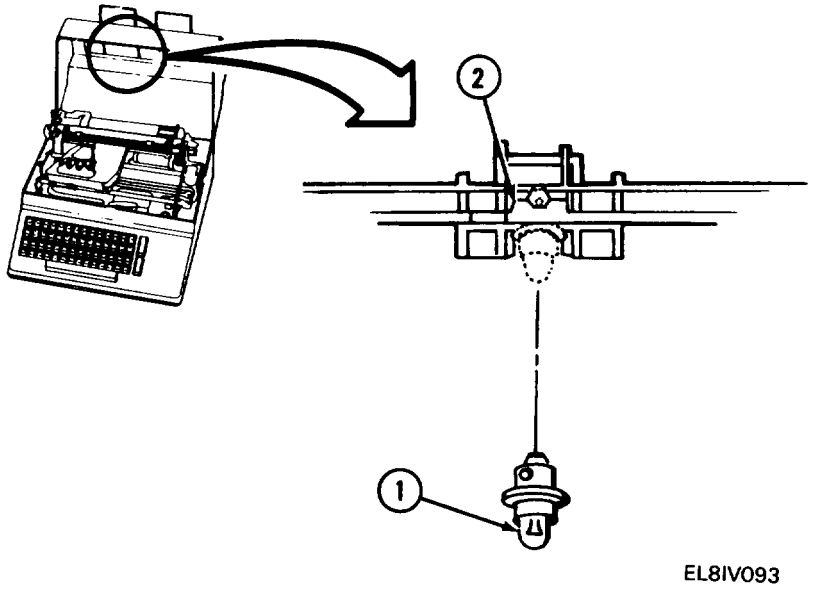
EL8IV092

2. PRESS LAMP (3) INTO SOCKET (4) AND TURN TO LEFT.

3. PULL LAMP (3) OUT.

END OF TASK 2-73

INSTALL

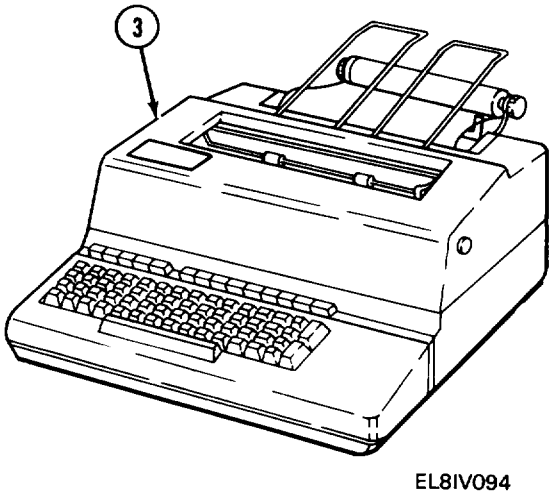


NOTE

There are four cover lamps. This task is the same for all four.

1. PRESS LAMP (1) INTO SOCKET (2) AND TURN TO RIGHT.

2. CLOSE COVER LID (3).



END OF TASK

2-15. REPLACE KEYBOARD PRINTER MANUAL CONTROLS LAMPS.

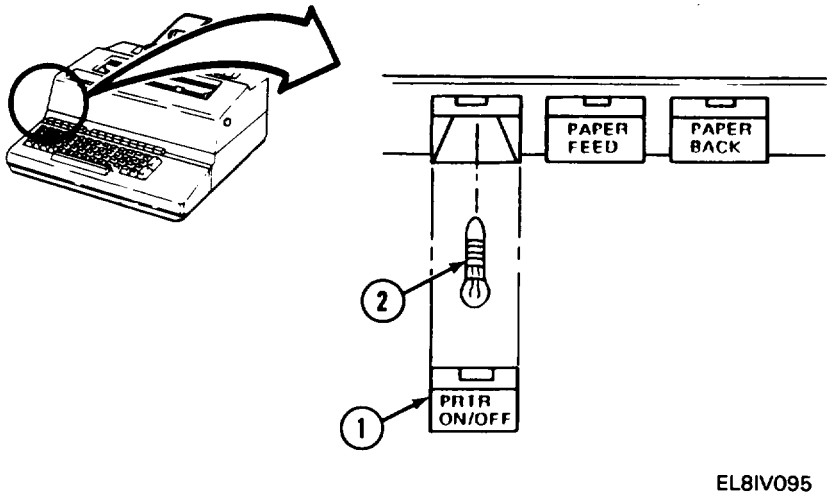
DESCRIPTION

This procedure covers: Remove (page 2-75). Install (page 2-76).

INITIAL SETUP

Personnel Required: MOS 18E

REMOVE



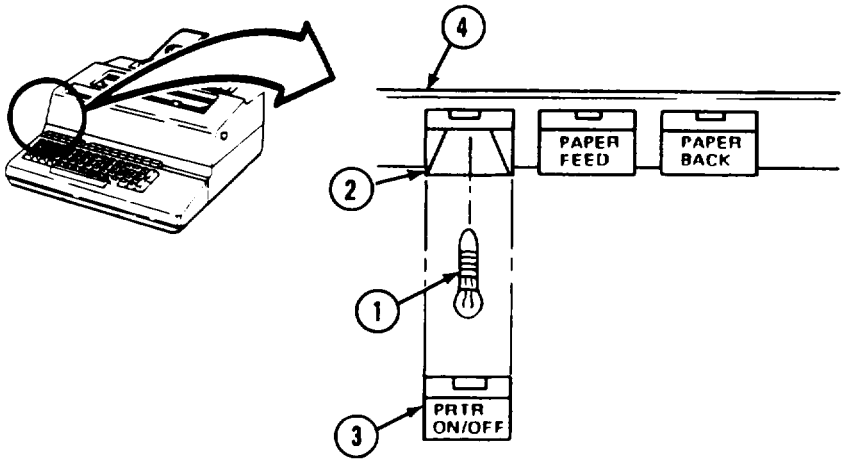
NOTE

There are 14 manual controls lamps in the keyboard printer. This task is the same for all 14. PRTR ON/OFF lamp is shown.

1. WORKING AT FRONT PANEL, SET PRTR ON/OFF BUTTON (1) TO OFF (OUT) POSITION.
2. GRASP FRONT AND BACK OF BUTTON CAP (1) AND LIFT UP ON ONE END.
3. CAREFULLY GRASP LAMP (2) AND LIFT OUT.

END OF TASK

INSTALL



EL8IV096

NOTE

There are 14 manual controls lamps in the keyboard printer. This task is the same for all 14. PRTR ON/OFF lamp is shown.

1. POSITION LAMP (1) IN SOCKET (2) AND CAREFULLY PUSH IN UNTIL SEATED.
2. POSITION BUTTON CAP (3) ON KEYBOARD (4) AND PRESS ON UNTIL SEATED.
3. PUSH PRTR ON/OFF BUTTON (3) IN AND CHECK THAT LAMP (1) LIGHTS.

END OF TASK

2-16. INSPECT TAPE READER.

DESCRIPTION

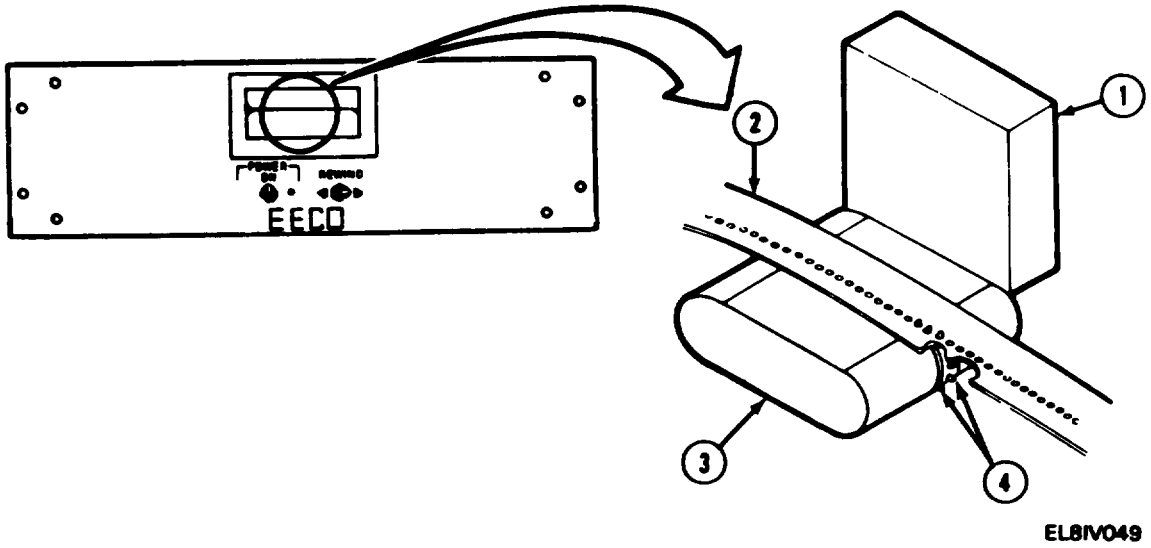
NOTE

The transmitter shelter contains one tape reader and the receiver shelter contains two tape readers. This procedure is the same for all three.

To replace RP-278/U use this procedure. To replace RP-278A/U perform procedure in paragraph 2-16A.

INITIAL SETUP

Personnel Required: MOS 18E



CAUTION

Do not let read head cover (1) snap closed when loading test tape (2) or equipment will be damaged.

1. WORKING AT FRONT PANEL, LOAD TEST TAPE (2) IN READ HEAD (3).
   - Lift up read head cover (1).
   - Position test tape on sprocket teeth (4) with wide side of tape toward back of tape reader.
   - Close read head cover (1).

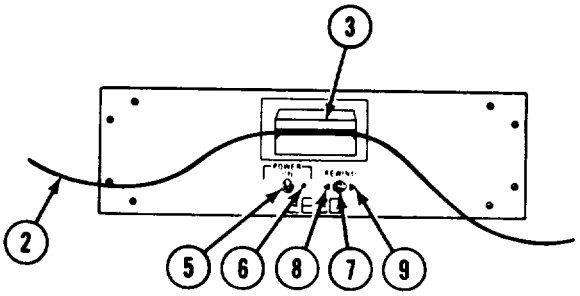
INSPECT TAPE READER (CONT)

2. SET POWER SWITCH (5) TO ON AND CHECK THAT POWER INDICATOR (6) IS LIT.

3. HOLD REWIND SWITCH (7) TO LEFT POSITION (8) AND CHECK THAT TEST TAPE (2) RUNS THROUGH READ HEAD (3) FROM RIGHT TO LEFT.

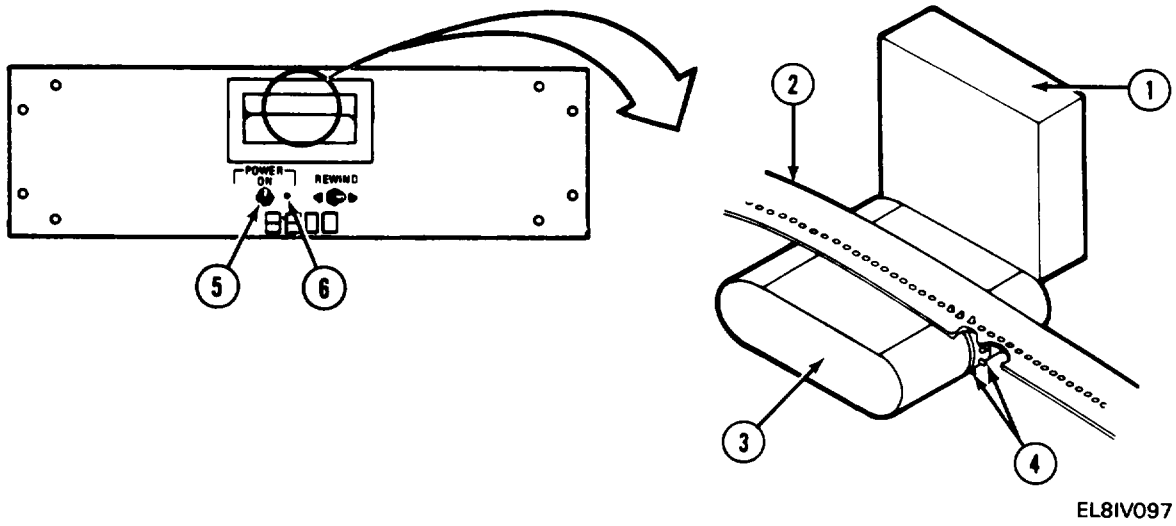
4. HOLD REWIND SWITCH (7) TO RIGHT POSITION (9) AND CHECK THAT TEST TAPE (2) RUNS THROUGH READ HEAD (3) FROM LEFT TO RIGHT.

5. RELEASE REWIND SWITCH (7) AND CHECK THAT TEST TAPE (2) STOPS.



EL8IV098

INSPECT TAPE READER (CONT)



CAUTION

Do not let read head cover (1) snap closed when removing test tape (2) or equipment will be damaged.

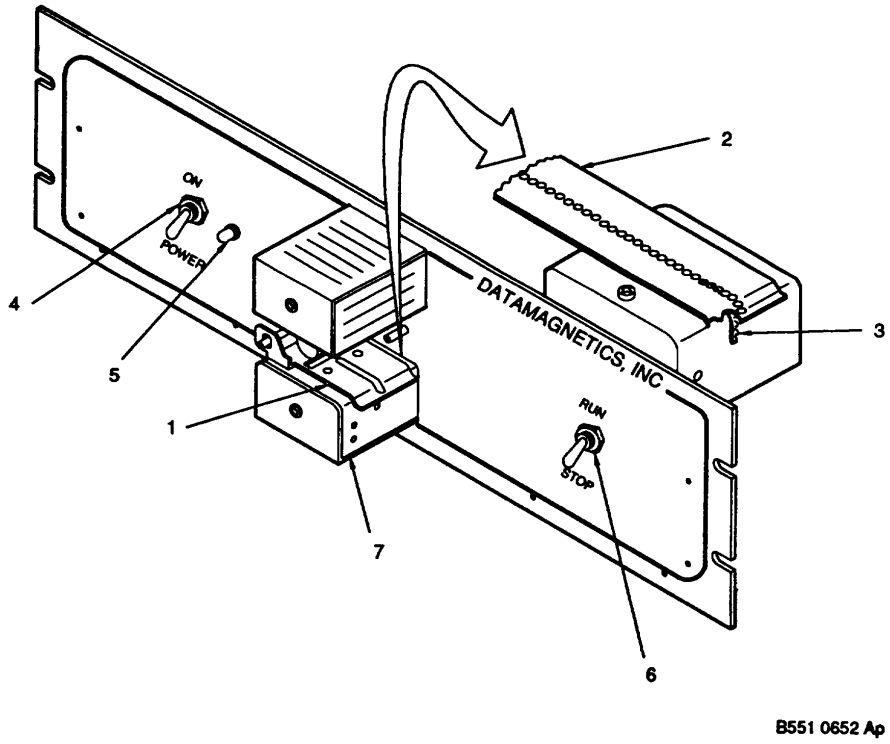
6. REMOVE TEST TAPE (2) FROM READ HEAD (3).
   - Lift up read head cover (1).
   - Lift test tape off sprocket teeth (4).
   - Close read head cover (1).
7. SET POWER SWITCH (5) TO OFF AND CHECK THAT POWER INDICATOR (6) GOES OUT.

END OF INSPECTION

2-16A. INSPECT TAPE READER.

INITIAL SETUP

Personnel Required: MOS 18E



NOTE

Immediately after turn-on, the reader head lamp will flash bright and return to dim. This flash indicates that the built-in test functioned

NOTE

After turn-off, the tape reader should not be turned on for two minutes. The time-out on the built-in test sets a malfunction for an on-off-on cycle.

INSPECT TAPE READER (CONT)

1. Set the ON/POWER switch (4) to ON and the RUN/STOP switch (6) to STOP. The green POWER led (5) and the tape head reader lamp should come on.

2. WORKING AT FRONT PANEL, LOAD TEST TAPE (2) IN READ HEAD (3).

   - Lift up read head cover (1).
   - Position test tape on sprocket teeth (4) with wide side of tape toward back of tape reader..
   - Close read head cover.(l).

3. Set the RUN/STOP switch (6) to RUN. The reader lamp should get brighter and the data tape should run through the head from left to right.

4. After the tape has run through, set the RUN/STOP switch (6) to STOP. The tape will stop and the reader lamp will dim.

5. REMOVE TEST TAPE (2) FROM READ HEAD (7).

   - Lift up read head cover (1).
   - Lift test tape off sprocket teeth (4).
   - Close read head cover.(l).

6. SET POWER SWITCH (4) TO OFF AND CHECK THAT POWER INDICATOR (6) GOES OUT.

END OF INSPECTION

2-17. INSPECT AUDIO MATRIX.

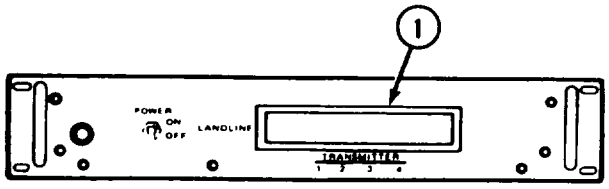
INITIAL SETUP

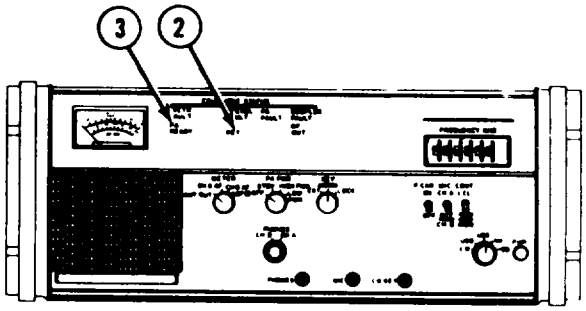
Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

NOTE
PRELIMINARY PROCEDURE: Initialize central processors. See TM 11-5895-1160-10-2.

1. WORKING AT AUDIO MATRIX, CHECK THAT DISPLAY (1) READS 0000.
2. WORKING AT KEYBOARD PRINTER, ENTER INFORMATION IN KEYBOARD PRINTER ENTRY COLUMN OF TABLE 2-9 FOR TEST CYCLE 1.
3. WORKING AT AUDIO MATRIX, CHECK THAT DISPLAY (1) READS THE SAME AS AUDIO MATRIX DISPLAY COLUMN OF TABLE 2-9.
4. WORKING AT EXCITER 1, CHECK THAT KEY INDICATOR (2) LIGHTS AND PA READY INDICATOR (3) LIGHTS WHEN KEY INDICATOR GOES OUT.
5. WORKING AT KEYBOARD PRINTER ENTER: CLSR TEST CR.
6. WORKING AT EXCITER 1, CHECK THAT PA READY INDICATOR (3) GOES OUT.
7. REPEAT STEPS 2 THRU 6 FOR TEST CYCLES 2 THRU 16.





EL8IV099

INSPECT AUDIO MATRIX (CONT)

Table 2-9. AUDIO MATRIX SWITCHING

Test cycle	Keyboard printer entry	Audio matrix display
1	SEND TEST LL1 TX1 F2.5 LO USB ANT7 CR	1000
2	SEND TEST LL2 TX1 F2.5 LO USB ANT7 CR	2000
3	SEND TEST LL3 TX1 F2.5 LO USB ANT7 CR	3000
4	SEND TEST LL4 TX1 F2.5 LO USB ANT7 CR	4000
5	SEND TEST LL1 TX2 F2.5 LO USB ANT7 CR	0100
6	SEND TEST LL2 TX2 F2.5 LO USB ANT7 CR	0200
7	SEND TEST LL3 TX2 F2.5 LO USB ANT7 CR	0300
8	SEND TEST LL4 TX2 F2.5 LO USB ANT7 CR	0400
9	SEND TEST LL1 TX3 F2.5 LO USB ANT7 CR	0010
10	SEND TEST LL2 TX3 F2.5 LO USB ANT7CR	0020
11	SEND TEST LL3 TX3 F2.5 LO USB ANT7 CR	0030
12	SEND TEST LL4 TX3 F2.5 LO USB ANT7CR	0040
13	SEND TEST LL1 TX4 F2.5 LO USB ANT7CR	0001
14	SEND TEST LL2 TX4 F2.5 LO USB ANT7CR	0002
15	SEND TEST LL3 TX4 F2.5 LO USB ANT7CR	0003
16	SEND TEST LL4 TX4 F2.5 LO USB ANT7CR	0004

END OF INSPECTION

2-18. INSPECT EXCITER.

DESCRIPTION

NOTE
There are four exciters in the transmitter shelter. This procedure is the same for all four.

INITIAL SETUP

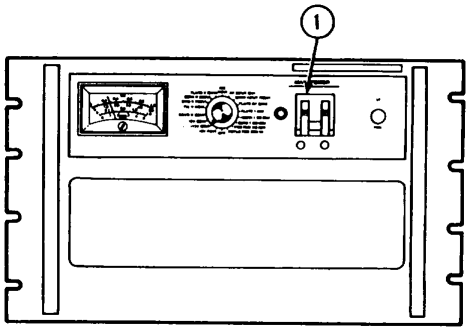
Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

INSPECT EXCITER (CONT)

1. SWITCH POWER AMPLIFIER TO DUMMY LOAD. SEE TM 11-5895-1160-102.

2. WORKING AT PA POWER SUPPLY, SET MAIN POWER CIRCUIT BREAKER (1)TO ON.



EL8IV100

3. WORKING AT EXCITER, PUSH PWR SWITCH (2) TO ON (IN).

4. SET CONT SWITCH (3) TO LCL.

5. CHANGE ONE NUMBER ON FREQUENCY KHZ SWITCHES (4) AND CHECK THAT EXCTR FAULT INDICATOR (5) GOES OUT.

6. SET MODE SWITCH (6) TO CW.

7. SET PA PWR SWITCH (7) TO STBY.

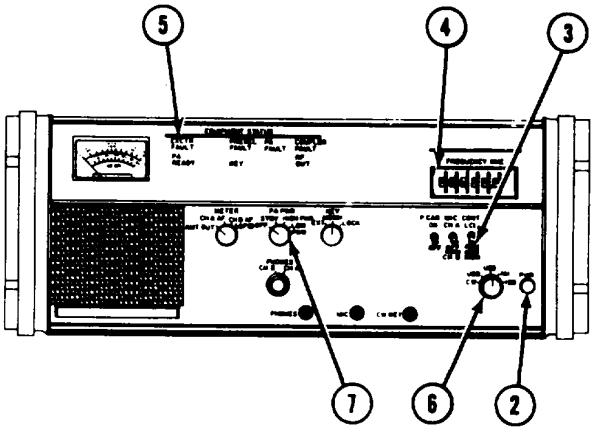
8. WORKING AT POWER AMPLIFIER, CHECK THAT CONTROL (8) AND FILAMENT (9) INDICATORS ARE LIT.

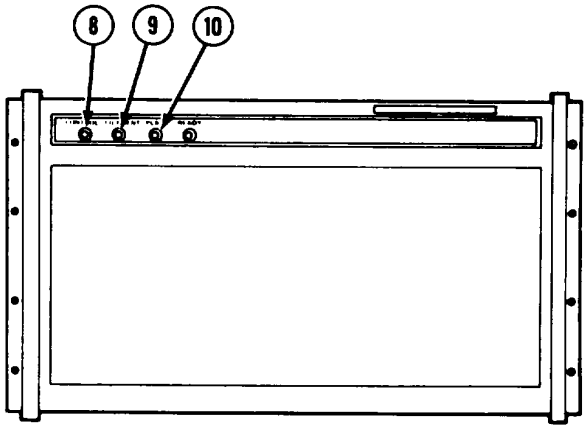
9. WORKING AT EXCITER, SET PA PWR SWITCH (7) TO LOW PWR.

NOTE

Power amplifier must warm up for 3 minutes before PLATE indicator (10) will light.

10. WORKING AT POWER AMPLIFIER, CHECK THAT PLATE INDICATOR (10) IS LIT.





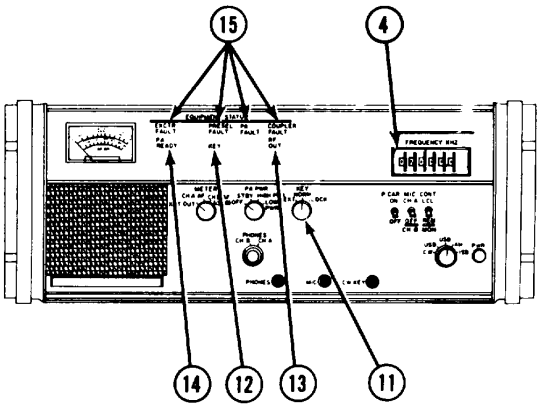
EL8IV101

INSPECT EXCITER (CONT)

11. SET FREQUENCY KHZ SWITCHES (4) TO 02000.0.

12. SET KEY SWITCH (11) TO LOCK AND CHECK THAT KEY (12), RF OUT (13), AND PA READY (14) INDICATORS ARE LIT.

13. SET KEY SWITCH (11) TO NORM AND CHECK THAT KEY (12) AND RF OUT(13) INDICATORS GO OUT AND THAT FOUR FAULT INDICATORS (15) ARE OUT.



EL8IV102

14. REPEAT STEPS 11 THRU 13 FOR THE FOLLOWING FREQUENCY KHZ SWITCH (4) SETTINGS:

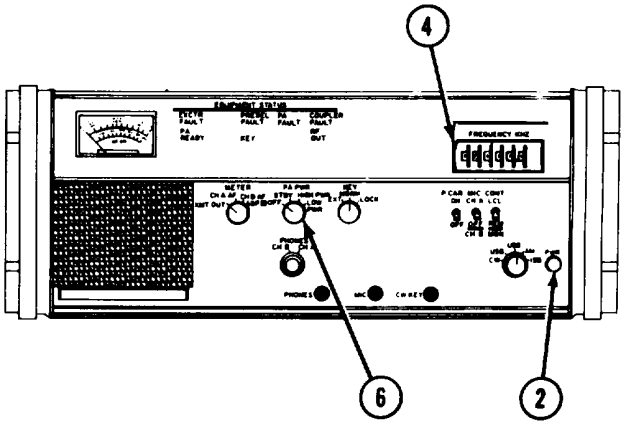
    04000.0
    08000.0
    16000.0
    29999.9

15. SET PA PWR SWITCH (6) TO HIGH PWR.

16. REPEAT STEPS 11 THRU 14.

17. SET PA PWR SWITCH (6) TO OFF.

18. PUSH PWR SWITCH (2) TO OFF (OUT).

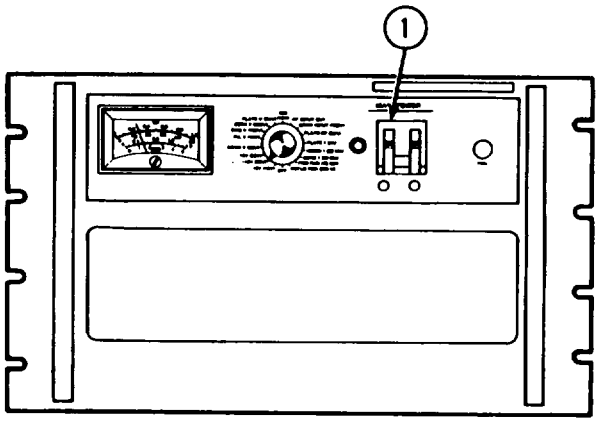


EL8IV103

INSPECT EXCITER (CONT)

19. WORKING AT PA POWER SUPPLY, SET MAIN POWER CIRCUIT BREAKER (1) TO OFF.

20. SWITCH POWER AMPLIFIER OFF DUMMY LOAD. SEE TM 1 1-5895-1160-102.



EL8IV100

END OF INSPECTION

2-19. INSPECT POWER AMPLIFIER.

DESCRIPTION

NOTE
There are four power amplifiers in the transmitter shelter. This procedure is the same for all four.

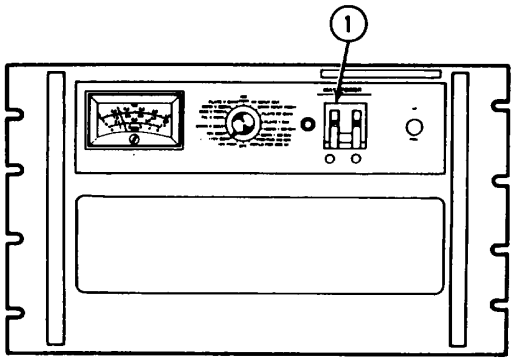
INITIAL SETUP

Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

INSPECT POWER AMPLIFIER (CONT)

1. SWITCH POWER AMPLIFIER TO DUMMY LOAD. SEE TM 11-5895-1160-102.
2. WORKING AT PA POWER SUPPLY, SET MAIN POWER CIRCUIT BREAKER (1) TO ON.



EL8IV100

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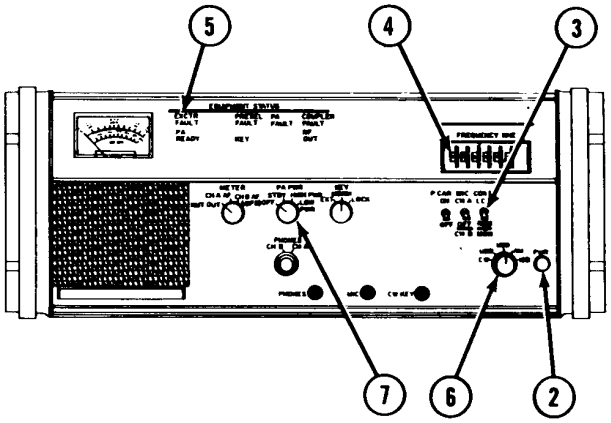
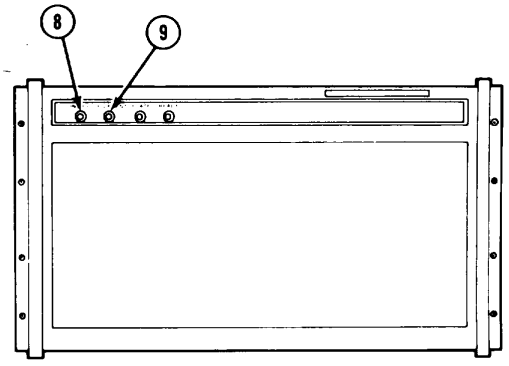
3. WORKING AT EXCITER, PUSH PWR SWITCH (2) TO ON (IN).
4. SET CONT SWITCH (3) TO LCL.
5. CHANGE ONE NUMBER ON FREQUENCY KHZ SWITCHES (4) AND CHECK THAT EXCTR FAULT INDICATOR (5) GOES OUT.
6. SET MODE SWITCH (6) TO CW.
7. SET PA PWR SWITCH (7) TO STBY.



EL8IV104

8. WORKING AT POWER AMPLIFIER, CHECK THAT CONTROL (8) AND FILAMENT (9) INDICATORS ARE LIT.



EL8IV105

INSPECT POWER AMPLIFIER (CONT)

9. WORKING AT EXCITER, SET FREQUENCY KHZ SWITCHES (4) TO 02000.0 AND PA PWR SWITCH (7) TO LOW PWR.

NOTE

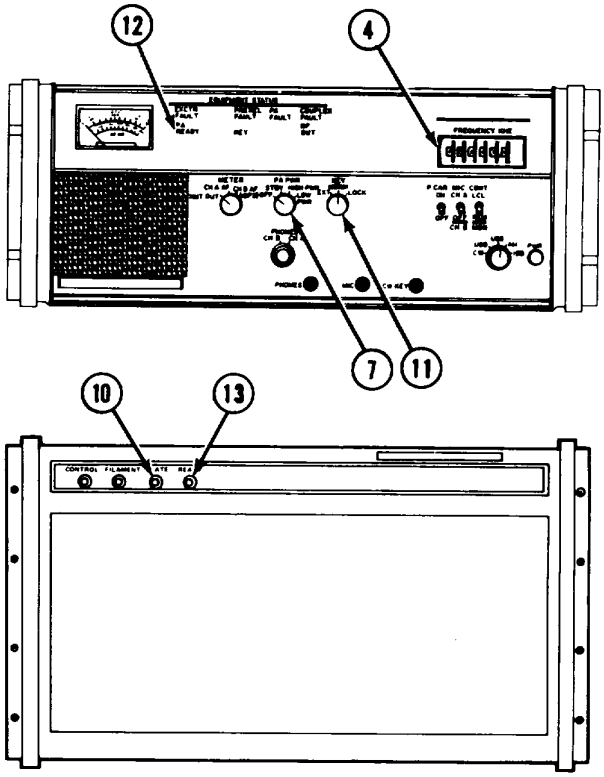
Power amplifier must warm up for 3 minutes before PLATE indicator (10) will light.

10. WORKING AT POWER AMPLIFIER, CHECK THAT PLATE INDICATOR (10) IS LIT.

11. WORKING AT EXCITER, SET KEY SWITCH (11) TO LOCK UNTIL PA READY INDICATOR (12) IS LIT.

12. SET KEY SWITCH (11) TO NORM.

13. WORKING AT POWER AMPLIFIER, CHECK THAT READY INDICATOR (13) IS LIT.



EL8IV106

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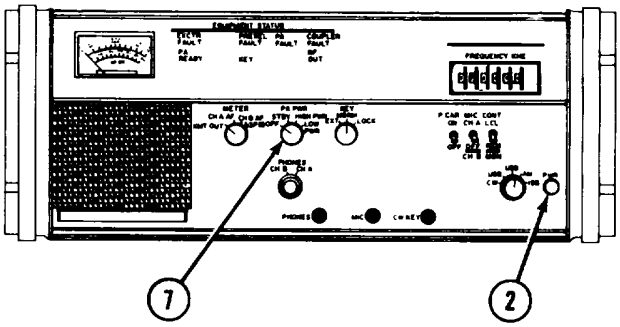
14. WORKING AT EXCITER, SET PA PWR SWITCH (7) TO OFF.

15. PUSH PWR SWITCH (2) TO OFF (OUT).

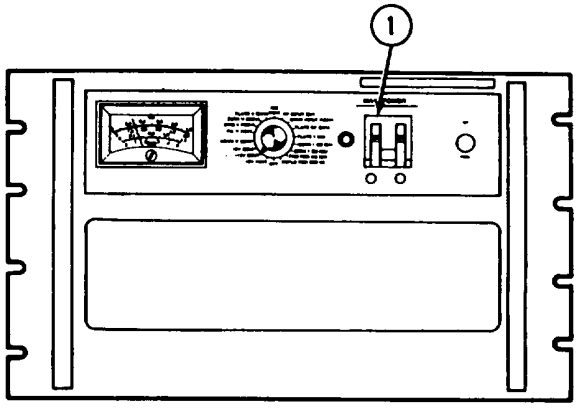


EL8IV107

INSPECT POWER AMPLIFIER (CONT)

16. WORKING AT PA POWER SUPPLY, SET MAIN POWER CIRCUIT BREAKER (1) TO OFF.

17. SWITCH POWER AMPLIFIER OFF DUMMY LOAD. SEE TM 11-5895-1160-102.



EL8IV100

END OF INSPECTION

2-20. REPLACE POWER AMPLIFIER AND PA POWER SUPPLY INDICATOR BULB.

DESCRIPTION

This procedure covers: Remove (page 2-88). Install (page 2-88).

NOTE

There are four power amplifiers and four pa power supplies in the transmitter shelter. This procedure is the same for all four power amplifiers and all four pa power supplies except where noted. Power amplifier is shown.

INITIAL SETUP

Personnel Required:. MOS 18E

REMOVE

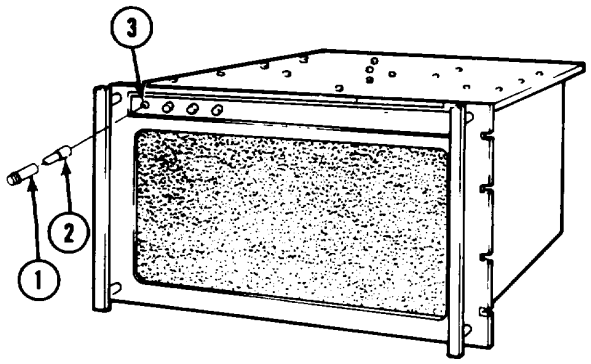
NOTE

Power amplifier contains four front panel indicators and pa power supply contains one front panel indicator. CONTROL indicator on power amplifier is shown.

1. WORKING AT FRONT PANEL, UNSCREW AND REMOVE INDICATOR LENS CAP (1).
2. REMOVE INDICATOR BULB (2) FROM INDICATOR LENS CAP (1).

INSTALL

1. WORKING AT FRONT PANEL, INSERT INDICATOR BULB (2) INTO INDICATOR LENS CAP (1).
2. INSTALL INDICATOR LENS CAP (1) AND INDICATOR BULB (2) IN SOCKET (3).



EL8IV108

END OF TASK

2-21. INSPECT PA POWER SUPPLY.

DESCRIPTION

NOTE

There are four pa power supplies in the transmitter shelter. This procedure is the same for all four.

INSPECT PA POWER SUPPLY (CONT)

INITIAL SETUP

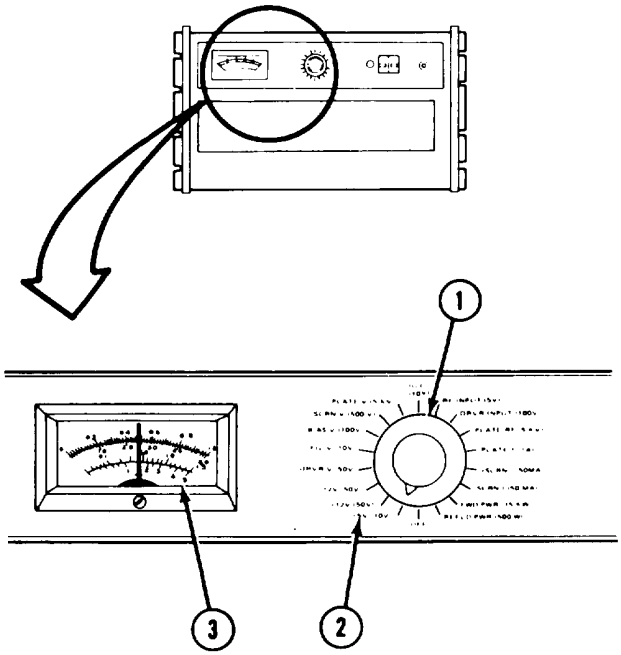
Personnel Required: MOS 18E

NOTE

PRELIMINARY PROCEDURE: Inspect power amplifier, steps 1 thru 13. See page 2-84.

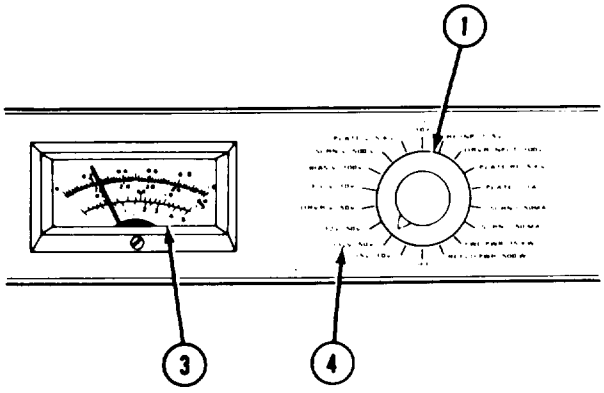
NOTE
Meter should read 4.9 V to 5.1 V.

1. WORKING AT PA POWER SUPPLY FRONT PANEL, SET METER SELECT SWITCH (1) TO +5V (10V) (2) AND CHECK READING ON METER (3).



NOTE
Meter should read 11.75 V to 12.25 V.

2. SET METER SELECT SWITCH (1) TO +12V (50V) (4) AND CHECK READING ON METER (3).

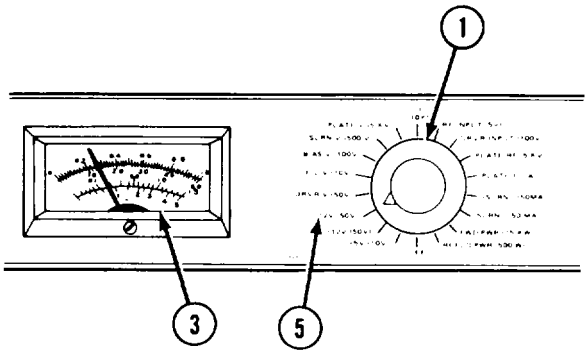


INSPECT PA POWER SUPPLY (CONT)

NOTE

Meter should read -11.75 V to -12.25 V.

3. SET METER SELECT SWITCH (1) TO 12V (50V) (5) AND CHECK READING ON METER (3).

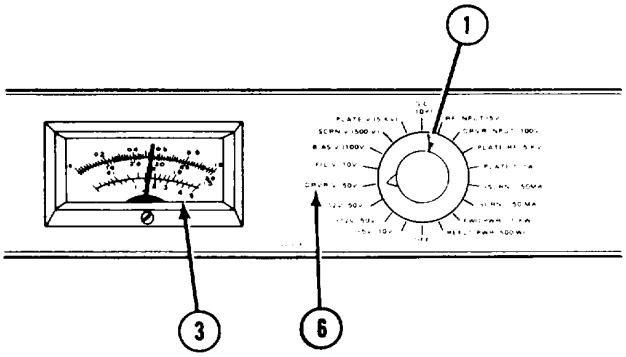


EL8IV111

NOTE

Meter should read 27.4 V to 28.6 V.

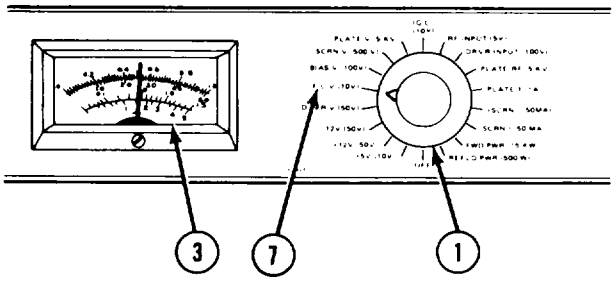
4. SET METER SELECT SWITCH (1) TO DRVR V (50V) (6) AND CHECK READING ON METER (3).



EL8IV112

NOTE
Meter should read 5.7 V to 5.9 V.

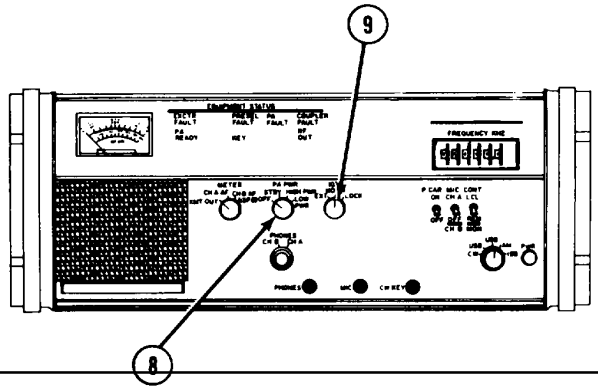
5. SET METER SELECT SWITCH (1) TO FIL V (10V) (7) AND CHECK READING ON METER (3).



EL8IV113

INSPECT PA POWER SUPPLY (CONT)

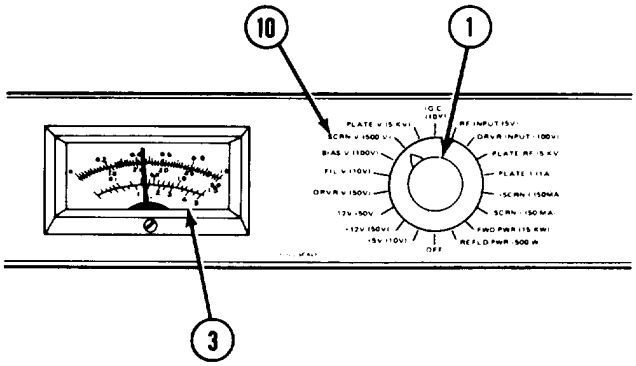
6. WORKING AT EXCITER FRONT PANEL, SET PA PWR SWITCH (8) TO HIGH PWR.
7. SET KEY SWITCH (9) TO LOCK.



EL8IV114

NOTE
Meter should read 218 V to 232 V.

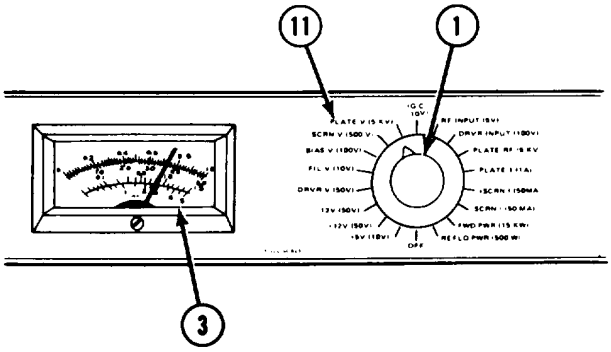
8. WORKING AT PA POWER SUPPLY FRONT PANEL, SET METER SELECT SWITCH (1) TO SCRN V (500V) (10) AND CHECK READING ON METER (3).



EL8IV115

NOTE
Meter should read 2465 V to 3335 V.

9. SET METER SELECT SWITCH (1) TO PLATE V (5KV) (11) AND CHECK READING ON METER (3).

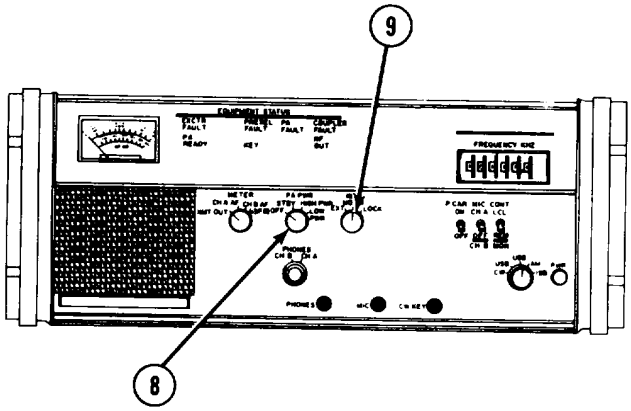


EL8IV116

INSPECT PA POWER SUPPLY (CONT)

10. WORKING AT EXCITER FRONT PANEL, SET KEY SWITCH (9) TO NORM.

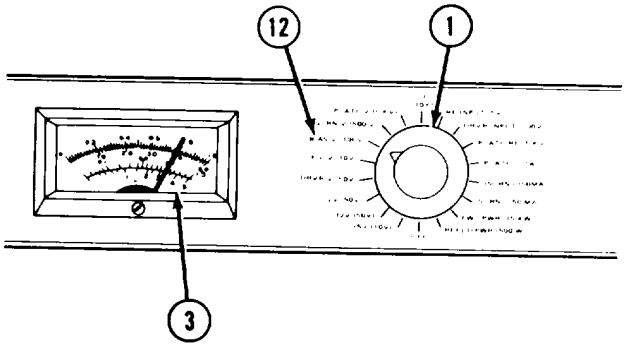
11. SET PA PWR SWITCH (8) TO STBY.



EL8IV114

NOTE
Meter should read -90 V to -70 V.

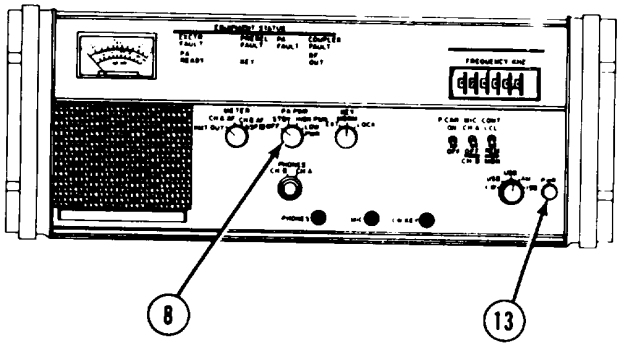
12. WORKING AT PA POWER SUPPLY FRONT PANEL, SET METER SELECT SWITCH (1) TO BIAS V (100V) (12) AND CHECK READING ON METER (3).



EL8IV117

13. WORKING AT EXCITER FRONT PANEL, SET PA PWR SWITCH (8) TO OFF.

14. PUSH PWR SWITCH (13) TO OFF (OUT).



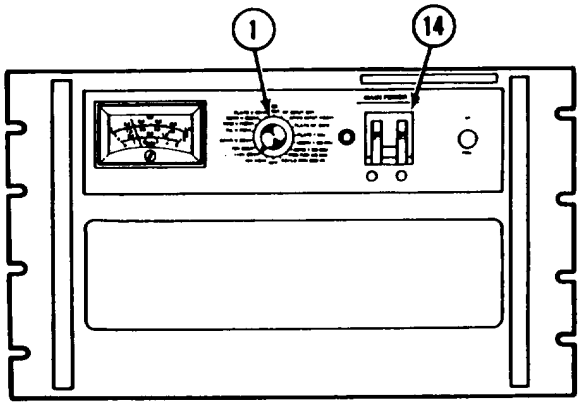
EL8IV118

INSPECT PA POWER SUPPLY (CONT)

15. WORKING AT PA POWER SUPPLY FRONT PANEL, SET METER SELECT SWITCH (1) TO OFF.

16. SET MAIN POWER CIRCUIT BREAKER (14) TO OFF.

17. SWITCH POWER AMPLIFIER OFF DUMMY LOAD. TM 11-5895-1160-10-2.



EL8IV119

END OF INSPECTION

2-22. INSPECT DATA MODEM.

DESCRIPTION

NOTE

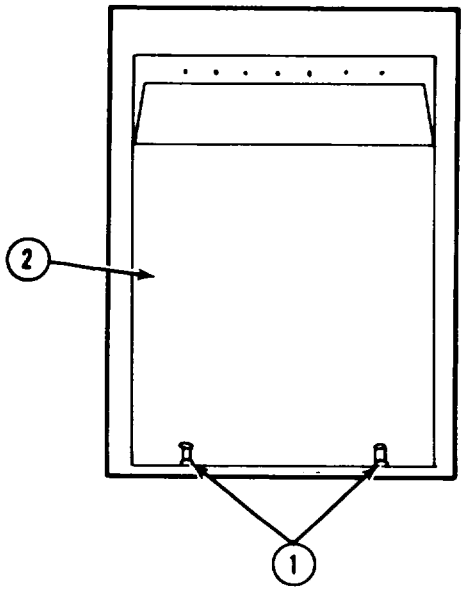
There is one data modem in the transmitter shelter and there are four data modems in the receiver shelter. This procedure is the same for all five except where noted.

INITIAL SETUP

Personnel Required: MOS 18E

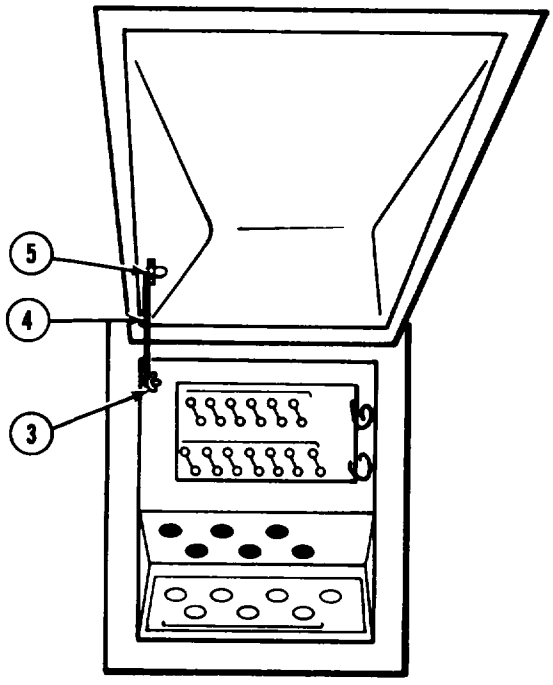
INSPECT DATA MODEM (CONT)

1. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, SLIDE UP TWO LATCHES (1) AND LIFT UP PANEL (2).



EL8IV120

2. LOOSEN WINGNUT (3).
3. PLACE ROD (4) IN CATCH (5) AND TIGHTEN WINGNUT (3).



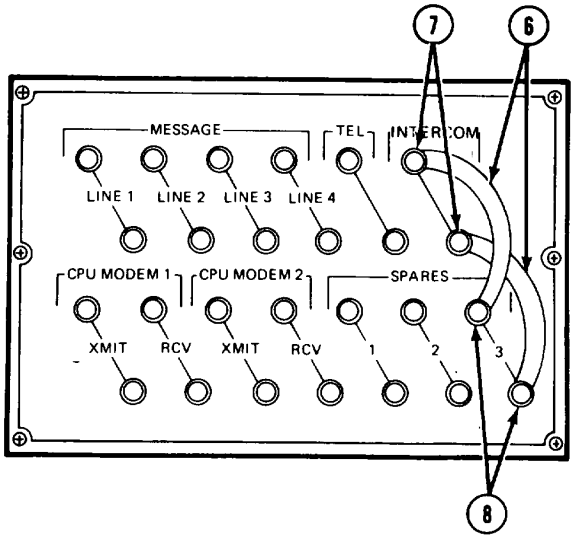
EL8IV121

INSPECT DATA MODEM (CONT)

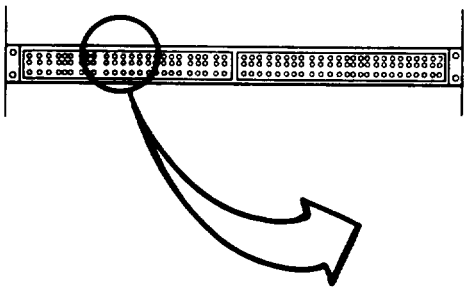
NOTE

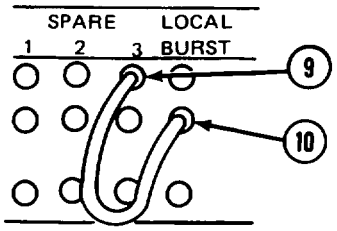
- **If testing data modem in transmitter shelter, do steps 4 thru 6.**
- **If testing data modems in receiver shelter, go to step 7.**

4. CONNECT TWO JUMPERS (6) TO TWO INTERCOM TERMINALS (7) AND TWO SPARE 3 TERMINALS (8).



EL8IV122





EL8IV123

5. WORKING AT PATCH PANEL, PATCH SPARE 3 EQUIP JACK (9) TO LOCAL BURST LINE JACK (10).
6. GO TO STEP 8.

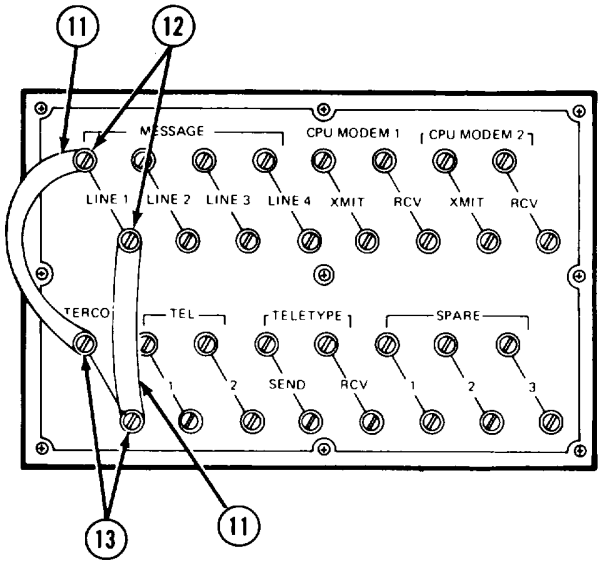
INSPECT DATA MODEM (CONT)

NOTE

Connections for data modem 1 are shown. If testing data modems 2 thru 4, connect two jumpers (11) to two MESSAGE LINE terminals (12) as follows:

DATA MODEM	MESSAGE LINE
2	2
3	3
4	4

7. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, CONNECT TWO JUMPERS (11) TO TWO INTERCOM TERMINALS (13) AND TWO MESSAGE LINE 1 TERMINALS (12).



EL8IV124

8. WORKING AT DATA MODEM, PUSH PWR SWITCH (14) TO ON (IN).

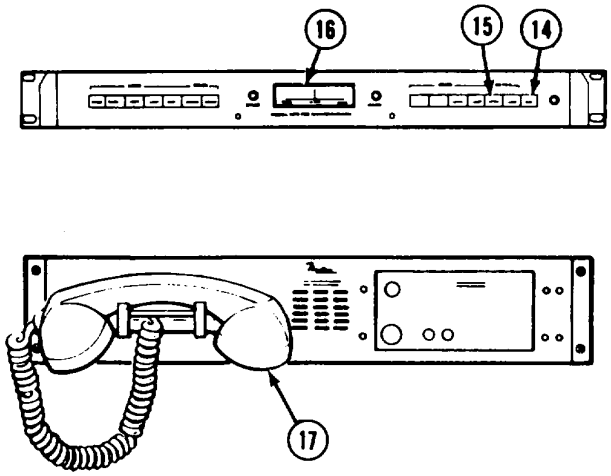
9. PUSH KEYER LEVEL SWITCH (15) TO IN POSITION.

10. CHECK THAT FRONT PANEL METER (16) READS 0 dBm.

11. WORKING AT INTERCOM, LISTEN AT HANDSET (17) AND CHECK THAT TONE CAN BE HEARD.

12. WORKING AT DATA MODEM, PUSH KEYER LEVEL SWITCH (15) TO OUT POSITION.

13. PUSH PWR SWITCH (14) TO OFF (OUT).

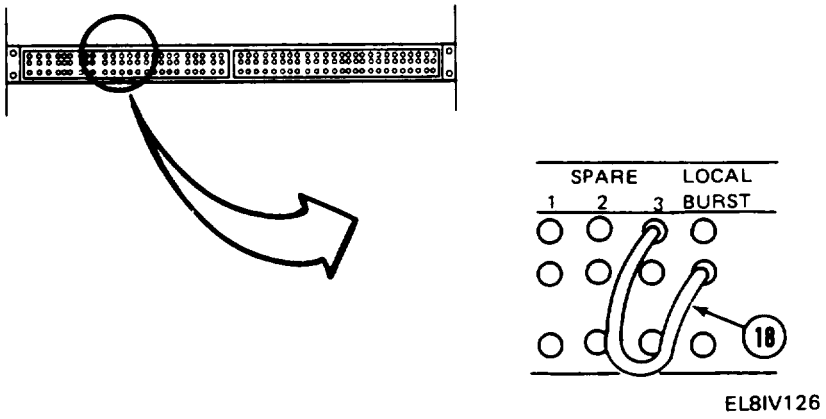


EL8IV125

INSPECT DATA MODEM (CONT)

NOTE

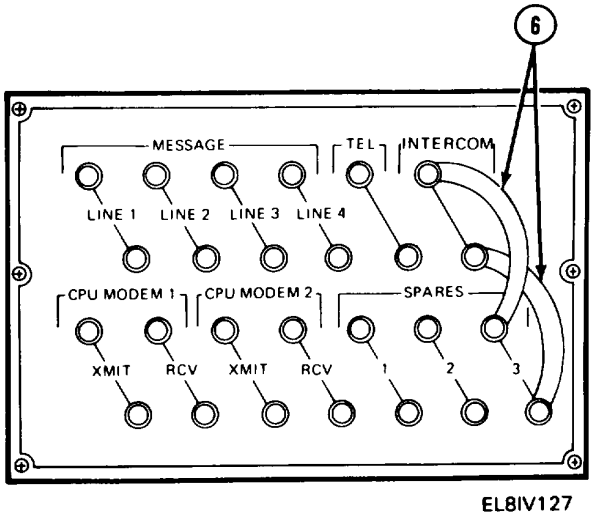
- **If testing data modem in transmitter shelter, do steps 14 and 15.**
- **If testing data modems in receiver shelter, go to step 16.**



14. WORKING AT PATCH PANEL, REMOVE PATCH CORD (18).

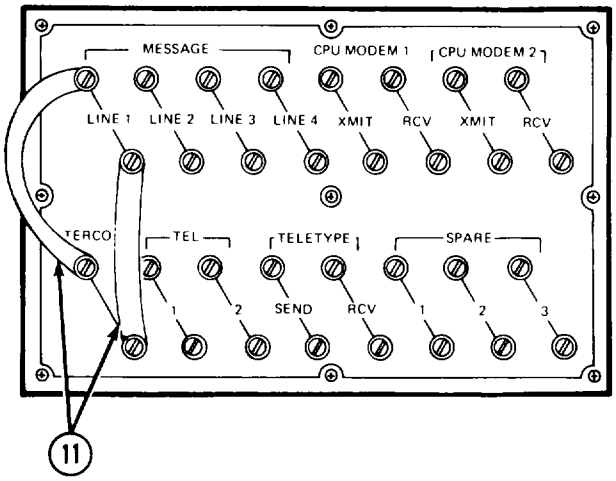
---

15. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, DISCONNECT TWO JUMPERS (6) AND GO TO STEP 17.



INSPECT DATA MODEM (CONT)

16. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, DISCONNECT TWO JUMPERS (11).

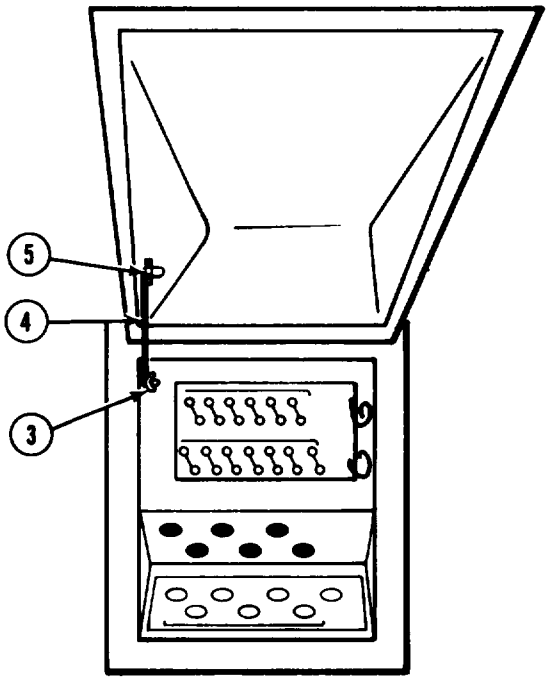


EL8IV128

17. LOOSEN WINGNUT (3).

18. PULL ROD (4) OUT OF CATCH (5) AND LOWER ROD.

19. TIGHTEN WINGNUT (3).

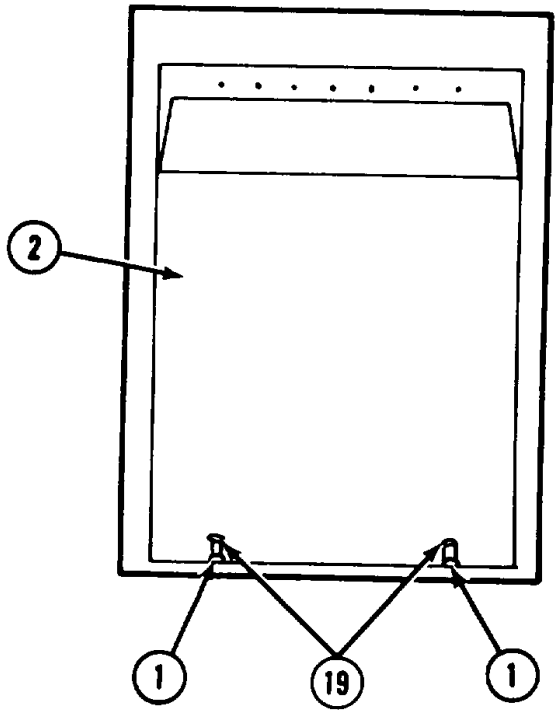


EL8IV121

INSPECT DATA MODEM (CONT)

20. LOWER PANEL (2) OVER TWO STUDS (19).

21. SLIDE DOWN TWO LATCHES (1).



EL8IV129

END OF TEST

2-23. INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY.

INITIAL SETUP

Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-2

NOTE

PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-2.

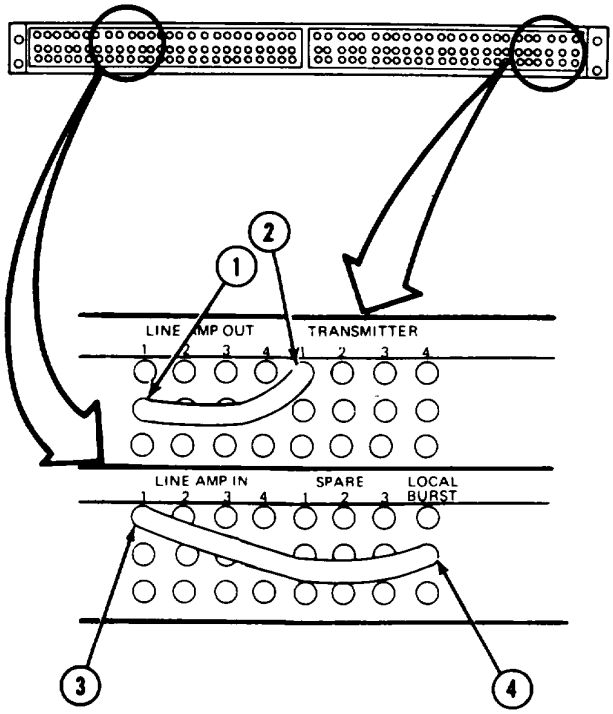
INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY (CONT)

NOTE

Any exciter may be used for this test. Procedures given use exciter 1. If exciter 2, 3, or 4 is used, patch LINE AMP OUT 1 middle jack (1) to matching TRANSMITTER jack (2).

1. WORKING AT PATCH PANEL JACKFIELD, PATCH LINE AMP OUT 1 MIDDLE JACK (1) TO TRANSMITTER 1 TOP JACK (2).

2. PATCH LINE AMP IN 1 TOP JACK (3) TO LOCAL BURST MIDDLE JACK (4).



EL8IV130

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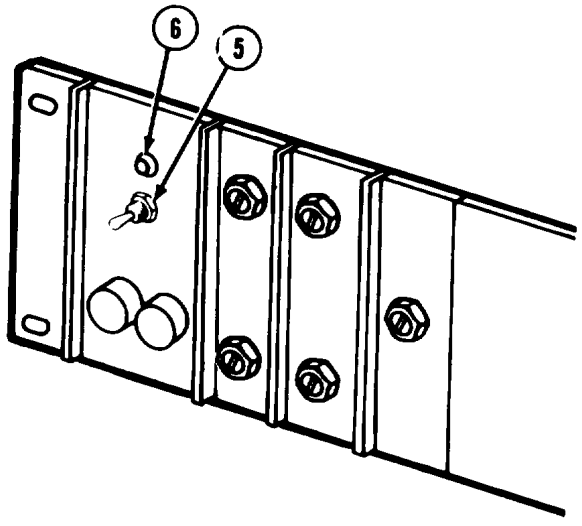
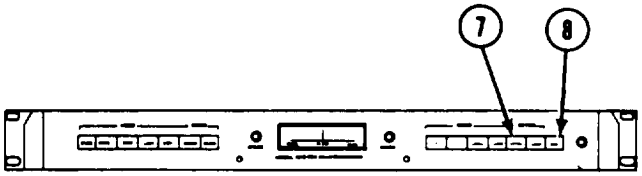
3. WORKING AT LINE AMPLIFIER POWER SUPPLY, CHECK THAT ON/OFF SWITCH (5) IS SET TO ON AND POWER INDICATOR (6) IS LIT.



EL8IV131

INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY (CONT)

4. WORKING AT DATA MODEM, PRESS KEYER LEVEL BUTTON (7).
5. PUSH PWR SWITCH (8) TO ON (IN).



EL8IV132

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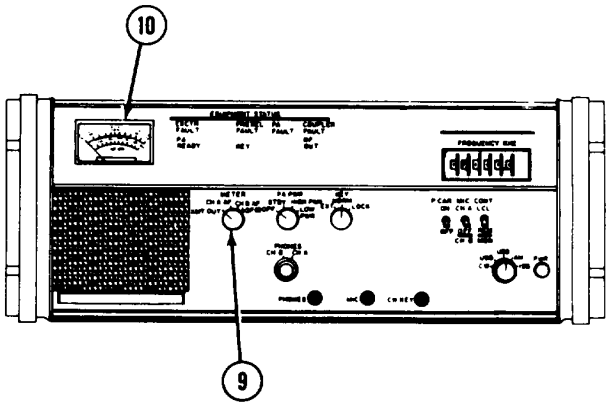
6. WORKING AT EXCITER, SET METER SWITCH (9) TO CH A AF.
7. CHECK THAT METER (10) READS 0 DBM.



EL8IV133

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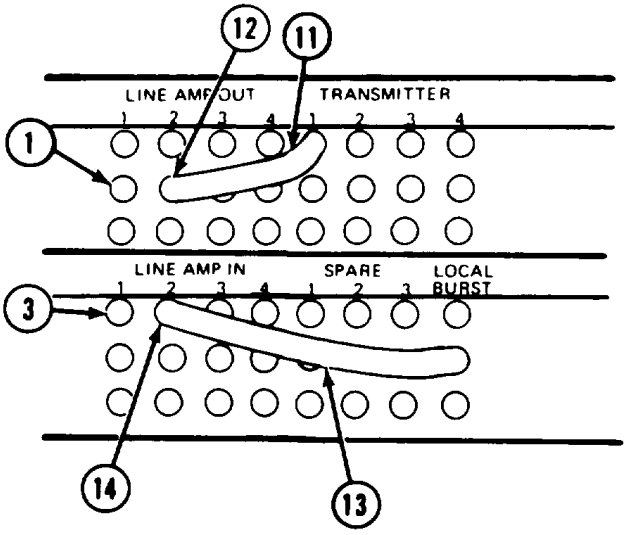
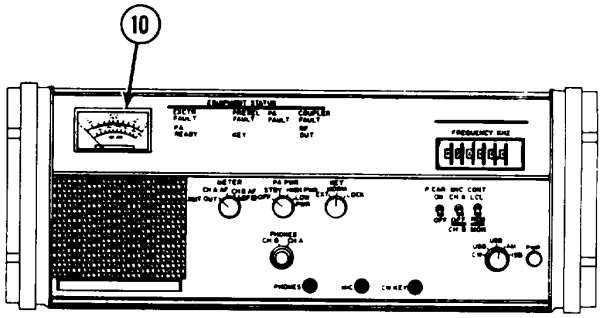
8. WORKING AT PATCH PANEL JACKFIELD, REMOVE PATCH CORD (11) FROM LINE AMP OUT 1 MIDDLE JACK (1) AND INSERT IN LINE AMP OUT 2 MIDDLE JACK (12).
9. REMOVE PATCH CORD (13) FROM LINE AMP IN 1 TOP JACK (3) AND INSERT IN LINE AMP IN 2 TOP JACK (14).



EL8IV134

INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY (CONT)

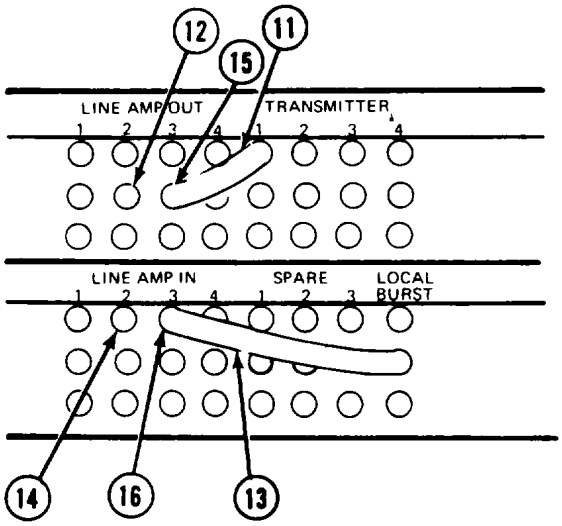
10. WORKING AT EXCITER, CHECK THAT METER (10) READS 0 DBM.



EL8IV135

11. WORKING AT PATCH PANEL JACKFIELD, REMOVE PATCH CORD (11) FROM LINE AMP OUT 2 MIDDLE JACK (12) AND INSERT IN LINE AMP OUT 3 MIDDLE JACK (15).

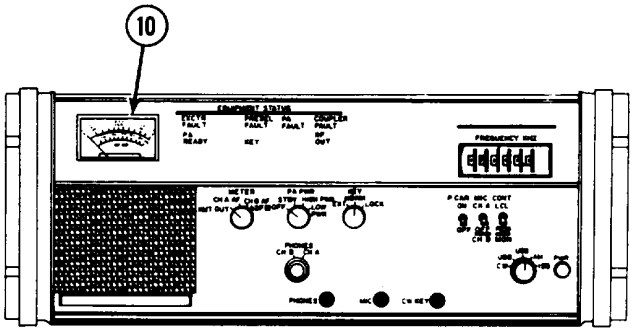
12. REMOVE PATCH CORD (13) FROM LINE AMP IN 2 TOP JACK (14) AND INSERT IN LINE AMP IN 3 TOP JACK (16).



EL8IV136

INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY (CONT)

13. WORKING AT EXCITER, CHECK THAT METER (10) READS 0 DBM.



EL8IV135

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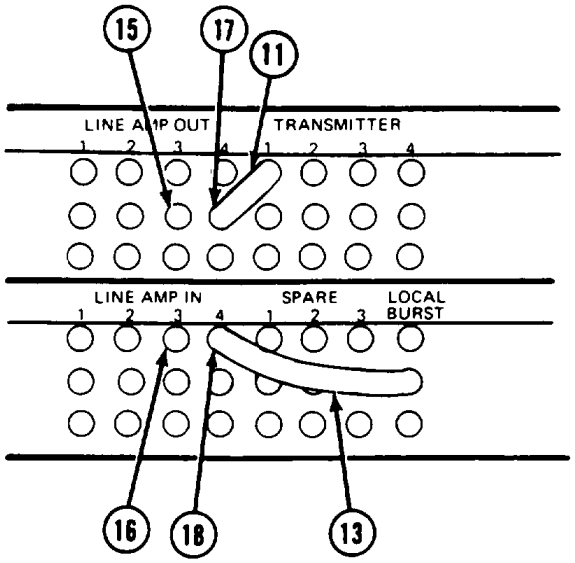
14. WORKING AT PATCH PANEL JACKFIELD, REMOVE PATCH CORD (11) FROM LINE AMP OUT 3 MIDDLE JACK (15) AND INSERT IN LINE AMP OUT 4 MIDDLE JACK (17).

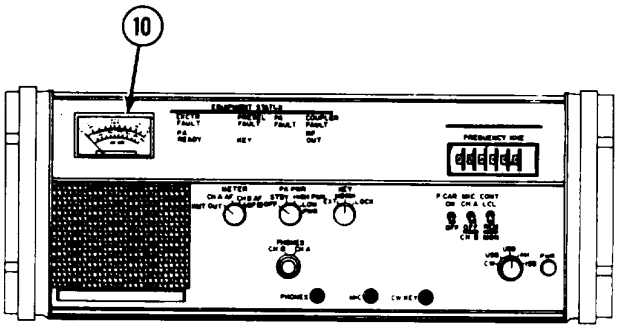
15. REMOVE PATCH CORD (13) FROM LINE AMP IN 3 TOP JACK (16) AND INSERT IN LINE AMP IN 4 TOP JACK (18).



EL8IV137

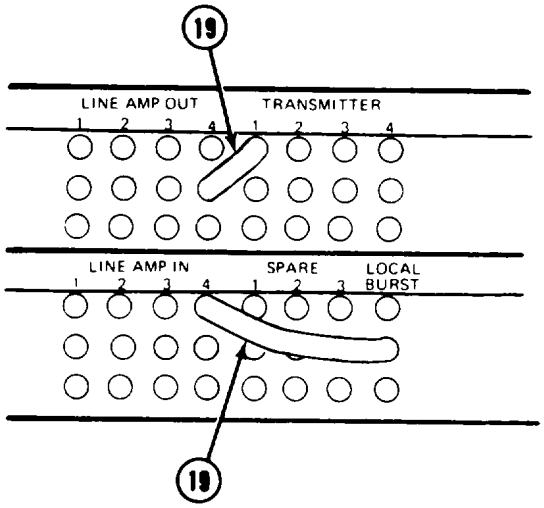
INSPECT LINE AMPLIFIER AND LINE AMPLIFIER POWER SUPPLY (CONT)

16. WORKING AT EXCITER, CHECK THAT METER (10) READS 0 DBM.



EL8IV135

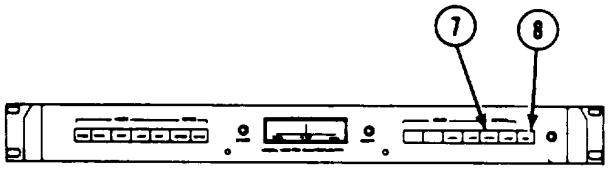
17. WORKING AT PATCH PANEL JACKFIELD, REMOVE TWO PATCH CORDS (19).



EL8IV138

18. WORKING AT DATA MODEM, PUSH KEYER LEVEL BUTTON (7) TO OUT POSITION.

19. PUSH PWR SWITCH (8) TO OFF (OUT).



EL8IV132

END OF INSPECTION

2-24. INSPECT INTERCOM.

DESCRIPTION

NOTE

There is one intercom in the transmitter shelter and one intercom in the receiver shelter. This procedure is the same for both except where noted. Intercom in transmitter shelter is shown.

INITIAL SETUP

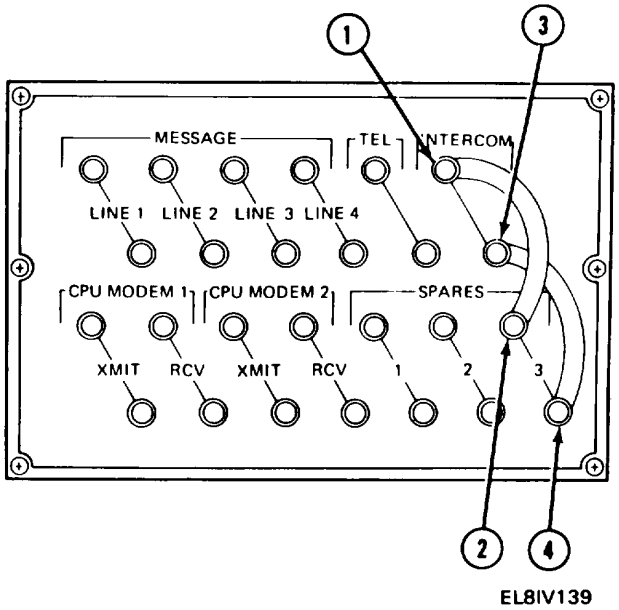
Personnel Required: MOS 18E

References: TM 11-5895-1160-10-1
TM 11-5895-1160-10-2

NOTE

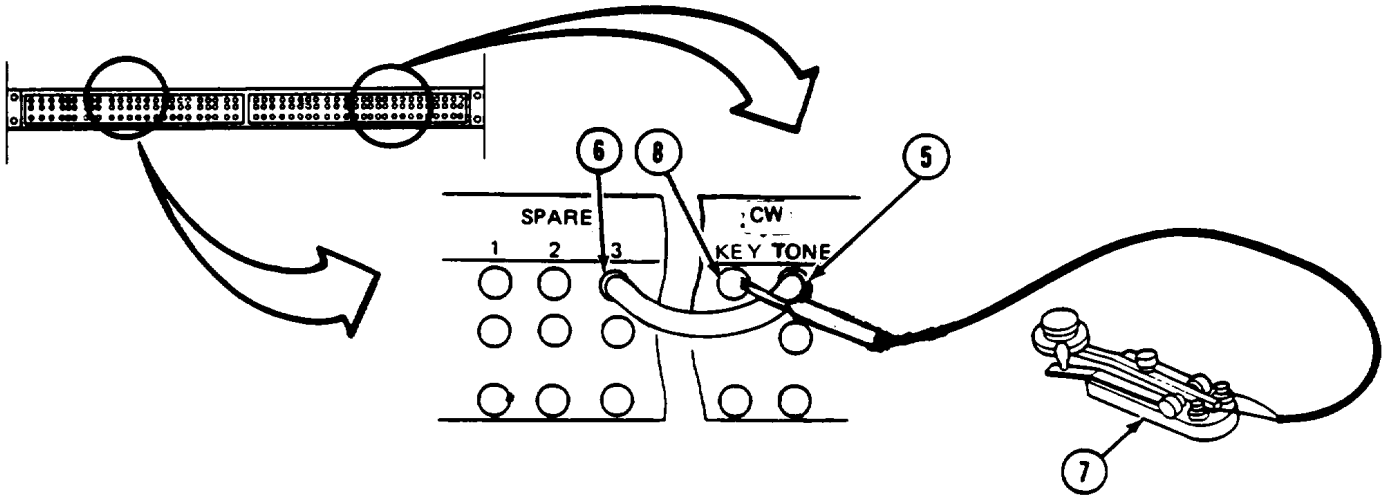
PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-1 for receiver shelter. See TM 11-5895-1160-10-2 for transmitter shelter.

1. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, CONNECT JUMPER TO INTERCOM TOP TERMINAL (1) AND SPARE 3 TOP TERMINAL (2).
2. CONNECT ANOTHER JUMPER TO INTERCOM BOTTOM TERMINAL (3) AND SPARE 3 BOTTOM TERMINAL (4).



EL8IV139

INSPECT INTERCOM (CONT)



EL8IV140

NOTE

If inspecting intercom in receiver shelter, use CW OUT middle jack (5).

3. WORKING AT PATCH PANEL JACKFIELD, PATCH CW TONE TOP JACK (5) TO SPARE 3 TOP JACK (6).

NOTE

If inspecting intercom in receiver shelter, connect CW key (7) to audio panel KEY jack.

4. CONNECT CW KEY (7) TO CW KEY TOP JACK (8).

5. PRESS AND HOLD CW KEY (7).

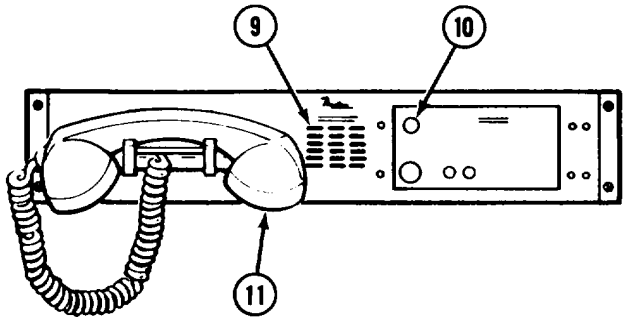
---

6. WORKING AT INTERCOM, CHECK THAT TONE CAN BE HEARD AT SPEAKER (9).

7. TURN VOL CONTROL (10) TO RIGHT AND THEN TO LEFT AND CHECK THAT TONE BECOMES LOUDER AND THEN SOFTER.

8. LIFT HANDSET (11) AND CHECK THAT TONE CAN NO LONGER BE HEARD AT SPEAKER.

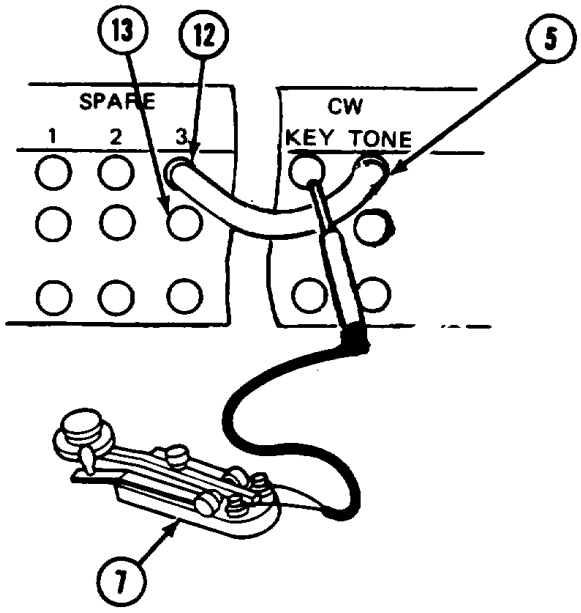
9. LISTEN IN HANDSET (11) AND CHECK THAT TONE CAN BE HEARD.



EL8IV141

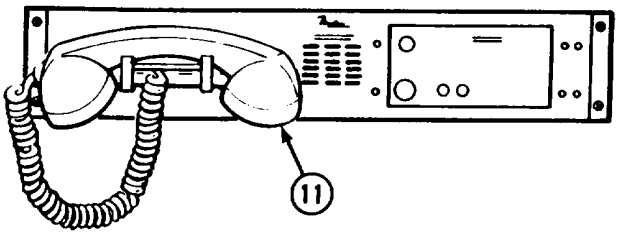
INSPECT INTERCOM (CONT)

10. RELEASE CW KEY (7).
11. WORKING AT PATCH PANEL JACKFIELD, DISCONNECT CW KEY (7).
12. REMOVE PATCH CORD (12) FROM CW TONE TOP JACK (5) AND CONNECT TO SPARE 3 MIDDLE JACK (13).



EL8IV142

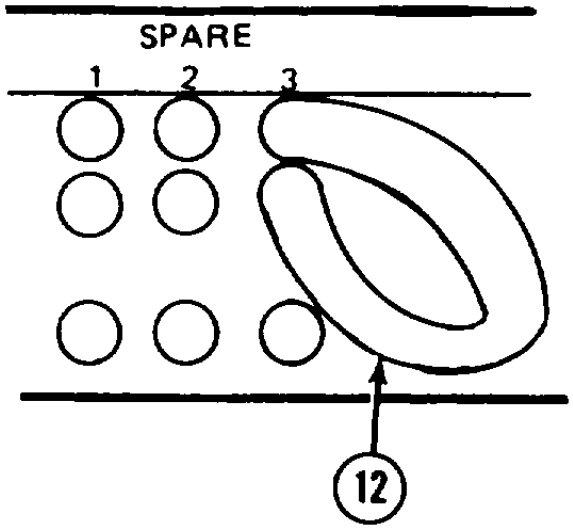
13. WORKING AT INTERCOM, SPEAK INTO HANDSET (11) AND CHECK THAT VOICE OUTPUT CAN BE HEARD.
14. REPLACE HANDSET (11).



EL8IV143

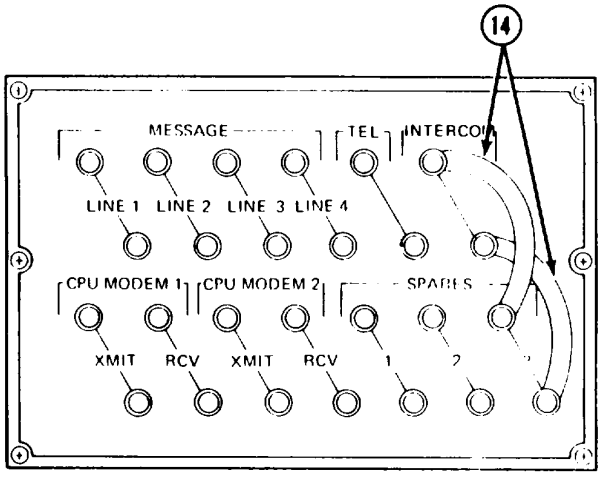
INSPECT INTERCOM (CONT)

15. WORKING AT PATCH PANEL JACKFIELD, REMOVE PATCH CORD (12).



EL8IV144

16. WORKING AT ANTENNA/SIGNAL ENTRY PANEL, REMOVE TWO JUMPERS (14).



EL8IV145

END OF INSPECTION

2-25. INSPECT PP-7716/U UNINTERRUPTIBLE POWER SUPPLY (UPS)

DESCRIPTION

NOTE

There is one UPS in the transmitter shelter and one UPS in the receiver shelter. This procedure is the same for both except where noted. UPS in the transmitter shelter is shown.

NOTE

If PP-7716A/U is installed, perform procedure 2-25A (page 2-112.1).

INITIAL SETUP

Personnel Required: MOS 18E

References: TM 11-5895-1160-10-1
TM 11-5895-1160-10-2

General safety instructions:

WARNING

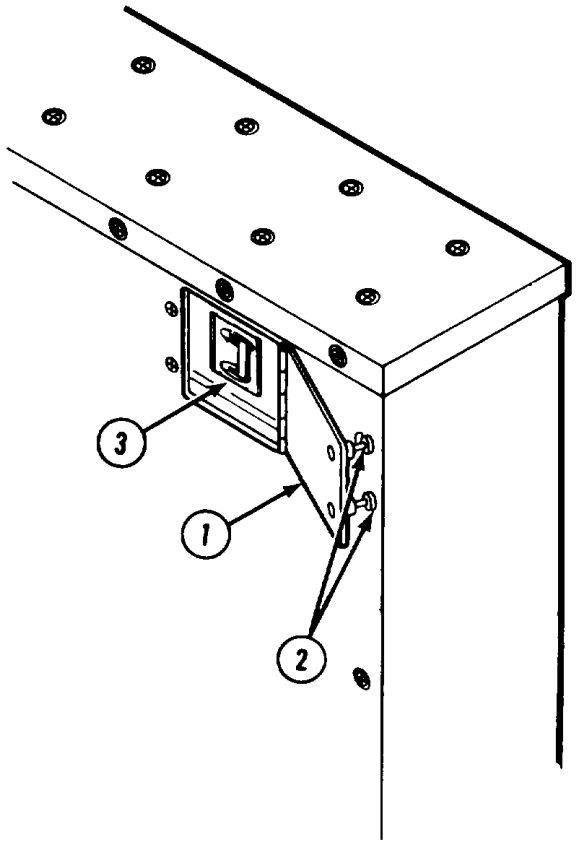
When operating equipment in enemy territory, bright lights can cause detection by the enemy. See general warning page.

NOTE

PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-1 for receiver shelter. See TM 11-5895-1160-10-2 for transmitter shelter.

INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

1. WORKING AT BATTERY CABINET, OPEN ACCESS DOOR (1).
   - Loosen two captive screws (2) to open access door.
2. SET CIRCUIT BREAKER CB1 (3) TO OFF.



EL8IV146

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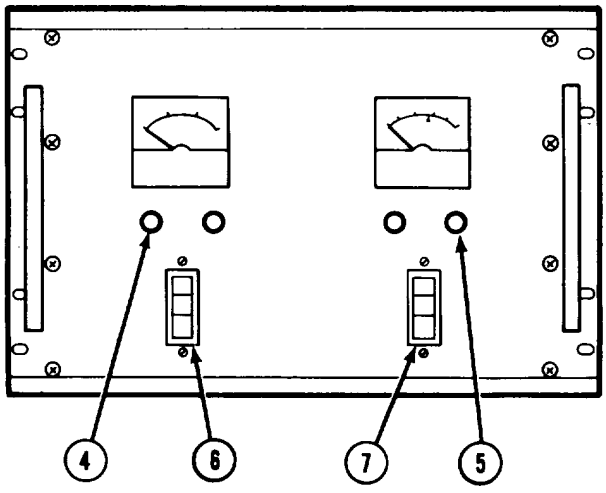
3. WORKING AT UPS, CHECK THAT AC POWER ON (4) INDICATOR IS LIT.
4. CHECK THAT REVERSE TRANSFER INDICATOR (5) IS LIT.
5. SET AC POWER CIRCUIT BREAKER (6) TO OFF.

NOTE

On UPS in receiver shelter, set BATTERY circuit breaker (7) to OFF.

6. SET INVERTER CIRCUIT BREAKER (7) TO OFF.



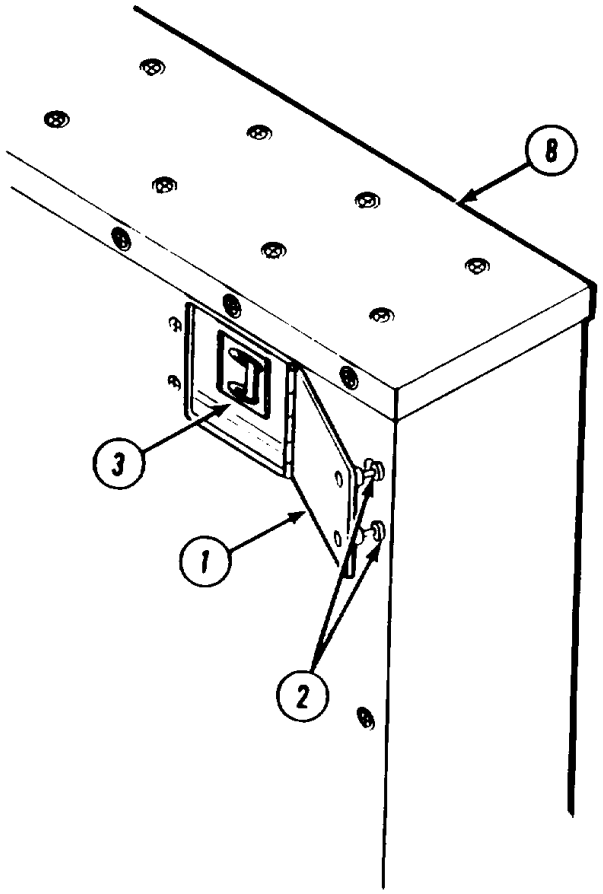
EL8IV147

INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

7. WORKING AT BATTERY CABINET, SET CIRCUIT BREAKER CB1 (3) TO ON.

8. LISTEN AND CHECK THAT FAN IN BATTERY CABINET (8) IS RUNNING.

9. CLOSE ACCESS DOOR (1) AND TIGHTEN TWO CAPTIVE SCREWS (2).



EL8IV148

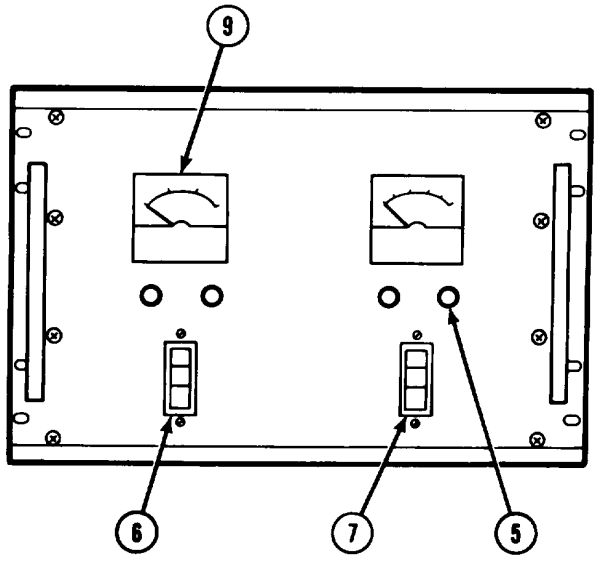
NOTE

On UPS in receiver shelter, set BATTERY circuit breaker (7) to ON.

10. WORKING AT UPS, SET AC POWER (6) AND INVERTER (7) CIRCUIT BREAKERS TO ON.

11. CHECK THAT REVERSE TRANSFER (5) INDICATOR IS OFF.

12. CHECK THAT OUTPUT VOLTAGE METER (9) READS 108 TO 132 VOLTS AC.

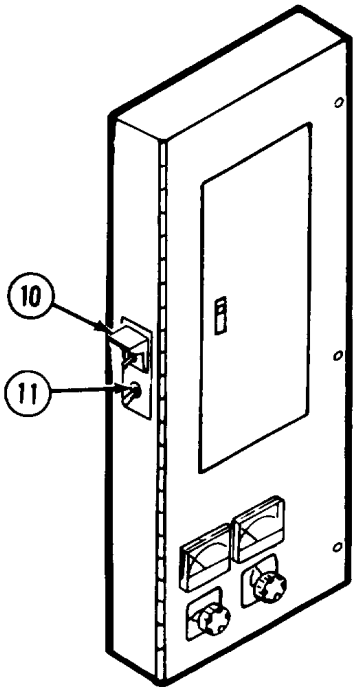


EL8IV149

INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

13. WORKING AT POWER PANEL, SET BLACKOUT OVERRIDE SWITCH (10) TO OFF.

14. SET LIGHTS SWITCH (11) TO ON.



EL8IV150

15. OPEN SHELTER DOOR (12) AND CHECK THAT WHITE EMERGENCY LIGHT (13) IS OFF AND BLUE EMERGENCY LIGHT (13) IS ON.

16. CLOSE SHELTER DOOR (12) AND CHECK THAT WHITE EMERGENCY LIGHT (13) IS ON AND BLUE EMERGENCY LIGHT (13) IS OFF.

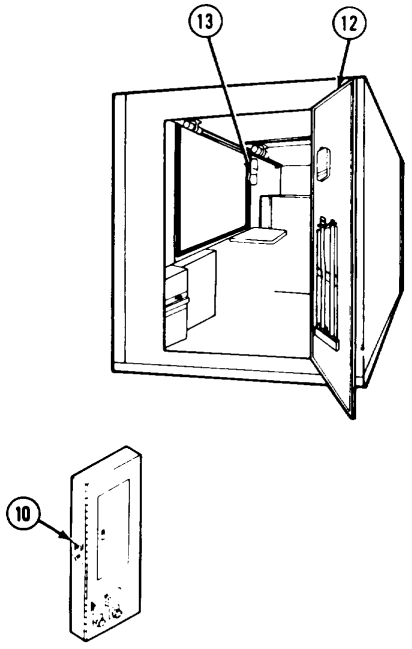
WARNING

If equipment is located in hostile territory, BLACKOUT OVERRIDE switch (10) must be set to OFF to prevent detection by the enemy.

17. OPEN SHELTER DOOR (12) AND SET BLACKOUT OVERRIDE SWITCH (10) TO ON.

18. CHECK THAT WHITE EMERGENCY LIGHT (13) IS ON AND BLUE EMERGENCY LIGHT (13) IS OFF.

19. CLOSE SHELTER DOOR (12)



EL8IV151

END OF INSPECTION

2-25A. INSPECT PP-7716A/U UNINTERRUPTIBLE POWER SUPPLY (UPS)

DESCRIPTION

NOTE

There is one UPS in the transmitter shelter and one UPS in the receiver shelter. This procedure is the same for both except where noted. UPS in the transmitter shelter is shown.

NOTE

If PP-7716/U is installed, perform procedure 2-25 (page 2-109).

INITIAL SETUP

Personnel Required: MOS 18E

References: TM 11-5895-1160-10-1
TM 11-5895-1160-10-2

General safety instructions:

WARNING

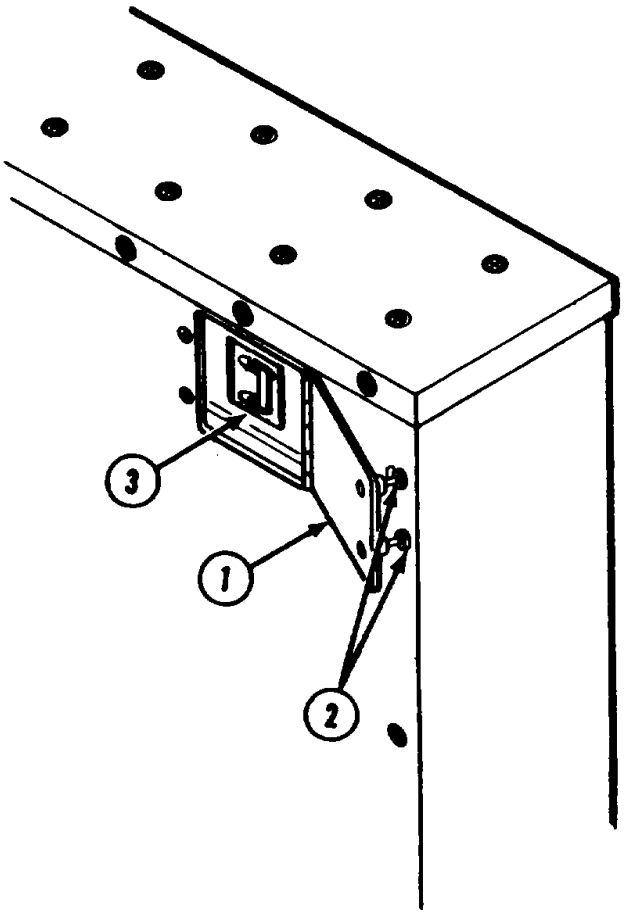
When operating equipment in enemy territory, bright lights can cause detection by the enemy. See general warning page.

NOTE

PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-1 for receiver shelter. See TM 11-5895-1160-10-2 for transmitter shelter.

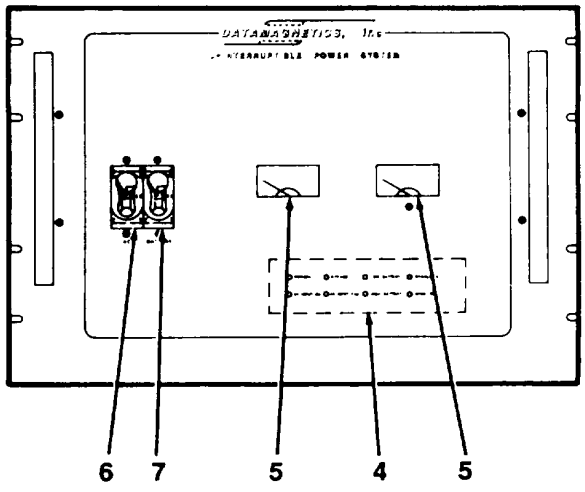
INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

1. WORKING AT BATTERY CABINET, OPEN ACCESS DOOR (1).
   - Loosen two captive screws (2) to open access door.
2. SET CIRCUIT BREAKER CB1 (3) TO OFF.



EL8IV146

3. WORKING AT UPS, CHECK THAT AC INPUT FAIL INDICATOR (4) IS ON.
4. CHECK AC INPUT ON INDICATOR (4) IS ON.
5. CHECK AC VOLTS METER (5) SHOWS 108 TO 132 V AC.
6. SET AC CIRCUIT BREAKER (6) TO OFF.
7. SET BATTERY CIRCUIT BREAKER (7) TO OFF.



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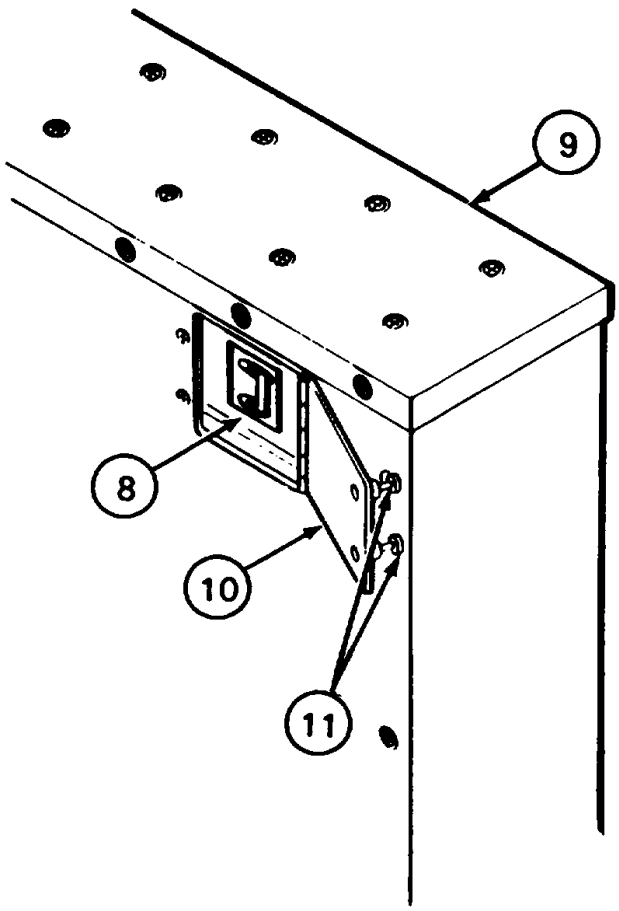
INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

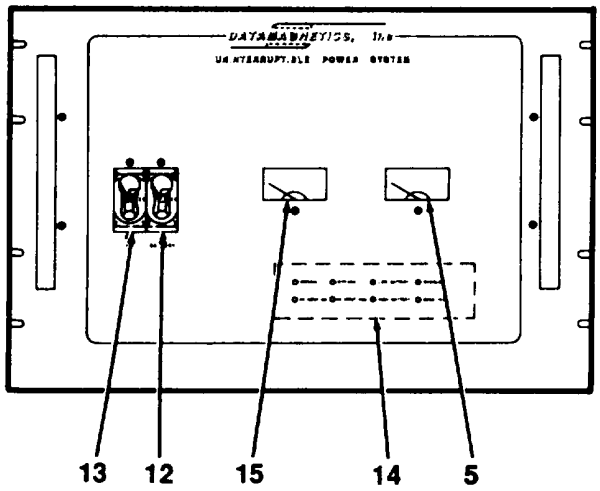


8. WORKING AT BATTERY CABINET, SET CIRCUIT BREAKERS CB1 (8) TO ON.
9. LISTEN AND CHECK THAT FAN IN BATTERY CABINET (9) IS RUNNING.
10. CLOSE ACCESS DOOR (10) AND TIGHTEN TWO CAPTIVE SCREWS (11).

NOTE

On UPS in receiver shelter, set BATTERY circuit breaker (12) to ON.

11. WORKING AT UPS, SET AC (13) AND BATTERY (12) CIRCUIT BREAKERS TO ON.
12. CHECK THAT NORMAL INDICATOR (14) IS ON.
13. CHECK THAT AC VOLTS METER (15) READS 108 TO 132 V AC.

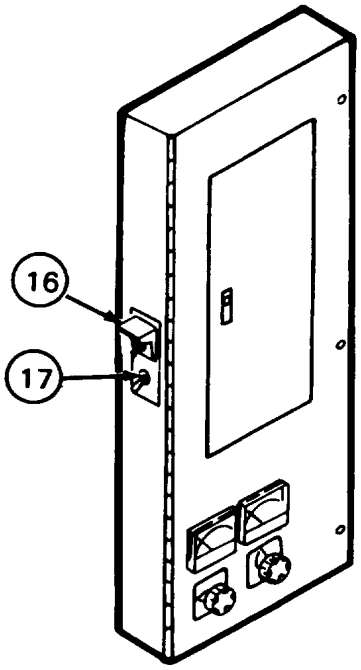


B551 0687B Bx

INSPECT UNINTERRUPTIBLE POWER SUPPLY (UPS) (CONT)

14 WORKING AT POWER PANEL, SET BLACKOUT OVERRIDE SWITCH (16) TO OFF.

15 SET LIGHT SWITCH (17) TO ON.



16. OPEN SHELTER DOOR (18) AND CHECK THAT WHITE EMERGENCY LIGHT (19) IS OFF AND THAT BLUE EMERGENCY LIGHT (19) IS ON.

17. CLOSE SHELTER DOOR (18) AND CHECK THAT WHITE EMERGENCY LIGHT (19) IS ON AND THAT BLUE EMERGENCY LIGHT (19) IS OFF.

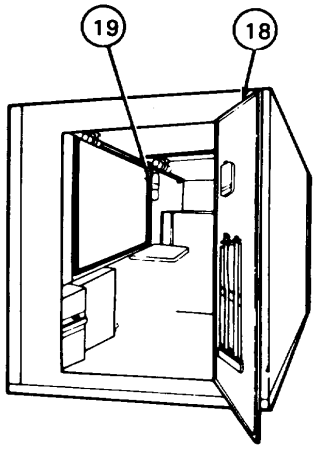
WARNING

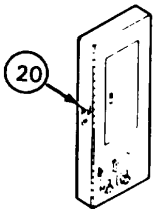
If equipment is located in hostile territory, BLACKOUT OVERRIDE switch (20) must be set to OFF to prevent detection by the enemy.

18. OPEN SHELTER DOOR (18) AND SET BLACKOUT OVERRIDE SWITCH (20) TO ON.

19. CHECK THAT WHITE EMERGENCY LIGHT (19) IS ON AND THAT BLUE EMERGENCY LIGHT (19) IS OFF.

20. CLOSE SHELTER DOOR (18).





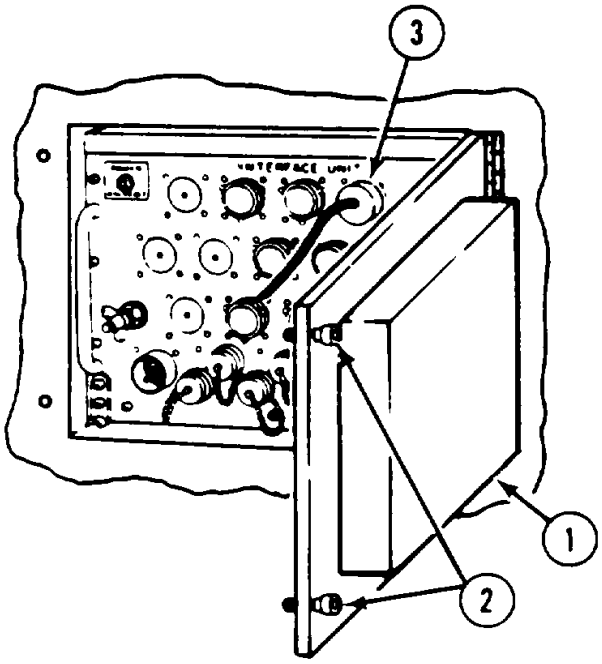
END OF INSPECTION

2-26. INSPECT MASS MEMORY.

INITIAL SETUP

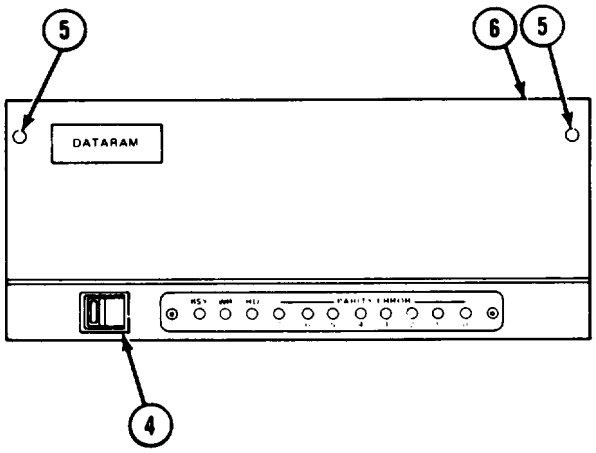
Personnel Required: MOS 18E

1. WORKING AT I/O CHASSIS, OPEN ACCESS DOOR (1).
   - Loosen two captive screws (2) to open access door.
2. TAG AND UNPLUG CABLE FROM CONNECTOR J4 (3).



EL8IV187

3. WORKING AT MASS MEMORY FRONT PANEL, SET POWER SWITCH (4) TO ON.
4. LOOSEN TWO CAPTIVE SCREWS (5) AND REMOVE FRONT COVER (6).



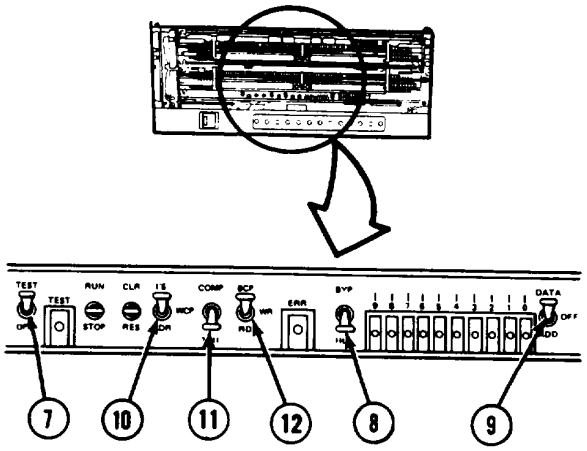
EL8IV152

INSPECT MASS MEMORY (CONT)

5. SET SELF-TEST SWITCHES AS FOLLOWS:

TEST/OPR (7)	TEST
BYP/HLT (8)	BYP
DATA/OFF/ADD (9)	ADD

6. USE TABLE 2-10 TO SET 1'S/WCP/ ADR (10), COMP/TRU (11), AND BCP/WR/RD (12) SWITCHES AND DO STEPS 7THRU 13 FOR EACH TEST CYCLE.



EL8IV153

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7. PUSH CLR/RES SWITCH (13) TO UP POSITION.

8. PUSH RUN/STOP SWITCH (14) TO UP POSITION AND RELEASE.

9. CHECK THAT TEST INDICATOR (15) IS LIT.

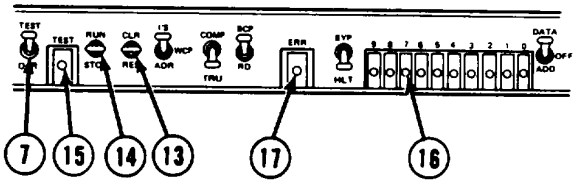
10. WAIT FOR ADDRESS DISPLAY 7 INDICATOR (16) TO LIGHT, TURN OFF, AND LIGHT AGAIN. DISPLAY INDICATOR TURNING OFF AND ON SIGNALS COMPLETION OF EACH CYCLE.

11. PUSH RUN/STOP SWITCH (14) TO DOWN POSITION AND RELEASE.

12. CHECK THAT TEST INDICATOR (15) IS OFF.

13. CHECK THAT ERR INDICATOR (17) IS OFF.

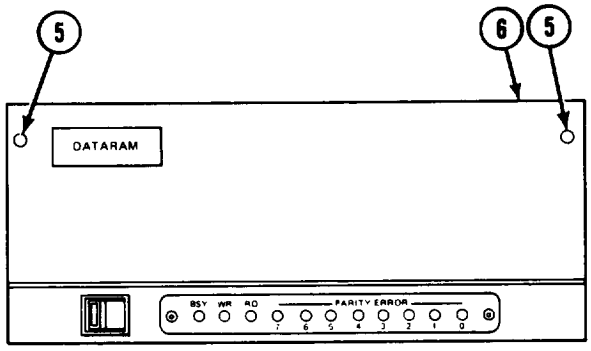
14. SET TEST/OPR SWITCH (7) TO OPR.



EL8IV154

INSPECT MASS MEMORY (CONT)

15. POSITION FRONT COVER (6) ON MASS MEMORY AND TIGHTEN TWO CAPTIVE SCREWS (5).

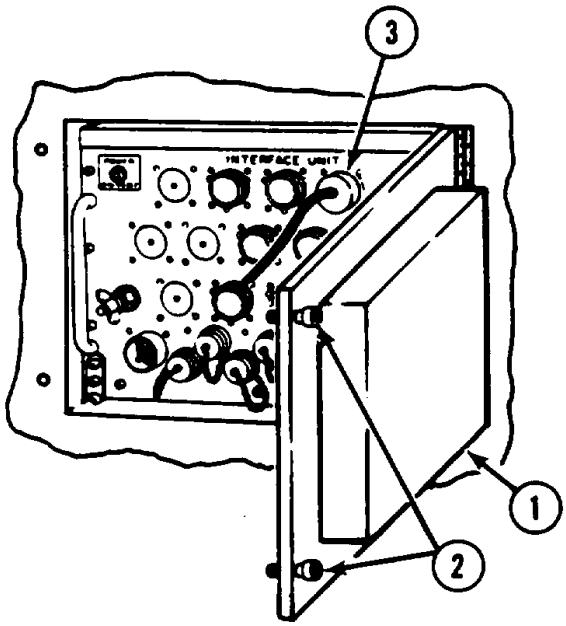


EL8IV155

16. WORKING AT I/O CHASSIS, PLUG CABLE INTO CONNECTOR J4 (3) AS TAGGED.

17. CLOSE ACCESS DOOR (1).

    - Swing access door closed and tighten two captive screws (2).



EL8IV187

INSPECT MASS MEMORY (CONT)

Table 2-10. SELF-TEST SWITCH SETTINGS

NOTE

This table contains only the self-test switches that will change during test cycles.

Test steps	1'S/WCP/ADR switch	COMP/TRU switch	BCP/WR/RD switch
1	l's	TRU	WR
2	1's	TRU	RD
3	WCP	TRU	WR
4	WCP	TRU	RD
5	ADR	TRU	WR
6	ADR	TRU	RD
7	1's	COMP	WR
8	1's	COMP	RD
9	WCP	COMP	WR
10	WCP	COMP	RD
11	ADR	COMP	WR
12	ADR	COMP	RD
13	l's	TRU	BCP
14	1's	COMP	BCP
15	WCP	TRU	BCP
16	WCP	COMP	BCP
17	ADR	TRU	BCP
18	ADR	COMP	BCP

END OF INSPECTION

2-27. INSPECT PLASMA DISPLAY.

DESCRIPTION

NOTE

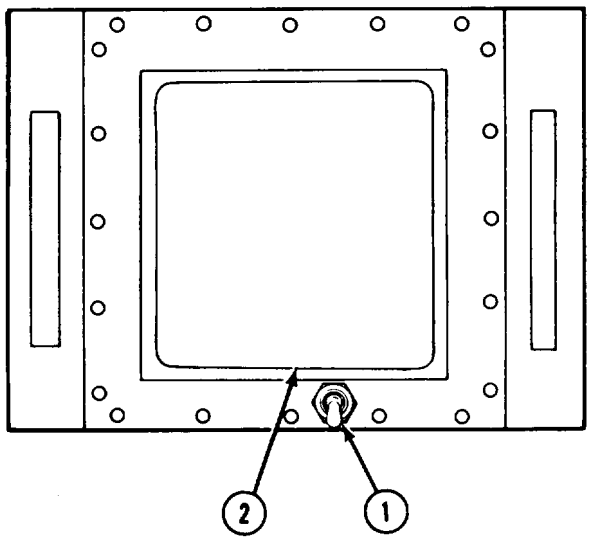
There are two plasma displays in the receive shelter. This procedure is the same for both. Error indicator will illuminate during first cycle when BCP/WR/RD switch is in BCP. Error indicator should go out after first cycle and not illuminate on later cycles.

INSPECT PLASMA DISPLAY (CONT)

INITIAL SETUP

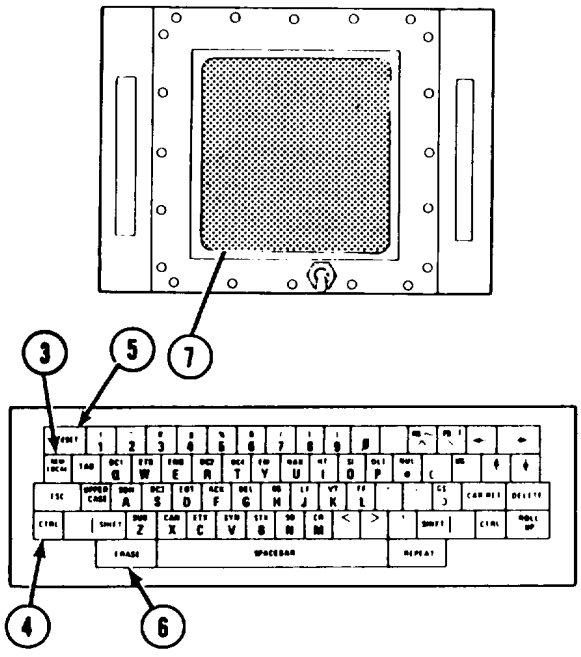
Personnel Required: MOS 18E

1. WORKING AT FRONT PANEL, SET POWER SWITCH (1) TO ON.
2. LET PLASMA DISPLAY WARM UP FOR 1 MINUTE AND CHECK THAT PLASMA DISPLAY BORDER (2) GLOWS.



EL8IV156

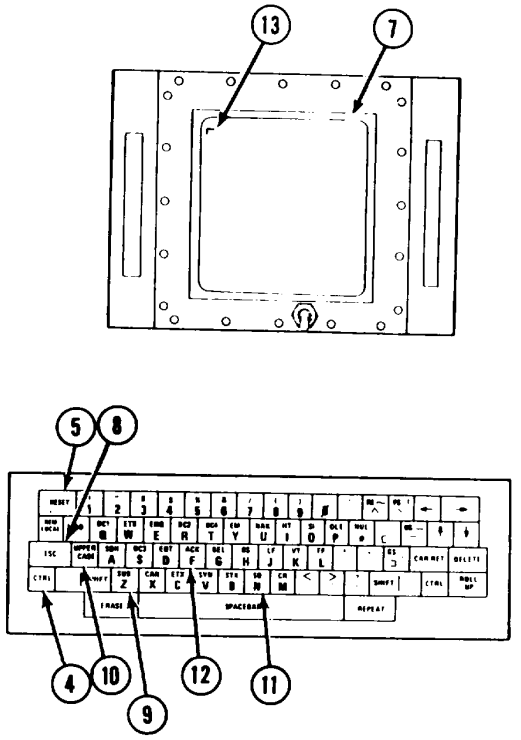
3. PRESS REM/LOCAL KEY (3) TO LOCAL MODE (DOWN POSITION).
4. WHILE HOLDING DOWN CTRL KEY (4), PRESS RESET KEY (5).
5. WHILE HOLDING DOWN CTRL KEY (4) AND ERASE KEY (6), PRESS AND RELEASE RESET KEY (5), THEN RELEASE ERASE KEY WHEN PLASMA DISPLAY SCREEN (7) IS ALMOST FULL OF DOTS.
6. CHECK THAT PLASMA DISPLAY SCREEN (7) FILLS COMPLETELY WITH DOTS.
7. PRESS CTRL KEY (4) AND ERASE KEY (6).
8. CHECK THAT PLASMA DISPLAY SCREEN (7) CLEARS.



EL8IV157

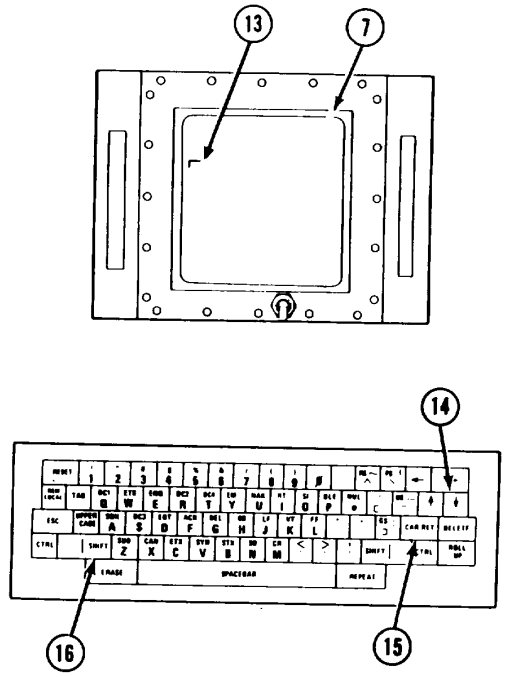
INSPECT PLASMA DISPLAY (CONT)

9. PRESS CTRL KEY (4) AND RESET KEY (5).
10. PRESS ESC KEY (8) AND Z KEY (9).
11. PRESS UPPER CASE KEY (10) TO DOWN POSITION (UPPERCASE).
12. PRESS CTRL KEY (4) AND N KEY (11).
13. PRESS CTRL KEY (4) AND F KEY (12).
14. CHECK THAT ALPHA CURSOR (13) APPEARS IN UPPER LEFT CORNER (HOME POSITION) OF PLASMA DISPLAY SCREEN (7).



EL8IV158

15. PRESS EACH KEY LISTED IN KEY COLUMN OF TABLE 2-11.
16. CHECK THAT CHARACTERS SHOWN IN UPPERCASE/NONSHIFT COLUMN OF TABLE 2-11 APPEAR ON PLASMA DISPLAY SCREEN (7) FOR EACH KEY PRESSED.
17. PRESS ↓ KEY (14) AND CAR RET KEY (15) AND CHECK THAT ALPHA CURSOR (13) MOVES TO LEFT SIDE OF PLASMA DISPLAY SCREEN (7).
18. WHILE PRESSING SHIFT KEY (16), REPEAT STEPS 15 THRU 17 CHECKING THAT CHARACTERS SHOWN IN UPPERCASE/SHIFT COLUMN OF TABLE 2-11 APPEAR ON PLASMA DISPLAY SCREEN (7).



EL8IV159

INSPECT PLASMA DISPLAY (CONT)

Table 2-11. KEYBOARD CHARACTER TABLE

Key	Uppercase		Lowercase		Key	Uppercase		Lowercase	
	Non-shift	Shift	Non-shift	Shift		Non-shift	Shift	Non-shift	Shift
! 1	1	!	1	!	ETB W	W	W	w	W
“ 2	2	"	2	“	ENQ E	E	E	e	E
# 3	3	#	3	#	DC2 R	R	R	r	R
4	4	$	4	$	DC4 T	T	T	t	T
% 5	5	%	5	%	EM Y	Y	Y	y	Y
& 6	6	&	6	&	NAK U	U	U	u	U
' 7	7	7	'	I	HT I	I	I	i	I
(8	8	(	8	(	SI O	O	O	o	O
) 9	9	)	9	)	DLE P	P	P	p	P
0	∅	∅	∅	∅	NUL @	@	@	@	‘
= -	-	=	-	=	{ [	[	[	[	{
RS ^	^	^	^	~	US- -	-	-	-	-
FS \	\	\	\	I	SOH A	A	A	a	A
DC1 Q	Q	Q	q	Q	DC3	S	S	s	S

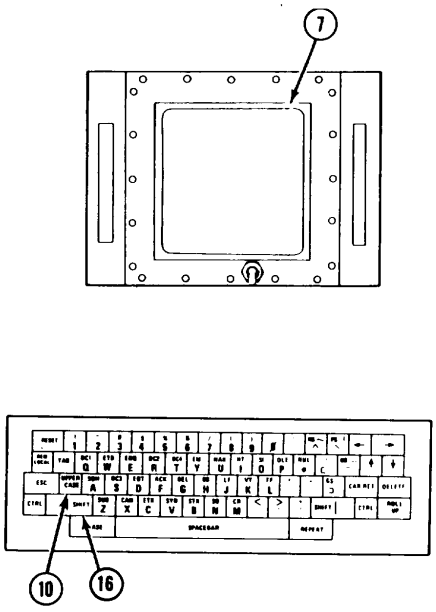
INSPECT PLASMA DISPLAY (CONT**)**

Table 2-11. KEYBOARD CHARACTER TABLE- Continued

Key	Uppercase		Lowercase		Key	Uppercase		Lowercase	
	Non-shift	Shift	Non-shift	Shift		Non-shift	Shift	Non-shift	Shift
EOT D	D	D	d	D	SUB Z	Z	Z	z	Z
ACK F	F	F	f	F	CAN X	X	X	x	X
BEL G	G	G	g	G	ETX C	C	C	c	C
BS H	H	H	h	H	SYN V	V	V	v	V
LF J	J	J	j	J	STX B	B	B	b	B
VT K	K	K	k	K	SO N	N	N	n	N
FF L	L	L	l	L	CR M	M	M	m	M
+ ;	;	+	;	+	< ‘	‘	<	‘	<
* :	:	*	:	*	> ?				
GS}]	]	]	]	}	/	/	?	/	?
DELETE	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					
	.....	.....	.....	.....					

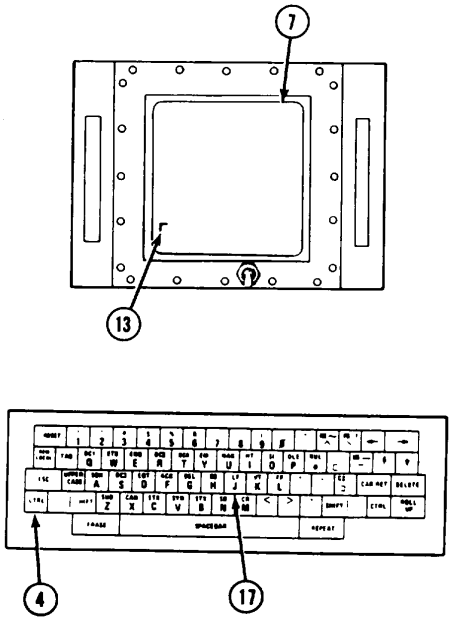
INSPECT PLASMA DISPLAY (CONT)

19. PRESS UPPER CASE KEY (10) TO UP POSITION (LOWERCASE).
20. REPEAT STEPS 15 THRU 17, CHECKING THAT CHARACTERS SHOWN IN LOWERCASE/NONSHIFT COLUMN OF TABLE 2-11 APPEAR ON PLASMA DISPLAY SCREEN (7).
21. WHILE PRESSING SHIFT KEY (16), REPEAT STEPS 15 THRU 17, CHECKING THAT CHARACTERS SHOWN IN LOWERCASE/SHIFT COLUMN OF TABLE 2-11 APPEAR ON PLASMA DISPLAY SCREEN (7).



EL8IV160

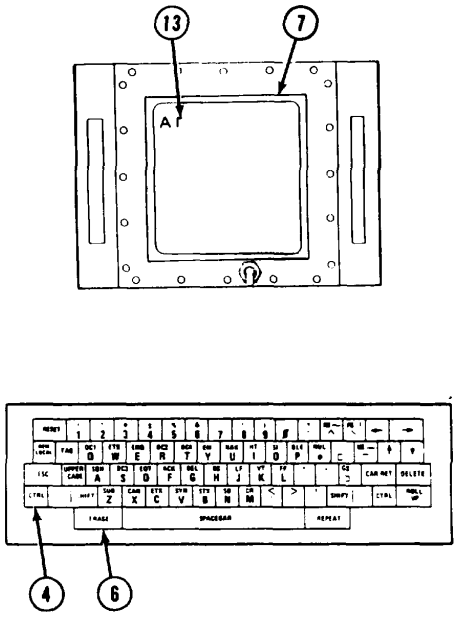
22. PRESS CTRL KEY (4) AND J KEY (17) SEVERAL TIMES UNTIL ALPHA CURSOR (13) MOVES TO LAST TWO LINES OF PLASMA DISPLAY SCREEN (7).
23. TYPE ANY CHARACTER UNTIL LAST LINE OF PLASMA DISPLAY SCREEN (7) IS FULL.
24. CHECK THAT ALPHA CURSOR (13) DISAPPEARS.



EL8IV161

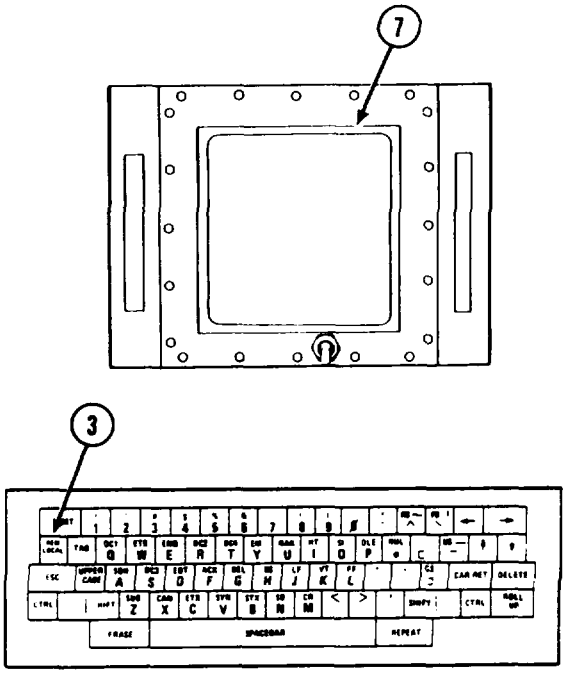
INSPECT PLASMA DISPLAY (CONT)

25. TYPE ANY CHARACTER ONE TIME.
26. CHECK THAT CHARACTER TYPED APPEARS IN UPPER LEFT CORNER AND ALPHA CURSOR (13) APPEARS IN NEXT POSITION OF PLASMA DISPLAY SCREEN (7).
27. PRESS CTRL KEY (4) AND ERASE KEY (6).,
28. CHECK THAT PLASMA DISPLAY SCREEN (7) CLEARS AND ALPHA CURSOR (13) APPEARS IN UPPER LEFT CORNER.



EL8IV162

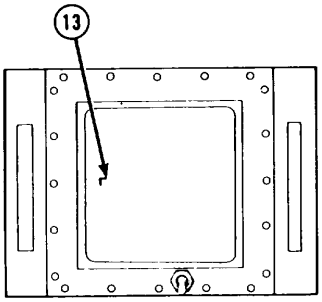
29. PRESS REM/LOCAL KEY (3) TO REMOTE MODE (UP POSITION).
30. TYPE SEVERAL CHARACTERS.
31. CHECK THAT NO CHARACTERS APPEAR ON PLASMA DISPLAY SCREEN (7).
32. PRESS REM/LOCAL KEY (3) TO LOCAL MODE (DOWN POSITION).
33. TYPE SEVERAL CHARACTERS.
34. CHECK THAT CHARACTERS APPEAR ON PLASMA DISPLAY SCREEN (7).

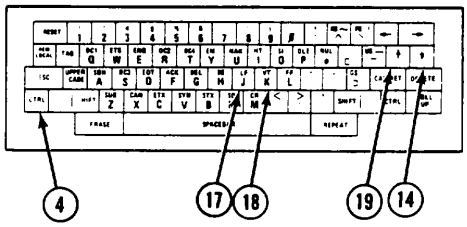


EL8IV163

INSPECT PLASMA DISPLAY (CONT**)**

35. PRESS CTRL KEY (4) AND J KEY (17) TWICE.
36. PRESS ↓ KEY (14) TWICE.
37. CHECK THAT ALPHA CURSOR (13) MOVES DOWN FOUR LINES.
38. PRESS CTRL KEY (4) AND K KEY (18).
39. PRESS ↑ KEY (19).
40. CHECK THAT ALPHA CURSOR (13) MOVES UP TWO LINES.





EL8IV164

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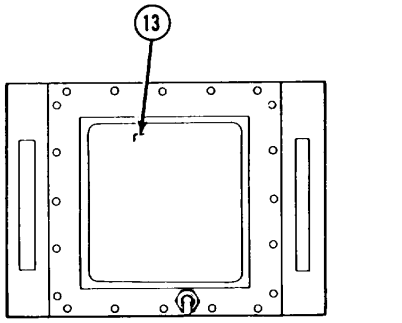
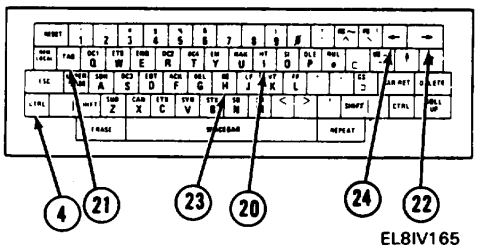
41. PRESS CTRL KEY (4) AND I KEY (20).
42. PRESS TAB KEY (21).
43. PRESS→KEY (22).
44. CHECK THAT ALPHA CURSOR (13) MOVES RIGHT THREE POSITIONS.
45. PRESS CTRL KEY (4) AND H KEY (23).
46. PRESS ←KEY (24).
47. CHECK THAT ALPHA CURSOR (13) MOVES LEFT TWO POSITIONS.

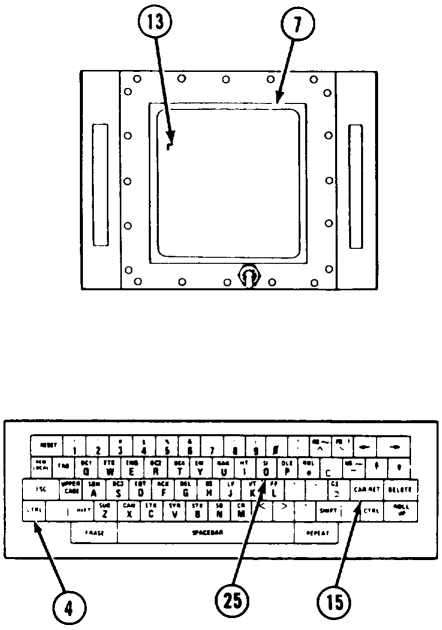




EL8IV165

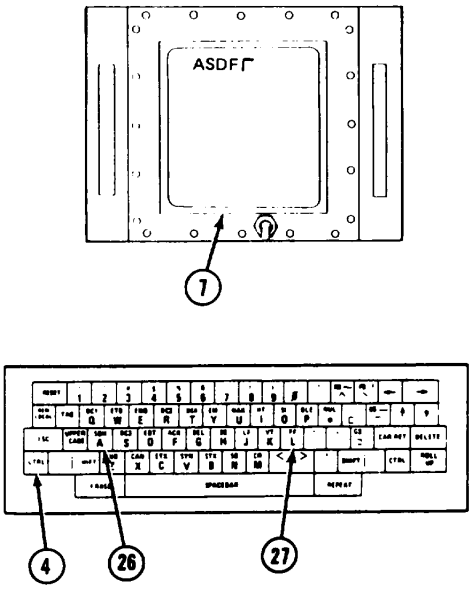
INSPECT PLASMA DISPLAY (CONT**)**

48. TYPE SEVERAL CHARACTERS.
49. PRESS CAR RET KEY (15).
50. CHECK THAT ALPHA CURSOR (13) MOVES TO LEFT SIDE OF PLASMA DISPLAY SCREEN (7).
51. PRESS CTRL KEY (4) AND O KEY (25).
52. CHECK THAT ALPHA CURSOR (13) DISAPPEARS.



EL8IV166

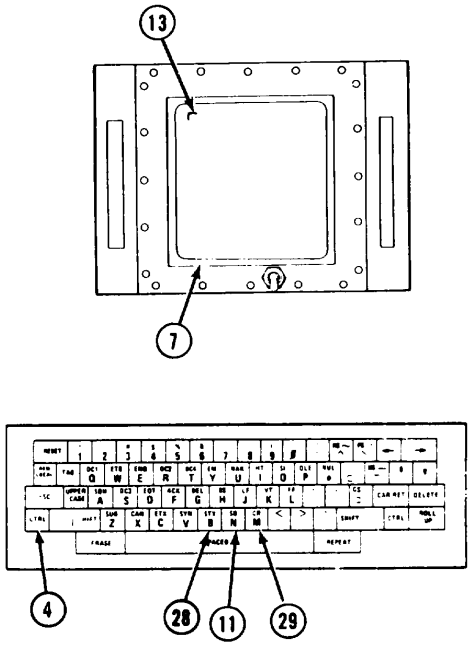
53. PRESS CTRL KEY (4) AND A KEY (26).
54. TYPE SEVERAL CHARACTERS.
55. CHECK THAT CHARACTERS APPEAR IN UPPER LEFT CORNER OF PLASMA DISPLAY SCREEN (7).
56. PRESS CTRL KEY (4) AND L KEY (27).
57. CHECK THAT PLASMA DISPLAY SCREEN (7) CLEARS.
58. TYPE SEVERAL CHARACTERS.
59. CHECK THAT CHARACTERS APPEAR IN UPPER LEFT CORNER OF PLASMA DISPLAY SCREEN (7).



EL8IV167

INSPECT PLASMA DISPLAY (CONT**)**

60. PRESS CTRL KEY (4) AND N KEY (11).
61. PRESS CTRL KEY (4) AND B KEY (28).
62. CHECK THAT ALPHA CURSOR (13) APPEARS.
63. PRESS CTRL KEY (4) AND M KEY (29).
64. CHECK THAT ALPHA CURSOR (13) MOVES TO LEFT SIDE OF PLASMA DISPLAY SCREEN (7).



EL8IV168

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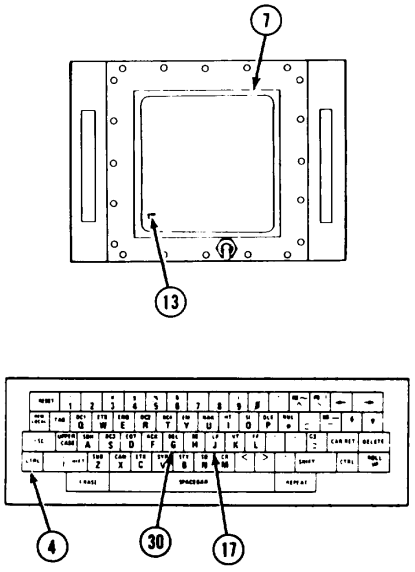
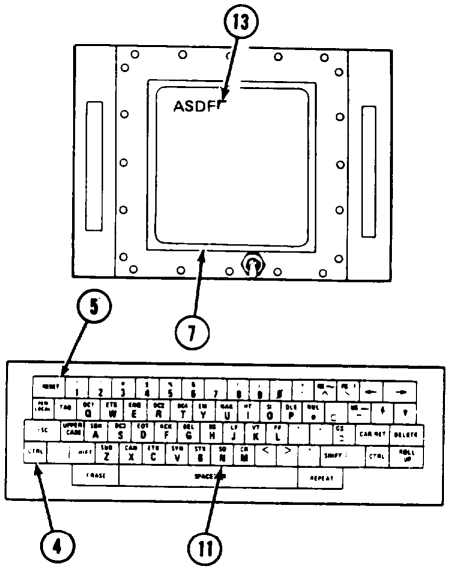
65. PRESS CTRL KEY (4) AND G KEY (30).
66. LISTEN AND CHECK THAT ALARM SOUNDS.
67. PRESS CTRL KEY (4) AND J KEY (17) SEVERAL TIMES UNTIL ALPHA CURSOR (13) MOVES TO BOTTOM LINE ON PLASMA DISPLAY SCREEN.
68. TYPE SEVERAL CHARACTERS TO FILL LAST LINE OF PLASMA DISPLAY SCREEN (7).
69. CHECK THAT ALPHA CURSOR (13) MOVES TO UPPER LEFT CORNER OF PLASMA DISPLAY SCREEN (7).



EL8IV169

INSPECT PLASMA DISPLAY (CONT**)**

70. TYPE SEVERAL CHARACTERS.
71. CHECK THAT TYPED CHARACTERS REPLACE ANY CHARACTERS WHERE ALPHA CURSOR (13) WAS POSITIONED.
72. PRESS CTRL KEY (4) AND RESET KEY (5).
73. CHECK THAT PLASMA DISPLAY SCREEN (7) CLEARS.
74. PRESS CTRL KEY (4) AND N KEY (11).
75. CHECK THAT ALPHA CURSOR (13) APPEARS IN UPPER LEFT CORNER OF PLASMA DISPLAY SCREEN (7).



EL8IV170

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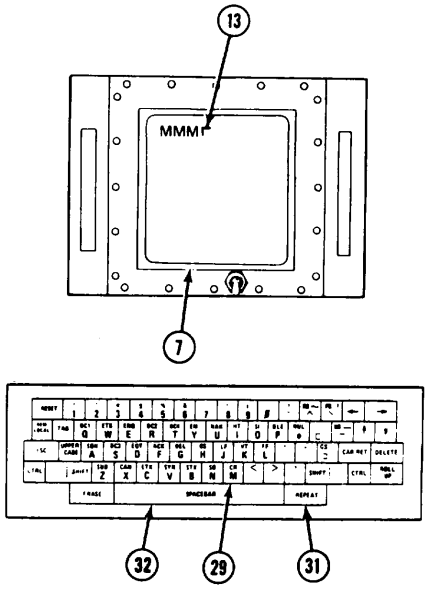
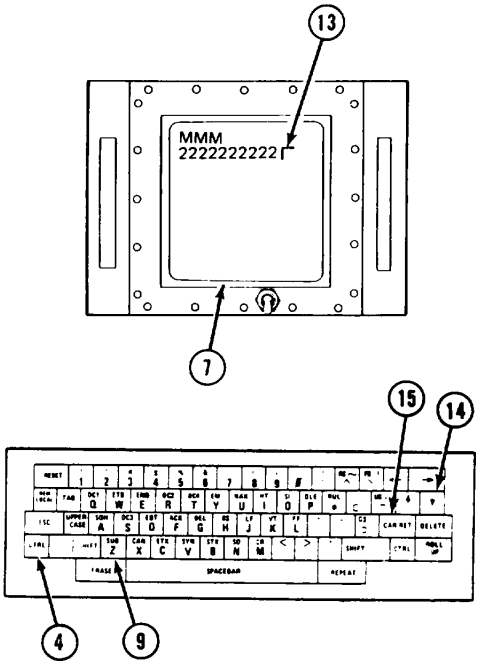
76. PRESS AND HOLD M KEY (29) AND REPEAT KEY (31) FOR SEVERAL SECONDS.
77. CHECK THAT M'S APPEAR ON PLASMA DISPLAY SCREEN (7) AS LONG AS M KEY (29) AND REPEAT KEY (31) ARE PRESSED.
78. PRESS SPACEBAR (32) SEVERAL TIMES.
79. CHECK THAT ALPHA CURSOR (13) MOVES ONE SPACE TO RIGHT EACH TIME SPACEBAR (32) IS PRESSED.



EL8IV171

INSPECT PLASMA DISPLAY (CONT**)**

80. PRESS ↓ KEY (14) AND CAR RET KEY (15).
81. CHECK THAT ALPHA CURSOR (13) MOVES TO LEFT SIDE AND ONE LINE LOWER ON PLASMA DISPLAY SCREEN (7).
82. PRESS CTRL KEY (4) AND Z KEY (9).
83. TYPE TEN 2'S.
84. PRESS CAR RET KEY (15).
85. CHECK THAT ALPHA CURSOR (13) MOVES TO LEFT SIDE OF PLASMA DISPLAY SCREEN (7).



EL8IV172

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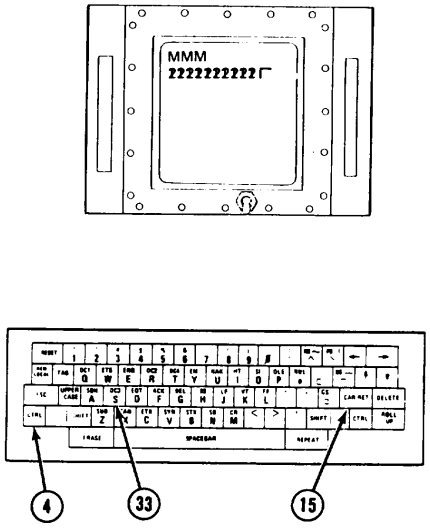
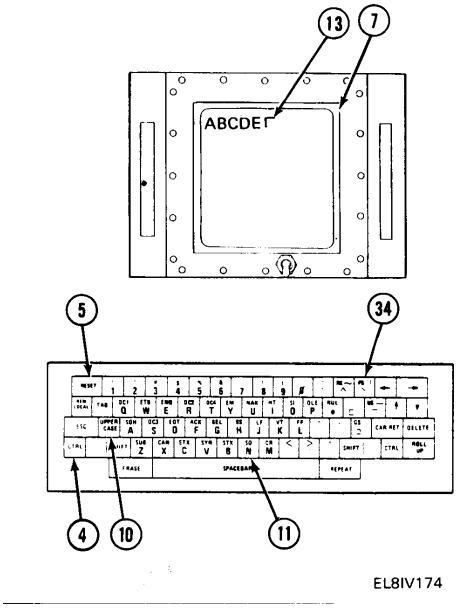
86. TYPE TEN 1'S.
87. CHECK THAT TEN 1'S ARE WRITTEN ON TOP OF THE TEN 2'S.
88. PRESS CAR RET (15).
89. PRESS CTRL KEY (4) AND S KEY (33).
90. TYPE TEN 3'S.
91. CHECK THAT TEN 3'S APPEAR IN PLACE OF THE TEN 1'S AND 2'S.



EL8IV173

INSPECT PLASMA DISPLAY (CONT**)**

92. PRESS CTRL KEY (4) AND RESET KEY (5)
93. PRESS CTRL KEY (4) ANDY KEY (34).
94. PRESS UPPER CASE KEY (10) TO DOWN POSITION.
95. TYPE ABCDE.
96. CHECK THAT CHARACTERS ON PLASMA DISPLAY SCREEN (7) APPEAR LARGER (7 BY 9 FONT).
97. PRESS CTRL KEY (4) AND RESET KEY (5).
98. PRESS CTRL KEY (4) AND N KEY (11).
99. CHECK THAT ALPHA CURSOR (13) APPEARS IN UPPER LEFT CORNER OF PLASMA DISPLAY SCREEN (7)



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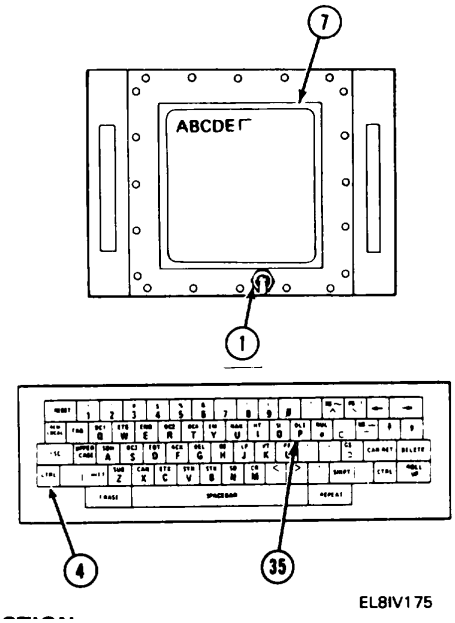
100. PRESS CTRL KEY (4) AND P KEY (35).
101. TYPE ABCDE.
102. THAT CHARACTERS ON PLASMA DISPLAY SCREEN (7) APPEAR SMALL (5 BY 7 FONT).
103. SET POWER SWITCH (1) TO OFF.



EL8IV175

END OF INSPECTION

2-28. REPLACE PLASMA DISPLAY FILTERS.

DESCRIPTION

This procedure covers: Remove (page 2-129). Install (page 2-130).

NOTE
There are two plasma displays in the receiver shelter. This procedure is the same for both.

INITIAL SETUP

Personnel Required: MOS 18E

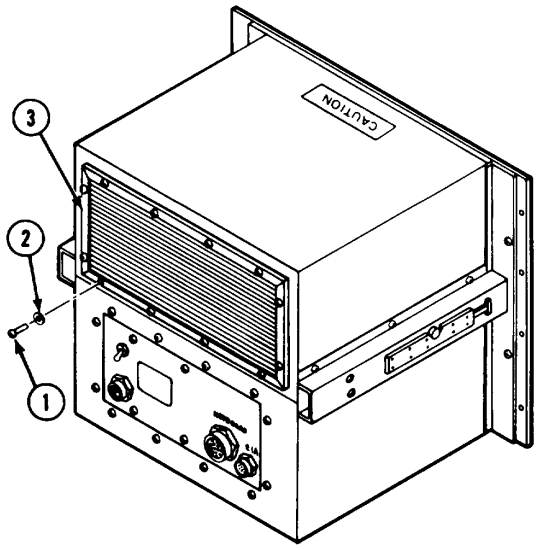
NOTE
PRELIMINARY PROCEDURE: Access plasma display. See page 2-52.

REMOVE

NOTE
This task is the same for exhaust filter and emi/intake filter. Exhaust filter is shown.

1 REMOVE 12 SCREWS (1) AND FLAT WASHERS (2).

2. LIFT OFF FILTER (3).



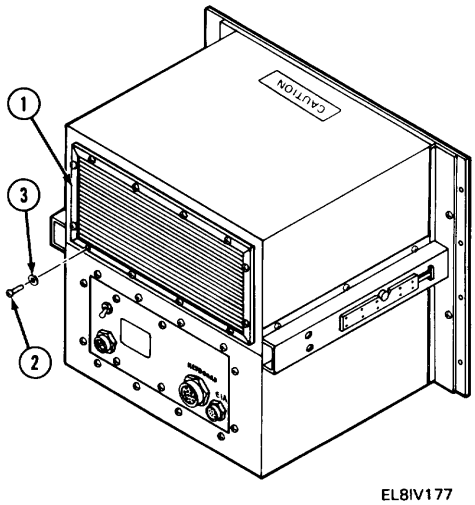
EL8IV176

END OF TASK

INSTALL

NOTE
This task is the same for exhaust filter and emi/intake filter. Exhaust filter is shown.

1. POSITION FILTER (1) ON PLASMA DISPLAY.
2. INSTALL 12 SCREWS (2) AND FLAT WASHERS (3).



NOTE
FOLLOW-ON MAINTENANCE: Secure plasma display. See page 2-52.

END OF TASK

2-29. INSPECT TTY-MORSE CONVERTER.

DESCRIPTION

NOTE
There are two tty-Morse converters in the receiver shelter. This task is the same for both except where noted. Tty-Morse converter 1 is shown.

INSPECT TTY-MORSE CONVERTER (CONT)

INITIAL SETUP

Personnel Required: MOS 18E

Reference: TM 11-5895-1160-10-1

NOTE

PRELIMINARY PROCEDURE: Do shelter power-up procedures. See TM 11-5895-1160-10-1.

NOTE

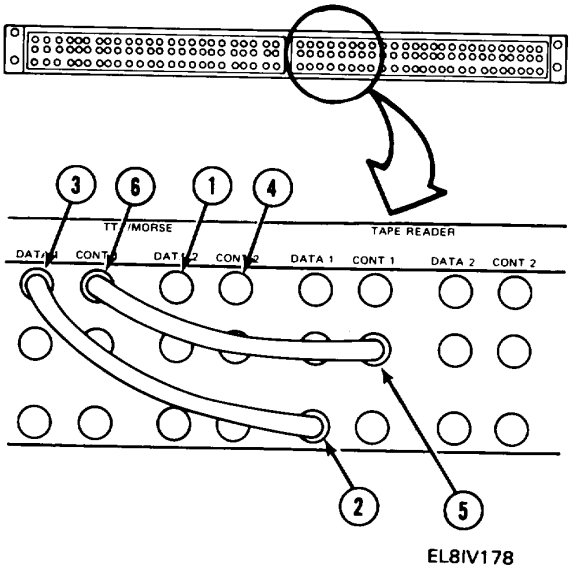
If working on tty-Morse converter 2, patch TTY/MORSE DATA 2 top jack (1) to TAPE READER DATA 1 bottom jack (2).

1. WORKING AT PATCH PANEL JACK-FIELD, PATCH TTY/MORSE DATA 1 TOP JACK (3) TO TAPE READER DATA 1 BOTTOM JACK (2).

NOTE

If working on tty-Morse converter 2, patch TTY/MORSE CONT 2 top jack (4) to TAPE READER CONT 1 middle jack (5).

2. PATCH TTY/MORSE CONT 1 TOP JACK (6) TO TAPE READER CONT 1 MIDDLE JACK (5).



EL8IV178

INSPECT TTY-MORSE CONVERTER (CONT**)**

3. WORKING AT TTY-MORSE CONVERTER, - SET POWER SWITCH (7) TO ON.

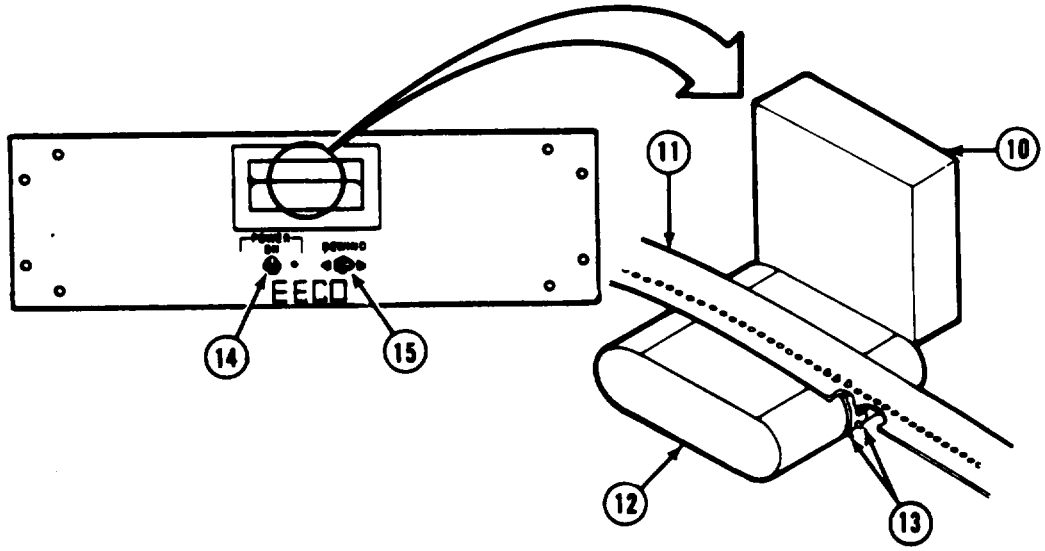
4. SET WPM SWITCHES (8) TO 010.

5. SET DITTER/NORMAL/MESSAGE SWITCH (9) TO NORMAL.

CAUTION

Do not let read head cover (10) snap open or shut when loading test tape (11) or equipment will be damaged.

NOTE
If RP-278A/U is installed, go to step 10.



6. WORKING AT RP-278/U TAPE READER, LOAD TEST TAPE (11) IN READ HEAD (12).

   - Lift up read head cover (10).
   - Position test tape on sprocket teeth (13) with side of tape toward back of tape reader.
   - Close read head cover.

7. SET POWER SWITCH (14) TO ON.

8. PUSH REWIND SWITCH (15) TO RIGHT AND RELEASE.

9. GO TO STEP 13.

INSPECT TTY-MORSE CONVERTER (CONT)

NOTE

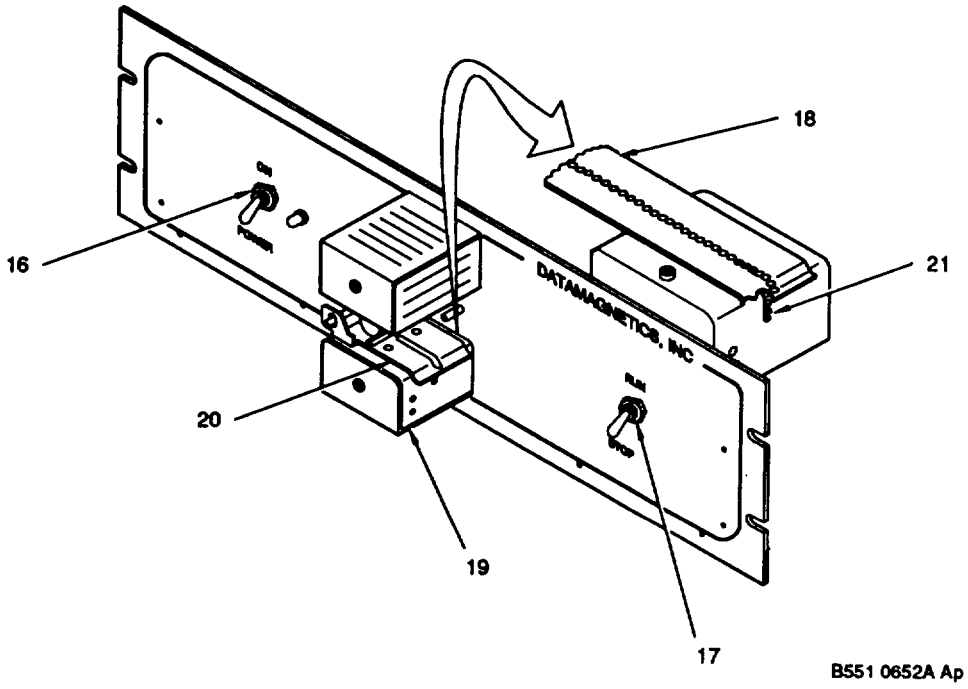
If RP-278/U is installed, go to step 6.

NOTE

Immediately after turn-on, the reader head will flash bright and return to dim. This flash indicates that the built-in test has functioned properly.

NOTE

After turn-off, the tape reader should not be turned on for two minutes. The time-out function on the built-in test sets a malfunction for an on-off-on cycle.



10. WORKING AT RP-278A/U TAPE READER, SET THE ON/POWER SWITCH (16) TO ON AND THE RUN/STOP SWITCH (17) TO STOP.

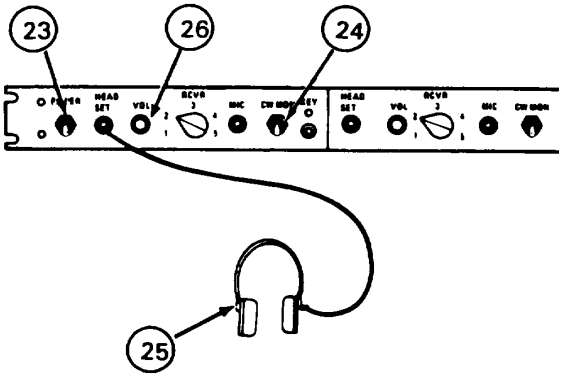
11. LOAD TEST TAPE (18) IN READ HEAD (19).

- Lift up read head cover (20).
- Position test tape on sprocket teeth (21) with side of tape toward back of tape reader.
- Close read head cover.

12. SET THE RUN/STOP SWITCH (17) TO RUN.

INSPECT TTY-MORSE CONVERTER (CONT)

13. WORKING AT THE AUDIO PANEL, SET POWER SWITCH (23) TO ON.
14. SET CW MON SWITCH (24) TO UP POSITION.
15. CONNECT HEADSET (25) TO LEFT SIDE HEAD SET JACK (26).
16. LISTEN AT HEADSET (18); CHECK THAT MORSE CODE SIGNAL CAN BE HEARD.
17. SET POWER SWITCH (23) TO OFF.
18. DISCONNECT HEADSET (25) FROM HEADSET JACK (26).



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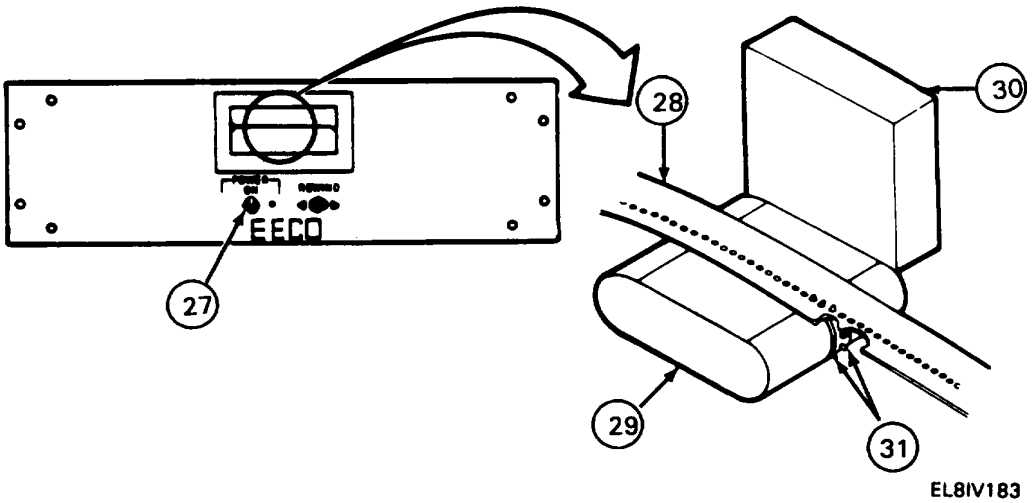

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NOTE

If RP-278A/U is installed, go to step 21.

19. WORKING AT TAPE READER, SET POWER SWITCH (27) TO OFF

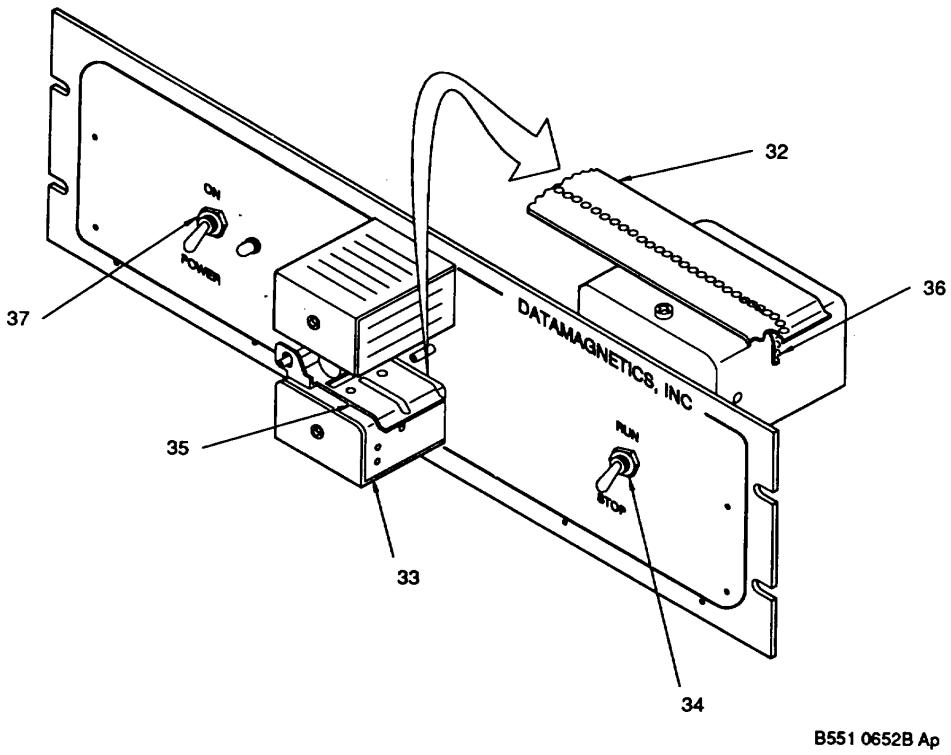
CAUTION

Do not let read head cover (30) snap open or shut when removing test tape (28) or equipment will be damaged.

20. REMOVE TEST TAPE (28) FROM READ HEAD (29).

- Lift up read head cover (30).
- Lift test tape off sprocket teeth (31).
- Close read head cover.

INSPECT TTY-MORSE CONVERTER (CONT)



NOTE

If RP-278/U is installed, go to step 19.

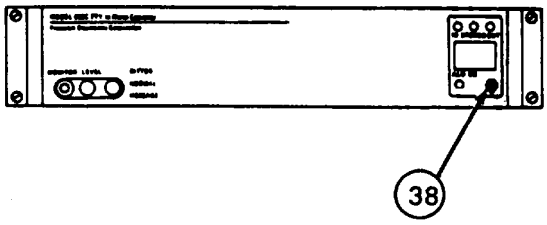
21. WORKING AT TAPE READER, REMOVE TEST TAPE (32) FROM READ HEAD (33).

- Set RUN/STOP switch (34) to STOP.
- Lift up read head cover (35).
- Lift test tape off sprocket teeth (36).
- Close read head cover.

22. SET POWER SWITCH (37) TO OFF: CHECK THAT POWER INDICATOR GOES OUT.

INSPECT TTY-MORSE CONVERTER (CONT)

23. WORKING AT TTY-MORSE CONVERTER, SET POWER SWITCH (38) TO OFF.



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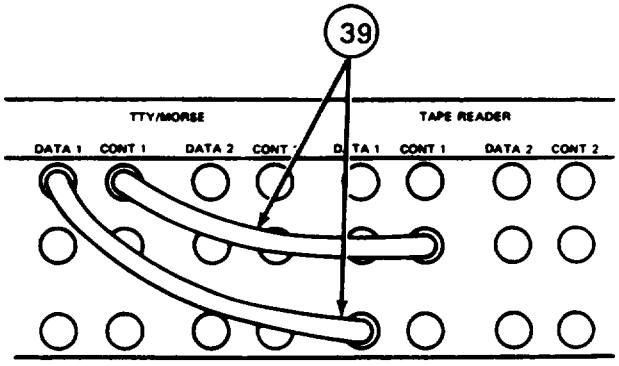
24. WORKING AT PATCH PANEL JACKFIELD, REMOVE TWO PATCH CORDS (39).



EL8IV185

END OF INSPECTION

2-30. ADJUST CPU MODEM.

DESCRIPTION

This procedure covers CPU modem adjustment for both the transmitter shelter and the receiver shelter.

NOTE

This procedure must be done any time the length of intershelter cabling between both shelters is

INITIAL SETUP

Personnel Required: MOS 18E (2)

References: TM 11-5895-1160-10-1
TM 11-5895-1160-10-2

NOTE

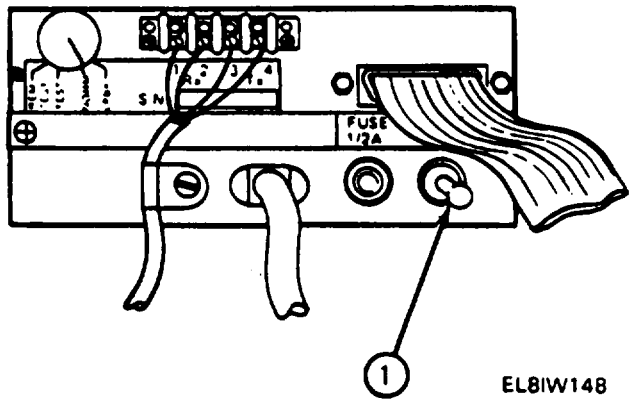
PRELIMINARY PROCEDURES:

- **Adjust receiver shelter intercom. See TM 11-58951160-10-1.**
- **Adjust transmitter shelter intercom. See TM 115895-1160-10-2.**
- **Access CPU modems. See page 2-52.**

NOTE

Technician A is located in the transmitter shelter and technician B is located in the receiver shelter. Voice communication should be maintained between both technicians using the intercom in each shelter.

1. TECHNICIANS A AND B: SET POWER SWITCH (1)ON BOTH CPU MODEMS TO OFF.

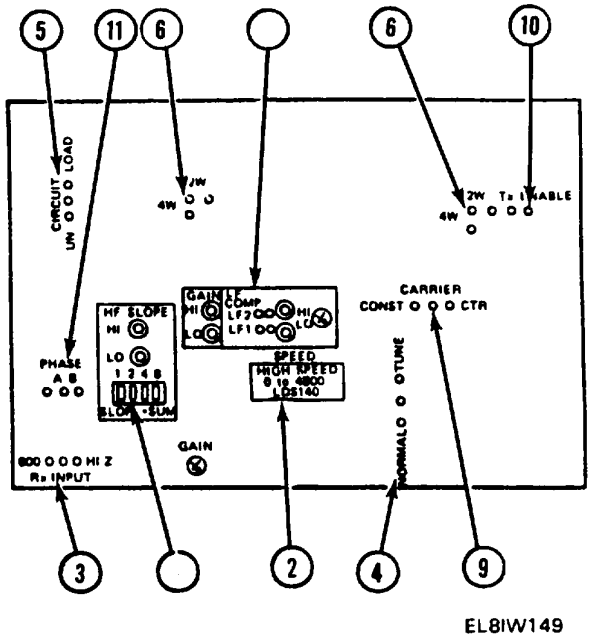


ADJUST CPU MODEM (CONT)

2. SET SPEED MODULE (2) ON BOTH CPU MODEMS SO THAT 0 TO 4800 IS PLACED DIRECTLY UNDER THE WORD SPEED.

3. WORKING AT CPU MODEM 1, SET STRAPS AS FOLLOWS:

Rx INPUT (3)	600
NORMAL/TUNE (4)	TUNE
CIRCUIT (5)	UN
4W/2W (6)	4W
HF SLOPE (7)	All switches to 0
LF COMP (8)	LF2
CARRIER (9)	CONST
Tx ENABLE (1 0)	IN
PHASE (1 1)	A



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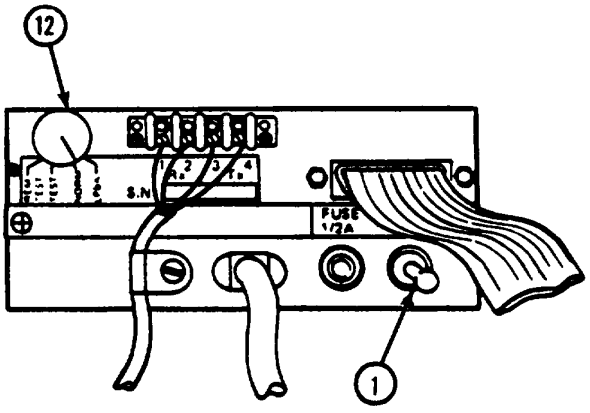
4. SET POWER SWITCH (1) TO ON.

5. SET MODE SWITCH (1 2) TO TEST.

6. TECHNICIAN B: WAIT FOR TECHNICIAN A TO GIVE GO-AHEAD.



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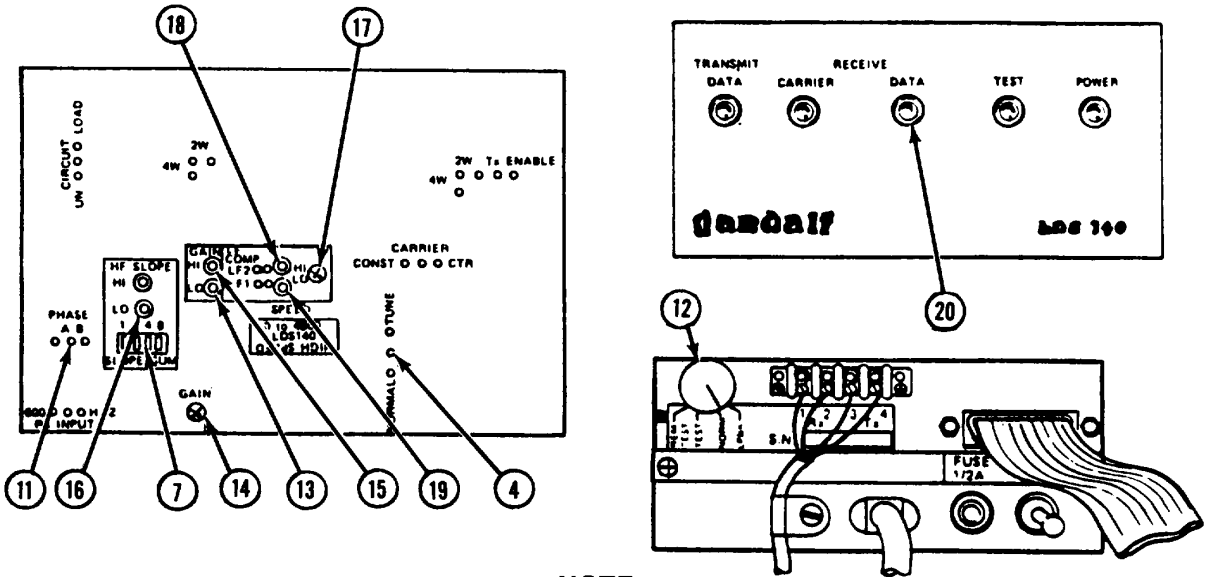
ADJUST CPU MODEM (CONT)



NOTE

If LO indicator (13) will not go out, leave GAIN control (14) at maximum setting.

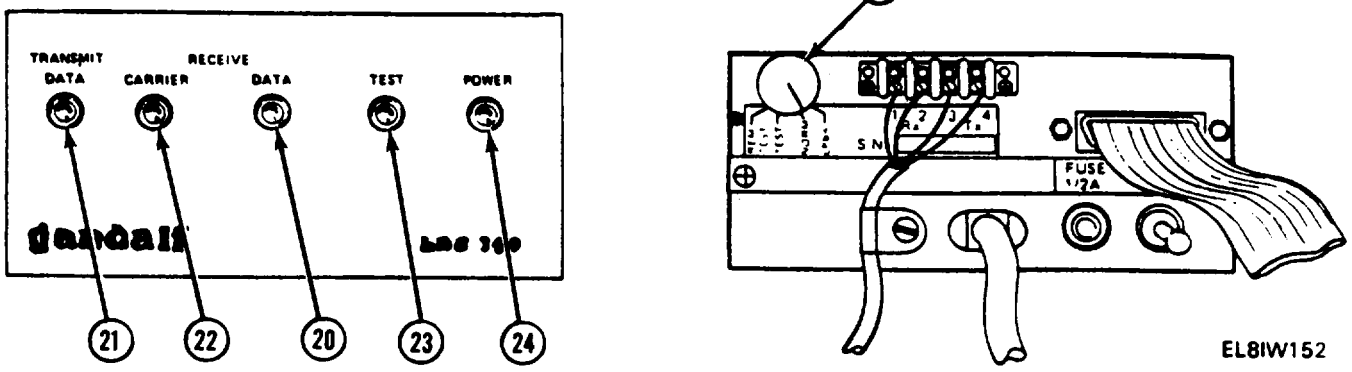
7. TECHNICIAN A: ADJUST GAIN CONTROL (14) UNTIL BOTH HI (15) AND LOW (13) INDICATORS GO OUT.
8. SET HF SLOPE SWITCHES (7), ONE AT A TIME, UNTIL LO INDICATOR (16) GOES OUT COMPLETELY.
9. REPEAT STEPS 7 AND 8 UNTIL HF SLOPE SWITCHES (7) ARE SET TO LOWEST SETTING THAT KEEPS LO INDICATOR (16) OFF AND GAIN (12) IS SET TO KEEP BOTH HI (15) AND LO (13) INDICATORS OFF.
10. ADJUST LF COMP CONTROL (17) UNTIL HI (18) AND LO (19) INDICATORS GO OUT.

NOTE

RECEIVE DATA indicator (20) should be out.

11. CHECK RECEIVE DATA INDICATOR (20) ON FRONT PANEL.
    - If indicator is lit, go to step 12.
    - If indicator is not lit, go to step 14.
12. CHANGE POSITION OF PHASE STRAP (1 1).
13. WAIT 10 SECONDS AND REPEAT STEP 11.
14. SET MODE SWITCH (12) ON REAR PANEL TO NORM.

ADJUST CPU MODEM (CONT)



15. SET NORMAL/TUNE STRAP (4) TO NORMAL.

16. GIVE TECHNICIAN B GO-AHEAD AND WAIT FOR GO-AHEAD FROM TECHNICIAN B.

17. TECHNICIANS B: WORKING AT CPU MODEM 1, SET MODE SWITCH (12) ON REAR PANEL TO REM TEST.

18. WAIT 10 SECONDS AND DO STEPS 7 THRU 15.

19. GIVE TECHNICIAN A GO-AHEAD.

20. TECHNICIANS A AND B: REPEAT STEPS 4 THRU 20 FOR CPU MODEM 2.

21. TECHNICIAN A: SET MODE SWITCH (12) ON BOTH CPU MODEMS TO NORM.

22. TECHNICIAN B: SET MODE SWITCH (12) ON BOTH CPU MODEMS TO REM TEST.

23. TECHNICIAN A: WAIT 10 SECONDS AND CHECK FRONT PANEL INDICATORS AS FOLLOWS:

TRANSMIT DATA (21)	ON, DIM, OR FLASHING
RECEIVE CARRIER (22)	ON, DIM, OR FLASHING
RECEIVE DATA (20)	OFF
TEST (23)	ON
POWER (24)	ON

24. TECHNICIAN B: WAIT 10 SECONDS AND CHECK FRONT PANEL INDICATORS AS FOLLOWS:

TRANSMIT DATA (21)	ON, DIM, OR FLASHING
RECEIVE CARRIER (22)	ON
RECEIVE DATA (20)	OFF
TEST (23)	ON
POWER (24)	ON

ADJUST CPU MODEM (CONT)

25. SET MODE SWITCH (12) ON BOTH CPU MODEMS TO NORM.
26. TECHNICIAN A: SET MODE SWITCH (12) ON BOTH CPU MODEMS TO REM TEST AND DO STEP 24.
27. TECHNICIAN B: DO STEP 23.
28. TECHNICIAN A: SET MODE SWITCH (12) ON BOTH CPU MODEMS TO NORM.

NOTE

FOLLOW-ON MAINTENANCE: Secure CPU modems.
See page 2-52.

END OF TASK

APPENDIX A
REFERENCES

A-1. SCOPE.

This appendix lists all forms, technical bulletins, technical manuals, and miscellaneous publications referenced in this manual.

A-2. Forms.

Recommended Changes to Publications and Blank Forms ..... DA Form 2028
Recommended Changes to Equipment Technical Publications ..... DA Form 2028-2
Hand Receipt ..... DA Form 2062
Equipment Inspection and Maintenance Worksheet ..... DA Form 2404
Equipment Modification Record ..... DA Form 2408-5
Discrepancy in Shipment Report (DISREP) ..... SF 361
Report of Discrepancy (ROD)) ..... SF 364
Quality Deficiency Report ..... SF 368

A-3. TECHNICAL BULLETINS.

Safety Measures to be Observed When Installing and Using Whip Antennas, Field-Type Masts, Towers and Antennas and Metal Poles That are Used With Communications, Radar and Direction Finder Equipment ..... TB 43-0129

Field Instructions for Painting and Preserving Communications-Electronics Equipment ..... TB 43-0118

Maintenance and Repair Procedure for Shelters, Electrical Equipment S-141/G and S-141B/G (NSN 5410-00-752-9898), S-144/G, S-144A/G, S-144B/G, S-144C/G and S-144D/G (5410-00-542-2532), S-250/G (5410-00-999-4935), S-250/G (Shielded) (5410-00-489-8076), S-280/G (5410-00-999-5269), S-260A/G 410-00-999-6022), S-2808/G (5410-00-117-2866), S-2808/G (Shielded) (5410-00-001-4093), S-280C/G and S-318/G (5410-00-763-2339) and S-318A/G (5410-00-116-7086) (Reprinted W/Basic Incl C1-2) Subscription Form: 12-34C-R BLK 0331 ..... TB 43-0124

A-4. TECHNICAL MANUALS.

Operator's, Organizational, Direct Support, and General Support Maintenance Manual for Air Conditioner, Horizontal, Compact, 18,000 BTU/ HR Cooling; Model F18H, 230 V, Single Phase, 50/60 HZ (NSN 4120-00-411-3729); F18H-3, 208 V, 3 Phase, 50/60 HZ (4120-01-076-1753), F18H-4, 208 V, 3 Phase, 400 HZ (KECO) (4120-00-411-3731), F18H-3A, 208 V, 3 Phase, 50/60 HZ (4120-01-122-0626) and F18H-4A, 208 V, 3 Phase, 400 HZ (4120-01-122-0627) (TM 07592B-14/1) ..... TM 11-5-4120-367-14

Operator's, Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Dolly Set, Lift, Transportable Shelter: M689 (NSN 2330-00-266-6076); Composed of Dolly, Trailer, Front; M690 (2330-00-226-6077); Dolly, Trailer, Rear; M691 (2330-00-226-6078); Dolly Set, Lift, Transportable Shelter; M689E1 (Craig) (2330-00-937-1175) Composed of Dolly, Trailer, Front; M690E1 (2330-00-937-1173); Dolly, Trailer, Rear; M691E1 (2330-00-937-1174); Dolly Set, Lift Transportable Shelter; M689E1 (Gichner)/M840 (2330-00-937-1175) Composed of Dolly, Trailer, Front, M841 (2330-00-937-1173); Dolly, Trailer, Rear; M842 (2330-00-937-1174); Dolly, Set, Lift, Transportable Shelter; M829 (2330-00-484-0861) Composed of Dolly, Trailer, Front; M830 (2330-00-484-0862); Dolly Trailer, Rear; M831 (2330-00-484-0863); Dolly Set, Lift, Transportable Shelter; M832 (2330-00-221-4939) Composed of Dolly, Trailer, Front; M833 (2330-00-221-4938) and Dolly, Trailer, Rear; M834 (2330-00-221-4937) ..... TM 9-2330-275-14&P

Operator's and Organizational Maintenance Manual for Telephone Set TA-312/PT (NSN 5805-00-543-0012) and TA-312A/PT (NSN 5805-01-217-7310) ..... TM 11-5805-201-12

Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List): Terminal, Telegraph-Telephone AN/TCC-29 (NSN 5805-00-902-3087) (Including Terminal, Telegraph TH-22/TG (NSN 5805-00-907-8300) and Converter, Telegraph Telephone Signal CV-425/U (NSN 5805-00-985-9088)) ..... TM 11-5805-356-12

Operator's and Organizational Maintenance Manual for Automatic Telephone Central Offices AN/TTC-38(V)l (NSN 5805-00-186-0681) and AN/TTC-38(V)2 (5805-00-186-0640) ..... TM 11-5805-628-12

Operator's and Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Electronic Teletypewriter TSEC/KW-7-2 (NSN 5810-01-080-5613) (FOUO) ..... TM 11-5810-221-12&P

Organizational, Direct Support, and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for Comsec Board Set, E-FFY CPU Board (NSN 5810-01-145-8502), E-FFZ Memory Board (NSN 5810-01-145-8501) (FOUO) ..... TM 11-5810-355-24&P

Operator's, Unit, and Intermediate Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Display Set AN/FYQ-90(V)1 ..... TM 11-5815-613-13&P

Operator's, Organizational and Direct Support Maintenance Manual for Spectrum Monitor Radio Receiver, R-2093/TRO-35(V), Model RSS-4 (NSN 5820-01-038-9119) ..... TM 11-5820-884-13

Operator's, Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) Mast Base AB- 15/GR ..... TM 11-5985-230-14P

Operator's Manual for Communication Central AN/TSC-99 (NSN 5895-01-121-4485) Receiver Group OR-218/TSC-99 (NSN 5895-01-121-4585) ..... TM 11-5895-1160-10-1

Operator's Manual for Communication Central AN/TSC-99 (NSN 5895-01 -121-4485) Transmitter Group OT-11 8/TSC-99 (NSN 5895-01-121-1986) ..... TM 11-5895-1160-10-2

Organizational Maintenance Manual for Radio Set AN/VSC-7 (NSN 5820-01-090-5449)	TM 11-5895-1181-20 (to be published)
Operator's Manual for Antenna Group OE-316/TSC-99 (NSN 5985-01-092-5944)	TM 11-5985-361-10
Organizational and Direct Support Maintenance Manual: Antenna Group OE-316/TSC-99 (NSN 5985-01-092-5944)	TM-11-5985-361-23
Operator's, Unit, and Intermediate Direct Support Maintenance Manual: Antenna Groups OE-316/TSC-99 (NSN 5895-01-092-5944) and OE-316A/TSC-99 (NSN 5985-01-210-0496)	TM 11-5985-361-13 (to be published)
Operator's, Organizational and Direct Support Maintenance Manual: Antenna Group OE-317/TSC-99 (NSN 5895-01-095-6206)	TM 11-5985-362-13
Operator's, Unit, and Intermediate Direct Support Maintenance Manual for Antenna Group OE-317A/TSC-99 (NSN 5895-01-187-0429)	TM 11-5985-380-13
Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools List) for MultimeterAN/USM-223	TM 11-6625-654-14
Operator's, Unit and Intermediate Direct Support Maintenance Manual (Including Repair Parts and Special Tools List) for Digital Voltmeter ME-529/TSC-99 (NSN 6625-01-050-8696	TM 11-6625-3134-13&P
Operator's and Organizational Maintenance Manual for Processor, AN/UYK-19A (NSN 7035-01-134-7148); Processor, AN/UYK-19AX (7035-01-139-4434); Plasma Display Set, AN/UYQ-10(V)1 (7035-01-163-3667); Plasma Display Set, AN/UYQ-10(V)2 (7035-01-158-7673); Plasma Display Set, AN/UYQ-10(V)lX Plasma Display Set, AN/UYQ-10(V)2X Magnetic Tape Set, AN/UYQ-10(V)2X Magnetic Tape Set, AN-UYH-1 (7025-01-134-3338); Teleprinter, Electrographic TT-773(P)/G (5815-01 -127-5867) Teleprinter, Electrographic TT-772-(P)/G (5815-01-127-5868)	TM 11-7021-201-12
Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command)	TM 750-244-2

A-5. MISCELLANEOUS.

Consolidated Index of Army Publications and Blank Forms	DA Pam 25-30
The Army Maintenance Management System (TAMMS)	DA Pam 738-750
First Aid for Soldiers	FM 21-11
Abbreviations for use on Drawings, and in Specifications, Standards and in Technical Drawings	MIL-STD-12
Preservation, Packaging, Packing and Marking Materials, Supplies and Equipment used by the Army	SB 38-100

APPENDIX B
MAINTENANCE ALLOCATION CHART

Section I. INTRODUCTION

B-1. GENERAL.

This appendix provides a summary of the maintenance operations for Communication Central AN/ TSC-99. 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 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 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 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, or module (component or assembly) in a manner to allow proper functioning of an 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, aline, 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 (services/actions) 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 C unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel 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 names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column (3) - Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see para B-2.)

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 the maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures will be shown for each level. The number of manhours 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:

<u>Unit</u>
C - Operator/Crew
O - Unit (Organizational)

<u>Intermediate</u>
F - Direct Support
H - General Support

<u>Depot</u>
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 (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 the 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 NA TO 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 (SECTION IV).

a. Reference Code. The 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 AN/TSC-99 COMMUNICATION CENTRAL

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE LEVEL C	O	F	H	D	(5) TOOLS AND EQUIPMENT	(6) REMARKS
00	COMMUNICATION	INSPECT	0.5						
	CENTRAL	INSPECT		0.5				1	A
	AN/TSC-99	INSPECT			1.0			2,3	
		SERVICE		1.0				1,21	
		SERVICE			1.0			2,3,21	
		TEST			1.0			2 THRU 25	
		TEST					X		
		INSTALL		3.0				1	
		INSTALL			1.0			2,3	
		REPAIR			1.0			2 THRU 25	
		OVERHAUL					X		
01	TRANSMITTER	INSPECT	0.1						
	GROUP	INSPECT		0.1				1	
	0T-118/TSC-99	INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.5				1	
		TEST			0.5			2 THRU 15, 18 THRU 25	
		TEST					X		
		REPAIR			0.6			2 THRU 15 18 THRU 25	
		REPAIR					X		
0101	TRANSMIT	INSPECT	0.1						
	COMPUTER	INSPECT		0.1				1	B
	SUBSYSTEM	INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.5				1	
		TEST			0.5			2,3,6,9,10, 18,19,20	
		TEST					X		
		REPAIR				0.6		2,3,6,9,10, 18,19,20,27, 23	
		REPAIR					X		
010101	DATA PROCESSING	INSPECT	0.1						
	SET AN/UYK-19	INSPECT		0.1				1	C
		INSPECT			0.1			2.3	
		REPLACE			0.5			2,3	
010102	DATA PROCESSING SET AN/UYK-19	SAME AS GRP 010101							
010103	CONTROL-POWER	INSPECT	0.1						
	SUPPLY	INSPECT		0.1				1	
	C-11034/U	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010104	SELECTOR, DATA	INSPECT	0.1						
	COMMUNICATIONS	INSPECT		0.1				1	
	CHANNEL	INSPECT			0.1			2,3	
	SA-2349/U	TEST			0.1			2,3,6,10	
		TEST					X		
		REPLACE			0.1			2,3,6,10	
		REPAIR					X		
010105	RECORDER-	INSPECT	0.1						
	REPRODUCER, DATA	INSPECT		0.1				1	
	RD-485/U	INSPECT			0.1			2,3	
		REPLACE			0.2			2,3	
010106	POWER SUPPLY	INSPECT		0.1				1	
	PP-7715/U	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		ADJUST			0.1			2,3,10	
		REPLACE			0.3			2,3,10	
		REPAIR					X		
010107	PRINTER	INSPECT	0.1						
	TERMINAL, COM-	INSPECT		0.1				1	
	PUTER TT-766/U	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.1			2,3,10,19,20	D
		REPAIR					X		
01010701	BASIC ELECTRON-	INSPECT			0.1			2,3	
	ICS BOARD (GE)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010702	SPECIAL FUNCTION	INSPECT			0.1			2,3	
	MODULE (VA)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010703	MANUAL DEVICES	INSPECT			0.1			2,3	
	CONTROL (GB)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010704	SWITCH MODULE	INSPECT			0.1			2,3	
	(SB)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010705	CONTROL MODULE	INSPECT			0.1			2,3	
	(STT)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01010706	MANUAL COMMUNI-	INSPECT			0.1			2,3	
	CATIONS CONTROL	TEST			0.1			2,3,10,19,20	
	(BET)	TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010707	PRINTER ASSEMBLY	INSPECT			0.1			2,3	
	(DR)	TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0101070701	NEEDLE PRINT	INSPECT			0.1			2,3	
	HEAD	TEST			0.1			2,3	
		TEST					X		
		ADJUST			0.1			2,3	
		REPLACE			0.1			2,3	
		REPAIR					X		
0101070702	PRINTER	INSPECT			0.1			2,3	
	MECHANICAL ASSY	TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01010708	KEYBOARD (TA)	INSPECT		0.5	0.5			2,3	
		TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01010709	POWER SUPPLY	INSPECT			0.1			2,3	
	(SV)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01010710	ANSWERBACK	INSPECT			0.1			2,3	
	MODULE (KG)	TEST			0.1			2,3,10,19,20	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
010108	READER, PUNCHED	INSPECT	0.1						AE
	TAPE RP-278/U	INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.1			2,3,6,9,10,22 23	
		REPAIR					X		D
01010801	READ HEAD	INSPECT			0.1			2,3	
	ASSEMBLY	TEST			0.1			2,3,6,9,10	
		TEST					X		
		ADJUST			0.1			2,3,6,9,10	
		REPLACE			0.1			2,3,10	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level Unit C	Unit O	Intermediate F	Intermediate H	Depot D	(5) Tools and Equipment	(6) Remarks
01010802	PCB ASSEMBLY, READER CONTROL	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		TEST					X		
		ADJUST			0.1			2,3,6,9,10	
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01010803	POWER SUPPLY/ CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		REPLACE			0.1			2,3,10,22,23	E,F
		REPAIR					X		
01010804	UART ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
010109	SWITCHBOARD	INSPECT	0.1						
	INTERIOR	INSPECT		0.1				1	
	COMMUNICATION	INSPECT			0.1			2,3	
	SB/4112/TSC-99	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
010110	RECEIVER-	INSPECT	0.1						
	TRANSMITTER	INSPECT		0.1				1	
	DIGITAL DATA	INSPECT			0.1			2,3	
	RT-392/U	TEST			0.1			2,3,10	
		TEST					X		
		ADJUST		0.1					
		ADJUST			0.1				
		REPLACE			0.1			2,3,10	
		REPAIR					X		
010111	RECEIVER- TRANSMITTER DIGITAL DATA RP-1392/U	SAME AS GRP 010110							
010112	READER, PUNCHED	INSPECT	0.1						SEE NOTE AE
	TAPE RP-278A/U	INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		TEST					X		
		REPLACE			0.2				
		REPAIR			0.3			2,3,6,9,10,22, 23	SEE NOTE D
		REPAIR					X		
01011201	POWER SUPPLY	INSPECT			0.1			2,3	
	ASSEMBLY (A1)	TEST			0.1			2,3,6,9,10	
		TEST					X		
		ADJUST			0.1			2,3,10	
		REPLACE			0.2			2,3	
		REPAIR					X		
01011202	READER INTERFACE	INSPECT			0.1			2,3	
	CKT CARD (A3)	TEST			0.1			2,3,6,9,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01011203	CPU CKT CARD (A2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		SEE NOTES E,F
01011204	CHASSIS ASSY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,9,10	
		REPAIR			0.1			2,3	
		REPAIR					X		
0102	TRANSMIT HF	INSPECT	0.1						
	SUBSYSTEM	INSPECT		0.1				1	B
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.1				1	
		TEST			0.4			2,3,4,7,8,10,11 THRU 15, 24, 25	
		TEST					X		
		REPAIR			0.4			2,3,4,7,8,10,11 THRU 15, 24, 25	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010201	TRANSMITTER,	INSPECT	0.1						
	RADIO T-1449/URC	INSPECT		0.8				1	
	(HF-8010A)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		CALIBRATE			0.5			2,3,4,7,8,10, 11,12	
		REPLACE			0.2			2,3	
		REPAIR			0.4			2,3,4,7,8,10, 11,12	D
		REPAIR					X		
01020101	POWER SUPPLY	INSPECT			0.1			2,3	
	(A1)	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
0102010101	POWER SUPPLY	INSPECT			0.1			2,3	
	CIRCUIT CARD	TEST			0.1			2,3,10	
	(A1A1)	TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01020102	FRONT PANEL	INSPECT			0.1			2,3	
	ASSEMBLY (A2)	TEST			0.1			2,3,10	
		REPLACE			0.1			2,3,10	
		REPAIR			0.1			2,3,10	
		REPAIR					X		
0102010201	INDICATOR BOARD	INSPECT			0.1			2.3	
	(A2A1)	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR					X		
0102010202	MOUNTING BOARD	INSPECT			0.1			2,3	
	(A2A2)	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			1.5			2,3,10	
		REPAIR					X		
0102010203	THUMBWHEEL	INSPECT			0.1			2,3	
	SWITCH BOARD	TEST			0.1			2,3,10	
	(A2A3)	TEST					X		
		REPLACE			0.4			2,3.10	
		REPAIR					X		
01020103	TRANSMIT AUDIO	INSPECT			0.1			2,3	
	CARD (AS)	TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level Unit C	Unit O	Intermediate F	Intermediate H	Depot D	(5) Tools and Equipment	(6) Remarks
01020104	CHANNEL A IF CARD (A8)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
01020105	RF TRANSLATOR CARD (A9)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020106	CONTROL CARD (A10)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10 11,12	
		REPAIR					X		
01020107	PARALLEL INPUT CARD (A11)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020108	PARALLEL OUTPUT CARD (A12)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
01020109	SERIAL INTERFACE CARD (A13)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3,	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
01020110	SYNTHESIZER VOLTAGE REGU-LATOR (A14)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,8,10, 11,12	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01020111	SYNTHESIZER REFERENCE MODULE (A15)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020112	SYNTHESIZER END DECADE BOARD (A17)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1				
		REPAIR					X		
01020113	SYNTHESIZER 1 KHZ DECADE BOARD (A19)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1				
		REPAIR					X		
01020114	SYNTHESIZER 10 KHZ DECADE BOARD (A20)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020115	SYNTHESIZER 100 KHZ DECADE BOARD (A21)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020116	SYNTHESIZER OUT-PUT MODULE (A22)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020117	SYNTHESIZER SIDEBOARD (A23)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			2.5			2,3	
		REPAIR					X		
01020118	OVEN STANDARD	INSPECT			0.1			2,3	
		REPLACE			0.8			2,3	
		REPAIR					X		
01020117	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			1.0			2,3,10	E,F
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010202	AMPLIFIER, RADIO	INSPECT	0.1						
	FREQUENCY	INSPECT		0.3				1	
	AM-7130/URC	INSPECT			0.1			2,3	
	(HF-8020)	TEST			0.1			2,3,4,8,10,13, 14,15	
		TEST					X		
		REPLACE			0.7			2,3	
		ADJUST			0.1			2,3,4,8,10,13, 14,15	
		REPAIR			0.4			2,3,4,8,10,13, 14,15	D
		REPAIR					X		
01020201	INTERFACE CARD	INSPECT			0.1			2,3	
	(A1)	TEST			0.1			2,3,4,8,10,13, 14,15	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020202	CONTROL LOGIC	INSPECT			0.1			2,3	
	CARD (A2)	TEST			0.1			2,3,4,8,10,13, 14,15	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020203	BAND LOGIC CARD	INSPECT			0.1			2,3	
	(A3)	TEST			0.1			2,3,4,8,10,13, 14,15	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020204	SERVO CARD (A4)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10,13, 14,15	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01020205	ADJUSTMENT CARD	INSPECT			0.1				
	(A6)	TEST			0.1				
		TEST					X		
		REPLACE			0.1				
		ADJUST			0.1				
		REPAIR					X		
01020206	DRIVER MODULE	INSPECT			0.1			2,3	
	(A8)	TEST			0.1			2,3,4,8,10,13, 15	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,8,10,13, 15	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level Unit C	Unit O	Intermediate F	Intermediate H	Depot D	(5) Tools and Equipment	(6) Remarks
01020207	CHASSIS SUB-ASSEMBLY (A9)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		REPAIR			0.4			2,3,10	D,F
		REPAIR					X		
0102020701	LOADING COIL ASSEMBLY (A9A2)	INSPECT			0.1			2,3	
		REPLACE			1.6			2,3.10	
		ADJUST			0.2			2,3,10	
		REPAIR					X		
0102020702	TUNING COIL ASSEMBLY (A9A1)	INSPECT			0.1			2,3	
		REPLACE			0.6			2,3,10	
		ADJUST			0.2			2,3,10	
		REPAIR					X		
0102020703	BANDSWITCH ASSEMBLY (A9A3)	INSPECT			0.1			2,3	
		REPLACE			1.1			2,3,10	
		ADJUST			0.2			2,3,10	
		REPAIR					X		
0102020704	DISCRIMINATOR CARD (A9A4)	INSPECT			0.1			2,3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102020705	WATTMETER ASSEMBLY (A9A5)	INSPECT			0.1			2,3	
		REPLACE			1.0			2,3,10	
		REPAIR					X		
0102020706	HIGH-VOLTAGE FILTER ASSY	INSPECT			0.1			2.3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102020707	RESISTER ASSY (A9A10)	INSPECT			0.1			2,3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102020708	DUCT ASSEMBLY	INSPECT			0.1			2,3	
		REPLACE			1.2			2,3	
		REPAIR					X		
0102020709	GRID ASSEMBLY (A9A6)	INSPECT			0.1			2,3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102020710	PLATE/OVERVOLT-AGE DETECTOR (A9A7/A9A8)	INSPECT			0.1			2,3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102020711	INTERCONNECT BOARD (A9A11)	INSPECT			0.1			2,3	
		REPLACE			1.0			2,3,10	
		REPAIR					X		
0102020712	AMPLIFIER TUBE SOCKET (A9XV1)	INSPECT			0.1			2,3	
		REPLACE			0.4			2,3,10	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0102020713	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.4			2,3,10	E,F
		REPAIR					X		
010203	POWER SUPPLY	INSPECT	0.1						
	PP-7717/URC	INSPECT		0.3				1	
	(HF-8030)	INSPECT			0.1			2,3	
		TEST			0.4			2,3,4,8,10,13, 14,15,24,25	
		TEST					X		
		REPLACE			0.8			2,3	
		ADJUST			0.1			2,3,4,8,10,13, 14,15,24,25	
		REPAIR			0.4			2,3,4,8,10,13, 14,15,	D
		REPAIR					X		
01020301	CONTROL CARD	INSPECT			0.1			2,3	
	(A2)	TEST			0.1			2,3,4,8,10,13 14,15	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,8,10,13 14,15	
		REPAIR					X		
01020302	POWER SUPPLY	INSPECT			0.1			2,3	
	SUBASSEMBLY (Al)	TEST			0.1			2,3,4,8,10,13 15	
		TEST					X		
		REPLACE			0.3			2,3	
		ADJUST			0.1			2,3,4,8,10,13 15	
		REPAIR			0.2			2,3,4,8,10,13 15	D
		REPAIR					X		
0102030201	SOFT START HEAT-	INSPECT			0.1			2,3	
	SINK AND CONTROL	REPLACE			0.4			2,3,10	
	CARD (A1A6A1)	REPAIR					X		
0102030202	DRIVER VOLTAGE	INSPECT			0.1			2,3	
	HEATSINK ASSY	REPLACE			0.4			2,3,10	
	(A1A3)	REPAIR			0.1			2,3,10	
		REPAIR					X		
0102030203	LOW-VOLTAGE	INSPECT			0.1			2,3	
	FILTER ASSEMBLY	REPLACE			0.4			2,3,10	
	(A1A4)	REPAIR			0.1			2,3	
		REPAIR					X		
0102030204	SCREEN VOLTAGE	INSPECT			0.1			2,3	
	ASSEMBLY	REPLACE			0.4			2,3,10	
	(A1A5)	REPAIR			0.1			2,3,10	
		REPAIR					X		
0102030205	HIGH-VOLTAGE	INSPECT			0.1			2,3	
	RESISTOR PLATE	REPLACE			0.4			2,3,10	
	(A1TB4)	REPAIR			0.4			2,3,10	

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0102030206	RESISTOR ASSEMBLY (A1TB3)	INSPECT REPLACE REPAIR			0.1 0.4 0.4			2,3 2,3,10 2,3,10	
0102030207	FILTER BOX ASSEMBLY (A7)	INSPECT REPLACE REPAIR			0.1 0.4 0.4			2,3 2,3,10 2,3,10	
0102030208	CHASSIS ASSEMBLY	INSPECT REPAIR REPAIR			0.1 0.2		 X	2,3 2,3,10	 E,F
010204	TRANSMITTER, RADIO T-1449/URC (HF-8010A)	SAME AS GRP 010201							
010205	AMPLIFIER, RADIO FREQUENCY AM-7130/URC (HF-8020)	SAME AS GRP 010202							
010206	POWER SUPPLY PP-7717/URC (HF-8030)	SAME AS GRP 010203							
010207	TRANSMITTER, RADIO T-1449/URC (HF-8010A)	SAME AS GRP 010201							
010208	AMPLIFIER, RADIO FREQUENCY AM-7130/URC (HF-8020)	SAME AS GRP 010202							
010209	POWER SUPPLY PP-7717/URC (HF-8030)	SAME AS GRP 010203							
010210	TRANSMITTER, RADIO T-1449/URC (HF-8010A)	SAME AS GRP 010201							
010211	AMPLIFIER, RADIO FREQUENCY AM-7130/URC (HF-8020)	SAME AS GRP 010202							
010212	POWER SUPPLY PP-7717/URC (HF-8030)	SAME AS GRP 010203							
010213	DUMMY LOAD, ELECTRICAL DA-713/U	INSPECT INSPECT REPLACE REPAIR		0.1	 0.1 0.1		 X	1 2,3 2,3	
010214	MICROPHONE, MM-80	INSPECT REPLACE REPAIR			0.1 0.1 0.1			NONE 2,3,10 2,3,10	 G

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010215	HEADSET, AC-8050	INSPECT						NONE	
		REPLACE						2,3,10	
		REPAIR						2,3,10	G
010216	MODEM, DIGITAL	INSPECT	0.1						
	DATA MD-1126/U	INSPECT		1.0				1	
	(MODEL 1273)	INSPECT			1.0			2,3	
		TEST			0.1			2,3,6,10,11	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.2			2,3,6,10,11	D
		ADJUST			0.1			2,3,6,10,11	
		REPAIR					X		
01021601	POWER SUPPLY INSPECT				0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR					X		
01021602	TONE KEYER	INSPECT			0.1			2,3	
	MODULE	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR					X		
01021603	FRONT PANEL	INSPECT			0.1			2,3	
	ASSEMBLY	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR					X		
01021604	DEMODULATOR	INSPECT			0.1			2,3	
	MODULE	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR					X		
0102160401	BAND-PASS FILTER	INSPECT			0.1			2,3	
	ASSEMBLY	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
0102160402	LOW-PASS FILTER	INSPECT			0.1			2,3	
	ASSEMBLY	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
010217	KEY, CW	INSPECT			0.1			NONE	
	(AC-8010)	REPLACE			0.1			2,3,10	
		REPAIR			0.1			2,3,10	G

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010218	COMPARATOR-	INSPECT		0.1				1	
	CORRECTOR,	INSPECT			0.1			2,3	
	DIGITAL DATA	TEST			0.1			2,3,10	
	SN-545/TSC-99	TEST					X		
		REPLACE			0.2			2,3	
		REPAIR						2,3,10	D
		REPAIR					X		
01021801	INTERFACE CARD,	INSPECT			0.1			2,3	
	TRANSMIT (AI)	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01021802	POWER SUPPLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR X							
01021803	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.5			2,3,10	E,F
		REPAIR					X		
010219	RECEIVER, RADIO	INSPECT	0.1						
	R-2210/URC	INSPECT		0.1				1	
	(HF-8050)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.2			2,3,4,7,8,10, 11,12	D
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		CALIBRATE			0.5			2,3,4,7,8,10, 11,12	
		REPAIR					X		
01021901	POWER SUPPLY	INSPECT			0.1			2,3	
	(A1)	TEST			0.5			2,3,10	
		TEST					X		
		REPLACE			0.4			2,3,10	
		REPAIR					X		
0102190101	POWER SUPPLY	INSPECT			0.1			2,3	
	CIRCUIT CARD	TEST			0.1			2,3,10	
	(A1A1)	TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
01021902	FRONT PANEL	INSPECT			0.1			2,3	
	ASSEMBLY (A2)	TEST			1.0			2,3,10	
		TEST					X		
		REPLACE			1.2			2,3,10	
		REPAIR			0.4			2,3,10	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02190201	INDICATOR BOARD (A2A1)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.4			2,3,10	
		REPAIR					X		
102190202	MOUNTING BOARD (A2A2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			1.5			2,3,10	
		REPAIR					X		
02190203	FREQUENCY THUMB-WHEEL SWITCH (A2A3)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.4			2,3,10	
		REPAIR					X		
021903	RECEIVE AUDIO CARD (A6)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10 11,12	
		TEST					X		
		REPLACE			0.1			2,3,	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
021904	CHANNEL A IF CARD (A8)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.5			2,3,4,7,8,10, 11,12	
		REPAIR					X		
021905	NOT USED								
21906	RF TRANSLATOR MODULE (A9)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021907	CONTROL CARD (A10)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01021908	SYNTHESIZER VOLTAGE REGULATOR (A14)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		ADJUST			0.4				
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021909	SYNTHESIZER REFERENCE MODULE (A15)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021910	SYNTHESIZER SIDEBOARD (A23)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			2.5			2,3	
		REPAIR					X		
01021911	SYNTHESIZER END DECADE BOARD (A17)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021912	NOT USED								
01021913	SYNTHESIZER 1KHZ DECADE BOARD (A19)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021914	SYNTHESIZER 10KHZ DECADE BOARD (A20)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021915	SYNTHESIZER 100KHZ DECADE BOARD (A21)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01021916	SYNTHESIZER OUT-PUT MODULE (A22)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01021917	OVEN STANDARD	INSPECT			0.1			2,3	
		REPLACE			0.8			2,3	
		REPAIR					X		
01021918	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPLACE			0.1			2,3,10	E
		REPAIR					X		
010220	LINE AMPLIFIER	INSPECT		0.5				1	
	(1671-1L2)	INSPECT			0.1			2,3	
		TEST			0.5			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3	
		REPAIR					X		
010221	LINE AMPLIFIER	SAME AS GRP							
	(1671-1L2)	010220							
010222	MOUNTING SHELF,	INSPECT			0.1			2,3	
	LINE AMPLIFIERS	REPLACE			0.2			2,3	
	(10306-l0L1)	REPAIR					X		
010223	POWER SUPPLY	INSPECT	0.1						
	LINE AMPLIFIERS	INSPECT		0.5				1	
	(5861-1L1)	INSPECT			0.1			2,3	
		TEST			0.5			10	
		REPLACE			0.1			2,3	
		REPAIR					X		
010224	TONE GENERATOR,	INSPECT		0.1	1				
	CW	INSPECT			0.1			2,3	
		TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3	
		REPAIR					X		
010225	ANTENNA GROUP	INSPECT	1.0						
	OE-317/TSC-99 or	INSPECT		1.0				1	H or AD
	OE-317A/TSC-99	INSPECT			1.0			2,3	
		SERVICE		0.5	1				
		REPLACE			5.0			2,3	
010226	MAST SECTIONS	INSPECT		0.2				NONE	
	MS-116A, 117A,	SERVICE		0.5					
	118A	REPLACE		0.3					I
010227	ANTENNA BASE	INSPECT		0.2				1	
	AB-1S/GR	INSPECT			0.2			2,3	
		REPLACE			0.5			2,3	I

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0103	TRANSMIT ANCIL-	INSPECT	0.1						
	LARY SUBSYSTEM	INSPECT		0.1				1	B
		INSPECT			0.2			2,3	
		SERVICE		0.1				1,21	
		TEST		0.1				1	
		TEST			0.6			2,3,6,8,10	
		TEST					X		
		REPAIR			0.6			2,3,10,22,23	
		REPAIR					X		
010301	PATCH PANEL	INSPECT			0.1			2,3	
	(JC-2/48M)	TEST			0.3			2,3,10	
		REPLACE			0.2			2,3,10	
		REPAIR			0.3			2,3,10	
010302	INTERCOMMUNICATION	INSPECT	0.1						
	STATION	INSPECT			0.1			2,3	
	LS-633/TSC-99	TEST			0.1			2,3,6,8,10	
		TEST					X		
		REPLACE			0.2			2,3	
		ADJUST			0.1			2,3,6,8,10	
		REPAIR			0.1			2,3,10	D
		REPAIR					X		
01030201	AMPLIFIER MODULE	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,8,10	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,6,8,10	
		REPAIR					X		
01030202	POWER SUPPLY	INSPECT			0.1			2,3	
	MODULE	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
01030203	4 WIRE/2 WIRE	INSPECT	0.1						
	HYBRID	INSPECT			0.1			2.3	
		TEST			0.1			2,3,6,8,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01030204	CHASSIS ASSEMBLY	INSPECT			0.1				
		REPAIR			0.5				E,F
		REPAIR					X		
010303	SWITCH, RADIO	INSPECT	0.1						
	FREQ. TRANSMIS-	INSPECT			0.1			2,3	
	SION LINE	TEST			0.1			2,3,10	
	SA-2350/U	TEST					X		
		REPAIR			0.3			2,3,10,22,23	D
		REPLACE			2.0			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01030301	ANTENNA SWITCH MATRIX	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			1.2			2,3	
		REPAIR			0.3			2,3,10,22,23	J
		REPAIR					X		
0103030101	MOTOR ACTUATOR ASSEMBLY	INSPECT			0.1			2,3	
		REPLACE			0.8			2,3	
		REPAIR					X		
01030302	POWER SUPPLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			1.0			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
01030303	MATRIX CONTROL UNIT	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.2			2,3	
		REPAIR					X		
0103030301	MICROCOMPUTER ASSEMBLY (A6)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030302	VIDEO ASSEMBLY (A9)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030303	VIDEO MEMORY ASSEMBLY (A8)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030304	POWER SUPPLY ASSEMBLY (A5)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030305	SERIAL INTERFACE ASSEMBLY (A7)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0103030306	PERIPHERAL INTERFACE (ROW) (A10)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030307	PERIPHERAL INTERFACE (COLUMN) (A11)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030308	ROW DRIVER ASSEMBLY NO. 1 (A1A)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030309	ROW DRIVER ASSEMBLY NO. 2 (A1B)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030310	COLUMN DRIVER ASSEMBLY (A2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
0103030311	TIMING CONTROL ASSEMBLY (A3)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
01030304	INTERLOCK ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			1.0			2,3	
		REPAIR			0.2			2,3,10	
		REPAIR					X		
010304	ANTENNA/SIGNAL ENTRY PANEL	INSPECT			0.1			1	
		INSPECT			0.1			2,3,	
		TEST			0.1			2,3,10	
		TEST					X		
		REPAIR			1.0			2,3	E
		REPAIR					X		
010305	INTERMEDIATE DISTRIBUTION FRAME	INSPECT			0.1			1	
		INSPECT			0.1			2,3	
		REPLACE			1.2			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
010306	POWER SUPPLY	INSPECT	0.1						AF
	UNINTERRUPTABLE	INSPECT		0.5				1	
	PP-7716/U	INSPECT			0.5			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.3			2,3,10	D
		REPAIR					X		
01030601	CHARGER LOGIC	INSPECT			0.1			2,3	
	BOARD	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
01030602	CONVERTER LOGIC	INSPECT			0.1			2,3	
	BOARD	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
01030603	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.5			2,3,10	E,F
		REPAIR					X		
010307	POWER	INSPECT	0.1						
	DISTRIBUTION	INSPECT		0.1				1	
	PANEL	INSPECT			0.1			2,3	
		TEST			0.1			2,3,5,10	
		TEST					X		
		REPLACE					X		
		REPAIR			0.3			2.3,5,10	E
		REPAIR					X		
010308	POWER ENTRY/	INSPECT			0.1			2,3	
	FILTER ASSEMBLY	TEST			0.1			2,3,5,10,	
		TEST					X		
		REPAIR			0.1			2,3,5,10	E
		REPLACE					X		
		REPAIR							
010309	AIR CONDITIONER	INSPECT	0.1						
		INSPECT		0.1				1	K
		INSPECT			0.1			2,3	
		SERVICE		0.5				1,21	
		REPLACE			5.0			2,3	
010310	AIR CONDITIONER	SAME AS GRP 010309							
010311	SHELTER	INSPECT		0.1				1	
	INTERCONNECT	INSPECT			0.1			2,3	
	CABLING	TEST			0.1			2,3,10	
		REPAIR			0.5			2,3,10	
		REPLACE					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
01031101	COAX CABLE	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	
		REPLACE					X		
01031102	RIBBON CABLE	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	
		REPLACE					X		
01031103	MIL-TYPE MULTIPIN CABLE	INSPECT			0.1			2,3	
		REPAIR			0.3			2,3,10	
		REPLACE					X		
010312	TRANSFORMER, POWER DISTRIBUTION TF-591/TSC-99	INSPECT	0.1						
		INSPECT			0.1			2,3	
		REPLACE			0.5			2,3,10	
		REPAIR					X		
010313	TRANSFORMER, POWER DISTRIBUTION TF-592/TSC-99	INSPECT	0.1						
		INSPECT			0.1			2,3	
		REPLACE			0.5			2,3,10	
		REPAIR					X		
010314	TRANSFORMER, AIR CONDITIONER POWER	INSPECT			0.1			2,3	
		REPAIR			0.5			2,3,5,10	G
		REPLACE			0.5			2,3	
010315	TRANSFORMER, AIR CONDITIONER POWER	SAME AS GRP 010314							
010316	PA EXHAUST BLOWER ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			1.2			2,3,10	L
		REPLACE			0.3			2,3	
010317	2-BAY OPERATOR RACK ASSEMBLY	INSPECT			0.1				
		REPAIR			1.5				E
		REPLACE					X		
		REPAIR					X		
010318	3-BAY PA RACK ASSEMBLY	INSPECT			0.1			2.3	
		REPAIR			1.5			2,3,10	E
		REPLACE					X		
		REPAIR					X		
010319	TELEPHONE, TA-312	INSPECT	0.1						
		INSPECT		0.1				1	M
		INSPECT			0.1			2,3	
		REPLACE			0.1			2,3	
010320	MULTIMETER, AN/USM-223	INSPECT		0.1				NONE	N
		INSPECT			0.1			NONE	
		REPLACE			0.1			NONE	

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
013321	VOLTMETER,	INSPECT		0.1				NONE	Z
	DIGITAL	INSPECT			0.1			NONE	
	ME-529/TSC-99	REPLACE			0.1			2,3	
	(BOONTON 93AD)								
010322	BATTERY CABINET	INSPECT			0.1			2,3	
		TEST			0.3			2,3,10	
		TEST					X		
		REPAIR			0.3			2,3	
		REPAIR					X		
010323	CABLE ASSEMBLY,	INSPECT	0.1						
	POWER	INSPECT		0.1					
	CX-13170/TSC-99	INSPECT			0.1				
		REPAIR			0.1			2,3,5	G
		REPLACE			0.1				
							X		
010324	CABLE ASSEMBLY,	INSPECT	0.1						
	RF TRANSMISSION	INSPECT		0.1					
	CG-3828/TSC-99	INSPECT			0.1				
		REPAIR			0.2			2,3,5	
		REPLACE			0.2				
010325	CABLE ASSEMBLY,	INSPECT	0.1						
	RF RECEIVE	INSPECT		0.1					
	CG-3828/TSC-99	INSPECT			0.1				
		REPAIR			0.2			2,3,5	
		REPLACE			0.2				
010326	CABLE ASSEMBLY,	INSPECT	0.1						
	RF RECEIVE	INSPECT		0.1					
	CG-3830/TSC-99	INSPECT			0.1				
		REPAIR			0.1			2,3,10	
		REPLACE			0.1				
010327	POWER SUPPLY	INSPECT	0.1						SEE NOTE AF
	UNINTERRUPTABLE	INSPECT		0.5				1	
	PP-771BA/U	INSPECT			0.5			2,3	
		TEST			0.3			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR					X		
0104	SHELTER,	INSPECT	0.1						
	ELECTRICAL	INSPECT		0.1					
	EQUIPMENT	INSPECT			0.1				
	S-635/TSC-99	SERVICE		0.1					
		REPAIR			1.1				
		REPAIR					X		AA
0105	DOLLY SET, LIFT	INSPECT	0.1						
	TRANSPORTABLE	INSPECT		0.2					
	SHELTER, M-32	INSPECT			0.2				
		SERVICE		0.5					
		REPAIR			1.0				
		REPAIR					X		AB
END OF TRANSMIT-TER GROUP									

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02	RECEIVER GROUP	INSPECT	0.1	A					
	OR-218/TSC-99	INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.5				1	
		TEST			0.5			2 THRU 12, 16 THRU 18	
		TEST					X		
		REPAIR			0.6			2 THRU 12, 16 THRU 18,22,23	
		REPAIR					X		
0201	RECEIVER COMPUTER	INSPECT	0.1						
	SUBSYSTEM	INSPECT		0.1				1	B
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.5				1	
		TEST			0.5			2,3,6,9,10,16, 18	
		TEST					X		
		REPAIR			0.6			2,3,6,9,10,16, 18	
		REPAIR					X		
020101	DATA PROCESSING SET AN/UYK-19	SAME AS GRP 010101							
020102	DATA PROCESSING SET AN/UYK-19	SAME AS GRP 010101							
020103	PROCESSOR I/O	INSPECT	0.1						
020103	CHASSIS (ROLM 2150)	INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.5			2,3,10,18	
		TEST					X		
		REPLACE			0.2			2,3,	
		REPAIR			0.3			2,3,10,18	
		REPAIR					X		
02010301	POWER SUPPLY	INSPECT				0.1		2,3	
		TEST				0.1		2,3,10	
		TEST					X		
		REPLACE				0.1		2,3	
		REPAIR					X		
02010302	I/O BUS SWITCH SET	INSPECT				0.1		2,3	
		TEST				0.1		2,3,10,18	
		TEST					X		
		REPLACE				0.1		2,3	
		REPAIR					X		
02010303	I/O BUS SWITCH SET	SAME AS GRP 02010302							
02010304	I/O BUS SWITCH SET	SAME AS GRP 02010302							

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02010305	DATA RAM INTER-	INSPECT			0.1			2,3	
	FACE CARD NO. 1	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02010306	DATA RAM INTER-	INSPECT			0.1			2,3	
	FACE CARD NO. 2	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02010307	LINE PRINTER	INSPECT			0.1			2,3	
	INTERFACE NO. 1	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02010308	LINE PRINTER	INSPECT			0.1			2,3	
	INTERFACE NO. 2	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0;1			2,3	
		REPAIR					X		
02010309	ASYNC LINE MUX	INSPECT			0.1			2,3	
	MODULE NO. 1	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02010310	ASYNC LINE MUX	INSPECT			0.1			2,3	
	MODULE NO. 2	TEST			0.1			2,3,10,18	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
020104	MEMORY UNIT,	INSPECT	0.1						
	COMPUTER MU-720/	INSPECT		1.5				1	
	UYK-19	INSPECT			1.5			2,3	
		TEST			0.5			2,3,10,16,18	
		TEST					X		
		REPLACE		0.2				2,3,10	
		REPAIR		0.2				2,3,10,16,18	D
		REPAIR					X		
02010401	MEMORY MODULE	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10,16,18	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10,16,18	
		REPAIR					X		
02010402	MEMORY MODULE	SAME AS GRP 02010401							

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02010403	BULK INTERFACE MODULE	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10,16	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02010404	POWER SUPPLY MODULE	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10,16	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
020105	PRINTER, HIGH-SPEED RP-265A/G	INSPECT	0.1						
		INSPECT		0.1				1	O
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		REPLACE			0.3			2,3	
020106	PRINTER, HIGH-SPEED RP-265/UYQ	SAME AS GRP 020105							
020107	CONTROL-INDICATOR, PLASMA DISPLAY C-11033/UYK	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.5			2,3	
		ADJUST			0.3			2,3,10	
		REPAIR			0.5			2,3,10	D
		REPAIR					X		
02010701	KEYBOARD ASSEMBLY	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.5			2,3	
		REPAIR					X		
02010702	DISPLAY UNIT ASSEMBLY	INSPECT.			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.3			2,3,10	
		REPAIR					X		
0201070201	DISPLAY UNIT SUB-ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3.10	
		TEST					X		
		REPLACE			2.0			2,3	
		REPAIR					X		
0201070202	DISPLAY PROCESSOR BOARD	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			2.0			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0201070203	SUSTAINER/LOGIC CONTROL BOARD	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			2.0			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
0201070204	POWER SUPPLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			2.0			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
020108	CONTROL-INDICATOR, PLASMA	SAME AS GRP 020107							
020109	READER, PUNCHED TAPE RP-278/U	SAME AS GRP 010108							
020110	READER, PUNCHED TAPE RP-278/U	SAME AS GRP 010108							
020111	PERFORATOR, PUNCHED TAPE RO-534/U	INSPECT	0.1						AG
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		REPLACE			0.2			2,3	
		REPAIR					X		
020112	PERFORATOR, PUNCHED TAPE RO534/U	SAME AS GRP 020111							
020113	PERFORATOR, PUNCHED TAPE RO-534/U	SAME AS GRP 020111							
020114	PERFORATOR, PUNCHED TAPE RO-534/U	SAME AS GRP 020111							
020115	READER-PERFORATOR, PUNCHED TAPE RD-486/U	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,8,9,10,17	
		TEST					X		
		REPLACE			0.3			2,3,10	
		REPAIR			0.4			2,3,6,8,9,10,17	D
		ADJUST			0.3			2,3,6,8,9,10,17	
		REPAIR					X		
02011501	TAPE PUNCH ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,9,10	
		TEST					X		
		REPLACE			0.5			2,3,9,10	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02011502	TAPE READER ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2.3,6,8,9,10,17	
		TEST					X		
		REPLACE			0.4			2,3	
		ADJUST			0.1			2,3,6,8.9,10	
		REPAIR					X		
02011503	INTERFACE BOARD	INSPECT			0.1			2.3	
		TEST			0.1			2,3,6,8,9,10	
		TEST					X		
		REPLACE			0.4			2,3	
		REPAIR					X		
02011504	MAIN POWER SUPPLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3.10	
		TEST					X		
		REPLACE			0.4			2.3	
		REPAIR					X		
02011505	READER BOARD	INSPECT			0.1			2,3	
		TEST			0.1			2.3,6,8.9.10	
		TEST					X		
		REPLACE			0.3			2,3	
		ADJUST			0.1			2,3,6.8,9.10	
		REPAIR					X		
02011506	PUNCH BOARD	INSPECT			0.1			2.3	
		TEST			0.1			2,3,6,8,9,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR					X		
02011507	SERIAL PROCESSOR BOARD	INSPECT			0.1			2,3	
		TEST			0.1			2,3.6,8,9,10	
		TEST					X		
		REPLACE			0.4			2.3	
		REPAIR					X		
02011508	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.6			2,3,10	E,F
		REPAIR					X		
02011509	MOTHERBOARD	INSPECT			0.1			2,3	
		REPLACE			0.7			2,3,10	
		REPAIR					X		
020116	RECEIVER-TRANSMITTER, DIGITAL DATA RT-1392/U	SAME AS GRP 010110							
020117	RECEIVER-TRANSMITTER, DIGITAL DATA RT-1392/U	SAME AS GRP 010110							

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level Unit C	Unit O	Intermediate F	Intermediate H	Depot D	(5) Tools and Equipment	(6) Remarks
020118	RECORDER-REPRODUCER, DATA RD485/U	SAME AS GRP 010105							
020119	RECORDER-REPRODUCER, DATA RD485/U	SAME AS GRP 010105							
020120	POWER SUPPLY PP-7713/U	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
020121	READER, PUNCHED TAPE RP-278A/U	SAME AS GRP 010112							
020122	READER, PUNCHED TAPE RP-278A/U	SAME AS GRP 010112							
020123	PERFORATOR, PUNCHED TAPE RO-534A/U	INSPECT	0.1						SEE NOTE AG
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		REPLACE			0.2			2,3	
		REPAIR					X		
020124	PERFORATOR, PUNCHED TAPE RO-534A/U	SAME AS GRP 020123							
020125	PERFORATOR, PUNCHED TAPE RO534A/U	SAME AS GRP 020123							
020126	PERFORATOR, PUNCHED TAPE RO-534A/U	SAME AS GRP 020123							
0202	RECEIVE HF SUBSYSTEM	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		SERVICE		0.1				1,21	
		TEST		0.5				1	
		TEST			0.5			2-4,6-8,10-12	
		TEST					X		D
		REPAIR			0.6			2-4,6-8,10-12	
		REPAIR					X		
020201	RECEIVER, RADIO R-2211/URC (HF8050A)	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10,11,12	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.2			2,3,4,7,8,10,11,12	
		ADJUST			0.1			2,3,4,7,8,10,11,12	
		CALIBRATE			0.5			2,3,4,7,8,10,11,12	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART - Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02020101	POWER SUPPLY (A1)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
0202010101	POWER SUPPLY CIRCUIT CARD (A1A1)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
02020102	FRONT PANEL ASSEMBLY (A2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		REPLACE			0.1			2,3,10	
		REPAIR			0.1			2,3,10	

Section I!. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0202010201	INDICATOR BOARD (A2A1)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
0202010202	MOUNTING BOARD (A2A2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
0202010203	FREQUENCY THU4B-WHEEL SWITCH (A2A3)	INSPECT			0.1			2.3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
02020103	RECEIVE AUDIO CARD (A6)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
02020104	CHANNEL A IF CARD (A8)	INSPECT			0.1			2,3	
		TEST			0.1			2,3.4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
02020105	NOT USED								
02020106	RF TRANSLATOR MODULE (A9)	INSPECT			0.1			2.3	
		TEST			0.1			2,3,4,7.8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2.3	
		REPAIR					X		
02020107	CONTROL CARD (A10)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
2020108	PARALLEL INPUT CARD (A11)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
2020109	PARALLEL OUTPUT CARD (A12)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
2020110	SERIAL INTERFACE CARD (A13)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
2020111	SYNTHESIZER VOLTAGE REGULATOR (A14)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,7,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,4,7,8,10, 11,12	
		REPAIR					X		
2020112	SYNTHESIZER REFERENCE MODULE (A15)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
2020113	SYNTHESIZER SIDEBOARD (A23)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
2020114	SYNTHESIZER END DECADE BOARD (A17)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,4,8,10, 11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
2020115	NOT USED								

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02020116	SYNTHESIZER	INSPECT			0.1			2,3	
	1 KHZ DECADE	TEST			0.1			2,3,4,8,10,	
	BOARD (A19)							11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02020117	SYNTHESIZER	INSPECT			0.1			2,3	
	10 KHZ DECADE	TEST			0.1			2,3,4,8,10,	
	BOARD (A20)							11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02020118	SYNTHESIZER	INSPECT			0.1			2,3	
	100 KHZ DECADE	TEST			0.1			2,3,4,8,10,	
	BOARD (A21)							11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02020119	SYNTHESIZER	INSPECT			0.1			2,3	
	OUTPUT MODULE	TEST			0.1			2,3,4,8,10,	
	(A22)							11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
020202	RECEIVER, RADIO	SAME AS GRP							
	R-2211/URC	020201							
	(HF-8050A)								
020203	RECEIVER, RADIO	SAME AS GRP							
	R-2211/URC	020201							
	(HF-8050A)								
020204	RECEIVER, RADIO	SAME AS GRP							
	R-2211/URC	020201							
	(HF-8050A)								
020205	RECEIVER, RADIO	SAME AS GRP							
	R-2211/URC	020201							
	(HF-8050A)								
020206	RECEIVER, RADIO	SAME AS GRP							
	R-2211/URC	020201							
	(HF-8050A)								
020207	RECORDER-	INSPECT		0.1				1	
	REPRODUCER,	INSPECT			0.1			2,3	
	SOUND RD-484/U	TEST		0.1				1	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.2			2,3,10	D
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02020701	NESTING UNIT	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			2.0			2,3,10	
		REPAIR					X		
02020702	POWER SUPPLY MODULE	INSPECT			0.1			2,3	
		TEST			0.1			Z,3,10	
		TEST					X		
		REPLACE			0.1			2,3,10	
		REPAIR					X		
02020703	DECK MODULE	INSPECT			0.1			2,3	
		TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3,10	AC
		REPAIR					X		
02020704	DECK MODULE	SAME AS GRP 02020703							
02020705	DECK MODULE	SAME AS GRP 02020703							
02020706	DECK MODULE	SAME AS GRP 02020703							
020208	CONTROL, RECORDER, SOUND	INSPECT	0.1						
		INSPECT		0.1				1	
		INSPECT			0.1			2,3	
		TEST		0.1				1	
		TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.4			2,3	
		REPAIR					X		
020209	CONTROL, RECORDER, SOUND	SAME AS GRP 020208							
020210	CONTROL, RECORDER, SOUND	SAME AS GRP 020208							
020211	CONTROL, RECORDER, SOUND	SAME AS GRP 020208							
020212	PANEL, MONITOR SB-4111/TSC-99	INSPECT	0.1						
		INSPECT			0.1				
		TEST			0.1				
		TEST					X		
		REPLACE			0.2				
		REPAIR			0.2				D
		REPAIR					X		
02021201	24V POWER SUPPLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level Unit C	Unit O	Intermediate F	Intermediate H	Depot D	(5) Tools and Equipment	(6) Remarks
02021202	BRIDGING AMPLIFIER	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02021203	BRIDGING AMPLIFIER	SAME AS GRP 02021202							
02021204	MICROPHONE PREAMPLIFIER	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02021205	MICROPHONE PREAMPLIFIER	SAME AS GRP 02021204							
02021206	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.3			2,3,10	E,F
		REPAIR					X		
020213	MODEM, DIGITAL DATA MD-1126/U	SAME AS GRP 010216							
020214	MODEM, DIGITAL DATA MD-1126/U	SAME AS GRP 010216							
020215	MODEM, DIGITAL DATA MD-1126/U	SAME AS GRP 010216							
020216	MODEM, DIGITAL DATA MD-1126/U	SAME AS GRP 010216							
020217	MODEM, DIGITAL DATA MD-1126/U	SAME AS GRP 010216							
020218	COMPARATOR-CORRECTOR, DIGITAL DATA SN-544/TSC-99	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.2			2,3,10	D
		REPAIR					X		
02021801	INTERFACE CARD, RECEIVE (A6)	INSPECT			0.1			2,3	
		TEST			0.1			2,3	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02021802	INTERFACE CARD, RECEIVE (A7)	SAME AS GRP 02021801							
02021803	INTERFACE CARD, RECEIVE (A8)	SAME AS GRP 02021801							
02021804	INTERFACE CARD, RECEIVE (A9)	SAME AS GRP 02021801							

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02021805 02021801	INTERFACE CARD, RECEIVE (A10)	SAME AS GRP							
02021806	INTERFACE CARD, TRANSMIT (AI)	SAME AS GRP 01021801							
02021807	INTERFACE CARD, TRANSMIT (A2)	SAME AS GRP 01021801							
02021808	INTERFACE CARD, TRANSMIT (A3)	SAME AS GRP 01021801							
02021809	INTERFACE CARD, TRANSMIT (A4)	SAME AS GRP 01021801							
02021810	INTERFACE CARD, TRANSMIT (A5)	SAME AS GRP 01021801							
02021811	POWER SUPPLY (PS1)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.2			2,3,10	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
02021812	POWER SUPPLY (PS2)	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.2			2,3,10	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
02021813	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	E
		REPAIR					X		
020220	CONVERTER TELE-TYPEWRITER TO MORSE CODE CV-3711/U	INSPECT	0.1						
		INSPECT		0.8				1	
		INSPECT			0.8			2,3	
		TEST		0.1				1	
		TEST			0.1			2,3,6,10,11,12	
		TEST					X		
		REPLACE			0.2			2,3	
		REPAIR			0.2			2,3,6,10,11,12	D
		REPAIR					X		
02022001	POWER SUPPLY ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02022002	NOT USED								
02022003	FREQUENCY SYNTHESIZER ASSEMBLY	INSPECT			0.1			2,3	
		TEST			0.1			2,3,6,10,11,12	
		TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
02022004	CONVERTER INTER-	INSPECT			0.1			2,3	
	FACE ASSEMBLY	TEST			0.1			2,3,6,10,11,12	
	(BROWN HANDLE)	TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02022005	CONVERTER AND	INSPECT			0.1			2,3	
	BUFFER (ORANGE	TEST			0.1			2,3,6,10,11,12	
	HANDLE)	TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02022006	EXPANSION CON-	INSPECT			0.1			2,3	
	TROL ASSEMBLY	TEST			0.1			2,3,6,10,11,12	
	(GRAY HANDLE)	TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02022007	MORSE OSR ASSEM-	INSPECT			0.1			2,3	
	BLY (BLUE	TEST			0.1			2,3,6,10,11,12	
	HANDLE)	TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,6,10,11,12	
		REPAIR					X		
02022008	INPUT REGISTER	INSPECT			0.1			2,3	
	ASSEMBLY (RED	TEST			0.1			2,3,6,10,11,12	
	HANDLE)	TEST					X		
		REPLACE			0.1			2,3	
		REPAIR					X		
02022009	WIRING AND SUB-	INSPECT			0.1			2,3	
	PANEL	TEST			0.1			2,3,6,10,11,12	
		TEST					X		
		REPAIR			0.2			2,3	
		REPAIR					X		
02022010	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	E,F
		REPAIR					X		
020221	CONVERTER, TELE-	SAME AS GRP							
	TYPEWRITER TO								
020220									
	MORSE CODE								
	CV-3711/U								
020222	ANTENNA GROUP	INSPECT	0.1						
	OE-316A/TSC-99	INSPECT		0.1				1	P
		INSPECT			0.1			2,3	
		SERVICE		0.5				1	
		REPLACE			5.0			2,3	
020223	SPECTRUM MONITOR	INSPECT	0.1						
	R-2093/TRQ-35(V)	INSPECT		0.1				1	Q
		INSPECT			0.1			2,3	
		SERVICE		0.2				1,21	
		REPLACE			1.0			2,3	

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
0203	RECEIVE ANCILLARY	INSPECT	0.1						
	SUBSYSTEM	INSPECT		0.1				1	B
		INSPECT			0.1			2,3,5,6,10	
		SERVICE		0.2				1,21	
		TEST		0.5				1	
		TEST			0.5			2,3,5,6,10	
		TEST					X		
		REPAIR			0.8			2,3,5,6,10	
		REPAIR					X		
020301	PATCH PANEL,	INSPECT			0.1			2,3	
	JC-2/48M	REPLACE			0.3			2,3,10	
		REPAIR			0.3			2,3,10	
		REPAIR					X		
020302	INTERCOMMUNICA-TION STATION LS-633/TSC-99	SAME AS GRP 010302							
020303	ANTENNA/SIGNAL	INSPECT		0.1				1	
	ENTRY PANEL	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		TEST					X		
		REPAIR			0.4			2,3,10	E
		REPLACE					X		
		REPAIR					X		
020304	POWER ENTRY/	INSPECT			0.1			2,3	
	FILTER ASSEMBLY	TEST			0.1			2,3,10	
		TEST					X		
		REPAIR			0.1			2,3,10	E
		REPLACE					X		
		REPAIR					X		
020305	INTERMEDIATE	INSPECT		0.1				1	
	DISTRIBUTION	INSPECT			0.1			2,3	
	FRAME	REPLACE			0.5			2,3,5	
		REPAIR					X		
020306	POWER SUPPLY,	INSPECT		0.5				1	
	UNINTERRUPTIBLE	INSPECT			0.5			2,3	
	PP-7714/U	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.3			2,3	
		REPAIR			0.3			2,3,10	D
		REPAIR					X		
02030601	CHARGER LOGIC	SAME AS GRP							
	BOARD	01030601							
02030602	CONVERTER LOGIC	SAME AS GRP							
	BOARD	01030602							
02030603	CHASSIS ASSEMBLY	INSPECT			0.1			2,3	
		REPAIR			0.5			2,3,10	E,F
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
020307	SHELTER INTER-	INSPECT	0.1						
	CONNECT CABLING	INSPECT			0.1			2,3	
		TEST			0.1			2,3,10	
		REPAIR			0.5			2,3,10	
		REPLACE					X		
02030701	COAX CABLE	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	
		REPLACE					X		
02030702	RIBBON CABLE	INSPECT			0.1			2,3	
		REPAIR			0.2			2,3,10	
		REPLACE					X		
02030703	MIL-TYPE	INSPECT			0.1			2,3	
	MULTIPIN CABLE	REPAIR			0.3			2,3,10	
		REPLACE					X		
020308	KEY, CW, AC-8010	INSPECT			0.1			NONE	
		REPLACE			0.1			NONE	
		REPAIR			0.1			NONE	G
020309	KEY, CW, AC-8010	SAME AS GRP							
020308									
020310	MICROPHONE,	INSPECT			0.1			NONE	
	MM-80	REPLACE			0.1			NONE	
		REPAIR			0.1			NONE	G
020311	MICROPHONE,	SAME AS GRP							
	MM-80								
020310									
020312	MICROPHONE,	SAME AS GRP							
	MM-80								
020310									
020313	HEADSET, AC-8050	INSPECT			0.1			NONE	
		REPLACE			0.1			NONE	
		REPAIR			0.1			NONE	G
020314	HEADSET, AC-8050	SAME AS GRP							
020313									
020315	POWER SUPPLY,	INSPECT			0.1			2,3	
	LCD-A-11	TEST			0.1			2,3,10	
		TEST					X		
		REPLACE			0.1			2,3	
		ADJUST			0.1			2,3,10	
		REPAIR					X		
020316	POWER DISTRUBU-	INSPECT	0.1						
	TION PANEL	INSPECT		0.1				1,	
		INSPECT			0.1			2,3	
		TEST			0.1			2,3,5,10	
		TEST					X		
		REPAIR			0.3			2,3,5,10	E
		REPLACE					X		
		REPAIR					X		

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
020317	TRANSFORMER, POWER DISTRI-BUTION TF-592/TSC-99	SAME AS GRP 010313							
020318	TRANSFORMER, POWER DISTRI-BUTION TF-591/TSC-99	SAME AS GRP 010312							
020319	TRANSFORMER, AIR CONDITIONER POWER	SAME AS GRP 010314							
020320	TRANSFORMER, AIR CONDITIONER POWER	SAME AS GRP 010314							
020321	AIR CONDITIONER	SAME AS GRP 010309							
020322	AIR CONDITIONER	SAME AS GRP 010309							
020323	5-BAY OPERATOR CONSOLE RACK	INSPECT REPAIR REPLACE			0.1 1.5		 X	2,3 2,3,10	 E
020324	VIDEO DISPLAY TERMINAL AN/FYQ-90	INSPECT INSPECT INSPECT SERVICE REPLACE	0.1	 0.1 0.5	 0.1 1.0			 1 2,3 1,21 2,3	 R
020325 020324	VIDEO DISPLAY TERMINAL AN/FYQ-90	SAME AS GRP							
020326 020115	READER-PERFORATOR, PUNCHED TAPE RD-486/U	SAME AS GRP							S
020327 020115	READER-PERFORATOR, PUNCHED TAPE RD-486/U	SAME AS GRP							S
020328	COMSEC BOARDS, E-FFR								T
020329	COMSEC BOARDS, E-FFS								T

Section II. MAINTENANCE ALLOCATION CHART-Continued

(1) Group Number	(2) Component/ Assembly	(3) Maintenance Function	(4) Maintenance Level					(5) Tools and Equipment	(6) Remarks
			Unit		Intermediate		Depot		
			C	O	F	H	D		
020330	RADIO SET AN/VSC-7	INSPECT		0.1				1	U
		INSPECT			0.1			2,3	
		REPLACE			0.2			2,3	
020331	RADIO SET AN/VSC-7	SAME AS GRP							
020330									
020332	CRYPTO (SECURE ELECTRONIC TELE-TYPEWRITER) TSEC/KW-7-2	INSPECT		0.1				1	V
		INSPECT			0.1			2,3	
		REPLACE			0.3			2,3	
020333	CRYPTO (SECURE ELECTRONIC TELE-TYPEWRITER) TSEC/KW-7-2	SAME AS GRP							
020332									
020334	CRYPTO (LOW LEVEL INTERFACE) REPLACE	INSPECT		0.1				1	W
		INSPECT			0.1			2,3	
		REPLACE			0.3			2,3	
020335	TELETYPE MODEM TH-22B/TG	INSPECT	0.1						
		INSPECT		0.1				1	X
		INSPECT			0.1			2,3	
		REPLACE		0.1				2,3	
020336	TELEPHONE (DTMF) TA-938	INSPECT		0.1				1	Y
		INSPECT			0.1			2,3	
		REPLACE			0.1			2,3	
020337	BATTERY CABINET	INSPECT			0.1			2,3	
		TEST			0.3			2,3,10	
		TEST					X		
		REPAIR			0.3			2,3	
		REPAIR					X		
0204	SHELTER, ELEC-TRICAL EQUIPMENT S-634/TSC-99	INSPECT	0.1						
		INSPECT		0.1					
		INSPECT			0.1				
		SERVICE		0.1					
		REPAIR			1.0				AA
		REPAIR					X		
0205	DOLLY SET, LIFT TRANSPORTABLE SHELTER M-832	SAME AS GRP 0105							

SECTION III TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
001	0	Tool Kit, Electronic Equipment, TK-1O1/G	5180-00-064-5178	
002	F, D	Tool Kit, Electronic Equipment, TK-105/G	5180-00-610-8177	
003	F, D	Tool Kit, Electronic Equipment, TK-100/G	5180-00-605-0079	
004	F, D	Attenuator Pad, 0 to 80 dB ARMTEC 641-50	5905-00-162-1081	
005	F, D	Multimeter, AN/USM-223	6625-00-999-7465	
006	F, D	Oscilloscope, OS-262 (P)/U (Tektronix 7623A),	6625-01-007-9416	
		with Amplifier AM-6785/U and	6625-00-361-5318	
		Time Base TD-1159/U	6625-00-261-5139	
		Probe	6625-01-059-2435	
007	F, D	Card/Module Extenders, TS-8010, Collins 622-3431-001	6625-01-113-9438	
008	F, D	Signal Generator, SG-1112(V)2/U (HP-8640B-001)	6625-00-500-6525	
009	0, F	Punched Test Tape, EECO 230996-02	7530-00-994-0793	
010	F, D	Digital Multimeter, AN/PSM-45 (Simpson 467)	6625-01-139-2512	
011	F, D	Voltmeter, Digital, ME-529/TSC-99 (Boonton 93AD)	6625-01-050-8696	
012	F, D	Electronic Counter, AN/USM-459 (HP5328A-010)	6625-01-061-8928	
013	F, D	Maintenance Panel, TS-8020, Collins 622-3396-001	5895-01-152-2895	
014	F, D	Card Extenders, TS-8022, Collins 622-3430-001	6625-01-113-9490	
015	F, D	Test Set, Radio Freq Power, AN/USM-298	6625-00-880-5119	
		a. Element, 1000H	6625-00-954-2785	
		b. Element, 2500H	6625-00-242-8590	
016	F, D	Card Extender, DATARAM 62828		

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
017	F	Pin Gauge Tool Systematics General 1B9-1031	5985-01-G35-9012	
018	F, D	Computer Test Tape, COMCON, Inc.		
019	F	DIKO Diagnostic Module, Siemens S22751-P101-A1		
020	F	DIAG Diagnostic Module, Siemens S22711-P105	5895-01-153-9241	
021	O,F	Cleaner, Vaccum, Electric	7910-00-905-9474-	
022	F, D	Rivet Gun	5120-00-017-2849	
023	F, D	Hand Drill	5110-00-293-3411	
024	F, D	Load Resistor (70 ohms), Rex Rheostat BB6-4111		
025	F, D	Load Resistor (3.75 ohms), Rex Rheostat BB6-4117		
026	F, D	Strap, Static, Small		
027	F, D	Strap, Static, Large		
028	0, F, D	Connector, UG-999A/U	5935-00-501-8025	
029	F, D	Clip, IC Test (14 PIN)	5999-01-039-6778	
030	F, D	Clip, IC Test (16 PIN)	5999-00-116-3470	
031	F, D	Clip, IC Test (24 PIN)	5999-01-019-1010	
032	F, D	Clip, IC Test (40 PIN)	5999-01-106-4046	
033	F	Dummy Load, Electrical	5985-01-037-5050	
034	F	Adapter, Connector T-Shape	5935-00-164-9666	
035	F	Clamp-on DC/AC Current Probe	6625-01-131-3882	

SECTION IV.

REFERENCE CODE	REMARKS
A	Repair is limited to replacement of lamps and fuses.
B structuring.	Information only functional grouping. Not a replaceable item. Necessary for logical TM
C	See TM 11-7021-201-12 for maintenance allocation chart on Data Processing Set, AN/UYK-19.
D	Repair is by replacement of the next lower tier components/assemblies/subassemblies and non-modularized chassis-mounted piece parts, including fans if applicable.
E	repair is by replacement of electrical piece parts. Structural/sheetmetal repair is depot level.
F	If repair cannot be accomplished, replacement of the next higher group is required.
G	Repair is limited to obvious breaks in electrical connections and/or replacement of the entire assembly.
H	See TM 11-5895-362-13 for maintenance allocation chart on Antenna Group, OE-317/TSC-99.
I	Repair is by replacement only. (For information on AB-15 Base, see TM 11-5895-230-14P).
J	Repair is by replacement of the next lower tier components/assemblies/subassemblies and non-modularized chassis mounted piece parts including front contact assy,, rear spring assy. ground contact, rotor contact, and end contact.
K	See TM 5-4120-369-14 for maintenance allocation chart on Air Conditioner, Horizontal, Compact 18,000 BTU/HR Cooling.
L	Repair is by replacement of piece parts.
M	See TM 11-5805-201-12 for maintenance allocation chart on Telephone, ta-312.
N	See TM 11-6625-654-14 for maintenance allocation chart on Multimeter, AN/USM-223.
P	See TM 11-5895-361-23 for maintenance allocation chart on Antenna Group, OE-316A/TSC-99.
Q 35(V).	See TM 11-5820-884-13 for maintenance allocation chart on Spectrum Monitor, R-2093/TYQ-

SECTION IV.

REFERENCE CODE	REMARKS
R	See TM 11-5815-613-13&P for maintenance allocation chart on Display Set, AN/FYQ-90(V)1.
S	See TM 11-5895-1160-20 for maintenance allocation chart on Reader-Perforator, Punched Tape, RD-486/U.
T	See TM 11-5895-355-24&P (FOUO) for maintenance allocation chart on COMSEC Boards E-FFR and E-FFS.
U	See TM 11-5895-1181-20 for maintenance allocation chart on Radio Set, AN/VSC-7.
V	See TM 11-5810-221-12&P (FOUO) for maintenance allocation chart on Electronic Typewriter TSEC/KW-7-2.
W	See TM 11-5810-221-12P for maintenance allocation chart on CRYPTO (Low Level Interface) TSEC/KWX-11.
X	See TM 11-5805-356-12 for maintenance allocation chart on Teletype Modem, TH-22B/TG.
Y	See TM 11-5805-628-12 for maintenance allocation chart on Telephone (DTMF), TA-938.
Z	See TM 11-6625-3134-13&P for maintenance allocation chart on Voltmeter, Digital, RF, ME-529/TSC-99.
AA	Replacement is limited to replacement of electrical part and non-welded mechanical part. Repair of the shelter structure is limited to procedures contained in Department of The Army Technical Bulletins TB43-0124 and TB 750-240.
AB	Repair is limited to procedures contained in Appendix D of TM 9-2330-275-14&P; Dolly set, Lift, Transportable Shelter M-832/U.
AC	Replace belts.
AD	See TM 11-5895-380-13 for maintenance allocation chart on Antenna Group, OE-317A/TSC-99.
AE	Group number 010112 is directly two-way interchangable with group number 010108.
AF	Group number 010327 is directly two-way interchangable with group number 010306.
AG	Group number 020123 is directly two-way interchangable with group number 020111.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

C-1. SCOPE.

This appendix lists expendable supplies and materials you will need to operate and maintain the receiver group. These items are authorized to you by CTA 50-970, Expendable Items (Except Medical, Class V, Repair Parts, and Heraldic Items).

C-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., "Use cleaning compound, item 5, Appx. C".

b. Column (2) - Level. This column identifies the lowest level of maintenance that requires the listed item.

Unit

C - Operator/Crew
O - Unit (Organizational)

Intermediate

F - Direct Support
H - General Support

c. Column (3) National Stock Number. This is the National stock number assigned to the item; use it to request or requisition the item.

d. Column (4) Description. Indicates the Federal item name and, if required, a description to identify the item. The last line for each indicates the Federal Supply Code for Manufacturer (FSCM) in parentheses followed by the part number.

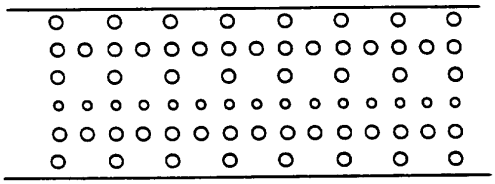
e. Column (5) U/M (Unit of Measure). Indicates the measure used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation; e.g., ea, in., pr. If the unit of measure differs from the unit of issue, requisition of lowest unit of issue that will satisfy your requirements.

SECTION II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NUMBER	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION PART NO. AND FSCM	(5) UNIT OF MEAS.
1	C	6810-00-753-4993	Alcohol, Isopropyl (81349) MIL-A-10428, Grade A	OZ
2	C	8020-00-205-6512	Brush, Sash EA (96906)	
3	C	6750-00-408-5175	Cleaner, Lens	OZ
4	O	5350-00-221-0872	Cloth, Abrasive	SH
5	C	8305-00-205-6512	Cloth, Cheesecloth, Cotton, Lintless (81348) CCC-C-440 Type II, Class 2	YD
6	C	7930-00-926-5280	Detergent, Mild, Liquid	OZ
7	O	9150-00-753-4649	Grease, General Purpose, Lubricating Grease (6G650)	OZ
8	O	9150-00-273-2389	Oil, Low Temperature 14-0-2564-200	OZ
9	O	9150-00-252-6173	Oil, Machine, Light Weight VV-0-526	OZ
10	C	7530-01-106-4725	Paper, High Speed Printer (54418) 461024	SH
11	C	6640-00-597-6745	Paper, Lens Cleaning	PK
12	C	7530-00-223-7966 7530-00-834-6987	Paper, Printer Terminal (55660) UU-P-574, Type I, Class I Grade B	RL
13	C	TBD	Paper Tape, 5-Level Punches	RL
14	C	TBD	Ribbon, Printer Terminal (25088) S22751-J301-C2	EA
15	C	6515-00-303-8250	Swabs, Cotton	PK
16	C	6850-00-105-3084	Trichlorotrifluoroethane (73925) Freon - TF	QT

APPENDIX D

ILLUSTRATED LIST OF MANUFACTURED ITEMS



1. FABRICATE FROM PAPER, NSN TBD USING COMSEC TERMINAL AND COMSEC READER/PUNCH.
2. AT COMSEC TERMINAL, TUYPE EDIT AND PRESS RETURN KEYTO ENTER MODE.
3. ALTERNATELY PRESS R AND Y KEYS
4. MOVE CURSOR TO COMMAND LINE 9SECOND LINE ON TERMINAL DISPLAY). TYPOE PUNCH AND PRESS RETURN KEY TO PUNCH A TAPE ON COMSEC READER/PUNCH.

EL8IV186

Figure D-1. Test Tape

GLOSSARY

Section I. ABBREVIATIONS

ASCII ..... American Standard Code for Information Interchange

COMSEC ..... Communication Security

CPU ..... Central Processor Unit

DS ..... Direct Support

SATCOM ..... Satellite Communication

UPS ..... Uninterruptible Power Supply

Section II. DEFINITION OF UNUSUAL TERMS

Modem - Acronym for modulator/demodulator. Converts one type of radio signal to another type of signal and vice versa.

INDEX

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By Order of the Secretary of the Army:

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General, United States Army
Chief of Staff

Official:

R.L. DILWORTH
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FROM					TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W200	SIGNAL ENTRY PANEL	1A6	J1	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A1J25	P2
W201	SIGNAL ENTRY PANEL	1A6	J2	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	J1J26	P2
W202	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A1J27	P1	LINE AMPLIFIER	1A5A2A4	J1	P2
W203	LINE AMPLIFIER	1A5A2A4	J2	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A1J28	P2
W204	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A1J29	P1	INTERIOR COMMUNICATION SWITCHBOARD	1A5A2A8	J3	P2
W205	INTERIOR COMMUNICATION SWITCHBOARD	1A5A2A8	J2	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A1J30	P2
W206	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J25	P1	RADIO TRANSMITTER #1	1A5A3A1	TB2	
W207	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J26	P1	RADIO TRANSMITTER #2	1A5A3A2	TB2	
W208	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J27	P1	RADIO TRANSMITTER #3	1A5A3A3	TB2	
W209	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J28	P1	RADIO TRANSMITTER #4	1A5A3A4	TB2	
W210	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J29	P1	DIGITAL DATA RECEIVER-TRANSMITTER #1	1A5A2A9A1	TB	
W211	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J30	P1	DIGITAL DATA RECEIVER-TRANSMITTER #2	1A5A2A9A2	TB	
W212	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J31	P1	DIGITAL DATA MODEM	1A5A2A3	TB1	P1
W213	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A2J32	P1	INTERCOMMUNICATION STATION	1A5A2A7	TB1	
W214	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A3J28	P1	PATCH PANEL JACKFIELD	1A5A3A5	J1	P2
W215	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A3J27	P1	PATCH PANEL JACKFIELD	1A5A3A5	J2	P2
W216	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A3J26	P1	PATCH PANEL JACKFIELD	1A5A3A5	J1	P1
W217	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A3J25	P1	PATCH PANEL JACKFIELD	1A5A3A5	J1	P2
W218	DIGITAL DATA RECEIVER-TRANSMITTER #1	1A5A2A9A1	J1	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A4J25	P2
W219	DIGITAL DATA RECEIVER-TRANSMITTER #2	1A5A2A9A2	J1	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A4J26	P2
W220	DIGITAL DATA MODEM	1A5A2A3	J17	P1	INTERMEDIATE DISTRIBUTION FRAME	1A5A2A1	A4J27	P2

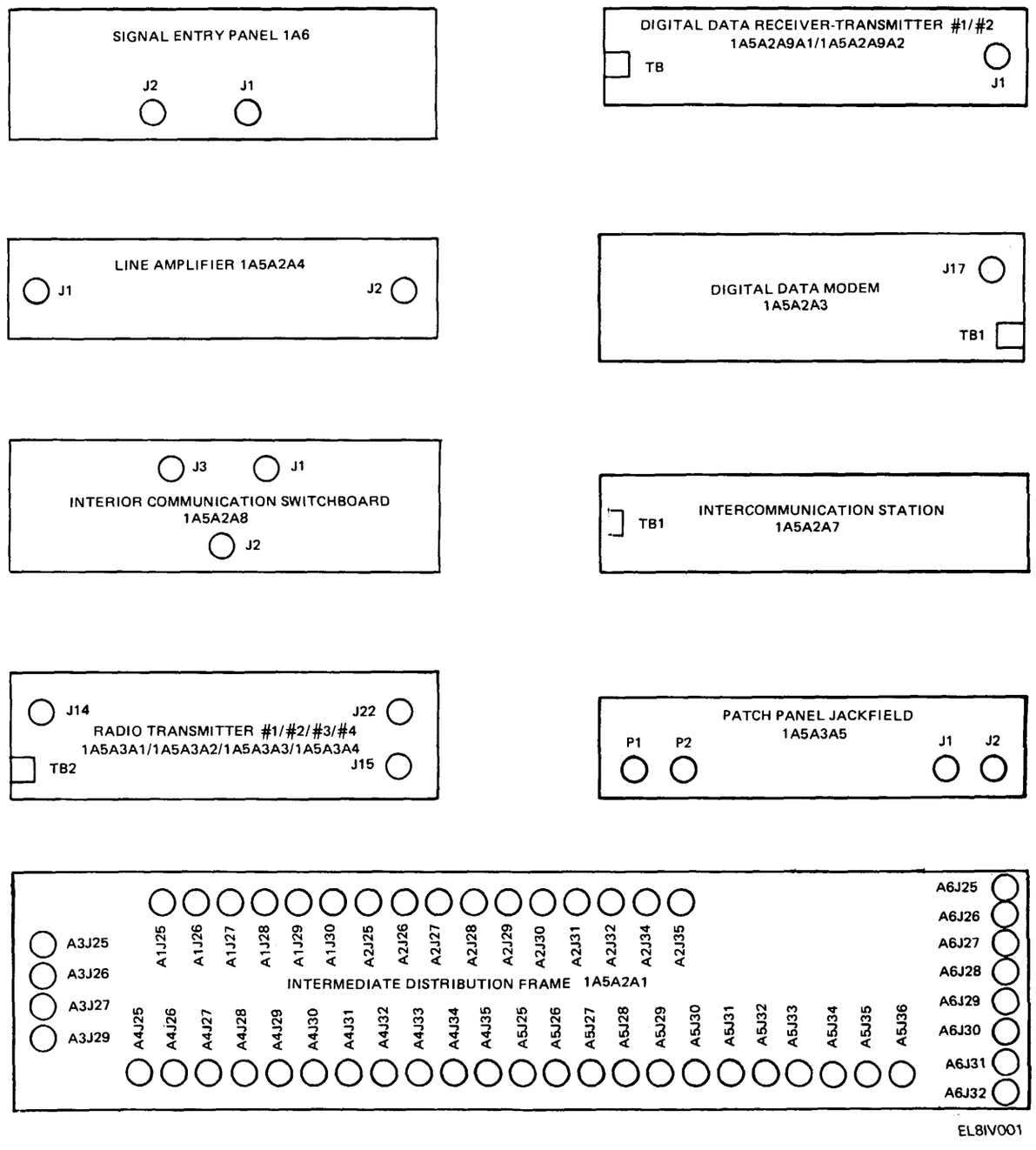


Figure FO-1. Transmitter Group OT-118/ TSC-99, Cable Diagram (Sheet 1 of 5)

FP-1/(FP-2 blank)

CABLE	FROM ASSEMBLY	FROM TYPE DES	FROM JACK	FROM PLUG	TO ASSEMBLY	TO TYPE DES	TO JACK	TO PLUG
W221	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J28	P1	PUNCHED TAPE READER	1A5A2A5	J1	P2
W222	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J29	P1	INTERIOR COMMUNICA-TION SWITCHBOARD	1A5A2A8	J1	P2
W223	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J30	P1	RADIO TRANSMITTER #1	1A5A3A1	J14	P2
W224	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J31	P1	RADIO TRANSMITTER #2	1A5A3A2	J14	P2
W225	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J32	P1	RADIO TRANSMITTER #3	1A5A3A3	J14	P2
W226	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J33	P1	RADIO TRANSMITTER #4	1A5A3A4	J14	P2
W227	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J34	P1	RADIO FREQUENCY TRANS-MISSION LINE SWITCH	1A4A3A2	J1	P2
W228	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A4J35	P1	DIGITAL DATA COM-PARATOR CORRECTOR	1A5A2A2	J1	P2
W229	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J25/ A5J26/ A5J27	P1	COMPUTER PRINTER TERMINAL	1A5A1	J1	P2
W230	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J28	P1	DATA PROCESSING SET #1	1A5A2A11	J1	P2
W231	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J29	P1	DATA PROCESSING SET #2	1A5A3A8	J1	P2
W232	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J30	P1	CONTROL POWER SUPPLY	1A5A3A7A1	CONT IN	P2
W233	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J31	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	TOP	P2
W234	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J32	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	BOT	P2
W235	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J33	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	A TOP	P2
W236	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J34	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	B TOP	P2
W237	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J35	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	A BOT	P2
W238	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A5J36	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	B BOT	P2
W239	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J32	P1	DATA PROCESSING SET #2	1A5A3A8	J2	P2
W240	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J31	P1	DATA PROCESSING SET #2	1A5A3A8	J3	P2
W241	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J30	P1	DATA PROCESSING SET #1	1A5A2A11	J2	P2
W242	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J29	P1	DATA PROCESSING SET #1	1A5A2A11	J3	P2
W243	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J28	P1	DATA PROCESSING SET #2	1A5A3A8	J5	P2
W244	INTERMEDIATE DISTRIBU-TION FRAME	1A5A2A1	A6J27	P1	DATA PROCESSING SET #1	1A5A2A11	J5	P2
W245	CONTROL-POWER SUPPLY	1A5A3A7A1	CONT OUT	P1	DATA COMMUNICATIONS CHANNEL SELECTOR	1A5A3A7A2	CONT IN	P2
W246	DATA RECORDER-REPRODUCER	1A5A2A10A1	J2	P1	INTERMEDIATE DISTRIBU TION FRAME	1A5A2A1	A6J25/ A6J26	P2

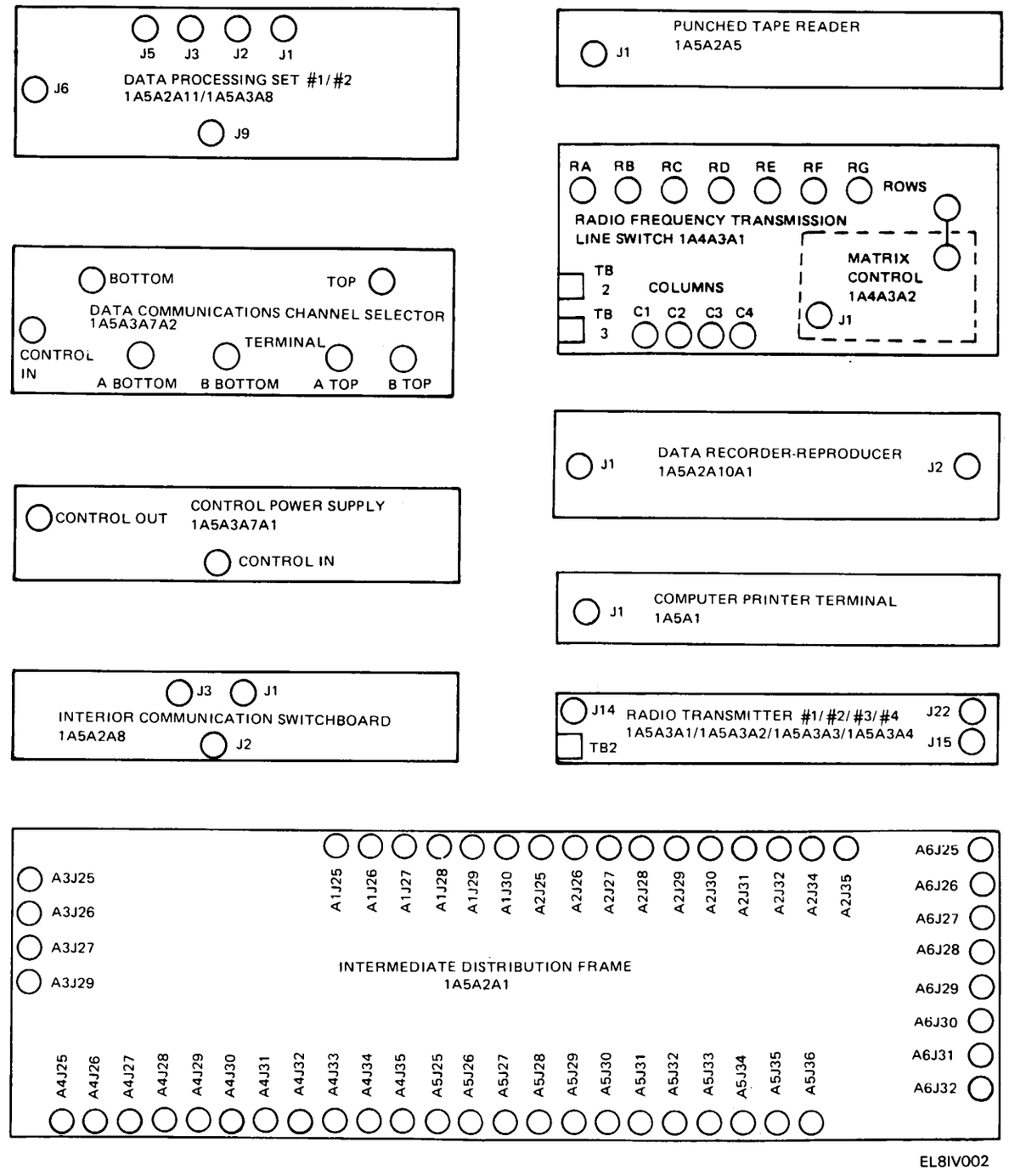
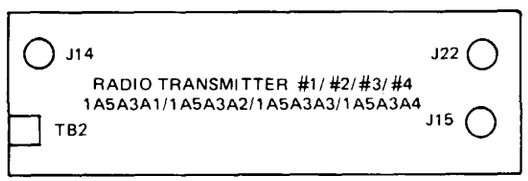
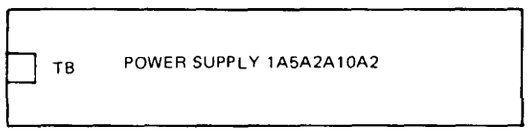
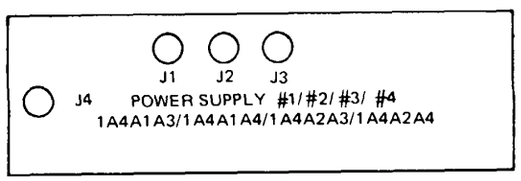


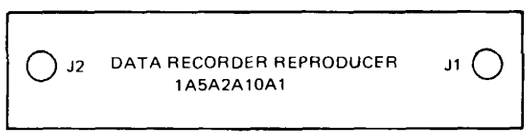
Figure FO-1. Transmitter Group OT-118/ TSC-99, Cable Diagram (Sheet 2 of 5)

FROM					TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W248	DATA RECORDER - REPRODUCER	1A5A2A10A1	J1	P1	POWER SUPPLY	1A5A2A10A2	TB	
W249	RADIO TRANSMITTER #1	1A5A3A1	J15	P1	POWER SUPPLY #1	1A4A1A3	J4	P2
P/O W249	RADIO TRANSMITTER #1	1A5A3A1	J15	P1	TERMINAL BOARD	1A4A1TB1	4&5	
W250	RADIO TRANSMITTER #2	1A5A3A2	J15	P1	POWER SUPPLY #2	1A4A1A4	J4	P2
P/O W250	RADIO TRANSMITTER #2	1A5A3A2	J15	P1	TERMINAL BOARD	1A4A1TB2	4&5	
W251	RADIO TRANSMITTER #3	1A5A3A3	J15	P1	POWER SUPPLY #3	1A4A2A3	J4	P2
P/O W251	RADIO TRANSMITTER #3	1A5A3A3	J15	P1	TERMINAL BOARD	1A4A2TB1	4&5	
W252	RADIO TRANSMITTER #4	1A5A3A4	J15	P1	POWER SUPPLY #4	1A4A2A4	J4	P2
P/O W252	RADIO TRANSMITTER #4	1A5A3A4	J15	P1	TERMINAL BOARD	1A4A2TB2	4&5	









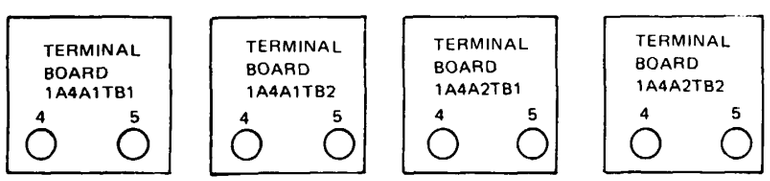


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Figure FO-1. Transmitter Group OT-118/ TSC-99, Cable Diagram (Sheet 3 of 5)

	FROM				TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W260	POWER SUPPLY #1	1A4A1A3	J1	P1	RADIO FREQUENCY AMPLIFIER #1	1A4A1A1	J5	P2
W261	POWER SUPPLY #1	1A4A1A3	J2	P1	RADIO FREQUENCY AMPLIFIER #1	1A4A1A1	J1	P2
W262	POWER SUPPLY #1	1A4A1A3	J3	P1	RADIO FREQUENCY AMPLIFIER #1	1A4A1A1	J2	P2
W263	POWER SUPPLY #2	1A4A1A4	J1	P1	RADIO FREQUENCY AMPLIFIER #2	1A4A1A2	J5	P2
W264	POWER SUPPLY #2	1A4A1A4	J2	P1	RADIO FREQUENCY AMPLIFIER #2	1A4A1A2	J1	P2
W265	POWER SUPPLY #2	1A4A1A4	J3	P1	RADIO FREQUENCY AMPLIFIER #2	1A4A1A2	J2	P2
W266	POWER SUPPLY #3	1A4A2A3	J1	P1	RADIO FREQUENCY AMPLIFIER #3	1A4A2A1	J5	P2
W267	POWER SUPPLY #3	1A4A2A3	J2	P1	RADIO FREQUENCY AMPLIFIER #3	1A4A2A1	J1	P2
W268	POWER SUPPLY #3	1A4A2A3	J3	P1	RADIO FREQUENCY AMPLIFIER #3	1A4A2A1	J2	P2
W269	POWER SUPPLY #4	1A4A2A4	J1	P1	RADIO FREQUENCY AMPLIFIER #4	1A4A2A2	J5	P2
W270	POWER SUPPLY #4	1A4A2A4	J2	P1	RADIO FREQUENCY AMPLIFIER #4	1A4A2A2	J1	P2
W271	POWER SUPPLY #4	1A4A2A4	J3	P1	RADIO FREQUENCY	1A4A2A2	J2	P2
W272	AIR CONDITIONER #1	1A7	J2	P2	AIR CONDITIONER CONTROL #1	1A4A4A1	J2	P2
W273	AIR CONDITIONER #2	1A8	J2	P2	AIR CONDITIONER CONTROL #2 AMPLIFIER #4	1A4A4A2	J2	P2
W100	RADIO TRANSMITTER #1	1A5A3A1	J22	P1	RADIO FREQUENCY AMPLIFIER #1	1A4A1A1	J3	P2
W101	RADIO TRANSMITTER #2	1A5A3A2	J22	P1	RADIO FREQUENCY AMPLIFIER #2	1A4A1A2	J3	P2
W102	RADIO TRANSMITTER #3	1A5A3A3	J22	P1	RADIO FREQUENCY AMPLIFIER #3	1A4A2A1	J3	P2
W103	RADIO TRANSMITTER #4	1A5A3A4	J22	P1	RADIO FREQUENCY AMPLIFIER #4	1A4A2A2	J3	P2

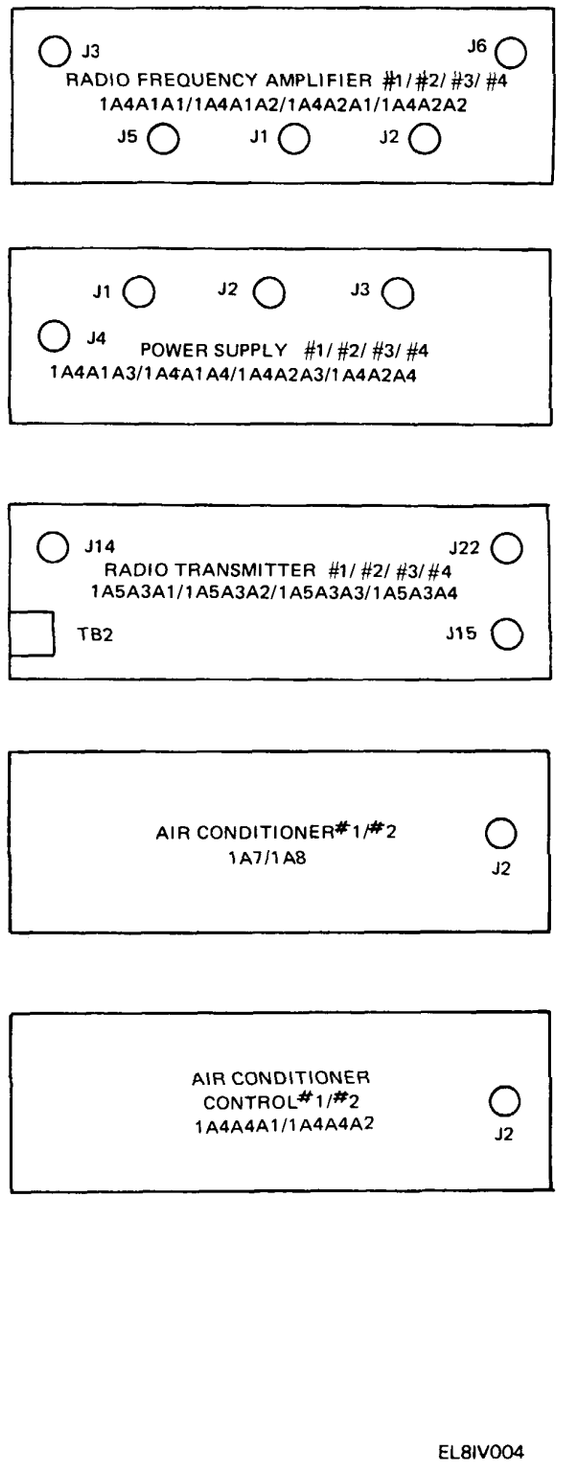


Figure FO-1. Transmitter Group OT-118/ TSC-99, Cable Diagram (Sheet 4 of 5)

	FROM				TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W104	RADIO RECEIVER	1A5A2A6	J21	P1	SIGNAL ENTRY PANEL	1A6	J9	P1
W105	RADIO FREQUENCY AMPLIFIER #1	1A4A1A1	J6	P1	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	COL 1	P2
W106	RADIO FREQUENCY AMPLIFIER #2	1A4A1A2	J6	P1	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	COL 2	P2
W107	RADIO FREQUENCY AMPLIFIER #3	1A4A2A1	J6	P1	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	COL 3	P2
W108	RADIO FREQUENCY AMPLIFIER #4	1A4A2A2	J6	P1	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	COL 4	P2
W109	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW A	P1	SIGNAL ENTRY PANEL	1A6	J3	P2
W110	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW B	P1	SIGNAL ENTRY PANEL	1A6	J4	P2
W111	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW C	P1	SIGNAL ENTRY PANEL	1A6	J5	P2
W112	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW D	P1	SIGNAL ENTRY PANEL	1A6	J6	P2
W113	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW E	P1	SIGNAL ENTRY PANEL	1A6	J7	P2
W114	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW F	P1	SIGNAL ENTRY PANEL	1A6	J8	P2
W115	RADIO FREQUENCY TRANSMISSION LINE SWITCH	1A4A3A1	ROW G	P1	ELECTRICAL DUMMY LOAD	1AT1	J1	P2

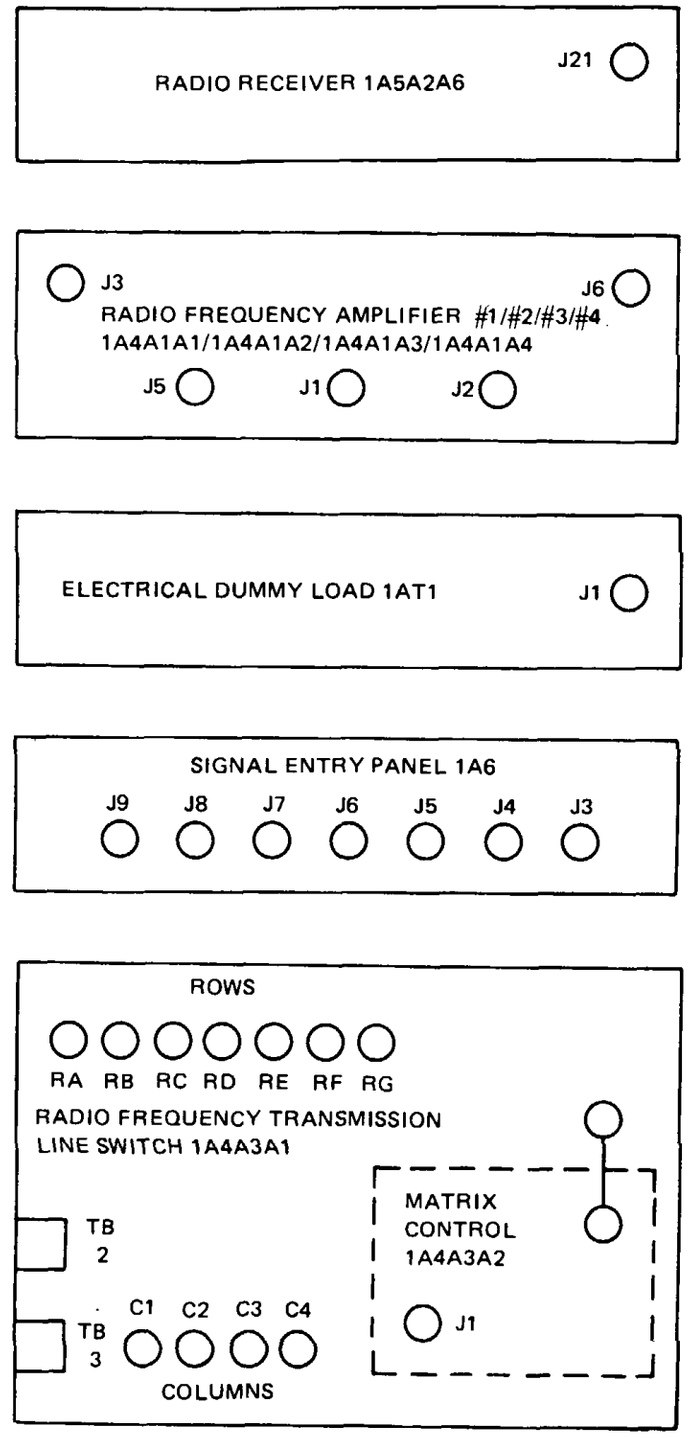


Figure FO-1. Transmitter Group OT-118/ TSC-99 Cable Diagram (Sheet 5 of 5)

CABLE	ASSEMBLY	FROM TYPE DES	FROM JACK	FROM PLUG	TO ASSEMBLY	TO TYPE DES	TO JACK	TO PLUG
W100	MULTICOUPLER	*		P1	RADIO RECEIVER #1	2A19A5A1	J21	P2
W101	MULTICOUPLER	*		P1	RADIO RECEIVER #2	2A19A5A2	J21	P2
W102	SIGNAL ENTRY PANEL	2A20	J16	P1	POWER SUPPLY	2A17A3	J1	P2
W103	SIGNAL ENTRY PANEL	2A20	J15	P1	MULTICOUPLER	2A17A1	3J1	P2
W104	SIGNAL ENTRY PANEL	2A20	J14	P1	POWER SUPPLY	2A17A4	J1	P2
W105	SIGNAL ENTRY PANEL	2A20	J13	P1	MULTICOUPLER	2A17A1	1J1	P2
W106	SIGNAL ENTRY PANEL	2A20	J12	P1	POWER SUPPLY	2A17A5	J1	P2
W107	SIGNAL ENTRY PANEL	2A20	J11	P1	MULTICOUPLER	2A17A1	2J1	P2
W108	MULTICOUPLER	*		P1	RADIO RECEIVER #3	2A19A5A3	J21	P2
W109	MULTICOUPLER	*		P1	RADIO RECEIVER #4	2A19A4A1	J21	P2
W110	SIGNAL ENTRY PANEL	2A20	J10	P1	POWER SUPPLY	2A16A3	J1	P2
W111	SIGNAL ENTRY PANEL	2A20	J9	P1	MULTICOUPLER	2A16A1	3J1	P2
W112	SIGNAL ENTRY PANEL	2A20	J8	P1	POWER SUPPLY	2A16A4	J1	P2
W113	SIGNAL ENTRY PANEL	2A20	J7	P1	MULTICOUPLER	2A16A1	1J1	P2
W114	SIGNAL ENTRY PANEL	2A20	J6	P1	POWER SUPPLY	2A16A5	J1	P2
W115	SIGNAL ENTRY PANEL	2A20	J5	P1	MULTICOUPLER	2A16A1	2J1	P2
W116	MULTICOUPLER	*		P1	RADIO RECEIVER #5	2A19A3A5	J21	P2

* RADIO RECEIVERS #1 THRU #5 AND HF SPECTRUM MONITOR ANTENNA INPUT CABLES CAN BE CONNECTED TO ANY ONE OF THE FOLLOWING MULTICOUPLER/POWER SUPPLY OUTPUT CONNECTIONS DEPENDING ON SYSTEM ANTENNA CONFIGURATION.

LOOP ANTENNA ROSETTE ARRAY

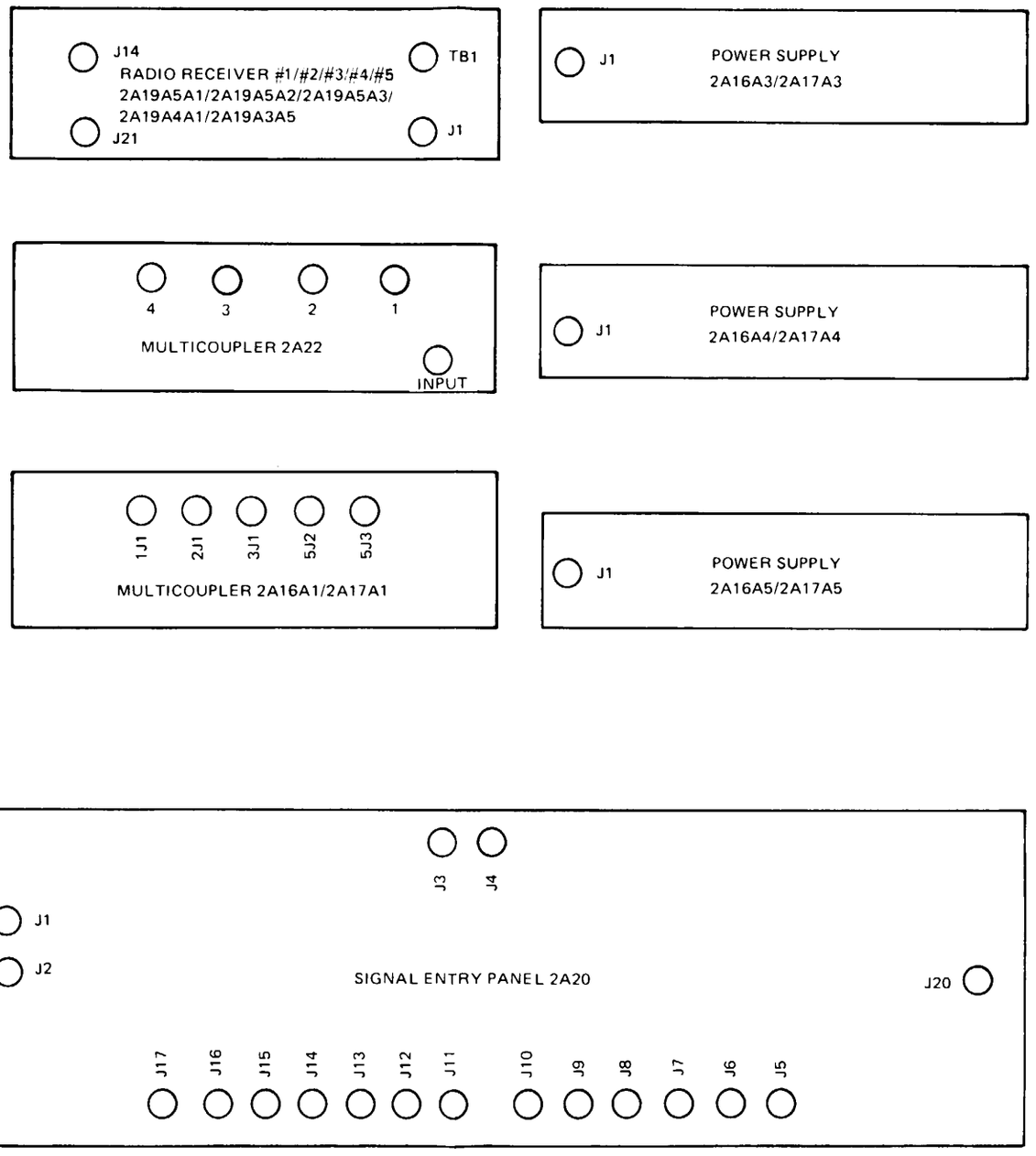
ASSEMBLY	TYPE DES	JACK
MULTICOUPLER	2A16A1	4J2 THRU 4J5
MULTICOUPLER	2A17A1	4J2 THRU 4J5

LOOP ANTENNA ENDFIRE ARRAY

ASSEMBLY	TYPE DES	JACK
POWER SUPPLY	2A16A3	J2 THRU J5
POWER SUPPLY	2A16A4	J2 THRU J5
POWER SUPPLY	2A16A5	J2 THRU J5
POWER SUPPLY	2A17A3	J2 THRU J5
POWER SUPPLY	2A17A4	J2 THRU J5
POWER SUPPLY	2A17A5	J2 THRU J5

HF DIPOLE ANTENNA

ASSEMBLY	TYPE DES	JACK
MULTICOUPLER	2A22	1 THRU 4



EL8IV006

Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 1 of 7)

	FROM				TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W117	HF SPECTRUM MONITOR	2A19A4A3	J3	P1	MULTICOUPLER	*		P2
W118	SIGNAL ENTRY PANEL	2A20	J17	P1	MULTICOUPLER	2A22	INPUT	P2
W119	SIGNAL ENTRY PANEL	2A20	J20		SATCOM TRANSCEIVER	2A19A2A6		P1
W201	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A6J28	P1	PLASMA DISPLAY CONTROL - INDICATOR #1	2A19A2A8	EIA	P2
W203	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A6J27	P1	PLASMA DISPLAY CONTROL - INDICATOR #2	2A19A4A4	E1A	P2

* RADIO RECEIVERS #1 THRU #5 AND HF SPECTRUM MONITOR ANTENNA INPUT CABLES CAN BE CONNECTED TO ANY ONE OF THE FOLLOWING MULTICOUPLER/POWER SUPPLY OUTPUT CONNECTIONS DEPENDING ON SYSTEM ANTENNA CONFIGURATION.

LOOP ANTENNA ROSETTE ARRAY

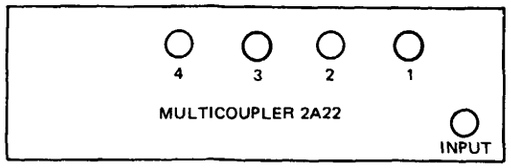
ASSEMBLY	TYPE DES	JACK
MULTICOUPLER	2A16A1	4J2 THRU 4J5
MULTICOUPLER	2A17A1	4J2 THRU 4J5

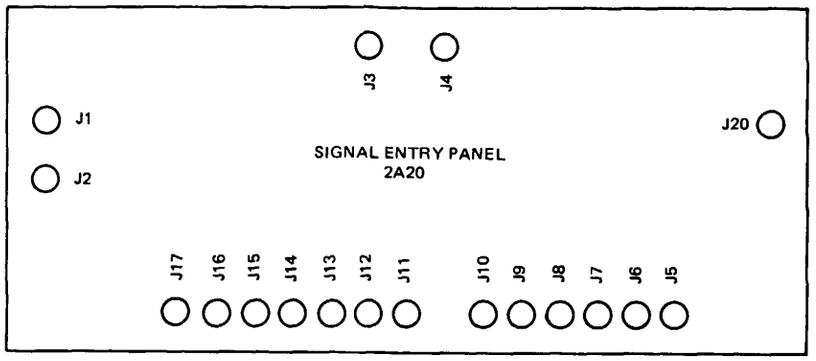
LOOP ANTENNA ENDFIRE ARRAY

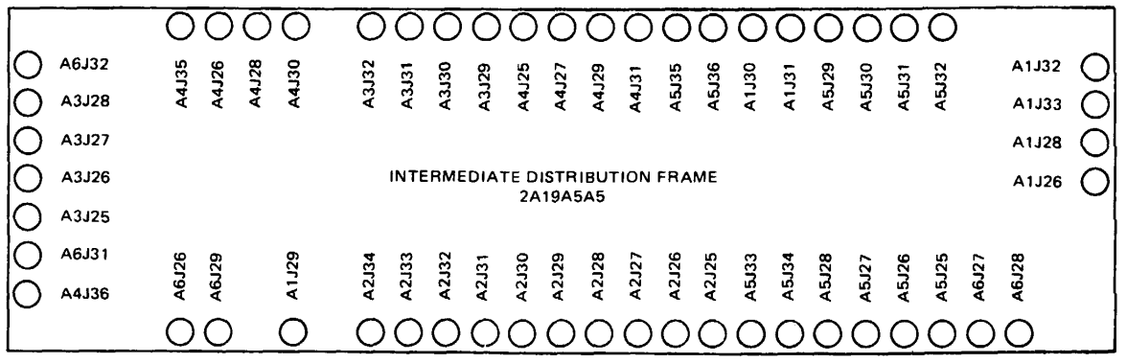
ASSEMBLY	TYPE DES	JACK
POWER SUPPLY	2A16A3	J2 THRU J5
POWER SUPPLY	2A16A4	J2 THRU J5
POWER SUPPLY	2A16A5	J2 THRU J5
POWER SUPPLY	2A17A3	J2 THRU J5
POWER SUPPLY	2A17A4	J2 THRU J5
POWER SUPPLY	2A17A5	J2 THRU J5

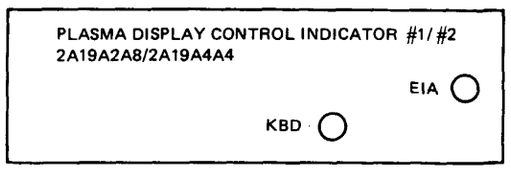
HF DIPOLE ANTENNA

ASSEMBLY	TYPE DES	JACK
MULTICOUPLER	2A22	1 THRU 4









EL8IV007

Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 2 of 7)

	FROM				TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W204	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A5 J25	P1	PUNCHED TAPE PERFORATOR #1	2A19A1 A1	J1	P2
W205	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A5J26	P1	PUNCHED TAPE PERFORATOR #2	2A19A1A2	J1	P2
W206	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A4J29	P1	DIGITAL DATA MODEM #3	2A19A2A16	J17/TB	P2
W207	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A5J28	P1	PUNCHED TAPE PERFORATOR #3	2A11	J1	P2
W208	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A5J34	P1	PUNCHED TAPE READER #1	2A19A2A7	J1	P2
W209	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A5J33	P1	PUNCHED TAPE READER #2	2A10	J1	P2
W210	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J25	P1	RADIO RECEIVER #1	2A19A5A1	TB1	P2
W211	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J26	P1	RADIO RECEIVER #1	2A19A5A1	J14	P2
W212	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J27	P1	RADIO RECEIVER #2	2A19A5A2	TB1	P2
W213	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J28	P1	RADIO RECEIVER #2	2A19A5A2	J14	P2
W214	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J29	P1	RADIO RECEIVER #3	2A19A5A3	TB1	P2
W215	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J30	P1	RADIO RECEIVER #3	2A19A5A3	J14	P2
W216	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J31	P1	RADIO RECEIVER #4	2A19A4A1	TB1	P2
W217	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J32	P1	RADIO RECEIVER #4	2A19A4A1	J14	P2
W218	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J33	P1	RADIO RECEIVER #5	2A19A3A5	TB1	P2
W219	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A2J34	P1	RADIO RECEIVER #5	2A19A3A5	J14	P2

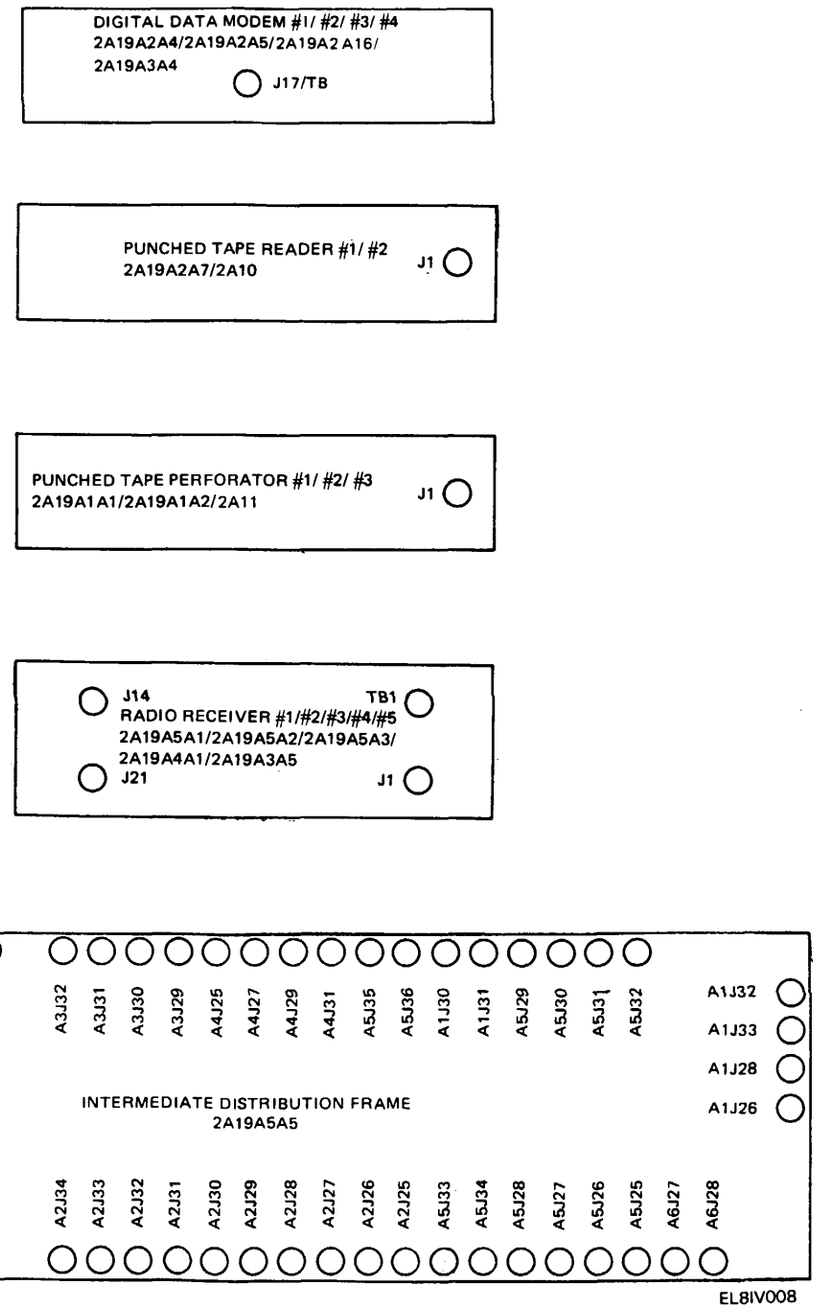


Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 3 of 7)

CABLE	FROM ASSEMBLY	FROM TYPE DES	FROM JACK	FROM PLUG	TO ASSEMBLY	TO TYPE DES	TO JACK	TO PLUG
W220	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A1J29	P1	SOUND RECORDER-REPRODUCER	2A19A3A3	1SKT2 2SKT2 3SKT2 4SKT2	P2
W221	AUDIO RECORDER CONTROL #1	2A19A3A8	TB1	P1	SOUND RECORDER-REPRODUCER	2A19A3A3	1SKT1	P2
W222	AUDIO RECORDER CONTROL #2	2A19A3A9	TB1	P1	SOUND RECORDER-REPRODUCER	2A19A3A3	2SKT1	P2
W223	AUDIO RECORDER CONTROL #3	2A19A3A10	TB1	P1	SOUND RECORDER-REPRODUCER	2A19A3A3	3SKT1	P2
W225	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A6J31	P1	DATA PROCESSING SET #2	2A19A4A7	J1	P2
W226	DATA RECORDER-REPRODUCER #2	2A19A2A2	J2	P1	DATA PROCESSING SET #2	2A19A4A7	J5	P2
W227	AUDIO RECORDER CONTROL #4	2A19A3A11	TB1	P1	SOUND RECORDER-REPRODUCER	2A19A3A3	4SKT1	P2
W228	POWER SUPPLY	2A19A2A3	TB1	P1,P4	DATA RECORDER-REPRODUCER #1	2A19A2A1	J1	P2
P/O W228	POWER SUPPLY	2A19A2A3	TB1	P1,P4	DATA RECORDER-REPRODUCER #2	2A19A2A2	J1	P3
W229	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A3J25	P1	I/O CHASSIS	2A19A3A14	J11	P2
W230	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A3J26	P1	I/O CHASSIS	2A19A3A14	J2	P2
W231	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A3J27	P1	I/O CHASSIS	2A19A3A14	J7	P2
W232	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A3J28	P1	I/O CHASSIS	2A19A3A14	J12	P2

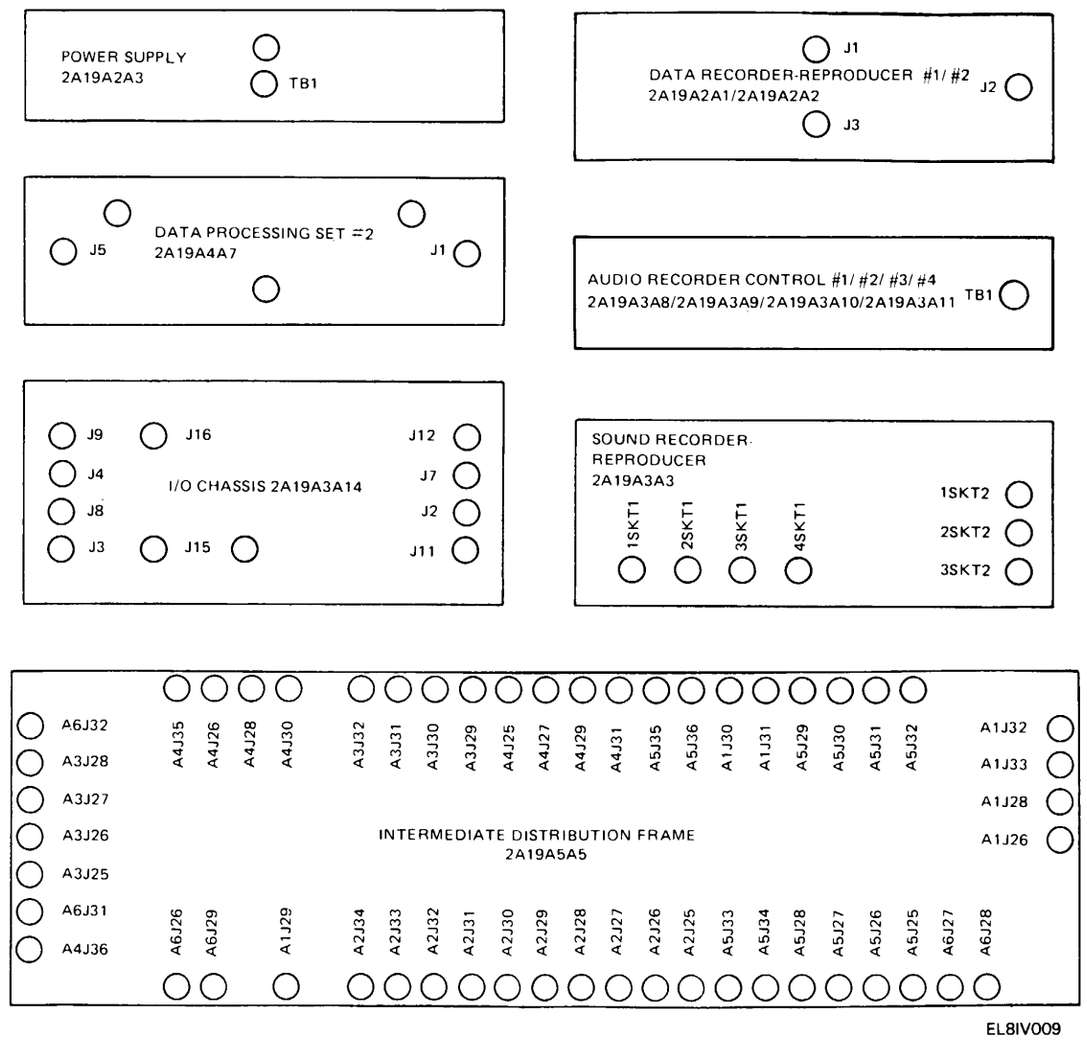


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Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 4 of 7)

FROM					TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W234	HIGH SPEED PRINTER #1	2A19A1A4	J2	P1	I/O CHASSIS	2A19A3A14	J8	P2
W235	HIGH SPEED PRINTER #2	2A19A5A4	J2	P1	I/O CHASSIS	2A19A3A14	J3	P2
W236	DATA RECORDER-REPRODUCER #1	2A19A2A1	J2	P1	DATA PROCESSING SET #1	2A19A2A12	J5	P2
W237	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A6J32	P1	DATA PROCESSING SET #1	2A19A2A12	J1	P2
W240	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J26	P1	DIGITAL DATA COMPARATOR-CORRECTOR	2A19A2A11	J15	P2
W241	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J28	P1	DIGITAL DATA COMPARATOR-CORRECTOR	2A19A2A11	J16	P2
W242	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J30	P1	DIGITAL DATA COMPARATOR-CORRECTOR	2A19A2A11	J17	P2
W244	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A3J32	P1	PATCH PANEL JACKFIELD	2A19A3A7	J1	P2
W245	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A3J31	P1	PATCH PANEL JACKFIELD	2A19A3A7	J2	P2
W246	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A3J30	P1	PATCH PANEL JACKFIELD	2A19A3A7	P1	P2
W247	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A3J29	P1	PATCH PANEL JACKFIELD	2A19A3A7	P2	P2
W248	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J25	P1	DIGITAL DATA MODEM #1	2A19A2A4	J17/TB	P2
W249	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J27	P1	DIGITAL DATA MODEM #2	2A19A2A5	J17/TB	P2
W250	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A4J31	P1	DIGITAL DATA MODEM #4	2A19A3A4	J17/TB	P2

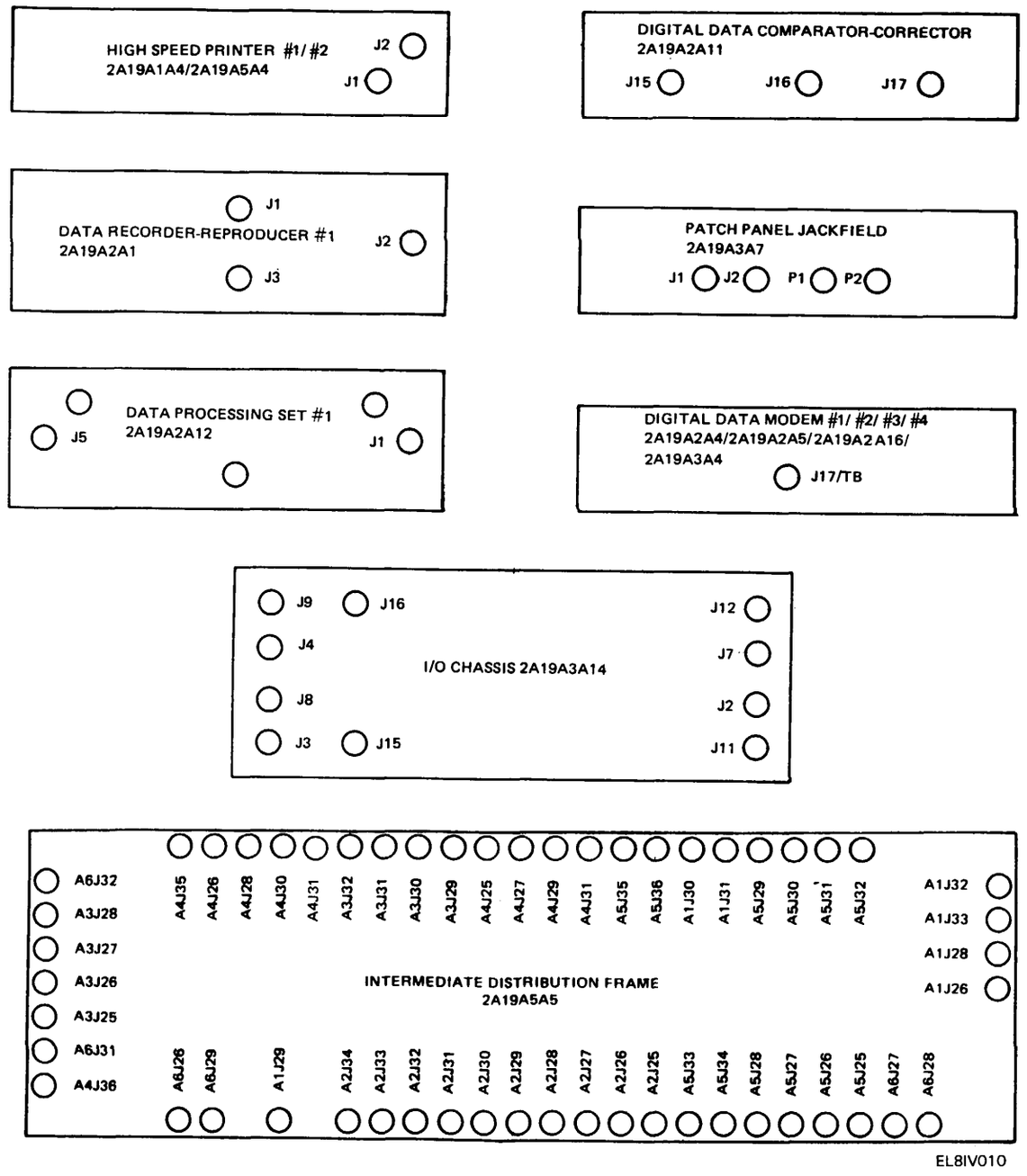
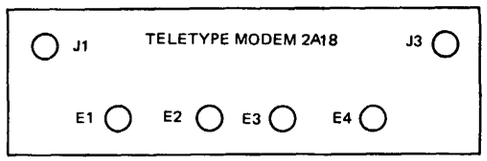
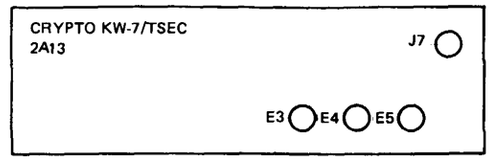
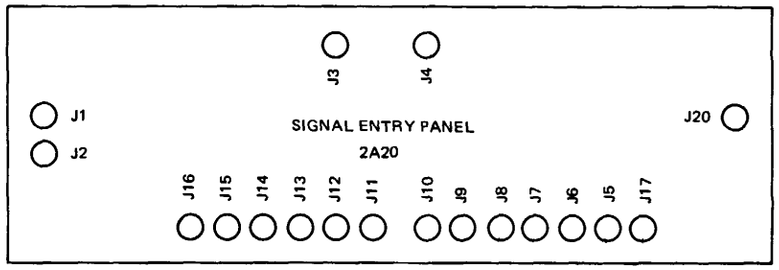


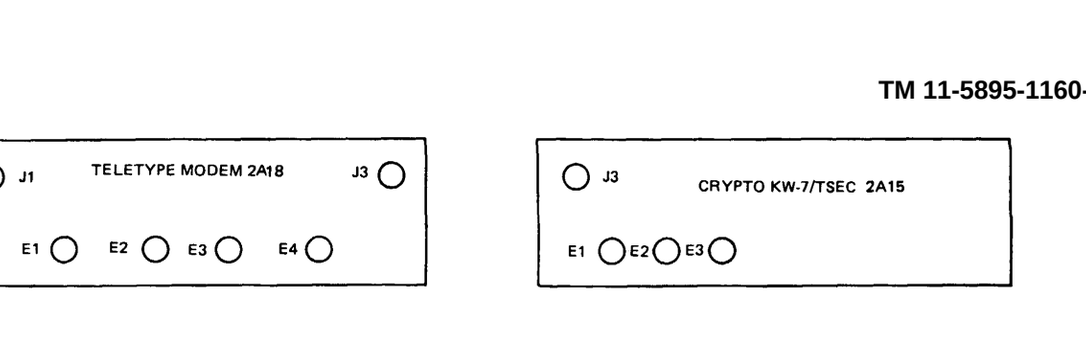
Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 5 of 7)

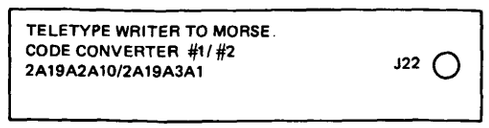
	FROM				TO			
CABLE	ASSEMBLY	TYPE DES	JACK	PLUG	ASSEMBLY	TYPE DES	JACK	PLUG
W252	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J35	P1	TELETYPEWRITER TO MORSE CODE CONVERTER #1	2A19A2A10	J22	P2
W253	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J36	P1	TELETYPEWRITER TO MORSE CODE CONVERTER #2	2A19A3A1	J22	P2
W254	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A1J30	P1	MONITOR PANEL	2A19A3A6	J1	P2
W255	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A1J31	P1	MONITOR PANEL	2A19A3A6	J2	P2
W256	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J29	P1	DIGITAL DATA RECEIVER-TRANSMITTER #1	2A19A1A7	J1	P2
W257	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J30	P1	DIGITAL DATA RECEIVER-TRANSMITTER #1	2A19A1A7	TB1	P2
W258	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J31	P1	DIGITAL DATA RECEIVER-TRANSMITTER #2	2A19A1A8	J1	P2
W259	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A5J32	P1	DIGITAL DATA RECEIVER-TRANSMITTER #2	2A19A1A8	TB1	P2
W260	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A1J32	P1	SIGNAL ENTRY PANEL	2A20	J1	P2
W261	INTERMEDIATE DISTRIBUTION FRAME	2A19A5A5	A1J33	P1	SIGNAL ENTRY PANEL	2A20	J2	P2
W262	SIGNAL ENTRY PANEL	2A20	J3	P1	TELETYPE MODEM	2A18	E3,E4, E5,E6	
W263	TELETYPE MODEM	2A18	J3	P1	CRYPTO KW-7/TSEC	2A15	E1,E2, E3	
W264	TELETYPE MODEM	2A18	J1	P1	CRYPTO KW-7/TSEC	2A13	E3,E4, E5	
W265	CRYPTO KWX-11/TSEC	2A14	J9	P1	CRYPTO KW-7/TSEC	2A15	J7	P2
W266	CRYPTO KWX-11/TSEC	2A14	J7	P1	CRYPTO KW-7/TSEC	2A13	J3	P2











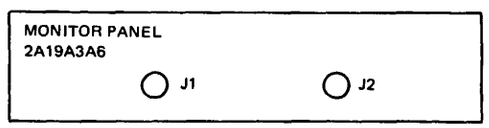


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Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 6 of 7)

CABLE	FROM ASSEMBLY	FROM TYPE DES	FROM JACK	FROM PLUG	TO ASSEMBLY	TO TYPE DES	TO JACK	TO PLUG
W263	TELETYPE MODEM	2A18	J3	P1	CRYPTO KW-7/TSEC	2A15	E1,E2, E3	
W264	TELETYPE MODEM	2A18	J1	P1	CRYPTO KW-7/TSEC	2A13	E3,E4, E5	
W265	CRYPTO KWX-11/TSEC	2A14	J9	P1	CRYPTO KW-7/TSEC	2A15	J7	P2
W266	CRYPTO KWX-11/TSEC	2A14	J7	P1	CRYPTO KW-7/TSEC	2A13	J3	P2
W267	PUNCHED TAPE READER PERFORATOR #1	2A7	J1		CRYPTO KWX-11/TSEC	2A14	TB4	
W268	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A1J28	P1	SATCOM TRANSCEIVER	2A19A2A6	VOICE/ DATA	P2
W269	INTERMEDIATE DISTRIBU-TION FRAME	2A19A5A5	A1J26	P1	INTERCOMMUNICATION STATION	2A19A3A2	TB1	P2
W271	PUNCHED TAPE READER-PERFORATOR #2	2A6	J1		COMSEC FACILITY	2A9	1J1	P1
W272	PUNCHED TAPE READER-PERFORATOR #3	2A8	J1		COMSEC FACILITY	2A12	1J1	P1
W273	SIGNAL ENTRY PANEL	2A20	J4	P1	TELEPHONE JACKS	2A19	E1,E2, E3,E4	P2
W274	DATA PROCESSING SET #2	2A19A4A7	J6	P1	I/O CHASSIS	2A19A3A14	J16	P2
W275	DATA PROCESSING SET #1	2A19A2A12	J6	P2	I/O CHASSIS	2A19A3A14	J15	P1
W276	I/O BUS SWITCH	2A19A3A15	J1	P1	I/O CHASSIS	2A19A3A14	J9	P2
W277	MASS MEMORY	2A19A3A13	P2,P3		I/O CHASSIS	2A19A3A14	J4	P2
W002	POWER SUPPLY	2A21	TB1	P1	CRYPTO KWX-11/TSEC	2A14	J3	P1
W003	POWER SUPPLY	2A21	TB1	P1	CRYPTO KWX-11/TSEC	2A14	TB4	

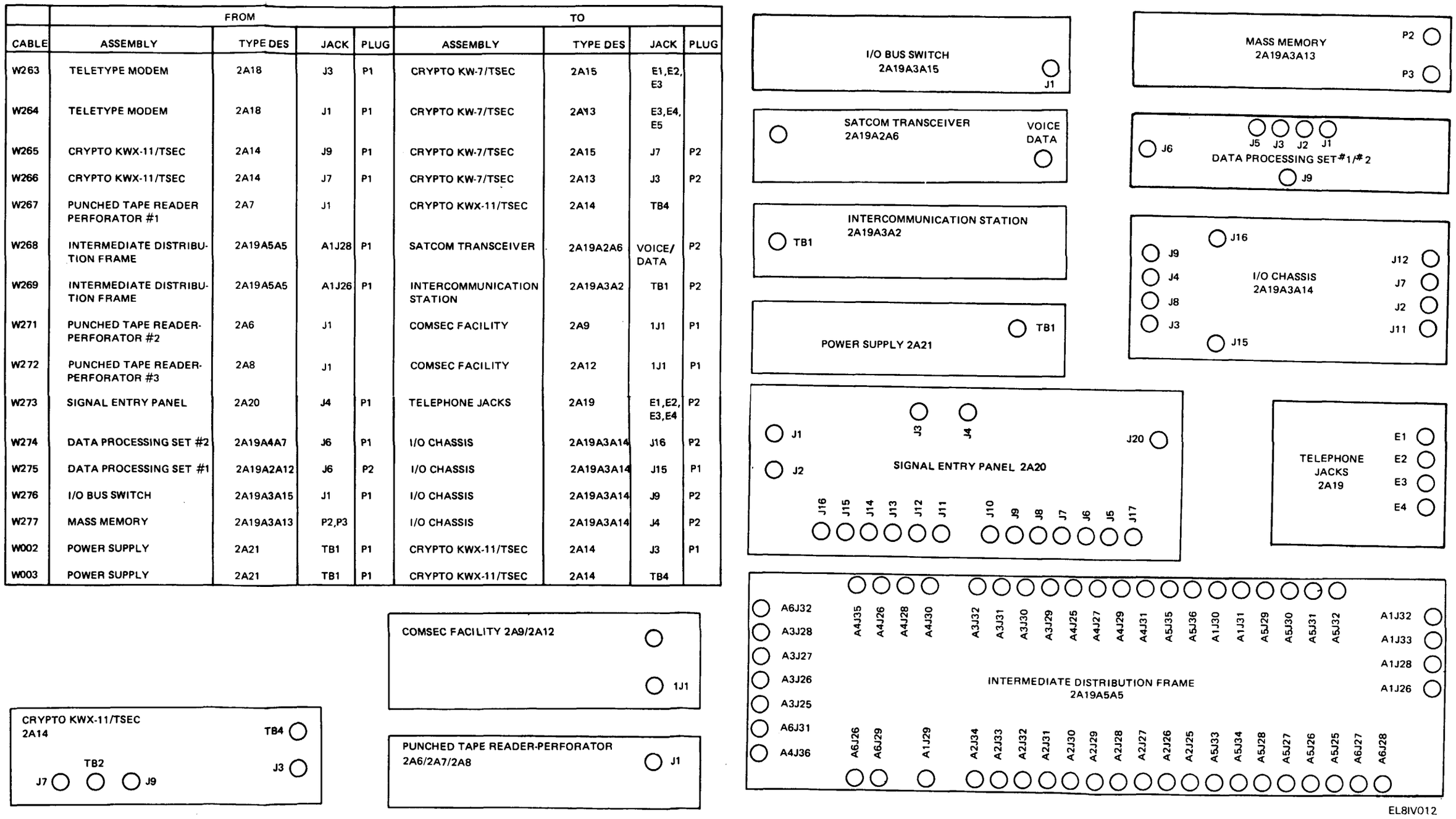

Figure FO-2. Receiver Group OR-218/ TSC-99, Cable Diagram (Sheet 7 of 7)

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