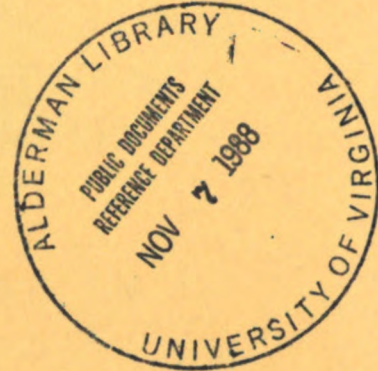


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TM 11-5805-211-15

DEPARTMENT OF THE ARMY TECHNICAL MANUAL



OPERATION AND MAINTENANCE MANUAL TELEPHONE CENTRAL OFFICE AN/MTC-7

This copy is a reprint which includes current
pages from Changes 3 through 14

HEADQUARTERS, DEPARTMENT OF THE ARMY
JULY 1959

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WARNING
HIGH VOLTAGE

is used in
this equipment.

DEATH ON CONTACT

may result if safety precautions
are not observed.

DANGEROUS POTENTIALS

EXIST IN THE FOLLOWING UNITS:
POWER DISTRIBUTION PANEL
SIGNAL & POWER ENTRANCE BOX
AC POWER DUCT

Trailer Mounted Gasoline Engine Generator Set PU-322/G (TM 11-900A)

All operating adjustments of this equipment are made with the power applied. Be careful when working on the wiring side of the equipment.

DON'T TAKE CHANCES

VENTILATION

When occupied, the shelter of Manual Telephone Central Office AN/MTC-7 must be ventilated at all times. Operate both blowers for maximum ventilation. If only one blower is used, close the outside vents of the unused blower.

CHANGE }
NO. 14 }HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC, 12 January 1984**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT,
GENERAL SUPPORT, AND DEPOT MAINTENANCE
MANUAL CENTRAL OFFICE, TELEPHONE
AN/MTC-7 (NSN 5805-00-542-7276)**

TM 11-5805-211-15, 13 July 1959, is changed as follows:

Page 3. Paragraphs 1.1, 2, 2.1, 2.2 and 2.3 are superseded as follows:

1.1. Consolidated Index of Army Publications and Blank Forms

Refer to the latest issue of DA Pam 310-1 to determine whether there are new editions, changes or additional publications pertaining to the equipment.

2. Maintenance Forms, Records, and Reports

a. Reports of Maintenance and Unsatisfactory Equipment. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System.

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 4355.73A/AFR 400-54/MCO 4430.3F.

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.

2.1. 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Communications-Electronics Command and Fort Mon-

mouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. In either case, a reply will be furnished direct to you.

2.2. Reporting Equipment Improvement Recommendations (EIR)

If your central office manual telephone, needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. We'll send you a reply.

2.3. 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 chapter 5 and TM 740-90-1.

Page 17, figure 12. Add the following note to the figure:

NOTE

On some equipments, "LIGHT" and "HEATER" circuit breakers are mounted one above the other; similarly mounted are "BLOWER 2" and "SPARE circuit breakers; "CONVENIENCE RECEPTACLE" and "BLOWER 1" are unchanged.

*This change supersedes C6, 26 April 1963; C8, 21 September 1964 and TM 11-5805-211 ESC
16 Apr 75.

Page 31. Paragraphs 38, 39, 40 and 41 are superseded as follows:

38. Operator/Crew and Organizational Preventive Maintenance

NOTE

Refer to TM 750-244-2 for proper procedures for destruction of this equipment to prevent enemy use.

a. Operator/crew preventive maintenance is the systematic care, servicing and inspection of equipment to prevent the occurrence of trouble, to reduce downtime, and to maintain equipment in serviceable condition. To be sure that your central office manual telephone is always ready for your mission, you must do scheduled preventive maintenance checks and services (PMCS).

(1) BEFORE OPERATION, perform your B PMCS to be sure that your equipment is ready to go.

(2) When an item of equipment is reinstalled after removal, for any reason, perform the necessary B PMCS to be sure the item meets the readiness reporting criteria.

(3) Use the ITEM NO. column in the PMCS table to get the number to be used in the TM ITEM NO. column on DA Form 2404 (Equipment Inspection and Maintenance Worksheet) when you fill out the form.

b. Organizational preventive maintenance procedures are designed to help maintain equipment in serviceable condition. They include items to be checked and how to check them. These checks and services, described in paragraph 4-3, outline inspections that are to be made at specific monthly (M), quarterly (Q), and semi-annual (S) intervals.

c. Routine checks like CLEANING, PRESERVATION, DUSTING, WASHING, CHECKING FOR FRAYED CABLES, STOWING ITEMS NOT IN USE, COVERING UNUSED RECEPTACLES, CHECKING FOR LOOSE NUTS AND BOLTS AND CHECKING FOR COMPLETENESS are not listed as PMCS checks. They are things that you should do any time you see they must be done. If you find a routine check like one of those listed in your PMCS, it is because other operators reported problems with this item.

NOTE

When you are doing any PMCS or

routine checks, keep in mind the warnings and cautions.

WARNINGS

- Never operate the generator or shelter until it has been properly grounded. Electrical defects in the load lines or equipment can cause death by electrocution when contact is made with an ungrounded system.
- Adequate ventilation should be provided while using TRICHLOROTRIFLUOROETHANE. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.
- Compressed air is dangerous and can cause serious bodily harm if protective means or methods are not observed to prevent a chip or particle (of whatever size) from being blown into the eyes or unbroken skin of the operator or other personnel. Goggles must be worn at all times while cleaning with compressed air. Compressed air shall not be used for cleaning purposes except where reduced to less than 29 pounds per square inch gage (psig) and then only with effective chip guarding and personnel protective equipment. Do not use compressed air to dry parts when trichlorotrifluoroethane has been used.

NOTES

The PROCEDURES column in your PMCS charts instruct how to perform the required checks and services. Carefully follow these instructions and, if tools are needed or the chart so instructs, get organizational maintenance to do the necessary work. If your equipment must be in operation all the time, check those items that can be checked and serviced

without disturbing operation. Make the complete checks and services when the equipment can be shut-down.

d. Deficiencies that cannot be corrected must be reported to higher category maintenance personnel. Records and reports of preventive maintenance must be made in accordance with procedures given in TM 38-750.

39. Operator/Crew Preventive Maintenance Checks and Services

Perform before operation PMCS if you are operating the item for the first time.

NOTE

The checks in the interval column are to be performed in the order listed.

40. Operator/Crew Preventive Maintenance Checks and Services Chart

B – Before

Item No.	Interval		Item to be Inspected	Procedures - Check for and have repaired or adjusted as necessary	Equipment is not Ready/Available If:
	B				
1	●		Mission Essential Equipment	Check for completeness and satisfactory condition of the equipment. Report missing items.	Available equipment is insufficient to support the combat mission.
2	●		Grounding System	Check grounding system.	Unable to ground properly.
3	*		Telephone Set TA-312/PT	Perform operational checks as described in TM 11-5805-201-12.	Telephone set fails to provide intelligible communications.
4	*		Manual Telephone Switchboard SB-86/P	Perform operational checks as described in TM 11-2134.	Switchboard inoperative or four or more line packs inoperative.
5	*		Central Office, Telephone AN/MTC-7	Perform operational checks as described in paragraph 28 and 32 through 36.	Circuits do not operate properly.

*Do this check before each deployment to a mission location. This will permit any existing problems to be corrected before the mission starts.

41. Organizational Preventive Maintenance Checks and Services Chart

M – Monthly

Q – Quarterly

S – Semiannually

Item No.	Interval			Item to be Inspected	Procedures
	M	Q	S		
1	●	●		Grounding System	Clean ground lug connections. Replace ground rod if ground lead cannot be securely tightened. Replace ground lead if damaged.
2			●	Fire Extinguisher	Refill, if seal is broken.
3			●	First Aid Kit	Replace missing parts.
4	●			Reel Unit RL-31	Perform organizational checks as described in TM 11-363.
5	●			Exhaust Blowers	Lubricate, at oiling points with PL Special or OE-10 lubricant.
6	●			Telephone Set TA-312/PT	Perform organizational checks as described in TM 11-5805-201-12.
7	●			Central Office, Telephone	Perform equipment checklist as described in paragraph 42.

Page 40. Change title of chapter 5 to "SHIP- Section II. Delete section II in its entirety.
 MENT AND LIMITED STORAGE AND Page 42. Delete appendix I and substitute:
 TRANSPORTATION."

**APPENDIX I
 REFERENCES**

Following is a list of applicable references available for Central Office, Telephone AN/MTC-7.

- AR 310-25 Dictionary of United States Army Terms.
- AR 310-50 Authorized Abbreviations and Brevity Codes.
- AR 702-7-1 Reporting of Product Quality Deficiencies Within the U.S. Army.
- FM 21-6 How to Prepare and Conduct Military Training.
- FM 21-30 Military Symbols.
- SB 11-6 Primary Battery Supply Data.
- SB 11-573 Painting and Preservation of Supplies Available for Field Use for Electronics Command Equipment.

- DA Pam 310-1 Consolidated Index of Army Publications and Blank Forms.
- TB 11-6625-666-50 Inspection Requirements for Repaired Electrical Indicating Instruments.
- TB 43-0124 Maintenance and Repair Procedure for Shelters, Electrical Equipment S-141/G and S-141B/G (NSN 5410-00-752-9698), S-144/G, S-114A/G, S-144B/G, S-114C/G and S-144D/G (5410-00-542-2532), S-250/G (5410-00-999-4935), S-250/G (Shielded) (5410-00-489-6076), S-280/G (5410-00-999-5269), S-280A/G (5410-00-999-6022), S-280B/G (5410-00-117-2868), S-280B/G (Shielded) (541-00-001-4093), S-280C/G and S-318/G (5410-00-763-2339), and S-318A/G (5410-00-116-7086).

- TB 43-0125 Installation of Communications-Electronic Equipment: Hookup of Electrical Cables to Mobile Generator Sets on Fielded Equipment to Meet Electrical Safety Standards.

- TM 5-6115-365-15 Operator's, Organizational, Direct Support, General Support and Depot Maintenance Manual (Including Repair Parts and Special Tools List) Generator Sets, Gasoline and Diesel Engine Driven, Trailer Mounted PU-236A/G, PU-236/G, (NSN 6115-00-393-1709), PU-236B/G, (NSN 6115-00-738-6334), PU-253A/U, PU-253/U, (NSN 6115-00-697-2402), PU-304C/MPQ-4 (NSN 6115-00-056-8421), PU-332/G (NSN 6115-00-577-8471), PU-332A/G (NSN 6115-00-738-8336), PU-375A/G, PU-375/G (NSN 6615-00-753-2231), PU-375B/G (NSN 6115-00-931-6789), PU-401/M (NSN 6115-00-823-2217), PU-402/M (NSN 6115-00-722-3760), PU-406/M (NSN 6115-00-738-6342), PU-409/M (NSN 6115-00-702-3343), PU-409A/M (NSN 6115-00-733-6338), PU-495/G (NSN 6115-00-823-2218), PU-551/G, (NSN 6115-00-889-1307), PU-564/G, (NSN 6115-00-738-6341), PU-564B/G (NSN 6115-00-179-2789), PU-617/M (NSN 6115-00-738-6335), PU-618/M (NSN 6115-00-738-6337), PU-619/M (NSN 6115-00-738-6339), PU-620/M (NSN 6115-00-738-6340), PU-625/G (NSN 6115-00-837-3915), PU-628/G (NSN 6115-00-087-0873), PU-629/G (NSN 6115-00-937-5555), PU-631/G (NSN 6115-00-059-5172), PU-656/G (NSN 6115-00-939-3296) and PU-650B/G (NSN 6115-00-258-1622).

- TM 9-2330-202-14P Operator's, Organizational, DS, and GS Maintenance Manual (Including Repair Parts and Special Tools List) for Trailer, Cargo: 3/4-Ton, 2-Wheel, M101 (FSN 2330-738-9509) and M101A1 (2330-898-6779); Chassis: Trailer: 3/4-Ton, 2-Wheel, M116 (2330-542-5987) and M116A1 (2330-898-6780).

- TM 11-362 Technical Manual: Reel Units RL-31, RL-31B, RL-31C, RL-31D, RL-31E (Including Organizational Repair Parts and Special Tool Lists).

- TM 11-2134 Manual Telephone Switchboard SB-86/P; Installation and Operation, (NSN 5805-00-503-2660).

- TM 11-3895-202-24P Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools): Reel Units RL-31, RL-31B, RL-31C, RL-31D and RL-31E (NSN 3895-00-252-6896).
- TM 11-4134 Manual Telephone Switchboard SB-86/P, Field Maintenance.
- TM 11-5805-201-12 Operator's and Organizational Maintenance Manual: Telephone Set TA-312/PT (NSN 5805-00-543-0012).
- TM 11-5805-204-15 Operator's, Organizational, DS, GS, and Depot Maintenance Manual (Including Repair Parts and Special Tools Lists): Panel, Patching Communication SB-611/MRC.
- TM 11-5805-211-24P Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) Central Office, Telephone, Manual AN/MTC-7 (NSN 5805-00-542-7276).
- TM 11-5935-203-15P Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools Lists: Connectors, Receptacle, Electrical U-186A/G and U-186B/G.
- TM 11-5935-205-14P Operator's, Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Connectors, Receptacle, Electrical U-187/G and U-187A/G (FSN 5935-682-0381).
- TM 11-5965-206-14P Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools): Headset-Microphone H-91A/U, (FSN 5965-669-6871): Handset-Headset H-144/U, H-144A/U, H-144B/U and H-144C/U (FSN 5965-682-2769), and Headset-Microphone H-210/G (FSN 5965-892-1068).
- TM 11-5965-244-15P Operator's, Organizational, Field and Depot Maintenance Repair Parts and Special Tools Lists: Handset H-111/U.
- TM 11-6105-200-50 Depot Maintenance Manual for Fractional Horsepower Motors.
- TM 11-6110-201-12P Operator's and Organizational Maintenance Repair Parts and Special Tools Lists for Distribution Boxes J-1077/U and J-1077A/U (NSN 6110-00-985-7574).
- TM 11-6110-201-34P DS and GS Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Distribution Boxes J-1077/U and J-1077A/U (NSN 6110-00-985-7574).
- TM 38-750 The Army Maintenance Management System (TAMMS).
- TM 740-90-1 Administrative Storage of Equipment.
- TM 750-244-2 Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

By Order of the Secretary of the Army:

JOHN A. WICKHAM JR.
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Major General, United States Army
The Adjutant General

DISTRIBUTION:

To be distributed in accordance with DA Form 12-51A-1,
Operator's Maintenance requirements for AN/MTC-7.

CHANGE

No. 13

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON DC, 1 April 1982

**Operator's, Organizational, Direct Support,
General Support, and Depot Maintenance Manual**

**CENTRAL OFFICE, TELEPHONE AN/MTC-7
(NSN 5805-00-542-7276)**

TM 11-5805-211-15, 13 July 1959, is changed as follows:

Inside front cover. CLEANING HAZARDS is superseded as follows:

WARNING

Compressed air shall not be used for cleaning purposes except where reduced to less than 29 pounds per square inch (psi) and then only with effective chip guarding and personnel protective equipment. Do not use compressed air to dry parts when TRICHLOROTRIFLUOROETHANE has been used. Compressed air is dangerous and can cause serious bodily harm if protective means or methods are not observed to prevent chip or particle (of whatever size) from being blown into the eyes or unbroken skin of the operator or other personnel.

WARNING

Adequate ventilation should be provided while using TRICHLOROTRIFLUOROETHANE. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame; the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

Add the following WARNINGS:

WARNING

BATTERY SHOP SAFETY PRACTICES

Nickel-cadmium battery maintenance personnel should be thoroughly trained in the use of charging, discharging, and test procedures. The employment of properly trained personnel in the maintenance of nickel-cadmium batteries cannot be overemphasized. The nickel-cadmium battery shop must be used ONLY to maintain nickel-cadmium batteries. Anything associated with lead-acid batteries should never come in contact with nickel-cadmium batteries, including acid fumes. In addition to the equipment required to maintain nickel-cadmium batteries; the nickel-cadmium battery shop should have adequate ventilation; deluge shower, eyewash fountain, and fire extinguisher (CO₂).

TIGHTENING TERMINAL SCREWS AND STUDS

Be extremely careful when tightening screws and studs. Bodily injury and damage to the equipment may result if the torque wrench accidentally causes a short circuit.

FIRE FIGHTING SAFETY PRACTICE

CO₂ is an acceptable fire extinguishing agent once a fire has developed. In no case should CO₂ be directed into a battery compartment to effect cooling or displace explosive gases. The static electricity generated by the discharge of the ex-

TM 11-5805-211-15

tinguishers could explode hydrogen/oxygen gases trapped in the battery compartment.

WARNING

Insure that the generator set or central power source is OFF before making any power connections, or disconnecting power cable.

WARNING

To avoid injury to personnel, or damage

to equipment, only personnel engaged in the actual loading or unloading operation should be permitted near the truck, lifting device and assemblage. To eliminate confusion, all instructions must come from the loading crew supervisor.

WARNING

All personnel must remain clear of the truck while the assemblage is lowered onto or lifted off of the truck.

**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 WOODEN POLE OR A 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**

Page 3. Paragraph 2 is superseded as follows:

2. Maintenance Forms, Records and Reports

a. *Reports of Maintenance and Unsatisfactory Equipment.* Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System.

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 4355.73/AFR 400-54/MCO 4430.3E.

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 4610.33B/AFR 75-18/MCO P4610.19C/DLAR 4500.15.

Paragraphs 2.1 and 2.2 are added after paragraph 2.

2.1. 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 or DA Form 2028 (Recommended Changes to Publications and Blank Forms) direct to: Commander, US Army Communications-Electronics Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

2.2. Reporting Equipment Improvement Recommendations (EIR)

If your Central Office, Telephone AN/MTC-7 needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Tell us why a procedure is hard to perform. Put it on an SF 368 (Quality Deficiency Report). Mail it to Commander, US Army Communications-Electronics Command, ATTN: DRSEL-ME-MQ, Fort Monmouth, New Jersey 07703. We'll send you a reply.

Page 6. Paragraph 27a(3) is superseded as follows:

(3) A wire of at least #6 AWG must be connected between one of the two-wire terminals and the ground binding post on the generator frame. The generators do not have internal grounding of their output stators; therefore it is mandatory for system

safety to install one. Some generators use L1 and L2 for 2 wire single phase 100vac service, whereas others use L2 and L3. You must consult the generator TM for guidance. The PU-322 uses L1 and L2.

Paragraph 38b, line 2. Change "trichloroethane" to read "TRICHLOROTRIFLUOROETHANE."

The WARNING after paragraph 38b is superseded as follows:

WARNING

Adequate ventilation should be provided while using TRICHLOROTRIFLUOROETHANE. Prolonged breathing of vapor should be avoided. The solvent should not be used near heat or open flame, the products of decomposition are toxic and irritating. Since TRICHLOROTRIFLUOROETHANE dissolves natural oils, prolonged contact with skin should be avoided. When necessary, use gloves which the solvent cannot penetrate. If the solvent is taken internally, consult a physician immediately.

Paragraph 38c, line 2. Change "trichloroethane" to read "TRICHLOROTRIFLUOROETHANE".

Page 12. Paragraph 46.4 is added after paragraph 46.3b.

46.4. Final Performance Check

a. Initial Conditions.

(1) The respective final performance checks on the following components of the AN/MTC-7 (if supplied in accordance with current BIIL), should have been successfully performed before assembly into the end item and the execution of this procedure.

(a) 5805-00-503-2660, Switchboard SB-86/P.

(b) 5805-00-543-0012, Telephone Set TA-312/PT.

(c) 5805-00-503-2616, Switchboard Signal Assembly TA-207/P.

(d) 6110-00-985-7574, Distribution Box J-1077A/U.

(e) 5965-00-669-6871, Headset-Microphone H-91A/U.

(2) Ground shelter at the entrance box ground terminal. Connect 115V \pm 10V, 60 cyc, 1 phase power to the shelter using any maintenance furnished power cables.

b. Signal Circuits. Refer to the signal schematic diagram (fig. 17). Perform the following tests on all wiring shown and all interconnecting cables. Omit test on the following components shown. Also perform test on any maintenance supplied 26-pr telephone cable assemblies CX-4566()/G.

(1) *Continuity test.* Perform a point-to-point continuity test using an ohmmeter (TS-32B/U or DIT-MCO Automatic Circuit Analyzer). Measured resistance shall not exceed 6.0 ohms. Use a test plug for connection to each jack to check circuit continuity.

(2) *Insulation breakdown/resistance test.* At connectors SIGNAL 1 through SIGNAL 3 perform an insulation test between any one conductor and all the rest (including ground) using a 500 V Megohmmeter (ME-213A/U or DIT-MCO Automatic Circuit Analyzer). Measured insulation resistance shall be 50 megohms minimum.

c. Ground System Test. With AC power removed, assure that each receptacle ground contact or raceway ground terminal has continuity (1/2 ohm or less) with the ground terminal in the SIGNAL & POWER ENTRANCE box (using ohmmeter).

d. Panel Meters. Test in accordance with TB 11-6625-666-50.

e. Blower and Motor. Test in accordance with TM 11-6105-200-50. The impeller is used as a load.

f. Basis Shelter Mechanical. Test in accordance with TB 43-0124.

g. Clock. The clock shall be accurate to an equivalent of 30 seconds in a 24-hour period.

h. Heater Test.

(1) Connect power cord through Ammeter ME-65/U to an AC power source.

(2) Place HEAT-OFF-FAN switch to the FAN position.

(3) The fan shall operate, expelling unheated air through the adjustable louvers.

(4) Place the HEAT-OFF-FAN switch to the HEAT position. Set thermostat to maximum heat.

(5) The fan shall operate, expelling heated air through the adjustable louvers.

(6) Note ammeter reading.

(7) Adjust thermostat to the point where the contacts just close as indicated by the current drain noted above.

(8) Temporarily enclose the unit under test with an external cover (box).

(9) Within a period of not more than 3

minutes, the thermostat contacts will open, as indicated by a drop in the current drain noted above.

(10) Remove the temporary cover.

(11) Remove the AC power source.

i. Power Distribution and Wiring Test.

(1) Check controls, indicators and functions as described in paragraph 25a and b.

(2) Use AC Outlet Tester, Hubbell 5200, to check for the presence of AC voltage at each unused receptacle as the associated powerswitch is operated to ON. Use improvised adapter for outlets other than standard three-wire.

j. Systems Operation Test.

(1) *Connections.*

(a) All main components and organizational equipments should have been installed and interconnected as described in paragraphs 18, 19, 20a, b and c, and 21 and 27. No external connections should exist between the AN/MTC-7 and any other communications equipment.

(b) In the SIGNAL & POWER ENTRANCE box connect a 26-pair cable from the SIGNAL 1 receptacle to the SIGNAL 2 receptacle.

(c) Strap TA-207 No. 1 lines 25 through 30 to TA-207 No. 2 lines 25 through 30 respectively at the SIGNAL BINDING POST panel or at the SIGNAL 3 receptacle using drop line box (see schematic).

(2) *Organizational components control settings.*

(a) Set all line selector switches (30 in each TA-207/P) to M.

(b) Operate the CIV TRKS switches (lines 29 and 30 in each TA-207/P) to OFF.

(c) Operate both N.A. switches (one in each TA-207/P) to OFF.

(d) Operate both LAMP switches (one in each TA-207/P) to OFF.

(e) Set the INT. SWBD. BATT. and the BATT. EXT-INT. switches (PP-990/G) to the proper position as described under control settings and indications in TM 11-2134.

(f) Operate the TALK BATT switch (SB-248/P) to ON.

(g) Set the INT-EXT switch to INT and the circuit selector switch to LB on the telephone set (TA-312/PT).

(3) *Operational test.* The Talk/Ring function shall be present over each line from TA-207 No. 1 to the corresponding line at TA-207 No. 2. Use

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operators pack at TA-207 No. 1 and a TA-312/PT at TA-207 No. 2.

Page 25. Paragraph 25b, Function and description column, last line. The following is added after

the word "switchboard." "in the early plain models (S-170/MTC-7) and the fluorescent light over the table in the later models."

Page 42. Appendix I is superseded as follows:

APPENDIX I REFERENCES

Following is a list of applicable references available for Central Office, Telephone AN/MTC-7.

- | | |
|-------------------|---|
| AR 310-25 | Dictionary of United States Army Terms. |
| AR 310-50 | Authorized Abbreviations and Brevity Codes. |
| AR 702-7-1 | Reporting of Product Quality Deficiencies Within the U.S. Army. |
| FM 21-6 | How to Program and Conduct Military Training. |
| FM 21-30 | Military Symbols. |
| SB 11-6 | Dry Battery Storage Data. |
| SB 11-573 | Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment. |
| DA Pam 310-4 | Index of Technical Publications. |
| TB 11-6625-666-50 | Inspection Requirements for Repaired Electrical Indicating Instruments. |
| TB 43-0124 | Maintenance and Repair Procedure for Shelters, Electrical Equipment S-141/G and S-141B/G (NSN 5410-00-752-9698), 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) (5410-00-489-6076), S-280/G (5410-00-999-5269), S-280A/G (5410-00-999-6022), S-280B/G (5410-00-117-2868), S-280B/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). |
| TM 5-6115-365-15 | Operator's, Organizational, Direct Support, General Support and Depot Maintenance Manual (Including Repair Parts and Special Tools List) Generator Sets, Gasoline and Diesel Engine Driven, Trailer Mounted PU-236A/G, PU-236/G, (NSN 6115-00-393-1709), PU-236B/G, (NSN 6115-00-738-6334), PU-253A/U, PU-253/U, (NSN 6115-00-697-2402), PU-304C/MPQ-4 (NSN 6115-00-056-8421), PU-332/G (NSN 6115-00-577-8471), PU-332A/G (NSN 6115-00-738-8336), PU-375A/G, PU-375/G (NSN 6615-00-753-2231), PU-375B/G (NSN 6115-00-931-6789), PU-401/M (NSN 6115-00-823-2217), PU-402/M (NSN 6115-00-722-3760), PU-406/M (NSN 6115-00-738-6342), PU-409/M (NSN 6115-00-702-3343), PU-409A/M (NSN 6115-00-733-6338), PU-495/G (NSN 6115-00-823-2218), PU-551/G, (NSN 6115-00-889-1307), PU-564A/G, (NSN 6115-00-738-6341), PU-564B/G (NSN 6115-00-179-2789), PU-617/M (NSN 6115-00-738-6335), PU-618/M (NSN 6115-00-738-6337), PU-619/M (NSN 6115-00-738-6339), PU-620/M (NSN 6115-00-738-6340), PU-625/G (NSN 6115-00-837-3915), PU-628/G (NSN 6115-00-087-0873), PU-629/G (NSN 6115-00-937-5555), PU-631/G (NSN 6115-00-059-5172), PU-656/G (NSN 6115-00-939-3296) and PU-650B/G (NSN 6115-00-258-1622). |

- TM 9-2330-202-14P** Operator's Organizational DS and GS Maintenance Manual (Including Repair Parts and Special Tools List) for Trailer, Cargo: 3/4-Ton, 2-Wheel, M101 (2330-738-9509) and M101A1 (2330-898-6779); Chassis: Trailer: 3/4-Ton, 2-Wheel, M116 (2330-542-5987) and M116A1 (2330-898-6780).
- TM 11-2134** Manual Telephone Switchboard SB-86/P; Installation and Operation, (NSN 5805-00-503-2660).
- TM 11-3895-202-24P** Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools): Reel Units RL-31, RL-31B, RL-31C, RL-31D and RL-31E (NSN 3895-00-252-6896).
- TM 11-4134** Manual Telephone Switchboard SB-86/P, Field Maintenance.
- TM 11-5805-201-12** Operator's and Organizational Maintenance Manual: Telephone Set TA-312/PT (NSN 5805-00-543-0012).
- TM 11-5805-204-15** Operator's, Organizational, DS, GS, and Depot Maintenance Manual (Including Repair Parts and Special Tools Lists): Panel, Patching Communication SB-611/MRC.
- TM 11-5805-211-24P** Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) Central Office, Telephone, Manual AN/MTC-7 (NSN 5805-00-542-7276).
- TM 11-5935-203-15P** Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools Lists: Connectors, Receptacle, Electrical U-186A/G and U-186B/G.
- TM 11-5935-205-14P** Operator's, Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Connectors, Receptacle, Electrical U-187/G and U-187A/G. (FSN 5935-682-0381).
- TM 11-5965-206-14P** Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools): Headset-Microphone H-91A/U, (FSN 5965-669-6871); Handset-Headset H-144/U, H-144A/U, H-144B/U and H-144C/U (FSN 5965-682-2769), and Headset-Microphone H-210/G (FSN 5965-892-1068).
- TM 11-5965-244-15P** Operator's, Organizational, Field and Depot Maintenance Repair Parts and Special Tool Lists: Handset H-111/U.
- TM 11-6105-200-50** Depot Maintenance Manual for Fractional Horsepower Motors.
- TM 11-6110-201-12P** Operator's and Organizational Maintenance Repair Parts and Special Tools Lists for Distribution Boxes J-1077/U and J-1077A/U (NSN 6110-00-985-7574).
- TM 11-6110-201-34P** DS and GS Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Distribution Boxes J-1077/U and J-1077A/U (NSN 6110-00-985-7574).
- TM 38-750** The Army Maintenance Management System (TAMMS).
- TM 740-90-1** Administrative Storage of Equipment.
- TM 750-244-2** Procedures for Destruction of Electronics Materiel to Prevent Enemy Use (Electronics Command).

TM 11-5805-211-15

By Order of the Secretary of the Army:

E. C. MEYER
General, United States Army
Chief of Staff

Official:

ROBERT M. JOYCE
Brigadier General, United States Army
The Adjutant General

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CHANGE }
No. 12 }

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 16 December 1977

**Operator's, Organizational, Direct Support,
General Support, and Depot Maintenance Manual**
CENTRAL OFFICE, TELEPHONE AN/MTC-7
(NSN 5805-00-542-7276)

TM 11-5805-211-15, 13 July 1959, is changed as follows:
The title of this manual is changed as shown above.

Inside front cover. Under "DANGEROUS POTENTIALS", line 5: "PU-322/G (TM 11-900A)" is changed to read "PU-617/M (TM 5-6115-385-15)."

Add the following:

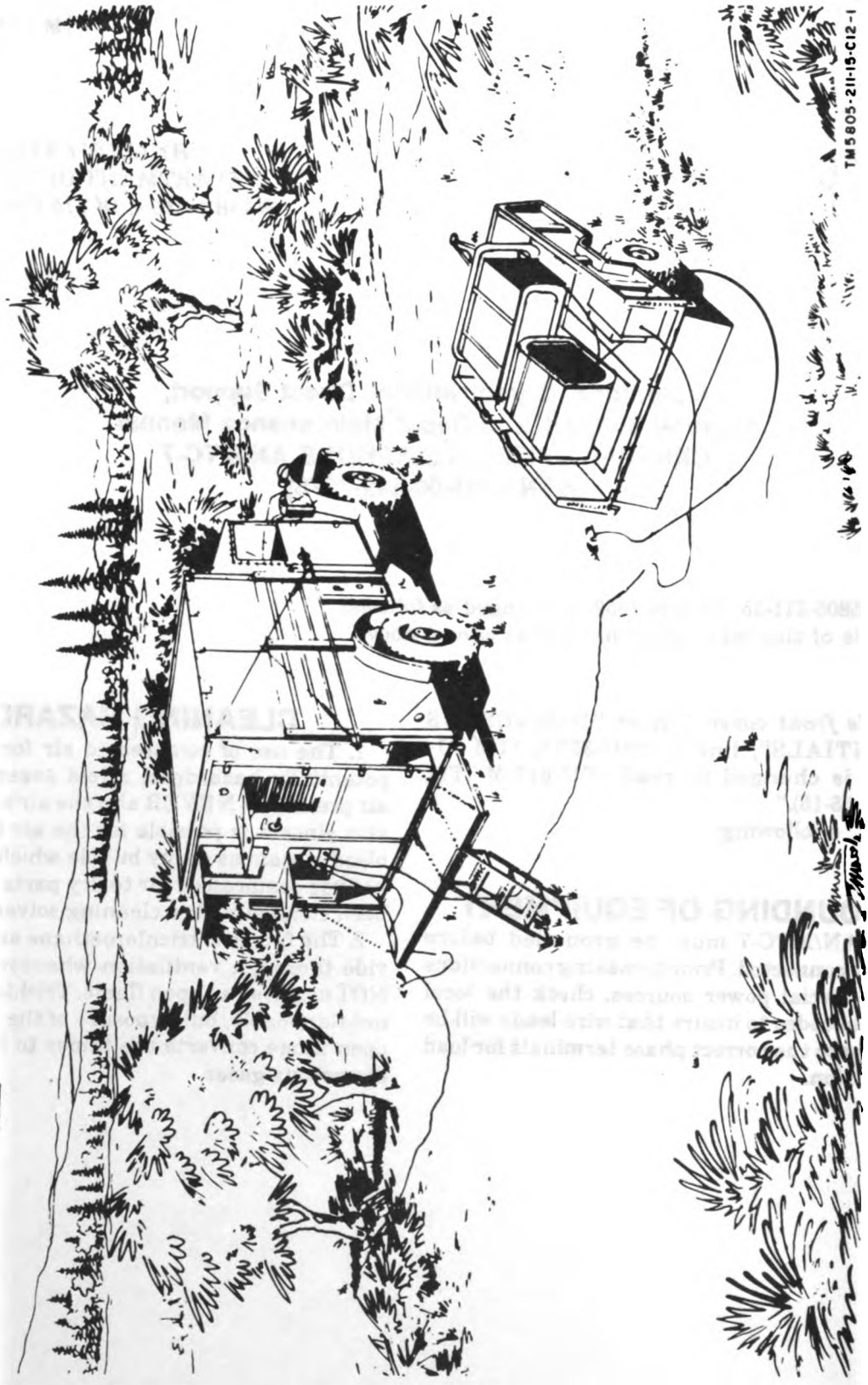
GROUNDING OF EQUIPMENT

The AN/MTC-7 must be grounded before power is connected. Prior to making connections to commercial power sources, check the local electrical codes to insure that wire leads will be placed onto the correct phase terminals for load distribution.

CLEANING HAZARDS

1. The use of compressed air for cleaning is potentially hazardous. Avoid excessive nozzle air pressures. NEVER aim the air source at the skin since it is possible for the air to enter the blood stream as a tiny bubble which is fatal. Do not use compressed air to dry parts which have been cleaned with a cleaning solvent.
2. The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichloroethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

Page 2. Figure 1 is superseded as follows:



TM 5805-211-15-C12-1

Figure 1. Manual Telephone Central Office AN/IMTC-7, connected for operation.

Page 3. Paragraph 2 is superseded as follows:

2. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (Packaging Improvement Report) as prescribed in AR-700-58/NAVSUPINST 4030.29/AFR 71-18/MCO P4030.29A, and DLAR 4145.8.

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 4610.33B/AFR 75-18/MCO P4610.19C and DLAR 4500.15.

Paragraph 2.1. Change paragraph title to read "Reporting of Errors."

Line 7, change "AMSEL-MA-C" to read "DRSEL-MA-Q."

Paragraphs 2.2, 2.3, and 2.4 are added after paragraph 2.1.

2.2. Reporting Equipment Improvement Recommendations (EIR)

EIR's will be prepared using DA Form 2407, (Maintenance Request). Instructions for preparing EIR's are provided in TM 38-750, the Army Maintenance Management System. EIR's should be mailed direct to Commander, US Army Electronics Command, ATTN: DRSEL-MA-Q, Fort Monmouth, NJ 07703. A reply will be furnished direct to you.

2.3. Administrative Storage

Administrative storage of equipment issued to and used by Army activities shall be in accordance with TM 740-90-1.

2.4. Destruction of Army Electronics Materiel

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

Page 4. Paragraph 4, lines 2 and 8. Change "PU-322/G" to read "PU-617/M."

Paragraph 5. Add paragraph 5.1 after paragraph 5.

5.1. Equipment Required But Not Supplied

NSN	QTY	NOMENCLATURE
5180-00-408-1859	1	Tool Kit TE-33
5180-00-408-1863	1	Tool Kit TE-49

Page 5. Paragraph 6, chart, line 2: Change "S-144/G" to read S-170(*)/MTC-7.

Line 3: Delete "Switch box SA-331/U" and "Switch box."

Line 8: Change "PU-322/G" to read "PU-617/M."

Paragraph 7, line 3: Change "(Trailer-Mounted Gasoline Engine Generator Set PU-322/G)" to read "(Trailer-Mounted Generator Set PU-617/M)."

Line 4: Delete sentence beginning with "It is usually" and ending with "equipment (para 5b)."

Paragraph 8, title and line 1: Change "S-144/G" to read S-170(*)/MTC-7.

Subparagraph a, line 7: Delete lines 7 through 11 beginning with "Tool Equipment TE-49" and ending with "when operating".

Line 11: Delete "Tool Equipment TE-33."

Page 9. Figure 5 is superceded as follows:

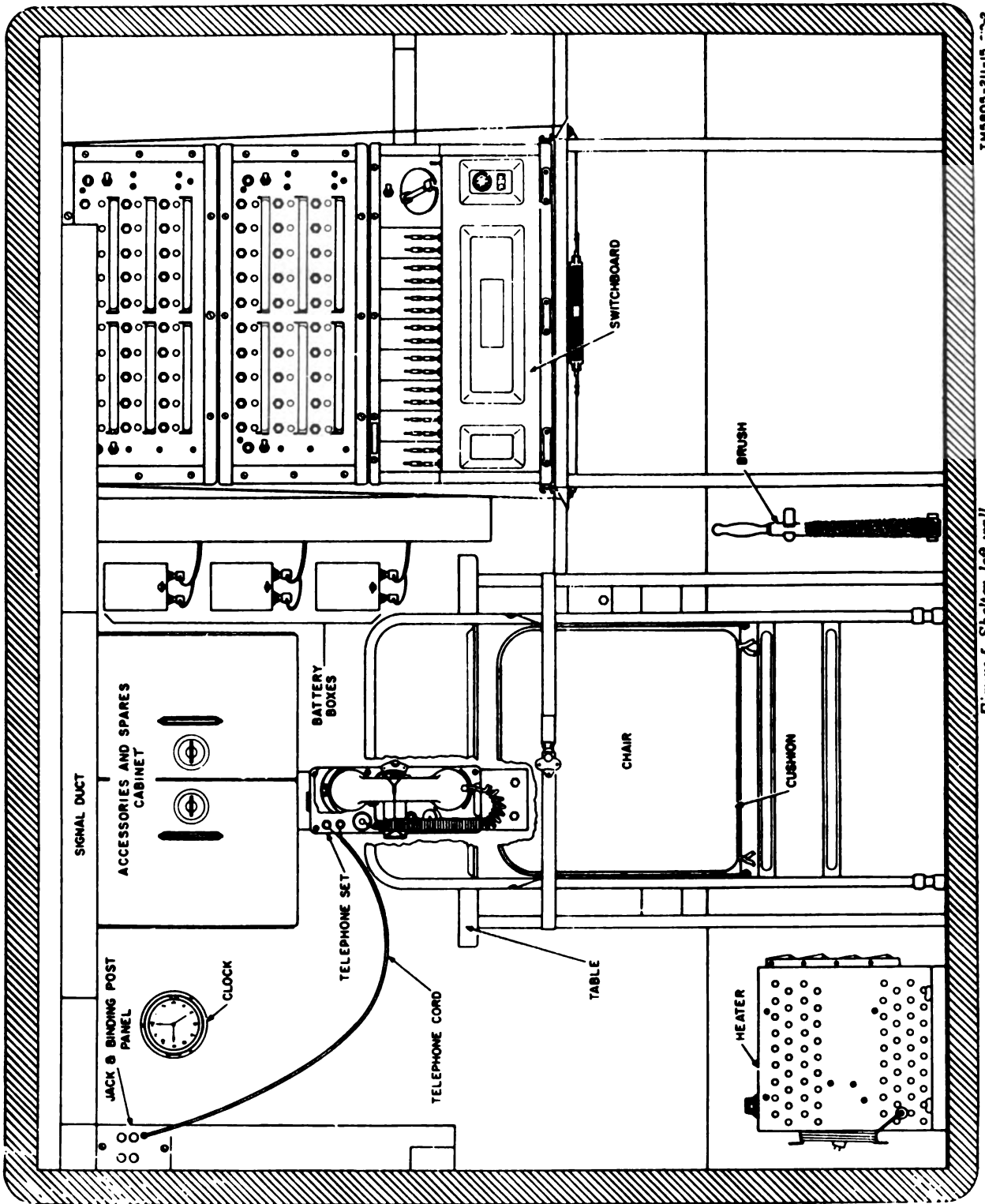


Figure 5. Shelter, left wall.

Page 14. Paragraph 9 title and line 2. Change "PU-322/G" to read "PU-617/M."

Paragraph 9, line 4: Change "PE-75-AF" to read "SF 3.0 MD, model MEP-016A."

Line 6: Change "2½ kw single phase" to read "3 Kw three phase."

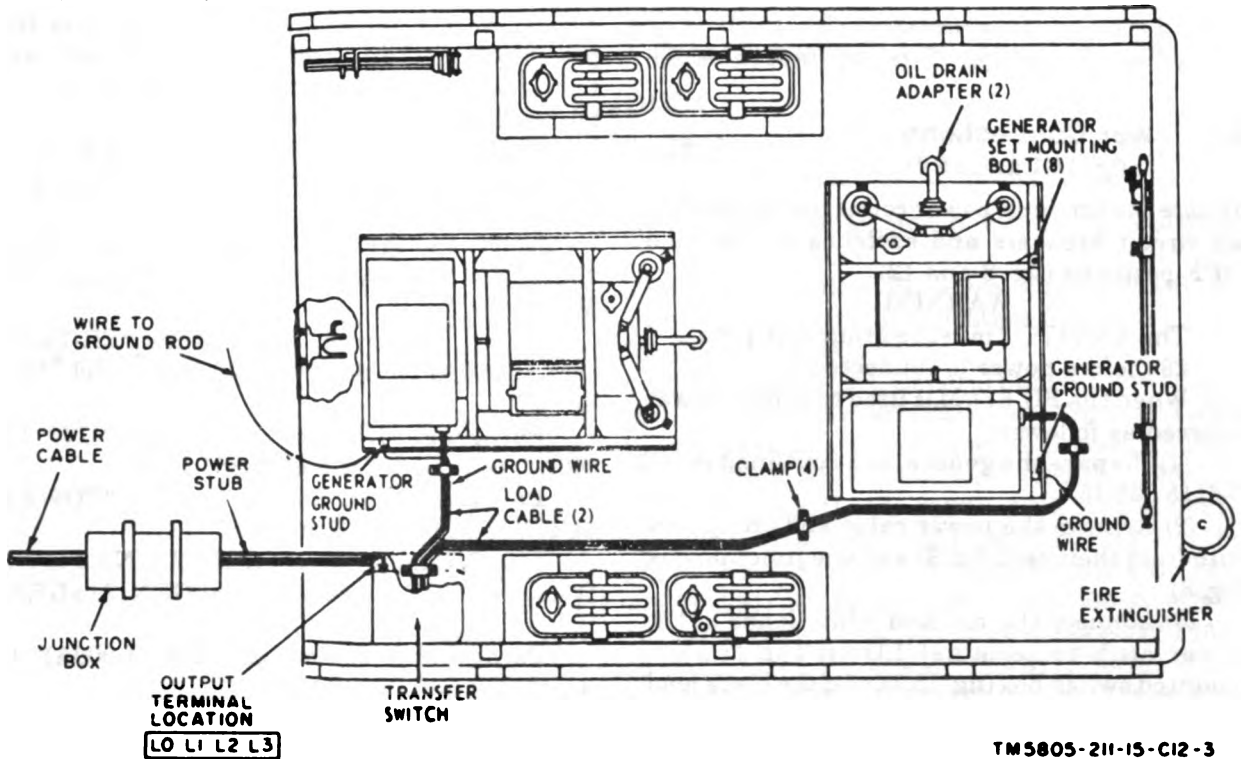
Paragraph 13, title. Add "or Space Heater AAT-15A" to the title.

Page 17. Paragraph 15c is rescinded.

Page 22. Paragraph 22, title. Delete "and Storage of Tool Equipments".

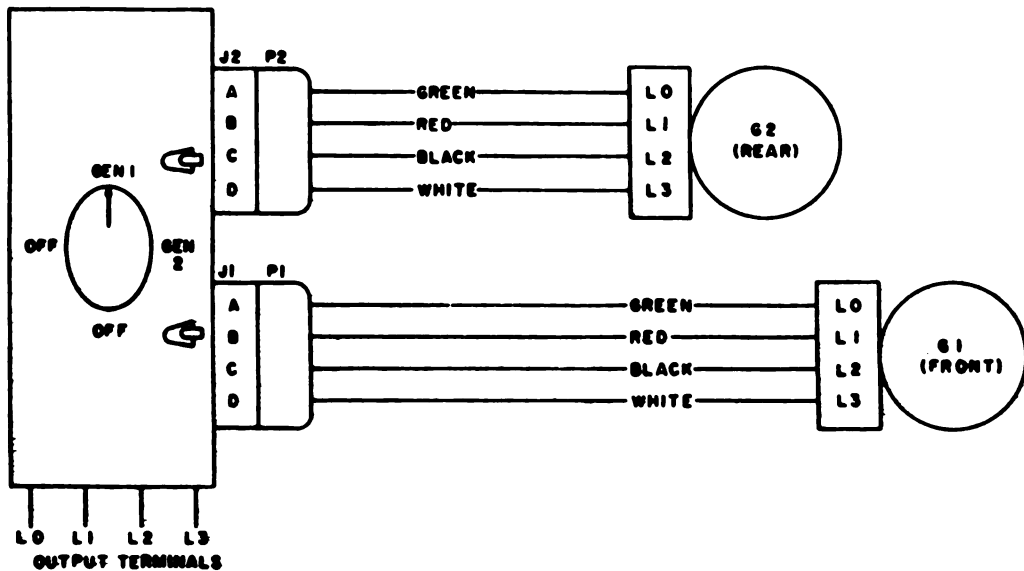
Delete subparagraphs b and c.

Page 24. Figures 15.1 and 15.2 are added as follows:



TM5805-211-15-C12-3

Figure 15.1. Power and ground connections, Power Unit PU-617M.



TM5805-211-15-C12-4

Figure 15.2. Transfer switch interconnections, Power Unit PU-617M.

Page 26. Paragraph 25d is rescinded.

Paragraph 26a. Subparagraph (8) is rescinded.

Paragraph 26b(4), line 2. Change "to the GRD lug on the switch box" to read "to the ground stud on the generators (fig. 15.1)."

Page 26. Paragraph 27 is superseded as follows:

27. Power Connections (fig. 15.1 and 15.2)

Before making any power connections, see that all circuit breakers and switches are in their OFF positions (fig. 8 and 12).

WARNING

The AN/MTC-7 must be grounded (para 26) before power is connected.

a. When the PU-617/M is used to supply power, proceed as follows:

(1) Prepare the generator as outlined in TM 5-6115-365-15.

(2) Remove the power cable and one power stub from their reel (fig. 9) and one junction box (fig. 8).

(3) Connect the red and white leads of the power stub to terminal LO on the trailer-mounted switch box (fig. 15.1), and the black lead to either L1, L2, or L3 of the switch box (fig. 15.2).

(4) Remove the covers from the connector of the power stub and the junction box (fig. 8) and connect the power stub to the male side of the junction box (fig. 15.1).

(5) Remove the cover from the male connector of the power cord and connect it to the junction box.

(6) Remove the covers from the female connector of the power cable and the POWER OUT male receptacle on the SIGNAL AND POWER ENTRANCE box and interconnect the connector and receptacle (fig. 11).

b. When a commercial power source is used, proceed as follows:

WARNING

Prior to making connections to commercial power sources, check the local electrical codes to insure that wire leads will be placed onto the correct phase terminal for load distribution.

(1) If the power source is 120 volts, 50-60 cycle single phase, or 120/240 volts 50-60 cycle three wire single phase ac, connect the red and white wires of the power stub to neutral wire of power source. Connect the black wire of power

stub to the hot wire of the power source.

(2) If the power source is 120/208 volts 50-60 cycle, four wire three phase ac, connect the power stub red and white wire to the neutral terminal, and the black wire of the power stub to either phase 1, phase 2, or phase 3 (hot) of the power source. The exact phase numbered wire to be used will be determined by the load distribution at the power source.

(3) Proceed with the rest of the installation as outlined in paragraph a(1), (2), (4), (5), and (6) above.

Page 27. Paragraph 28a, line 2. Change "PE-75-AF (TM 11-900A)" to read "SF-3.0 MD, model MEP 016A."

Page 30. Paragraph 34b. Change "PE-75-AF (TM 11-900A)" to read "SF 3.0 MD model MEP 016A."

Paragraph 35a, line 1: Change "(TM 11-900A)" to read "(TM 5-6115-365-15)."

Paragraph 35b, line 2: Change "POWER SUPPLY" to read "Transfer."

Line 3: Change "(No. 1 to No. 2 or No. 2 to No. 1)" to read "(GEN. 1 to GEN. 2 or GEN. 2 to GEN. 1)."

Paragraph 35c. Change "(TM 11-900A)" to read "(TM 5-6115-365-15)."

Paragraph 36b(2): Change "(TM 11-900A)" to read "(TM 5-6115-365-15)."

Page 31. Paragraph 38b. Change the subparagraph to read:

b. To clean, if necessary, moisten the cloth or brush with trichloroethane; after cleaning, wipe dry with a lint-free cloth.

WARNING

The fumes of trichloroethane are toxic. Provide thorough ventilation whenever used. DO NOT use near an open flame. Trichloroethane is not flammable, but exposure of the fumes to an open flame converts the fumes to highly toxic, dangerous gases.

Paragraph 38c. line 2. Delete "Cleaning Compound" and substitute trichloroethane.

Page 32. Paragraph 42, chart. Delete Item 2 in its entirety.

Item 3, Item column, change "PE-75-AF" to read "SF 3.0 MD model MEP-016A."

Action column, change "(TM 11-900A)" to read "(TM 5-6115-365-15)."

Item 5, Corrective measures column, line 7: Delete "Check the position of the switch on Switch Box SA-311/U."

Page 38. Paragraph 46a, line 3. Change "PE-75-AF" to read "SF 3.0 MD model MEP-016A."

Line 4. Add the words "trailer-mounted" between "a" and "switch box."

Subparagraph c, line 5. Change "(2,500 watts)" to read "(3,000 watts)."

Page 40. Paragraph 47e(1). Change "(TM 11-

900A)" to read "(TM 5-6115-365-15)."

Subparagraph (2). Between the words "cable" and "and" insert: junction box.

Subparagraph p is superseded as follows:

p. Secure the heater in its mountings (fig. 5 and 9).

Page 42. Appendix I is superseded as follows:

APPENDIX I REFERENCES

Following is a list of applicable references available to the repairman of Manual, Telephone, Central Office AN/MTC-7.

DA Pam 310-4

DA Pam 310-7

TM 5-6115-365-15

Index of Technical Manuals, Technical Bulletins, Supply Manuals (Types 7, 8, and (), Supply Bulletins, Lubrication Orders.

US Army Index of Modification Work Orders.

Operator, Organizational, Direct Support, General Support and Depot Maintenance Manual Including Repair Parts and Special Tools List: Generator Sets, Gasoline and Diesel Engine Driven, Trailer Mounted PU-236A/G, PU-236G, NSN 6115-00-393-1709; PU-236B/G, NSN 6115-00-738-6334; PU-253A/U, PU-253/U, NSN 6115-00-697-2402; PU-304C/MPQ-4, NSN 6115-00-056-8421; pu-332/G, NSN 6115-00-577-8471; PU-332A/G, NSN 6115-00-738-8336; PU-375A/G, PU-375/G, NSN 6115-00-753-2231; PU-375B/G, NSN 6115-00-981-6789; PU-401/M, NSN 6115-00-823-2217; PU-402/M, NSN 6115-00-722-3760; PU-406/M, NSN 6115-00-738-6342; PU-409/M, NSN 6115-00-702-3343; PU-409A/M, NSN 6115-00-738-6338; PU-495/G, NSN 6115-00-823-2218; PU-551/G, NSN 6115-00-889-1307; PU-564A/G, NSN 6115-00-738-6341; PU-564B/G, NSN 6115-00-179-2789; PU-617/M, NSN 6115-00-738-6335; PU-618/M, NSN 6115-00-738-6337; PU-619/M, NSN 6115-00-738-6339; PU-620/M, NSN 6115-00-738-6340; PU-625/G, NSN 6115-00-837-3915; PU-628/G, NSN 6115-00-087-0873; PU-629/G, NSN 6115-00-937-5555; PU-631/G, NSN 6115-00-059-5172; PU-656/G, NSN 6115-00-059-5172; PU-656/G, NSN 6115-00-939-3296; PU-650B/6, NSN 6115-00-258-1622.

TM 43-1039

TM 9-2330-202-14P

Painting Instructions for Field Use.

Operator's, Organizational DS and GS Maintenance Manual (Including Repair Parts and Special Tools List) for Trailer, Cargo: 3/4-Ton, 2-Wheel, M101 (2320-738-9509) and M101A1 (2330-898-6779); Chassis: Trailer: 3/4-Ton, 2-Wheel, M116 (2330-542-5987) and M116A1 (2330-898-6780).

TM 11-362

Reel Units RL-31, RL-31B, RL-31-C, RL-31D, and RL-31-E (Including Organizational Repair Parts and Special Tool Lists).

TM 11-2134

TM 11-4134

TM 11-5805-201-12

Manual Telephone Switchboard SB-86/P; Installation and Operation. Manual Telephone Switchboard SB-86/P, Field Maintenance.

TM 11-5805-204-14

Operator's and Organizational Maintenance Manual: Telephone Set TA-312/PT.

TM 11-5805-211-24P

Operator, Organizational, DS, GS, and Depot Maintenance Including Repair Parts and Special Tool Lists: Panel, Patching Communication SB-611/MRC.

Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tool Lists (Including Depot Maintenance Repair Parts and Special Tools) Central Office Telephone Manual AN/MTC-7.

TM 11-5935-203-15P	Organizational, DS, GS, and Depot Maintenance Repair Parts and Special Tools Lists: Connector, Receptacle, Electrical U-186A/G and B/G.
TM 11-5935-205-14P	Operator's, Organizational, Direct Support and General Support Maintenance Repair Parts and Special Tool Lists Including Depot Maintenance Repair Parts and Special Tools) Connectors, Receptacle, Electrical U-187/G and U-187A/G. (FSN 5935-682-0381)
TM 11-5965-206-14P	Operator's, Organizational, Direct Support, and General Support Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools): Headset-Microphone H-91A/U, Handset-Headset H-144/U, A, B, and C, and Headset-Microphone H-210/G.
TM 11-5965-244-15P	Operator's, Organizational, Field and Depot Maintenance Repair Parts and Special Tool Lists: Handset H-111/U.
TM 11-6110-201-34P	DS, GS Maintenance Repair Parts and Special Tools Lists (Including Depot Maintenance Repair Parts and Special Tools) for Distribution Boxes J-1077/U and J-1077A/U. (NSN 6110-00-985-75-74)
TM 11-6115-225-15P	Operator, Organizational, Field and Depot Maintenance Repair Parts and Special Tool Lists, Generator Set, Gasoline Engine, Trailer Mounted PU-322/G.
TM 38-750	Army Maintenance Management System (TAMM).
TM 740-90-1	Administrative Storage of Equipment.
TM 750-244-2.	Procedures for destruction of electronics materiel to prevent enemy use (Electronics Command).

APPENDIX II MAINTENANCE ALLOCATION

Section I. INTRODUCTION

A2-1. General.

This appendix provides a summary of the maintenance operations for Central Office, Telephone AN/MTC-7. It authorizes categories of maintenance for specific maintenance functions on reparable 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.

A2-2. Maintenance Function.

Maintenance functions will be limited to and defined as follows:

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

b. Test. To verify serviceability and to detect incipient failure by measuring the mechanical or electrical characteristics of an item and comparing those characteristics with prescribed standards.

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

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

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

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

g. Install. The act of emplacing, seating, or fixing into position an item, part, module (com-

ponent or assembly) in a manner to allow the proper functioning of the equipment or system.

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

i. Repair. The application of maintenance services (inspect, test, service, adjust, align, calibrate, replace) or other maintenance actions (welding, grinding, riveting, straightening, facing, remachining, or resurfacing) to restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system. This function does not include the trial and error replacement of running spare type items such as fuses, lamps, or electron tubes.

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

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of 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.

A2-3. Column Entries.

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

b. Column 2, Component/Assembly. Column 2 contains the noun names of components, as-

semblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Functions. Column 3 lists the functions to be performed on the item listed in column 2. When items are listed without maintenance functions, it is solely for purpose of having the group numbers in the MAC and RPSTL coincide.

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

- C — Operator/Crew
- O — Organizational
- F — Direct Support

H — General Support

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. Not applicable.

A2-4. Tool and Test Equipment Requirements (sect. III).

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

b. Maintenance Category. The codes in this column indicate the maintenance category 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/NATO Stock Number. This column lists the National/NATO stock number of the specific tool or test equipment.

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

A2-5. Remarks (sec. IV). Not applicable.

SECTION II MAINTENANCE ALLOCATION CHART
FOR

CENTRAL OFFICE TELEPHONE AM/MTC-7

(1) GROUP NUMBER	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQUIP.	(6) REMARKS	
			C	O	F	H	D			
00	CENTRAL OFFICE TELEPHONE, MANUAL AM/MTC-7	Inspect Test Test Service Adjust Repair Repair Repair Overhaul		0.5 0.5 1.0 0.5 1.0	1.0 2.0				1 1 1,2,3,6 1,2,3,6 1,2,3,6 1,2,3,3, 6 1 thru 6 1 thru 6	
01	Modified Electrical Equipment Shelter S-170(*)/MTC-7									
02	Distribution Box J-1077/U (Repair information will be found in TN 11-5805-204-15.)	Replace		0.5					1,2,3,6	
03	Electrical Space Heater HD-373/U (Repair information will be found in TN 11-5805-204-15.)	Replace		0.5					1,2,3,6	
04	Manual Telephone Switchboard SB-86/P (For Maintenance Allocation see TN 11-2134.)	Replace		0.5					1,2,3,6	
05	Telephone Set TA-112/PT (For Maintenance Allocation see TN 11-5805-201-12.)	Replace		0.5					1,2,3,6	

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS
FOR
CENTRAL OFFICE TELEPHONE AM/MTC-7

TM 11-5805-211-15

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O, F, H, D	MULTIMETER AM/UM-223	6625-00-999-7465	
2	O, F, H, D	TOOL KIT, ELECTRONIC EQUIPMENT TK-105/0	5180-00-610-8177	
3	F, H, D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/0	5180-00-605-0079	
4	H, D	TOOL KIT, ELECTRONIC EQUIPMENT, SHELTER TK-144/0	5180-00-973-4369	
5	O, F, H, D	TOOL KIT TK-49	5180-00-408-1863	
6	O, F, H, D	<p>TOOLS AND TEST EQUIPMENT ASSOCIATED WITH COMPONENTS OF THIS END ITEM.</p> <p>NOTE</p> <p>Depot may use other equipment required to overhaul or rebuild this equipment.</p> <p>NOTE</p> <p>Organizational test will be limited to equipment operation, and repair will be limited to replacement of blower parts, circuit breakers, starters, etc.</p> <p>NOTE</p> <p>General Support repair will be to shelter by utilizing Tool Kit TK-144/0.</p> <p>NOTE</p> <p>Component(s)/Assembly(s) without assigned maintenance functions are repaired as part of the next higher Component/Assembly where maintenance functions are assigned.</p>		

By Order of the Secretary of the Army:

BERNARD W. ROGERS
General, United States Army
Chief of Staff

Official:

J. C. PENNINGTON
Brigadier General, United States Army
The Adjutant General

Distribution:

Active Army:

USAINSC (2)	USA Dep (1)
COE (1)	Sig Sec USA Dep (1)
TSG (1)	Sig Dep (1)
USAARENBD (1)	Sig FLDMS (1)
DARCOM (2)	Units org under fol TOE:
TRADOC (2)	(1 cy each unit)
OS Maj Comd (4)	6-502
TECOM (2)	7
USACC (4)	7-42
MDW (1)	7-100
Armies (2)	11-35
Corps (2)	11-38
Svc Colleges (1)	11-97
USASIGS (5)	11-98
USAADS (2)	11-117
USAFAS (2)	11-127
USAARMS (2)	11-137
USAIS (2)	11-302
USAES (2)	11-500 (AA-AC)
USAICS (3)	17
MAAG (1)	17-42
USARMIS (1)	17-100
USAERDAA (1)	17-102
USAERDAW (1)	29-102
Ft Monmouth (HISA) (33)	29-134
Fort Gillems (10)	29-136
Fort Gordon (10)	30-26
Fort Huachuca (10)	32-52
Fort Carson (5)	32-55
Ft Richardson (ECOM) (2)	32-500
Army Dep (2) except	37-100
LBAD (14)	37-102
SAAD (30)	77-100
TOAD (14)	77-102
SHAD (3)	

ARNG: None

USAR: None

For explanation of abbreviations used, see AR 310-50.

CHANGE }
No. 11 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 8 July 1974

**Operator, Organizational, DS, GS, and
Depot Maintenance Manual
CENTRAL OFFICE, TELEPHONE, MANUAL AN/MTC-7**

TM 11-5805-211-15, 13 July 1959, is changed as follows:

Page 3. Paragraph 2 is superseded as follows:

2. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Maintenance forms, records, and reports which are to be used by maintenance personnel at all maintenance levels are listed in and prescribed by TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD Form 6 (report of Packaging and Handling Deficiencies) as prescribed in AR 700-58 (Army)/NAVSUP Pub 378 (Navy)/AFR 71-4 (Air Force)/MCO P4030.29 (Marine Corps), and DSAR 4145.8.

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 (Army)/NAVSUPINST 4610.33/AFM 75-18/MCO P4610.19A (Marine Corps), and DSAR 4500.15.

2.1. Reporting of Equipment Publication Improvements

The reporting of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to Publications and Blank Forms) and forwarded direct to Commander, US Army Electronics Command, ATTN: AMSEL-MA-C, Fort Monmouth, NJ 07703.

Page 4. Paragraph 5 is superseded as follows:

5. Items Comprising an Operable AN/MTC-7

FSN	QTY	Nomenclature, part No., and mfr code	Unable on code
		<p style="text-align: center;">NOTE</p> <p>The part number is followed by the applicable 5-digit Federal supply code for manufacturers (FSCM) identified in SB 708-42 and used to identify manufacturer, distributor, or Government agency, etc.</p> <p style="text-align: center;">NOTE</p> <p>Dry batteries shown are used with the equipment but are not considered part of the equipment. They will not be pre-shipped automatically but are to be requisitioned in quantities necessary for the particular organization in accordance with SB 11-6.</p>	
6115-738-6335	1	Generator Set, Gasoline Engine, trailer mounted PU-617/M: (Note: Used w/but not part of)	
3895-252-6896	1	Reel Unit RL-31	

PSN	QTY	Nomenclature, part No. and mfr code	Usable on code
5410-647-0136	1	Shelter, Electrical Equipment, S-170/MTC-7; S-170A/B, C/MTC-7: (S-144 ()/G shelter modified)	
5805-503-2616	1	Signal Assembly Switch Board TA-207/P	
5805-503-2660	1	Switchboard, Telephone, Manual SB-86/P, (Less case)	
5805-543-0012	1	Telephone Set TA-312/PT, (Less case)	
		SHELTER, ELECTRICAL EQUIPMENT S-170/MTC-7; S-170A, B, C, D/MTC-7	
		NOTE Number 1 in usable on code column refers to S-170/MTC-7; number 2 refers to S170A/MTC-7; number 3 refers to S170B/MTC-7; number 4 refers to S170C/MTC-7; and number 5 refers to S170D/MTC-7.	
5935-577-8804	2	Adapter, Connector UG-1312/U, SM-B-335345, 80063	1, 2, 3, 4, 5
7520-753-4807	1	Basket, Wastepaper, RR-B-181, style A, design C, 81349	1, 2, 3, 4, 5
6135-120-1020	4	Battery BA-30	1, 2, 3, 4, 5
7510-188-6951	2	Binder, Looseleaf, UU-B-346, type 1, grade C, 81349	1, 2, 3, 4, 5
5920-285-0286	60	Block, Telephone Protector: #41-274, 71688	1, 2, 3, 4, 5
5995-823-2715	3	Cable Assembly and Reel: (C/o CX-4566A/G (250 ft) on RC-435/U reel) 80058	1, 2, 3, 4, 5
5995-889-1228	1	Cable Assembly, Power Electrical CX-4694A/U, SC-DL-335418, 80063	1, 2, 3, 4, 5
5995-889-1229	2	Cable Assembly, Power Electrical CX-4693/U, (25 ft) SC-DL-335423A, 80063	1, 2, 3, 4, 5
5995-904-6106	1	Cable Assembly, Power Electrical CX-11215/G	1, 2, 3, 4, 5
7105-269-8463	2	Chair, Folding, (Steel), SM-B-335417, 80063	1, 2, 3, 4, 5
6645-950-8599	1	Clock, Aircraft Mechanical, (NOTE: When replacing clock, retain mtg bracket SMB-472589-5, 80063	1, 2, 3, 4, 5
	1	Cord Assembly, Electrical CX-4695/U, SC-DL-335582, 80063	1, 2, 3, 4, 5
7210-753-3043	2	Cushion, Chair and Stool: SM-B-335428, 80063	1, 2, 3, 4, 5
6110-985-7574	2	Distribution Box J-1077A/U	1, 2, 3, 4, 5
5935-162-6288	25	Dummy Plug, Telephone: (Black), SM-B-335431, 80063	1, 2, 3, 4, 5
5935-162-6283	10	Dummy Plug, Telephone: (Red), SM-B-335432, 80063	1, 2, 3, 4, 5
4140-072-0926	1	Fan, Centrifugal: SM-B-469159, 80063	1, 2, 3, 4, 5
5120-776-9917	5	Grip, Cable, Woven: (16 in. lg), SM-B-335430, 80063	1, 2, 3, 4, 5
5120-776-9918	20	Grip, Cable Woven: (12 in. long) SM-B-335429, 80063	1, 2, 3, 4, 5
5975-682-0519	2	Hanger, Cable: (U/to support incoming cables to shelter side) SM-B-363104, 80063	1, 2, 3, 4, 5
4520-649-8145	1	Heater, Space, Electric HD-375/U	1
4520-224-7909	1	Heater, Space, Electrical: #AAT-15A, 72143	2, 3, 4, 5
2540-846-8483	1	Ladder, Vehicle Boarding MX-3543/G, SC-DL-147118, 80063	1, 2, 3, 4, 5
6230-729-9614	1	Lantern, Electric: Model 2106-7, 32572	1, 2, 3, 4, 5
5410-752-2525	1	Lead Electrical: (F/ground connection) SM-B-352166C; 80063	1, 2, 3, 4, 5
6230-615-5384	1	Light, Extension: (25 ft), W-L-661; type 1, class 1, 81349	1, 2, 3, 4, 5
8130-656-1090	1	Reel, Cable RC-435/U	1, 2, 3, 4, 5
5410-714-8488	2	Retainer, Cable Reel, (Retains cable reel in transit) SM-B-335772, 80063	1, 2, 3, 4, 5
7520-162-6178	1	Sharpener, Pencil, GGG-236, type 11, 81349	1, 2, 3, 4, 5
6210-686-5568	4	Shield, Lamp, (F/fluorescent lamp; U shaped plastic 23 15/16 in. lg) SM-B-335531, 80063	1, 2, 3, 4, 5
6210-729-9052	2	Shield, Lamp, (F/fluorescent lamp, U shaped plastic 9 7/16 in. lg) SM-B-370467; 80063	1, 2, 3, 4, 5

FSN	QTY	Nomenclature, part No., and mfr code	Usable on code
5410-774-6108	1	Sling, Multiple Leg Assembly, (Lifting shelter) SC-C-36302, 80063	1, 2, 3, 4, 5
6250-299-2884	4	Starter, Fluorescent Lamp, Type-FS-2; 24455	1, 2, 3, 4, 5
7510-272-6887	1	Thumbtack: FF-T-311, 81349	1, 2, 3, 4, 5

Page 18, paragraph 18. In subparagraph b, delete the second sentence and substitute: When the component list is not available, the components comprising the operable end item chart

(para 5) may be used as a general check to indicate the equipment which probably was packed.

Page 48. Delete appendix III and substitute:

APPENDIX III BASIC ISSUE ITEMS LIST (BIIL) AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST (ITIAL)

Section I. INTRODUCTION

1. Scope

This appendix lists only basic issue items required by the crew/operator for installation, operation, and maintenance of Central Office, telephone, Manual AN/MTC-7.

2. General

This Basic Issue Items and Items Troop Installed or Authorized List is divided into the following sections:

a. *Basic Issue Items List - Section II.* A list, in alphabetical sequence, of items which are furnished with, and which must be turned in with the end item.

b. *Items Troop Installed or Authorized List - Section III.* Not applicable.

3. Explanation of Columns

The following provides an explanation of columns found in the tabular listings:

a. *Illustration.* This column is divided as follows:

(1) *Figure Number.* Indicates the figure number of the illustration in which the item is shown.

(2) *Item Number.* Not applicable.

b. *Federal Stock Number.* Indicates the Federal stock number assigned to the item and will be used for requisitioning purposes.

c. *Part Number.* Indicates the primary number

used by the manufacturer (individual, company, firm, corporation, or government activity), which controls the design and characteristics of the item by means of its engineering drawings, specifications standards, and inspection requirements, to identify an item or range of items.

d. *Federal Supply Code for Manufacturer (FSCM).* The FSCM is a 5-digit numeric code used to identify the manufacturer, distributor, or Government agency, etc., and is identified in SB 708-42.

e. *Description.* Indicates the Federal item name and a minimum description required to identify the item.

f. *Unit of Measure (U/M).* Indicates the standard of basic quantity of the listed item as used in performing the actual maintenance function. This measure is expressed by a two-character alphabetical abbreviation, (e.g., ea, in., pr, etc.). When the unit of measure differs from the unit of issue, the lowest unit of issue that will satisfy the required units of measure will be requisitioned.

g. *Quantity Furnished with Equipment (Basic Issue Items Only).* Indicates the quantity of the basic issue item furnished with the equipment.

4. Special Information

Usable on codes are included in the description

column. Uncoded items are applicable to all models. Identification of the usable on codes are as follows:

<i>Code</i>	<i>Used On</i>
1	S170/MTC-7
2	S170A/MTC-7
3	S170B/MTC-7
4	S170C/MTC-7
5	S170D/MTC-7

Section II. BASIC ISSUE ITEMS LIST

(1) Illustration (A) Pg. No.	(B) Item No.	(2) Federal stock number	(3) Part number	(4) FSCM	(5) Description	Usable on code	(6) Unit of measure	(7) Qty furn with equip
8		4210-727-8111	GGG-A-926	81349	AXE, SINGLE 131T, (2 1/4 LB), TYPE 1, CLASS 1, DESIGN C	1,2,3,4,5	EA	1
7		4210-270-4512	SM-B-364218	80063	EXTINGUISHER, FIRE, CARBON DIOXIDE, (2 1/2 LB)	1,2,3,4,5	EA	1
6		6545-922-1200	SC-C-539483	80063	FIRST AID KIT, GENERAL PURPOSE	1,2,3,4,5	EA	1
7		5120-251-4489	GGG-H-86	81349	HAMMER, HAND (8 LB), TYPE SA, CLASS 2	1,2,3,4,5	EA	1
6		5340-682-1508 5975-224-5260	• 325A1B	29823	PADLOCK, (W/RETAINING RING) ROD, GROUND MX-148/G	1,2,3,4,5 1,2,3,4,5	EA EA	1 1

By Order of the Secretary of the Army:

CREIGHTON W. ABRAMS
General, United States Army
Chief of Staff

Official:

VERNE L. BOWERS
Major General, United States Army
The Adjutant General

Distribution:

Active Army:

USASA (2)	USA Dep (2)
CNGB (1)	Sig Sec USA Dep (2)
Dir of Trans (1)	Sig Dep (2)
COE (1)	Sig FLDMS (1)
TSG (1)	USAERDAA (1)
USAAENBD (1)	USAERDAW (1)
USAMB (10)	MAAG (1)
AMC (1)	USARMIS (1)
TRADOC (2)	Units org under fol TOE:
ARADCOM (2)	(1 copy each unit)
ARADCOM Rgn (2)	6-502
OS Maj Comd (4)	7
LOGCOMDS (3)	7-42
MICOM (2)	7-100
TECOM (2)	11-35
USACC (4)	11-38
MDW (1)	11-57
Armies (2)	11-97
Corps (2)	11-98
HISA (Ft Monmouth) (18)	11-117
Svc Colleges (1)	11-127
USASESS (10)	11-137
USAADS (2)	11-302
USAFAS (2)	11-500(AA-AC)
USAARMS (2)	17
USAIS (2)	17-42
USAES (2)	17-100
USAINTS (3)	17-102
WRAMC (1)	29-102
ATS (1)	29-134
Fort Gordon (10)	19-136
Fort Huachuca (10)	30-26
WSMR (1)	32-52
Fort Carson (5)	32-56
Ft Richardson (ECOM Ofc) (2)	32-500
Army Dep (1) except	37-100
LBAD (14)	37-102
SAAD (30)	77-100
TOAD (14)	77-102
ATAD (10)	

.VG: State AG: Three (3); copies to each, AL, DE, GA, IN, MD, NY, NC, OH, PA, SC, TX.

USAR: None

For explanation of abbreviations used, see AR 310-50.

Change }
No. 10 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, D. C., 23 October 1968

**Operator, Organizational, DS, GS, and Depot Maintenance
Manual
CENTRAL OFFICE, TELEPHONE, MANUAL AN . MTC-7**

TM 11-5805-211-15, 13 July 1959, is changed as follows:

The title of the manual is changed as shown above.

Note. The parenthetical reference to previous changes (example: "page 1 of C9") indicate that pertinent material was published in that change.

Page 3, paragraph 1.1 (page 1 of C6). Delete paragraph 1.1 and substitute:

1.1 Indexes of Publications

a. *DA Pam 310-4.* Refer to DA Pam 310-4 to determine whether there are new editions, changes, or additional publications pertaining to the equipment.

b. *DA Pam 310-7.* Refer to DA Pam 310-7 to determine whether there are Modification Work Orders (MWO's) pertaining to the equipment.

Paragraph 2 (page 1 of C9). Delete paragraph 2 and substitute:

2. Forms and Records

a. *Reports of Maintenance and Unsatisfactory Equipment.* Use equipment forms and records in accordance with instructions in TM 38-750.

b. *Report of Packaging and Handling Deficiencies.* Fill out and forward DD form 6 (Report of Packaging and Handling Deficiencies) as prescribed in AR 700-58 (Army), NAVSUP Publication 378 (Navy), AFR 71-4 (Air Force), and MCO P4610-5 (Marine Corps).

c. *Discrepancy in Shipment Report (DISREP) (SF361).* Fill out and forward Discrepancy in Shipment Report (DISREP) (SF361) as prescribed in AR 55-38 (Army), NAVSUP Pub 459 (Navy), AFM 75-34 (Air Force), and MCO P4610.19 (Marine Corps).

d. *Report of Equipment Manual Improvements.* Report of errors, omissions, and recommendations for improving this publication by the individual user is encouraged. Reports should be submitted on DA Form 2028 (Recommended Changes to DA Publications) and forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSELM-E-NMP-AD, Fort Monmouth, N.J. 07703.

Page 42, appendix I (page 3 of C9). Delete the following references in their entirety:

TM 11-900A
TM 11-2155
TM 11-3895-202-20P
TM 11-5805-257-12P
TM 11-5965-206-15P
Add the following reference:
TM 11-5805-201-12

Organizational Maintenance Manual:
Telephone Set TA-312/PT

Page 48, appendix III (page 3 of C9). Delete appendix III and substitute.

APPENDIX III BASIC ISSUE ITEMS

Section I. INTRODUCTION

1. Scope

This appendix lists items comprising an operable equipment and those required for installation, operation, or operator's maintenance for Central Office, Telephone, Manual AN/MTC-7.

2. Explanation of Columns

The following is a list of explanations of columns in section II.

a. Source, Maintenance, and Recoverability Codes (SMR) Column.

(1) *Source code (S).* The selection status and source for the listed item is the first code indicated in this column.

The source code used and its explanation is:

<i>Code</i>	<i>Explanation</i>
P	Applies to repair parts that are stocked in or supplied from GSA/DSA, Army supply system, and authorized for use at indicated maintenance categories.

(2) *Maintenance code (M).* The lowest category of maintenance authorized to install the item is indicated by the second code in the column. The maintenance category code and its explanation is:

<i>Code</i>	<i>Explanation</i>
0	Organizational Maintenance

(3) *Recoverability code (R).* The recoverability code is the third code in the column. It indicates whether unserviceable items should be returned for recovery or salvage. Recoverability code and its explanation is as follows:

<i>Code</i>	<i>Explanation</i>
R	Applies to repair parts and assemblies that are economically repairable at DSU and GSU activities and are normally furnished by supply on an exchange basis.

Note. When no code is indicated in the recoverability column, the part will be considered expendable.

b. Federal Stock Number Column. This column indicates the Federal stock number for the item.

c. Description Column. This column includes the Federal item name and any additional description of the item which may be required. A

part number or other reference number is followed by the applicable five-digit Federal Supply Code for Manufacturers. Usable on code column is not used.

d. Unit of Measure Column. The unit used as a basis of measure (e.g., ea, pr, ft, yd, etc.) is given in this column.

e. Quantity Incorporated in Unit Column. The total quantity of the item used in the equipment is given in this column.

f. Quantity Furnished with Equipment Column. This column lists the quantity of the item supplied for initial operation of the equipment and/or the quantities authorized to be kept on hand by the operator for maintenance of the equipment.

g. Illustrations Column.

(1) *Figure number (a).* The number of the illustration on which the item is shown is indicated in this column.

(2) *Item No. or reference designation (b).* This column lists the reference designation used for identification of the item.

3. Batteries

Dry batteries shown are used with the equipment but are not considered part of the equipment. They will not be preshipped automatically but are to be requisitioned in quantities necessary for the particular organization in accordance with SB 11-6.

4. Federal Supply Codes

This paragraph lists the Federal supply code with the associated manufacturer's name.

<i>Code</i>	<i>Manufacturer</i>
24455	General Electric Co. Lamp Division of Consumer Products Group
29823	Avis Industrial Corp.
32572	Justrite Mfg. Co.
71688	Cook Electric Co.
72143	Friden Inc., Electronics Division
75915	Littlefuse Inc.
80063	Army Electronics Command
81349	Military Specifications

SECTION II. BASIC ISSUE ITEMS

(1) SIR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Wfr Code	USABLE ON CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) QTY FORM WITH EQUIP	(7) ILLUSTRATIONS	
							(a) FIG. NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
P-O-R	905-542-7276	CENTRAL OFFICE, TELEPHONE MANUAL AB/WTC-7: (This item is nonexpendable) TECHNICAL MANUAL TM 11-5805-211-15 Requisition through pinpoint account number if assigned; otherwise through nearest Adjutant General Facility. For technical manuals the quantity indicates the maximum number of copies authorized for packing (or issue) with the equipment. Where a number of these equipments are concentrated in a small area, the quantity on hand may be reduced to the minimum actual requirements as determined by the commanding officer of the unit. TECHNICAL MANUAL TM 11-5805-204-15 Requisition through pinpoint account number if assigned; otherwise through nearest Adjutant General Facility. For technical manuals the quantity indicates the maximum number of copies authorized for packing (or issue) with the equipment. Where a number of these equipments are concentrated in a small area, the quantity on hand may be reduced to the minimum actual requirements as determined by the commanding officer of the unit. TECHNICAL BULLETIN TB SIG-354 Requisition through pinpoint account number if assigned; otherwise through nearest Adjutant General Facility. For maintainable equipments listed below, only one (1) each Technical Manual is authorized.		ea	1	1		
--O	6115-738-6335	GENERATOR SET, GASOLINE ENGINE, TRAILER MOUNTED FU-617/M: (NOTE: Used w/ but not part of)		ea	1	1		
P-O-R	3895-878-6896	HEEL UNIT RL-31:		ea	1	1		
P-O-R	5410-647-0136	SHELTER, ELECTRICAL EQUIPMENT, S-170/WTC-7; S-170A/B,C/WTC-7: (S-144()/G shelter modified)		ea	1	1		
P-O-R	5805-503-2616	SIGNAL ASSEMBLY SWITCH BOARD TA-207/P		ea	1	1		
P-O-R	5805-503-2660	SWITCHBOARD, TELEPHONE, MANUAL SB-86/P: (Less case)		ea	1	1	9.1	
P-O-R	5805-543-0012	TELEPHONE SET TA-312/PT: (Less case) SHELTER, ELECTRICAL EQUIPMENT S-170/WTC-7; S-170A,B,C,D/WTC-7 NOTE: Usable on code 1 refers to S-170/WTC-7; 2 refers to S-170A/WTC-7; 3 refers to S-170B/WTC-7; 4 refers to S-170C/WTC-7; 5 refers to S-170D/WTC-7		ea	1	1	9.1	
P-O	5935-777-0804	ADAPTER, CONNECTOR UC-1312/U: SM-B-335345; 80063	1,2,3,4,5	ea	2	2		CF1,CPE
P-O	4210-787-8111	AXE, SINGLE BIT: (2 1/4 lb); OOG-A-906; type 1; class 1; design C; 81349	1,2,3,4,5	ea	1	1	8	
P-O	7580-753-4807	BANNET, WASTEPAPER: RB-B-181; style A; design C; 81349	1,2,3,4,5	ea	1	1	6	
P-O	6135-120-1080	BATTERY BA-30	1,2,3,4,5	ea	4	4		
P-O	7510-188-6951	BINDER, LOOSELEAF: UU-B-346; type 1; grade C; 81349	1,2,3,4,5	ea	2	2		
P-O	5980-285-0806	BLOCK, TELEPHONE PROTECTOR: A-1-274; 71688	1,2,3,4,5	ea	60	18		
P-O	7980-178-8315	BRUSH, DUSTING: ND-201; class D; 81349	1,2,3,4,5	ea	1	1	5	
P-O	5995-823-8715	CABLE ASSEMBLY AND REEL: (C/o CX-4566A/G (250 ft) on RC-435/U reel) 80058	1,2,3,4,5	ea	3	3	9	
P-O	5995-889-1288	CABLE ASSEMBLY, POWER ELECTRICAL CX-4694A/U: SC-DL-335418; 80063	1,2,3,4,5	ea	1	1	9	
P-O	5995-889-1289	CABLE ASSEMBLY, POWER ELECTRICAL CX-4699A/U: (25 ft) SC-DL-3354234; 80063	1,2,3,4,5	ea	2	2	9	
P-O	5995-904-4106	CABLE ASSEMBLY, POWER ELECTRICAL CX-11215/G	1,2,3,4,5	ea	1	1		
P-O	7105-269-8463	CHAIR, FOLDING: (Steel); SM-B-335417; 80063	1,2,3,4,5	ea	2	2	5	
P-O	6645-990-8999	CLOCK, AIRCRAFT MECHANICAL: (NOTE: When replacing clock, retain mtg bracket) SM-B-472589-5; 80063	1,2,3,4,5	ea	1	1	5	

SECTION II. BASIC ISSUE ITEMS (CONTINUED)

(1) SWR CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & Mfr Code	USABLE SW CODE	(4) UNIT OF MEAS	(5) QTY INC IN UNIT	(6) QTY FORM WITH EQUIP	(7) ILLUSTRATION	
							(a) FIG. NO.	(b) ITEM NO. OR REFERENCE DESIGNATION
P-O		CORD ASSEMBLY, ELECTRICAL CX-4695/U; SC-DL-335582; 80063	1,2,3,4,5	ea	1	1		
P-O	7210-753-3043	CUSHION, CHAIR AND STOOL: SM-B-335428; 80063	1,2,3,4,5	ea	2	2	5	
P-O-R	6110-985-7574	DISTRIBUTION BOX J-1077A/U	1,2,3,4,5	ea	2	2	7	
P-O	5935-162-6208	DUMMYP, PLUG, TELEPHONE: (Black); SM-B-335431; 80063	1,2,3,4,5	ea	25	25	2	
P-O	5935-162-6283	DUMMYP, PLUG, TELEPHONE: (Red); SM-B-335432; 80063	1,2,3,4,5	ea	10	10	2	
P-O-B	4210-270-4512	EXTINGUISHER, FIRE CARBON DIOXIDE: (2 1/2 lb cap) SM-B-364218; 80063	1,2,3,4,5	ea	1	1	7	
P-O	4140-072-0926	FAN, CENTRIFUGAL: SM-B-469159; 80063	1,2,3,4,5	ea	1	1		
P-O	6545-922-1200	FIRST AID KIT: General purpose; SC-C-539483; 80063	1,2,3,4,5	ea	1	1	6	
P-O		FUSE, CARTRIDGE: (1 amp; 250 v); #313001; 75915	1,2,3,4,5	ea	5	5		
P-O	5920-284-9454	FUSE, CARTRIDGE: (1 1/4 amp; 125 v); #3131.25; 75915	1,2,3,4,5	ea	2	2		
P-O	5920-284-9457	FUSE, CARTRIDGE: (1 1/4 amp; 250 v) #3131.25; 75915	1,2,3,4,5	ea	2	2		
P-O	5120-776-9917	GRIP, CABLE, MOVER: (16 in lg); SM-B-335430; 80063	1,2,3,4,5	ea	5	5	2	
P-O	5120-776-9918	GRIP, CABLE MOVER: (12 in long) SM-B-335429; 80063	1,2,3,4,5	ea	20	20	2	
P-O	5120-251-4489	HANGER, HARD: (8 lb); OGG-N-06; type SA; class 2; 81349	1,2,3,4,5	ea	1	1	7	
P-O	5975-682-0519	HANGER, CABLE: (U/to support incoming cables to shelter side) SM-B-363104; 80063	1,2,3,4,5	ea	2	2		
P-O-R	4520-649-8145	HEATER, SPACE, ELECTRIC MB-375/U	1	ea	1	1	5	
P-O-R	4520-224-7509	HEATER, SPACE, ELECTRICAL: #AFC-15A; 72143	2,3,4,5	ea	1	1	5	
P-O	2540-846-8483	LADDER, VEHICLE BOARDING ME-3543/U; SC-DL-147188; 80063	1,2,3,4,5	ea	1	1	9	
P-O	6240-538-8447	LAMP, FLUORESCENT: #P20T12/CV; 24455	1,2,3,4,5	ea	4	2		
P-O	6240-179-1814	LAMP, GLOW: ME-45; 81349	1,2,3,4,5	ea	1	1		
P-O	6240-223-9100	LAMP, GLOW: ME-51; 81349	1,2,3,4,5	ea	1	1		
P-O	6240-223-9104	LAMP, GLOW: ME-40; 81349	1,2,3,4,5	ea	1	1	3	
P-O	6240-270-4285	LAMP, GLOW: ME-21; 81349	1,2,3,4,5	ea	6	3	3	
P-O	6240-143-3070	LAMP, INCANDESCENT: (50 w; 115-120v); #50A/MS; 24455	1,2,3,4,5	ea	1	1	3	
P-O	6240-155-7786	LAMP, INCANDESCENT: (P/lantern) #P8-2; 24455	1,2,3,4,5	ea	1	1	3	
P-O	6240-196-4501	LAMP, INCANDESCENT: (3.2 v; 0.16 amp); 24455	1,2,3,4,5	ea	1	1		
P-O	6230-729-9614	LANTERN, ELECTRIC: Model 2106-7; 32572	1,2,3,4,5	ea	1	1	8	
P-O	5410-752-2525	LEAD ELECTRICAL: (P/ground connection) SM-B-352166C; 80063	1,2,3,4,5	ea	1	1		
P-O	6230-615-5384	LIGHT, EXTENSION: (25 ft); W-L-661; type 1; class 1; 81349	1,2,3,4,5	ea	1	1	2	
P-O	5340-682-1508	PADLOCK: (U/retaining chain) #325A1B; 29823	1,2,3,4,5	ea	1	1		
P-O	8130-656-1090	REEL, CABLE RC-435/U	1,2,3,4,5	ea	1	1	9	
P-O	5410-714-8488	RETAINER, CABLE REEL: (Retains cable reel in trolley) SM-B-335772; 80063	1,2,3,4,5	ea	2	2		
P-O	5975-224-5260	ROD, GROUND ME-148/U	1,2,3,4,5	ea	1	1	6	
P-O	7520-162-6178	SHARPENER, PENCIL: OMS-836; type 11; 81349	1,2,3,4,5	ea	1	1	8	
P-O	6210-686-5568	SHIELD, LAMP: (P/fluorescent lamp; U shaped plastic 23 15/16 in lg) SM-B-335531; 80063	1,2,3,4,5	ea	4	4		
P-O	6210-729-9052	SHIELD, LAMP: (P/fluorescent lamp; U shaped plastic 9 7/16 in lg) SM-B-370487; 80063	1,2,3,4,5	ea	2	2		
P-O	5410-774-4168	SLING, MULTIPLE LEO ASSEMBLY: (P/lifting shelter) SC-C-36302; 80063	1,2,3,4,5	ea	1	1	14	
P-O	6230-299-2884	STARTER, FLUORESCENT LAMP: Type-P8-2; 24455	1,2,3,4,5	ea	4	3	3	
P-O	7510-272-6887	TRUMPET: PT-T-311; 81349	1,2,3,4,5	ea	1	1	2	

SECTION II. BASIC ISSUE ITEMS (CONTINUED)

(1) SIC CODE	(2) FEDERAL STOCK NUMBER	(3) DESCRIPTION Reference Number & NIV Code UNABLE TO CODE	(4) UNIT OF MEAS.	(5) QTY INC IN UNIT	(6) QTY PROD ON HAND EQUIP	(7) ILLUSTRATION	
						(a) FIG. NO.	(b) ITEM NO. OR EQUIPMENT DESCRIPTION
		<p>"NO ACCESSORIES, TOOLS, OR TEST EQUIPMENT ARE TO BE ISSUED WITH THIS EQUIPMENT"</p> <p>"NO BASIC ISSUE ITEMS ARE ISSUED IN OR ON THE EQUIPMENT"</p>					

By Order of the Secretary of the Army:

W. C. WESTMORELAND,
General, United States Army,
Chief of Staff.

Official:

KENNETH G. WICKHAM,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

USASA (2)	SVAD (5)
CNGB (1)	CHAD (3)
Dir of Trans (1)	ATAD (10)
CofEngrs (1)	AMS (1)
TSG (1)	WRAMC (1)
CofSptS (1)	Army Pfc Cen (2)
USAAENBD (2)	USAERDAA (2)
USACDCEC (10)	USAERDAW (13)
US. CDC Agcy (1)	USACRREL (2)
USAMC (5)	Sig FLDMS (2)
USAMICOM (4)	Units org under fol TOE:- 2 ea.
USASTRATCOM (4)	6-502
ARADCOM (5)	7
ARADCOM Rgn (2)	7-42
OS Maj Comd (4)	7-100
LOGCOMD (2)	11-5
USAESC (70)	11-7
MDW (1)	11-8
Armies (2)	11-35
Corps (2)	11-38
Instl (2) except	11-57
Ft Gordon (10)	11-97
Ft Huachuca (10)	11-98
WSMR (5)	11-117
Ft Carson (25)	11-127
Ft Knox (12)	11-137
Svc Colleges (2)	11-155
USAADS (2)	11-157
USAAMS (2)	11-158
USAARMS (2)	11-508(AA-AC, GA)
USAIS (2)	11-587
USAES (2)	11-592
USASESS (40)	11-597
USATC Armor (2)	17
USATC Inf (2)	17-42
USASTC (2)	17-100
Gen Dep (2)	17-102
Sig Sec, Gen Dep (5)	29-102
Sig Dep (12)	39-25
	39-52
	39-52
Army Dep (2) except	39-52
LRAD (14)	39-500
SAAD (30)	37-100
TOAD (14)	37-102
LEAD (7)	54-102
SHAD (3)	77-100
NAAD (5)	77-100

ARNG: State AG (3); Units—Same as Active Army except allowance is one (1) copy each.

USAR: None.

For explanation of abbreviations used, see AR 350-50.

CHANGE }
No. 9 }

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 25 March 1965

**Organizational, DS, GS, and Depot Maintenance Manual
Central Office, Telephone, Manual AN/MTC-7**

TM 11-5805-211-15, 13 July 1959, is changed as follows:

This manual (as changed by C 7, 15 May 63) also applies to the following equipment:

Nomenclature
Shelter, Electrical Equipment
S-170C/MTC-7.

Order No.
19023-Phila-62

Note. The parenthetical reference to previous changes (example: page i of C 8) indicates that pertinent material was published in that change.

Page 3, chapter 1 (as added by C 7, 15 May 63) add the following note below the title of chapter 1:

Note. Shelter, Electrical Equipment S-170C/MTC-7 is similar to Shelters, Electrical Equipment S-170/MTC-7, S-170A/MTC-7, and S-170B/MTC-7. Information in this manual applies to all shelters unless otherwise specified.

c. Reporting of Equipment Manual Improvements. The direct reporting by the individual user of errors, omissions, and recommendations for improving this manual is authorized and encouraged. DA Form 2028 (Recommended Changes to DA Publications) will be used for reporting these improvements. This form will be completed in triplicate using pencil, pen, or typewriter. The original and one copy will be forwarded direct to Commanding General, U. S. Army Electronics Command, ATTN: AMSEL-MR-MA, Fort Monmouth, N. J. 07703. One information copy will be furnished to the individual's immediate supervisor (officer, noncommissioned officer, supervisor, etc.).

Page 5, paragraph 8c, line 6 (as added by C 7, 15 May 63).

After "wall," add:

In the S-170C/MTC-7, the two dropline boxes are secured with the ladder during tran-

sit and removed from the shelter when not in use.

Page 14, paragraph 12 (as changed by C 7, 15 May 63).

Delete paragraph 12 and substitute:
(fig. 7)

12. Distribution Boxes J-1077/U and J-1077A/U (fig. 7)

When not in use, two dropline boxes in the S-170/MTC-7, S-170A/MTC-7, and S-170B/MTC-7 shelters are mounted on the front wall of the shelter. In the S-170C/MTC-7, the two dropline boxes are secured with the ladder during transit. The dropline boxes are used for testing, as wireheads, and to drop extension circuits from the 26-pair cable. A complete description is included in TM 11-5805-204-15.

Page 18, paragraph 17a(1) (as added by C 7, 15 May 63).

Add subparagraph (1.1) after subparagraph (1):

- (1) In the S-170C/MTC-7, unfasten the two web straps which secure each of the dropline boxes to the ladder and remove the dropline boxes from the shelter.

Page 20, paragraph 19. Make the following changes:

Subparagraph b (page 1 of C 8). Add (as added by C 7, 15 May 63) the following after the last sentence:

*This change supersedes C 7, 15 May 1963.

The cable color code listed in (6) below is for the cables provided in the S-170C/MTC-7.

Add subparagraph (6) after subparagraph (5) (page 1 of C 3).

(6) Connect the pairs of the TA-207/P No. 1 cable to the jack field binding posts as indicated in the chart below. Connect the tip lead to the upper binding post and connect the ring lead to the lower binding post of each cable pair.

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip lead	Ring lead
1.....	White.....	Blue
2.....	White.....	Orange
3.....	White.....	Green
4.....	White.....	Brown
5.....	White.....	Gray (slate)
6.....	Red.....	Blue
7.....	Red.....	Orange
8.....	Red.....	Green
9.....	Red.....	Brown
10.....	Red.....	Gray (slate)
11.....	Black.....	Blue
12.....	Black.....	Orange
13.....	Black.....	Green
14.....	Black.....	Brown
15.....	Black.....	Gray (slate)
16.....	Yellow.....	Blue
17.....	Yellow.....	Orange
18.....	Yellow.....	Green
19.....	Yellow.....	Brown
20.....	Yellow.....	Gray (slate)
21.....	Violet.....	Blue
22.....	Violet.....	Orange
23.....	Violet.....	Green
24.....	Violet.....	Brown
25.....	Red.....	Orange
26.....	Red.....	Green
27.....	Red.....	Brown
28.....	Red.....	Gray (slate)
29.....	Black.....	Blue
30.....	Black.....	Orange

Page 21, paragraph 19c(2). (page 6 of C 3). Add subparagraph (3) after subparagraph (2) (as added by C 7, 15 May 63):

(3) S-170C/MTC-7.

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip lead	Ring lead
1.....	White.....	Blue
2.....	White.....	Orange
3.....	White.....	Green

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip lead	Ring lead
4.....	White.....	Brown
5.....	White.....	Gray (slate)
6.....	Red.....	Blue
7.....	Red.....	Orange
8.....	Red.....	Green
9.....	Red.....	Brown
10.....	Red.....	Gray (slate)
11.....	Black.....	Blue
12.....	Black.....	Orange
13.....	Black.....	Green
14.....	Black.....	Brown
15.....	Black.....	Gray (slate)
16.....	Yellow.....	Blue
17.....	Yellow.....	Orange
18.....	Yellow.....	Green
19.....	Yellow.....	Brown
20.....	Yellow.....	Gray (slate)
21.....	Violet.....	Blue
22.....	Violet.....	Orange
23.....	Violet.....	Green
24.....	Violet.....	Brown
25.....	Red.....	Orange
26.....	Red.....	Green
27.....	Red.....	Brown
28.....	Red.....	Gray (slate)
29.....	Black.....	Blue
30.....	Black.....	Orange

Page 34, paragraph 43b (as added by C 7, 15 May 63).

Add the following note after subparagraph b:

Note. The replacement cable color codes listed in the charts ((1) and (2) below) will be the original cable color codes as used in the S-170C/MTC-7 shelter.

Facing page 38, figure 17 (foldout). Make the following changes:

Caption. After diagram, change NOTES 10 and 11 (page 12 of C 3) to: NOTES (as changed by C 7, 15 May 1963) 10, 11, and 12.

Add note 12 after note 11:

12. IN THE S-170C/MTC-7 SHELTER, WIRE FROM E26B BINDING POST TO SIG 3 PAIR 26 JACK IS WHT INSTEAD OF BLU. WIRE FROM E61B BINDING POST TO E62B BINDING POST IS RED INSTEAD OF WHT. WIRE FROM E63A BINDING POST TO E64A BINDING POST IS BLUE INSTEAD OF YEL: WIRE FROM SB-248/P +24V TO PP-990/G +24V IS BLK INSTEAD OF WHT: WIRE FROM SB-248/P -24V TO PP-990/G -24V IS WHT INSTEAD OF BLK:

Page 39, figure 18. Delete the note (page 12 of C 3) and substitute (as changed by C 7, 15 May 1963).

Notes:

ALL WIRING IN THE SIGNAL AND POWER ENTRANCE BOX, AND TO MAIN CIRCUIT BREAKER CB7, VOLTMETER AND AMMETER IS NO. 6 AWG. ALL WIRING TO THE PILOT LAMPS IS NO. 18 AWG. ALL OTHER WIRING IS NO. 14 AWG.

Page 40, paragraph 47x (as added by C 7, 15 May 1963)

SB 11-573

Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment

TB SIG 364

Field Instructions for Painting and Preserving Electronics Command Equipment

(page ii of C 8). Change TM 11-5965-244-15 P to TM 11-5965-224-15P.

Add subparagraph u.1 after subparagraph u.

u.1 Place the two dropline boxes on top of the ladder and secure them to the ladder; use the two web straps provided.

Page 42, appendix I (page i of C 8). Add the following:

Page 48, appendix III (page ix of C 8). Delete and substitute:

APPENDIX III

BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

1. General

a. This appendix lists items supplied for initial operation and for running spares. The list includes tools, parts, and material issued as part of the major end item. The list includes all items authorized for basic operator maintenance of the equipment. End items of equipment are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning. This equipment is essential.

b. Columns are as follows:

- (1) *Federal stock number.* This column lists the 11-digit Federal stock number.
- (2) *Designation by model.* The dagger (†) indicates model in which the part is used.
- (3) *Description.* Nomenclature or the standard item name and brief identifying data for each item are listed in this column. When requisitioning, enter the nomenclature and description.
- (4) *Unit of issue.* The unit of issue is each unless otherwise indicated and is the supply term by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.

(5) *Expendability.* Nonexpendable items are indicated by NX. Expendable items are not annotated.

(6) *Quantity authorized.* Under "Items Comprising an Operable Equipment," the column lists the quantity of items supplied for the initial operation of the equipment. Under "Running Spare Items" the quantities listed are those issued initially with the equipment as spare parts. The quantities are authorized to be kept on hand by the operator for maintenance of the equipment.

(7) *Illustration.* The "Figure No." column lists the figure and reference numbers used for identification of the items in the illustration.

2. Batteries

Dry batteries shown are used with the equipment but are not considered part of the equipment. They will not be preshipped automatically but are to be requisitioned in quantities for the particular organization, in accordance with SB 11-6.

3. Cannibalization

The U-185/G is being maintained by cannibalization.

Section II. Functional Parts List

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
5805-542-7276	1 2 3 4 5 6	CENTRAL OFFICE, TELEPHONE MANUAL AN/MTC-7: An air or vehicular transportable central office containing switching facilities for 6C circuits. It is used to interconnect local tp circuits to trunk circuits and to switch local tp circuits. ITEMS COMPRISING AN OPERABLE EQUIPMENT TECHNICAL MANUAL TM 11-5805-211-15 TECHNICAL MANUAL TM 11-5805-204-15 (NOTE: For maintainable equipments listed below, only tow (2) each Technical Manuals are authorized) REEL UNIT RI-31		NX			
5805-543-0612		SHELTER, ELECTRICAL EQUIPMENT S-170/MTC-7; S-170A; B, C, D/MTC-7 (S-144) /G shelter modified).		NX	3		
5805-543-2666		SIGNAL ASSEMBLY SWITCH BOARD TA-207/P		NX	3		
5805-543-2666		SWITCHBOARD, TELEPHONE, MANUAL SB-86/P (less case)		NX	3		
5805-543-0612		TELEPHONE SET TA-311:PT (less case)		NX	3		
5935-577-6804	† † † †	SHELTER, ELECTRICAL EQUIPMENT S-170/MTC-7, S-170A, B, C, D/MTC-7					
4210-727-6111	† † † †	NOTE: Model Column 1 refers to S-17C/MTC-7; Column 2 refers to S-17CA/MTC-7; Column 3 refers to S-17CB/MTC-7; Column 4 refers to S-17CC/MTC-7; Column 5 refers to S-17CD/MTC-7.					
7520-75J-4807	† † † †	ADAPTER, CONNECTOR UG-1312/U: Sig Dwg SM-B-335345					
6135-120-1C2C	† † † †	AXLE, SINGLE BIT: 2-1/4 lb, Fed Spec GGG-A-926, Type 1, Class 1, Design C					
751C-160-6951	† † † †	BASKET, WASTEPAPER: Fed Spec RR-B-101, Style A, Design C					
7920-170-6315	† † † †	BATTERY, BA-30					
5995-623-2715	† † † †	BINDER, LOOSELEAF: Fed Spec UU-B-346, Type 1, Grade C					
		BRUSH, DUSTING: Fed Spec H-B-201, Class B					
		CABLE ASSEMBLY AND REEL: c/o CA-4566A/G (28C ft) on RC-435/U Reel					

AN/MTC-7 4

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	EXP	QTY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
	1-5/5	AN/MTC-7 (continued)					
5995-889-1229	†	CABLE ASSEMBLY, POWER ELECTRICAL CA-4693A/U: (25 ft) Sig Dwg SC-DL-335423A			2	9	
5995-889-1228	†	CABLE ASSEMBLY, POWER ELECTRICAL CA-4694A/U: (100 ft) Sig Dwg SC-DL-335418			1	9	
7105-269-8463	†	CHAIR, FOLDING: steel; Lyon Steel Equip Co. p/n 4506; Sig dwg SM-B-335417			2	5	
6645-526-4395	†	CLOCK, AIRCRAFT MECHANICAL: (Note: when replacing clock, retain mtg bracket)			1	5	
5995-881-8470	†	CORD ASSEMBLY, ELECTRICAL CA-4695/U: (2 ft) Sig dwg SC-DL-335582			1		
7210-753-3C4J	†	CUSHION, CHAIR AND STOOL: foam rubber, 11-1/2 in w x 15 in lg x 1 in thk; Dunlop p/n JC1 17; Sig dwg SM-B-335428			2	5	
6110-985-7874	†	DISTRIBUTION BOX J-1C77A/U		NA	2	7	
5935-162-6288	†	DUMMY PLUG, TELEPHONE: #LCO type No. 258C(black); Sig dwg SM-B-335431			25	2	
5935-162-6283	†	DUMMY PLUG, TELEPHONE: #LCO type No. 258D (red); Sig dwg SM-B-364217			10	2	
4210-383-7128	†	EXTINGUISHER, FIRE CARBON DIOXIDE: 2-1/2 lb cap; Kidde type 2-1/2 T1; Sig Dwg SM-B-364218		NA	1	7	
4140-072-0926	†	FAN, CENTRIFUGAL: c/o 2 Motors, 2 Impellers, 2 housings mtd on 1 plate; SM-D-469189			1	7	
4130-542-34C5	†	FILTER, AIR CONDITIONING: 9-5/8 in w x 9-3/4 in h x 1-7/8 in thk; Metalwood Div Carey Elect p/n A-2			2	4	
4130-752-9119	†	FILTER, AIR CONDITIONING: 15-3/4" w x 11-3/4" lg x 7/8" thk; Filt-R-ite No. DK-31			1	4	
5410-969-9068	†	FILTER, AIR CONDITIONER: 16 in lg x 12 in w x 1 in thk; Highway Trailer p/n SS-144-432			1	4	
6545-922-1200	†	FIRST AID KIT, GENERAL PURPOSE			1	6	
5120-9918	†	GRIP, CABLE WOVEN: 12 in lg; Economy Cable Grip No. EXA265			20	2	

AN/MTC-7

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF MEASURE	REP	QTY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
	23456	AN/MTC-7 (continued)					
5120-776-9917	† † †	GRIP, CABLE, MOVEN: 16 in lg; Economy Cable Grip No. 2306-0P			5	2	
5120-251-4409	† † †	HAMMER, HAND: 6 lb. Fed spec GGG-H-06, type 5A, Class 2			1	7	
5975-662-0819	† † †	HANGER, CABLE: M/te Support incoming cables to side of shelter; Sig dwg SM-B-3631C			2	2	
4502-649-0145	†	HEATER, SPACE, ELECTRIC HD-375/U		NA	1	5	
4520-224-79C9	† † †	HEATER, SPACE, ELECTRICAL: Electrode p/a ANT-15A		NA	1	5	
254C-846-8403	† † †	DOOR, VEHICLE BOARDING MA-3643/G; Sig dwg SC-DL-147100			1	9	
623C-729-9614	† † †	LANTERN, ELECTRIC: 6v, Justrite Model 2106-7			1	0	
541C-752-2525	† † †	LEAD ELECTRICAL: f/ground connection; Sig dwg SM-B-352164C			1	2	
6230-752-2479	† † †	LIGHT, EXTENSION: 25 ft lg; Fed Spec W-1-661; Type 1, Class 1			1	2	
546C-715-7774	† † †	BLOCK: w/retaining chain; 2 keys; Hard Lock Co. p/a 325A1B			1	2	
513C-656-1C90	† † †	Roll, CABLE RC-435/U			1	9	
541C-714-0400	† † †	RETAINER, CABLE REEL: retains cable reel during transit, 10 in lg x 1/2 in dia; Sig dwg SM-B-335772			2	0	
5975-224-526C	† † †	ROD, GROUND MA-140/G			1	0	
752C-162-0170	† † †	SHARPENER, PENCIL: Fed Spec GGS-236, Type 11			1	0	
621C-729-9052	† † †	SHIELD, LAMP: diffuser for fluorescent lamp, 9-7/16 in lg, U shaped plastic, Sig dwg SM-B-370467			2	0	
621C-666-5560	† † †	SHIELD, LAMP: diffuser for fluorescent lamp, 83-15/16 in lg, U shaped plastic; Sig dwg SM-B-335531			4	0	
541C-774-61C8	† † †	SLING, MULTIPLE LEG ASSEMBLY: f/lifting shelter; Sig dwg SC-C-36302			1	0	
7510-272-6097	† † †	THUMBSTACK: Fed spec FT-T-311			1	0	
5120-752-0061	†	WRENCH, DRAIN PLUG:			1	0	

FEDERAL STOCK NUMBER	DESIGNATION BY MODEL	DESCRIPTION	UNIT OF ISSUE	SEP	CITY AUTH	ILLUSTRATION	
						FIGURE NO.	ITEM NO.
	/ 2, 3, 4, 5, 6	AN/MTC-7 (continued)					
		RUNNING SPARE ITEMS					
		CENTRAL OFFICE, TELEPHONE MANUAL AN/MTC-7					
5920-285-0286	† † †	BLOCK, TELEPHONE PROTECTOR: Cook Elec No. 41-274			18		
5960-262-0152	† † †	ELECTRON TUBE: MIL type 6AUGMA			1		
5960-188-0880	† † †	ELECTRON TUBE: MIL type 6X4W			1		
5960-669-6561	† † †	ELECTRON TUBE: MIL type 6005/6AQ5W			1		
5920-636-3047	† † †	FUSE, CARTRIDGE: 1 amp, 250v; Littelfuse 313001			5		
5920-284-9454	† † †	FUSE, CARTRIDGE: 1-1/4 amp, 125v; Littelfuse No. 3131.25			2		
5920-284-9457	† † †	FUSE, CARTRIDGE: 1-1/4 amp, 250v; Littelfuse part #4131.25			2		
6240-179-1814	† † †	LAMP, GLOW: MIL type NE-45			1		
6240-223-9100	† † †	LAMP, GLOW: MIL type NE-51			1		
6240-196-4801	† † †	LAMP, INCANDESCENT: 3.2v, 0.16 amps; Mazda No. 1490			1		
		SHELTER, ELECTRICAL EQUIPMENT S-170/MTC-7, S-170A, B, C/MTC-7					
6240-538-8447	† † †	LAMP, FLOURESCENT: 20w; GE p/a F20T12/CW			2		3
6240-223-9104	† † †	LAMP, GLOW: MIL type NE-40			1		3
6240-270-4286	† † †	LAMP, GLOW: MIL type NE-21			2		3
6240-143-3070	† † †	LAMP, INCANDESCENT: 50w; GE type No. 50A/RS			1		3
6240-155-7786	† † †	LAMP, INCANDESCENT: 2/lentern; GE type No. PH-2 (NOTE: Mounted behind reflector)			1		3
6250-299-2884	† † †	STARTER, FLOURESCENT LAMP: GE type No. FS-2			2		3

By Order of the Secretary of the Army:

HAROLD K. JOHNSON,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

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ARADCOM Rgn (2)
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LOGCOMD (2)
USAMICOM (4)
USASMC (2)
MDW (1)
Armies (2) except
 Seventh USA (5)
Corps (2)
USAC (3)
11th Air Assault Div (3)
507th USASA Gp (5)
508th USASA Gp (5)
318th USASA Bn (5)
319th USASA Bn (5)
320th USASA Bn (5)
Instl (2) except
 Ft Monmouth (70)
 Ft Hancock (4)
 Ft Gordon (10)
 Ft Huachuca (10)
USACDCEA (1)
USACDCCBRA (1)
USACDCCEA (1)
USACDCCEA (Ft Huachuca Ofc) (1)
USACDCOA (1)
USACDCQMA (1)
USACDCTA (1)
USACDCADA (1)
USACDCARMA (1)
USACDCAVNA (1)
USACDCARTYA (1)
USACDCSWA (1)
Svc Colleges (2)
Br Svc Sch (2) except
 USAAMS (20)
 USASESCS (40)
GENDEP (OS) (2)
Sig Sec, GENDEP (OS) (5)

Sig Dep (OS) (12)
Army Dep (2) except SAAD (30)
 LXAD, TOAD (14), FTWOAD (10)
 LEAD, NAAD (5), SHAD (3)
 SVAD (5), CHAD (3), ATAD (10)
USASCC (4)
USA Tml Comd (1)
Army Tml (1) except OART (5)
USATC AD (2)
USATC Armor (2)
USATC Engr (2)
USATC Inf (2)
USASTC (2)
WRAMC (1)
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Fld Maint Shops (2)
AMS (1)
USAERDAA (2)
USAERDAW (13)
Units org under fol TOE: (2 copies each
 except as indicated)
5-600
5-605
7
7-42
7-100
7-102
11-5
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11-16
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11-37
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11-57
11-58
11-97
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11-117
11-137
11-155
11-157
11-165
11-166
11-337
11-500 (AA-AE) (4)
11-557

11-587
11-592
11-597
11-608
17
17-42
17-100
17-102
30-25

32-52
32-56
32-500
37
37-42
37-100
37-102
54-2
54-102

NG: State AG (3); Units—same as active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.

TECHNICAL MANUAL

Operator, Organizational, Field, and Depot Maintenance Manual CENTRAL OFFICE, TELEPHONE, MANUAL AN/MTC-7

TM 11-5805-211-15 }
CHANGES No. 3 }

HEADQUARTERS,
DEPARTMENT OF THE ARMY
WASHINGTON 25, D.C., 19 February 1962

TM 11-5805-211-15, 13 July 1959, is changed as follows:

Change "Modified Electrical Equipment Shelter S-144/G" to:

Shelter, Electrical Equipment S-170/MTC-7, in the following places:

Page 5, paragraph 6, chart, "Component" column, line 1.

Paragraph 8, heading.

Paragraph 8, line 1.

Page 3, paragraph 1. Delete subparagraph *b* and substitute:

b. The term *organizational equipment* as used in this manual refers to equipment authorized the using organization to be installed in Shelter, Electrical Equipment S-170/MTC-7. Shelter, Electrical Equipment S-170/MTC-7 with the *organizational equipment* constitutes Central Office, Telephone Manual AN/MTC-7.

Page 4, paragraph 5. Delete paragraph 5 and substitute:

5. Components

For information regarding the components in the AN/MTC-7, refer to appendix III. Appendix III also includes a list of items provided in Shelter, Electrical Equipment S-170/MTC-7.

Page 5, paragraph 7, line 8. After "9" add: 9.1 and 9.2.

Page 12. Delete the curtain shown adjacent to the door handles on figure 8.

Page 18, paragraph 16. After the first sentence add: Perform the preoperational procedures

described in paragraphs 26, 27, and 28 to provide light in the shelter.

Paragraph 18a. Delete subparagraph (3) and substitute:

(3) Remove the retaining plate bolts and retaining plate from the ceiling. Remove the steel strap from around the frame, and remove the strap guides from the cotton bag tied to the frame.

Page 20, paragraph 19. Make the following changes:

Subparagraph *a.* Change subparagraph (5) to:

(5) Connect the two black wires designated GND to the EARTH GND binding post.

Subparagraph *b.* Add the following after the last sentence: The cable color code listed in (4) below is for the cables provided in the S-170/MTC-7, serial numbers 1 through 66; the cable color code listed in (5) below is for the cables provided in the S-170/MTC-7, serial numbers 67 through 127.

Subparagraph *b*(4), chart, "Ring lead" column, line 4. Change "pink" to: Red.

Line 28. After "Pink" add: or red.

Add subparagraph (5) after subparagraph (4):

(5) Connect the pairs of the cable to the jack field binding posts as indicated in the chart below. Connect the tip lead to the upper binding post and connect the ring lead to lower binding post of each pair of the TA-207 No. 1 cable.

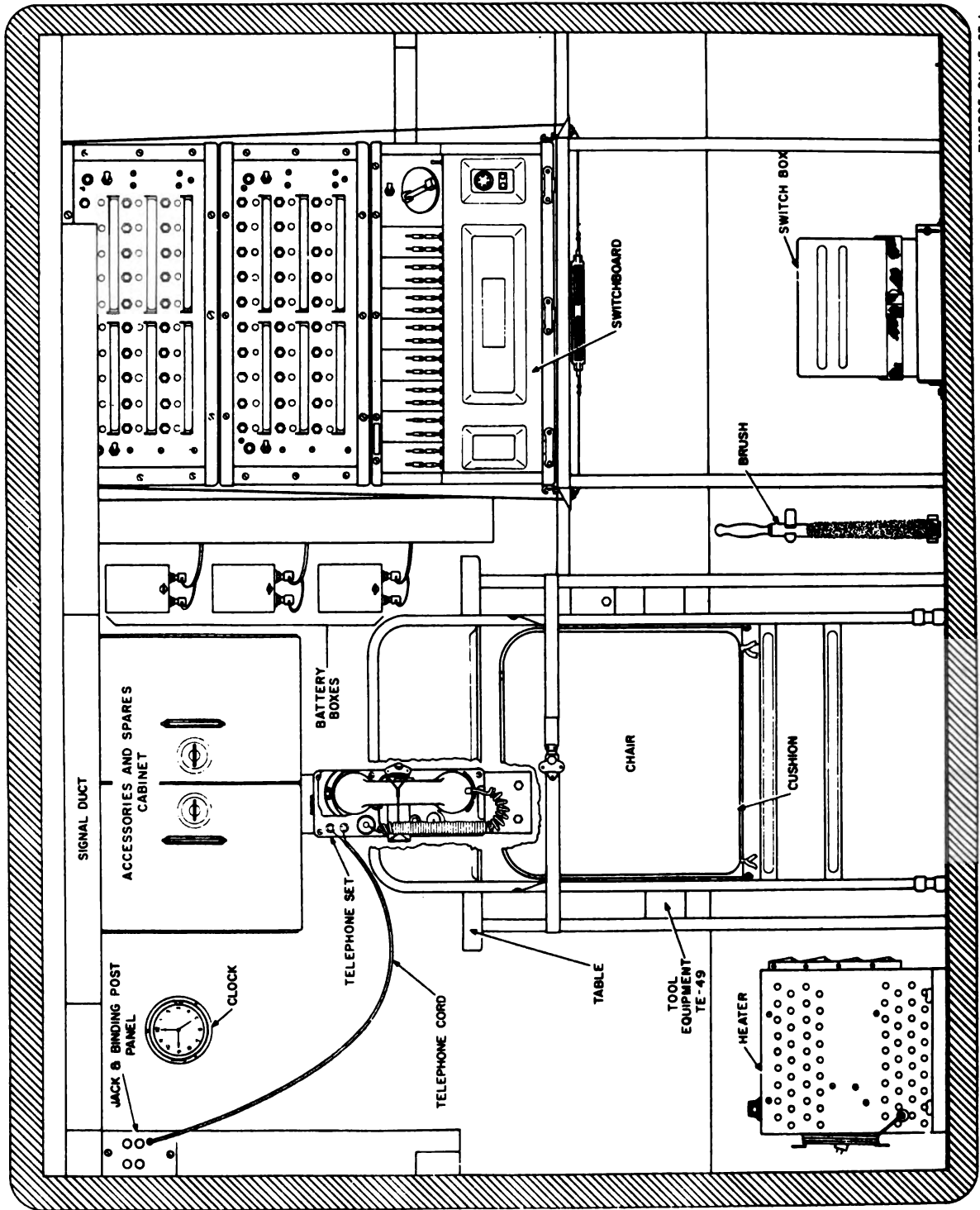
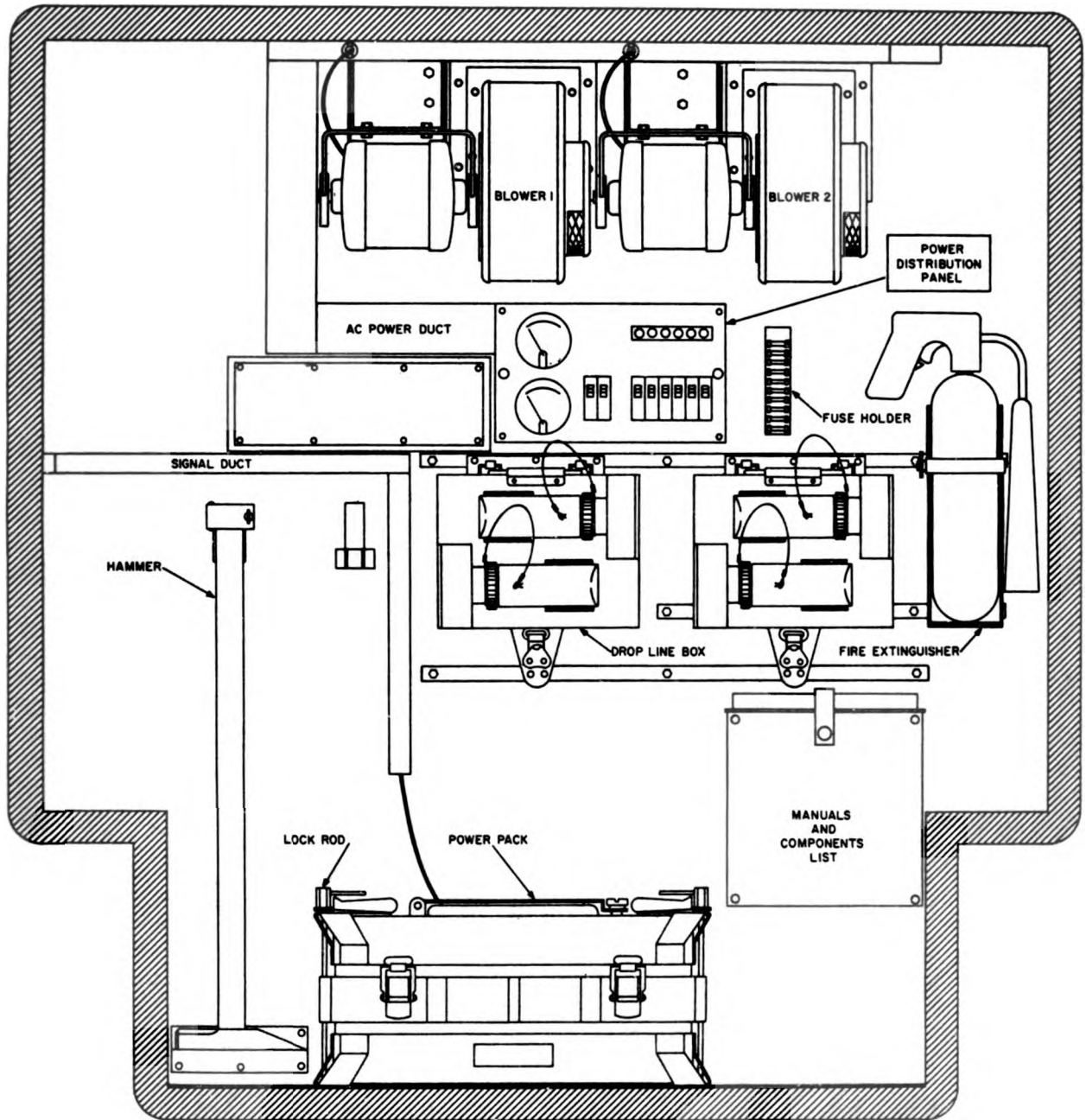


Figure 5. Shelter, left wall.



TM5805-211-15-C3-2

Figure 7. Shelter, front wall.

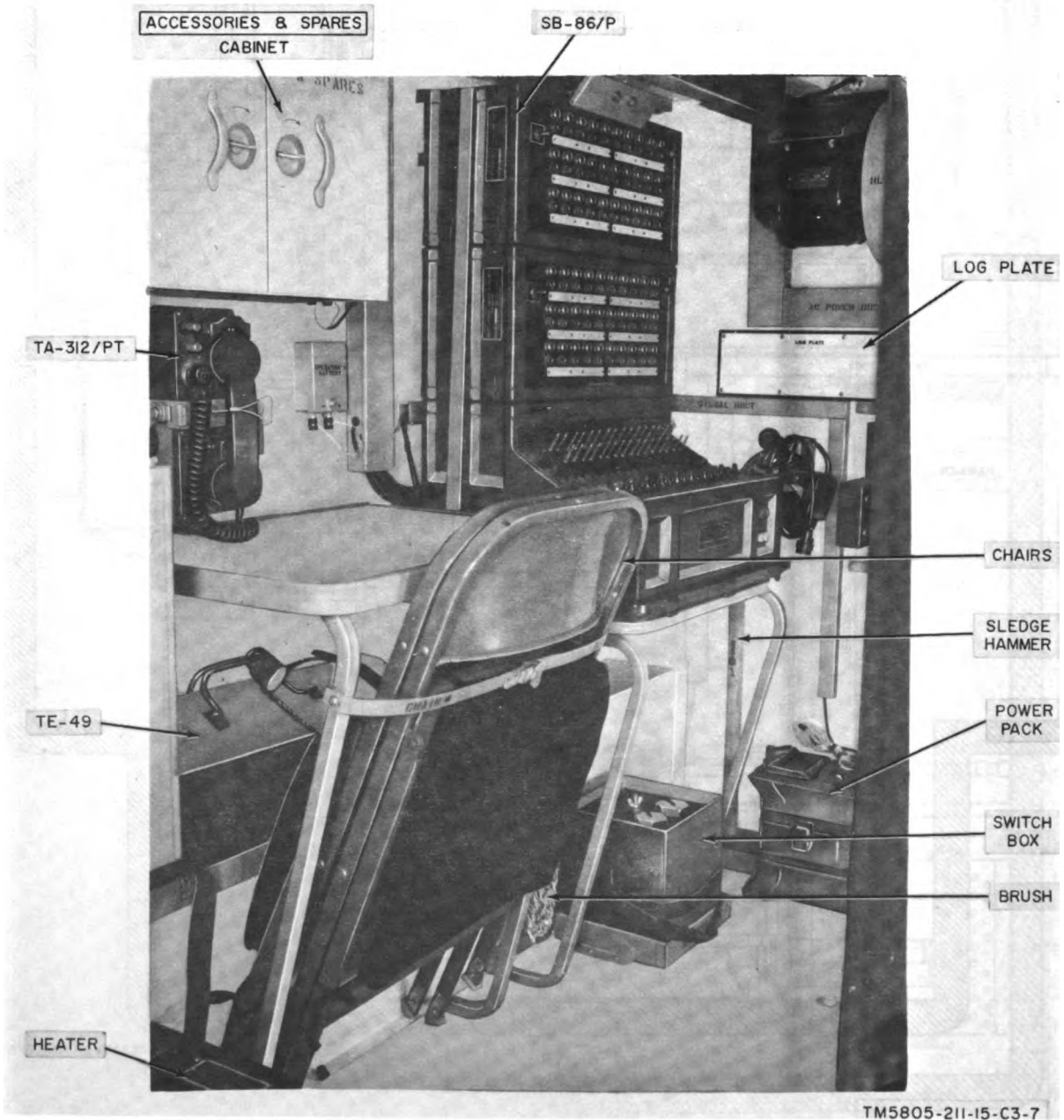


Figure 9.1. (added) Left wall.

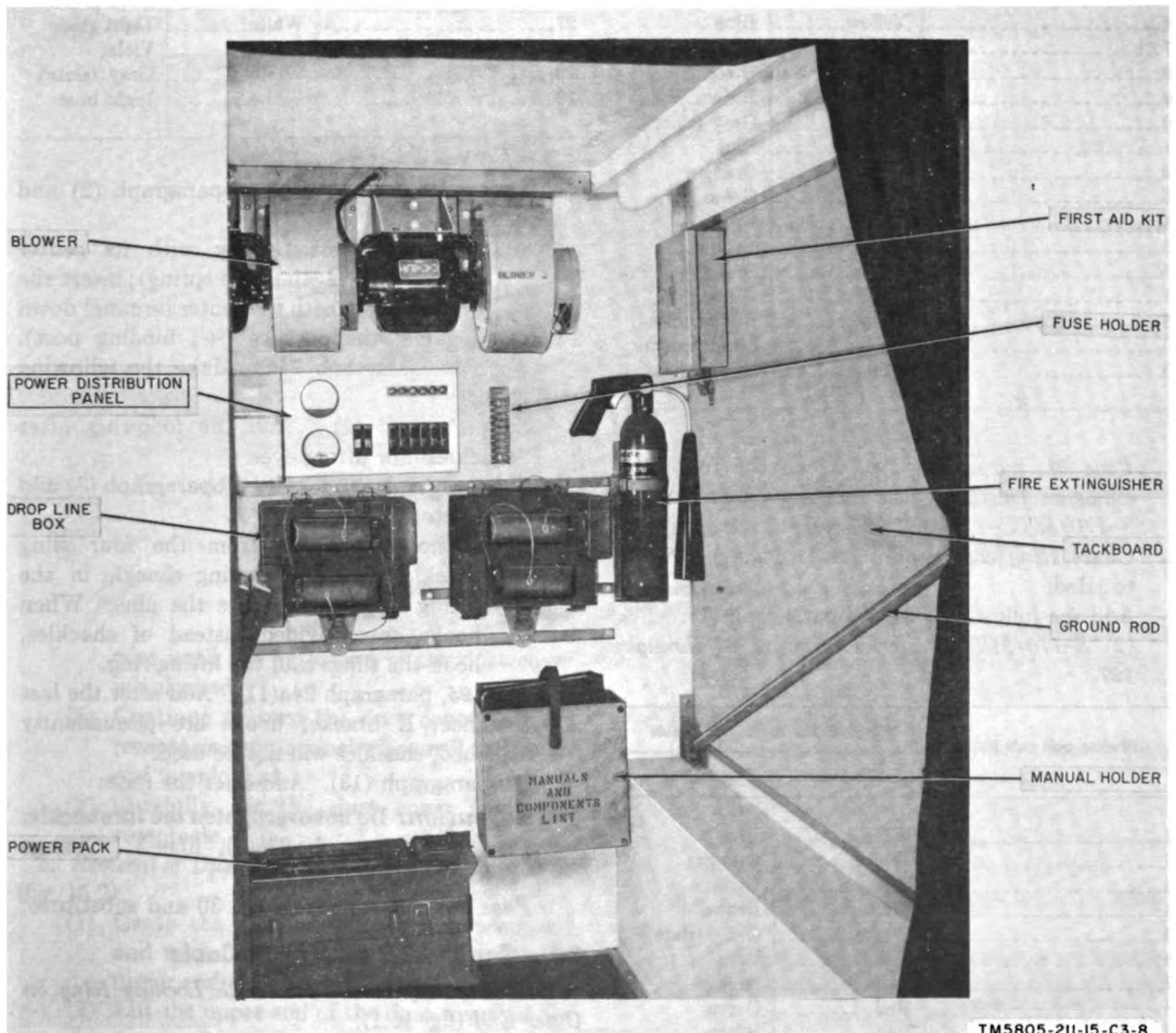


Figure 9.2. (added), Front and right side.

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip lead	Ring lead
1.....	White.....	Blue
2.....	White.....	Orange
3.....	White.....	Green
4.....	White.....	Brown
5.....	White.....	Gray (slate)
6.....	Red.....	Blue
7.....	Red.....	Orange
8.....	Red.....	Green
9.....	Red.....	Brown
10.....	Red.....	Gray (slate)
11.....	Black.....	Blue
12.....	Black.....	Orange
13.....	Black.....	Green
14.....	Black.....	Brown
15.....	Black.....	Gray (slate)
16.....	Yellow.....	Blue
17.....	Yellow.....	Orange
18.....	Yellow.....	Green
19.....	Yellow.....	Brown
20.....	Yellow.....	Gray (slate)
21.....	Violet.....	Blue
22.....	Violet.....	Orange
23.....	Violet.....	Green
24.....	Violet.....	Brown
25.....	White.....	Yellow
26.....	White.....	Orange
27.....	White.....	Black
28.....	White.....	Red or pink
29.....	White.....	Light brown
30.....	White.....	Dark brown

Page 21, paragraph 19c. Make the following changes: Designate the existing chart as: (1) S-170/MTC-7, serial numbers 1 through 66. Chart, Ring lead column, line 4. Change "Pink" to: Red.

Add the following after subparagraph (1):
 (2) S-170/MTC-7, serial numbers 67 through 127.

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip lead	Ring lead
1.....	White.....	Blue
2.....	White.....	Orange
3.....	White.....	Green
4.....	White.....	Brown
5.....	White.....	Gray (slate)
6.....	Red.....	Blue
7.....	Red.....	Orange
8.....	Red.....	Green
9.....	Red.....	Brown
10.....	Red.....	Gray (slate)
11.....	Black.....	Blue

Binding post pair No.	SB-86/P TA-207/P No. 2 cable	
	Tip lead	Ring lead
12.....	Black.....	Orange
13.....	Black.....	Green
14.....	Black.....	Brown
15.....	Black.....	Gray (slate)
16.....	Yellow.....	Blue
17.....	Yellow.....	Orange
18.....	Yellow.....	Green
19.....	Yellow.....	Brown
20.....	Yellow.....	Gray (slate)
21.....	Violet.....	Blue
22.....	Violet.....	Orange
23.....	Violet.....	Green
24.....	Violet.....	Brown
25.....	White.....	Silver
26.....	White.....	Dark green
27.....	White.....	Light green
28.....	White.....	Violet
29.....	White.....	Gray (slate)
30.....	White.....	Light blue

Paragraph 20a. Delete subparagraph (2) and substitute:

(2) Insert the left battery with its center terminal up (against the spring); insert the right battery with the center terminal down (against the positive (+) binding post).

Page 22, paragraph 24a. Make the following changes:

Subparagraph (1). Add the following after "shackles": or lifting eyes.

Subparagraph (3). Delete subparagraph (3) and substitute:

(3) Remove the pins from the four sling shackles, hook each sling shackle in the lifting ring, and replace the pins. When hooks are provided instead of shackles, hook the slings into the lifting ring.

Page 25, paragraph 24a(11). Add after the last sentence: If bracket hooks are permanently attached, shackles will not be used.

Subparagraph (13). Add after the note:

Caution: Do not overtighten the turnbuckle.

Page 27, paragraph 27b(3), line 3. Change "two" to: single.

Page 28. Delete paragraph 30 and substitute:

30. Connection of 26-Pair Cable

a. Removal of Dust Cover With Locking Ring on Outer End (fig. 15.1).

(1) Grasp the locking ring on the outer end of the dust cover and turn it counterclock-

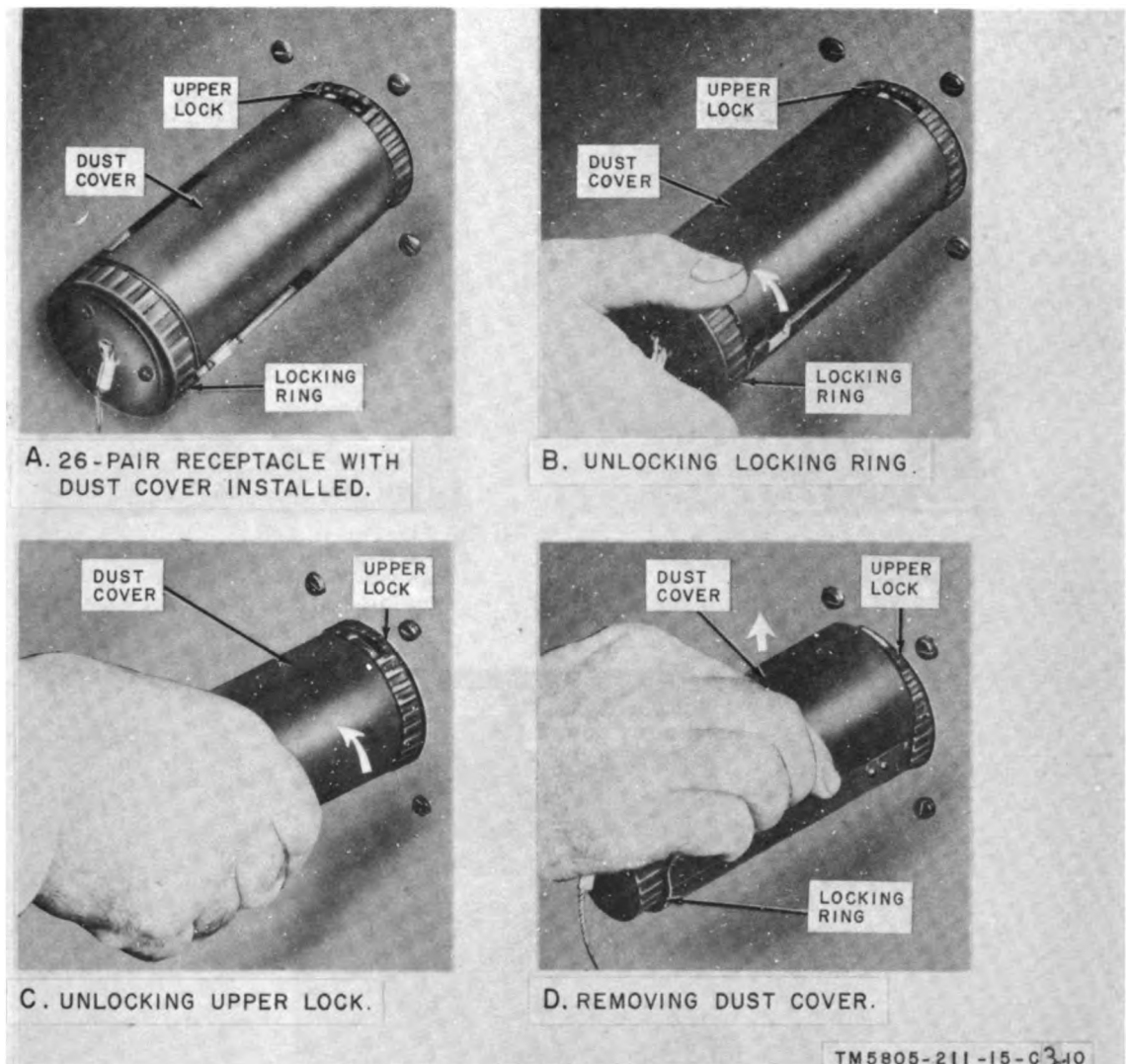


Figure 15.1 (added) Removal of dust cover with locking ring on outer end.

wise until the outer end of the dust cover is unlocked.

- (2) Continue to turn the dust cover and the receptacle counterclockwise until the upper end is unlocked.
- (3) Carefully lift the dust cover from the receptacle.

b. Removal of Dust Cover with Flange on Outer End (fig. 15.2).

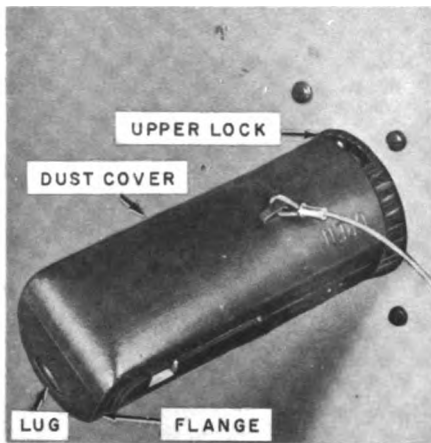
- (1) Grasp the dust cover and the receptacle and turn them counterclockwise until the upper end is unlocked.
- (2) Lift the upper end of the dust cover off the receptacle.
- (3) Swing the dust cover upward and outward

until the flange unhooks from the lug on the outer end of the receptacle.

c. Cable Connection (fig. 15.3).

- (1) Remove the dust cover from the 26-pair cable connector (a or b above).
- (2) Place the 26-pair cable connector on the receptacle. Be sure that the connector is positioned squarely on the receptacle.
- (3) Gently press the connector into the receptacle.

Caution: The connector or receptacle inserts may become damaged if the connector is not properly positioned or if too much pressure is required to interconnect the units.



A. 26-PAIR RECEPTACLE WITH DUST COVER.



B. UNLOCKING UPPER LOCK.



C. REMOVAL OF DUST COVER.

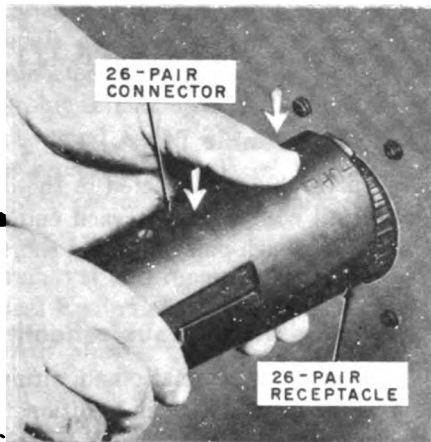
TM5808-211-15-C3-11

Figure 15.8. Removing dust cover with flange on outer end.

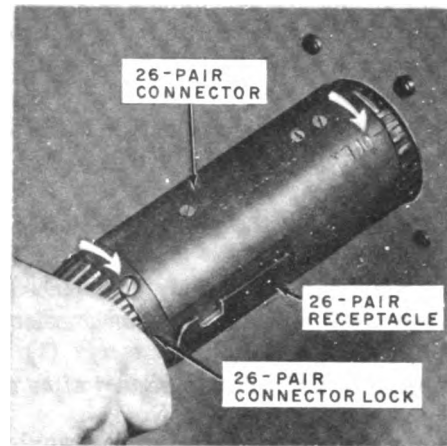
- (4) Grasp the locking ring on the 26-pair cable connector and turn it clockwise gently until the outer end of the connector is locked to the receptacle.
- (5) Continue to turn the connector and the receptacle clockwise until the upper end of the connector is securely locked to the receptacle.
- (6) Check to be sure that the locks on the outer and the upper ends of the connector and receptacle are securely locked.

d. Disconnecting 26-Pair Cable Connector.

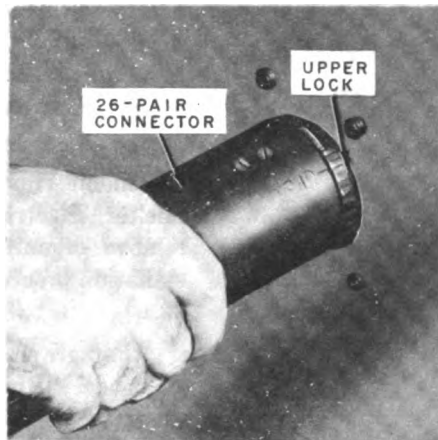
- (1) Grasp the locking ring on the 26-pair cable connector, near the cable, and turn it counterclockwise until the lock at each end of the connector is released.
- (2) Carefully lift the 26-pair cable connector from the receptacle.
Caution: Do not twist the connector to remove it from the receptacle.
- (3) Immediately replace the dust covers on the 26-pair cable connector and the receptacle.



A. 26-PAIR CONNECTOR AND 26-PAIR RECEPTACLE BEING INTERCONNECTED.



B. LOCKING OUTER END OF 26-PAIR CONNECTOR.



C. LOCKING UPPER END OF 26-PAIR CONNECTOR.

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Figure 16.3. (added) Interconnection of 26-pair connector and receptacle.

Caution: Do not drop or lay the open connector on the ground.

e. Replacement of Dust Cover With Locking Ring on Each End.

(1) Place the dust cover squarely on the receptacle.

- (2) Hold the dust cover in position. Grasp the locking ring on the outer end of the dust cover and turn the locking ring clockwise until the outer end is locked.
- (3) Turn the dust cover and the receptacle clockwise until the upper end is securely locked.

f. Replacement of Dust Cover With Flange on Outer End.

- (1) Place the hole in the flange over the lug on the outer end of the receptacle.
- (2) Swing down the upper end of the dust cover squarely onto the receptacle.
- (3) Grasp the dust cover and the receptacle and turn both items clockwise until the dust cover is securely locked in position.

Page 31, chapter 3. Change the title to: OPERATOR AND ORGANIZATIONAL MAINTENANCE.

Paragraph 38d. Add subparagraph *e* after the warning.

e. To determine which item may be replaced by second echelon maintenance personnel, refer to appendix II.

Paragraph 39. Add subparagraph *j* after subparagraph *i*.

j. Refer to TM 11-5805-204-15 for additional preventive maintenance procedures.

Paragraph 40. Add subparagraph *k* after subparagraph *j*.

k. Refer to TM 11-5805-204-15 for additional preventive maintenance procedures.

Page 38, paragraph 41. Add subparagraph *e* after subparagraph *d*.

e. Inspect the fire extinguisher (TM 11-5805-204-15).

Added paragraph 41.1 and 41.2 after paragraph 41.

41.1. Troubleshooting Procedures

The first step in servicing a defective equipment is to sectionalize the fault. Trouble may be located in the interconnecting wire, cable, or equipment. Most faults outside the shelter can be sectionalized with the test listed in paragraph 20. Before troubleshooting, refer to the applicable schematic-wiring diagrams.

41.2. Test Equipment and Tools Required for Troubleshooting

Tools and test equipment authorized for use by organizational maintenance personnel for the S-170/MTC-7 are listed in appendix II. Refer to the applicable maintenance allocation chart for tools and test equipment authorized for use with organizational equipment.

Paragraph 42, chart, item 7, "Action" column. Add the following caution after the first entry.

Caution: Under blackout conditions, this test may be made only if the door is closed. After testing, operate the NORMAL-BLACKOUT switch to the BLACKOUT position.

Page 34. Add paragraphs 42.1, 42.2 and 42.3 after paragraph 42.

42.1. Duct Cable Test

When trouble is suspected in the duct cable, disconnect all equipment for each end of the affected pairs. Test each pair for opens, shorts, crosses, and grounds.

42.2. Additional Troubleshooting Data

The following schematic and wiring diagrams are used in troubleshooting in addition to those in the publications listed in appendix I.

Diagram	Fig. No.
Signal schematic-wiring diagram, telephone terminal connections.	17
Ac power schematic-wiring diagram.....	18

42.3. Removal and Replacement

Refer to TM 11-5805-204-15 for removal or replacement instructions for all components of Shelter, Electrical Equipment S-170/MTC-7. To remove organizational equipment, reverse the installation procedures given in paragraphs 18 through 22.

Paragraph 43b(1), chart, "Original cable color code" "Ring" column, line 4. After "Pink" add: or red. Line 14. Change "Pink" to: Red or silver.

Page 35, paragraph 43b(2), chart, "Original color code" "Ring" column, lines 4, 25, and 26. Change "Pink" to: Red.

Page 38, paragraph 46f. Add the following after the last sentence: Each fluorescent fixture is equipped with a starter, ballast, lamp tube, and radio-interference filter. A description is given in TM 11-5805-204-15.

CHAPTER 4.1

FIELD AND DEPOT MAINTENANCE

46.1. Scope of Field and Depot Maintenance

a. Field and depot maintenance consists principally of the repair and fabrication of mechanical parts, the replacement of mechanical parts not available in the organization, and the replacement of wiring harness and cable. To determine which items must be repaired or replaced by field and depot maintenance personnel, refer to appendix II.

b. Refer to TM 11-5805-204-15 for information regarding the removal and replacement of parts on Shelter, Electrical Equipment S-170/MTC-7.

46.2. Repair of Shelter Skin

If the exterior skin of the shelter is damaged or punctured, use patch Kit, Shelter, Electrical Equipment (Federal stock No. 5410-783-6250) to repair holes in the exterior skin of the roof or sides of the shelter. Follow the procedures provided with the kit and those given below to repair the shelter skin.

a. Preparation of Shelter Skin and Patch.

- (1) Check the damaged area to determine if the insulation has been gouged out of the shelter wall. If necessary, fill the hole in the insulation with a clean noncombustible material. *Do not use the glass cloth.*
- (2) Clean the shelter skin around the damaged area within a radius of 3 inches of the hole. Use sandpaper, a knife, or a scraper to remove all paint, dirt, mud, or other foreign material. *Do not touch the cleaned area with your fingers.*
- (3) Cut a piece of glass cloth (patch) about 2 inches larger than the hole.

b. *Mixing Adherent (Glue).* The area to be covered determines the amount of adherent required; the surrounding air temperature indicates whether the cold weather promoter is required and the amount required. Follow the procedures given below to mix the ingredients:

- (1) Pour 3 ounces of resin into the mixing cup for each square foot of area to be covered.
- (2) Add the curing agent and cold weather promoter to the resin in the amounts shown in the chart below. These amounts are for 3 ounces of resin; increase the curing agent and cold weather promoter in proportion to the amount of resin required.

Temperature (° F.)	Curing agent No. 235 (eye dropper filled to red line)	Cold water promoter (eye dropper filled to red line)
Above 55.....	1	None
20-55.....	1	¼
Below 20.....	1	1

- (3) Mix the ingredients thoroughly and then apply the mixture to the patch and shelter surface as indicated in *c* below.

c. Application of Mixture and Patch.

- (1) Spread a liberal coating of the mixture over the surface of the entire area to be patched. Use the spatula or a brush.
- (2) Place the glass cloth patch over the hole; be sure it is centered. Press the patch lightly with the spatula to be sure it is firmly embedded in the mixture.
- (3) Spread a second liberal coating of the mixture over the patch. Work from the center of the patch toward the edges. Be sure the patch is completely covered. Check the edges of the patch to be sure that they are flat and are firmly embedded in the mixture.
- (4) Allow the patch to dry between 4 and 24 hours, depending on the drying conditions.
Note. To accelerate low-temperature drying, heat the patch with warm, dry air or radiant heat. *Do not use an open flame.*
- (5) After the patch is thoroughly dry, smooth the surface with sandpaper and paint it.

d. Cleaning Tools and Storing Components.

- (1) Tightly recap the containers and store them in a cool dry place. The shelf life is seriously affected by heat.
- (2) Wait until the mixture is thoroughly dry and then flex the cup and spatula to remove the mixture. Discard the paintbrush. Store the spatula and the cup with the containers.

46.3. Final Testing Procedure

The tests given in this paragraph are designed to measure the performance capabilities of a repaired equipment. These tests are limited to tests for the equipment and fixtures supplied as part of the S-170/MTC-7. When it is necessary to test the

communications equipment, refer to the applicable technical manual for final testing procedures.

a. *Wiring and Cable.* Check all signal (fig. 17) and power (fig. 18) wiring for opens, shorts, crosses, and grounds with a multimeter arranged as an ohmmeter. Check the wiring against the wiring diagram to be sure that all leads are properly terminated.

b. *Mechanical Tests.* Inspect mechanical parts for proper mounting and to be sure that all mounting facilities are securely tightened. If the item, such as a door hinge performs an operation, make an operational test in addition to an inspection.

Facing page 38, figure 17 (foldout). Make the following changes:

Caption, after "diagram" add: NOTES 10 AND 11.

In the center section of the illustration, under "P /O BINDING POSTS ROW 4," change the designation of the binding post connected to terminal 1A of J3 SIGNAL 3 from "E25B" to: E25A. Add notes 10 and 11 after note 9:

10. ON SERIAL NUMBERS 1 THROUGH 66, THE COLOR CODE FOR THE 26-PAIR CABLE IS AS SHOWN ON THE DIAGRAM. ON SERIAL NUMBERS 67 THROUGH 127,

THE COLOR CODE FOR THE 26-PAIR CABLE IS THE SAME AS THAT GIVEN IN THE COLOR CODE CHART FOR 26-PAIR REPLACEMENT CABLE. ON SOME EQUIPMENTS, PAIR 26 OF THE 26-PAIR CABLE MAY BE SILVER-BLUE INSTEAD OF WHITE-RED.

11. ON SERIAL NUMBERS 1 THROUGH 66, THE COLOR CODE FOR THE 14-PAIR CABLE IS AS SHOWN ON THE DIAGRAM. ON SERIAL NUMBERS 67 THROUGH 127, THE COLOR CODE FOR THE 14-PAIR CABLE IS THE SAME AS THAT GIVEN IN THE COLOR CODE CHART FOR 14-PAIR ORIGINAL CABLE.

Page 39, figure 18. Add the following note to figure 18:

Note. All wiring in the signal & power entrance box and to main circuit breakers CB7 is No. 6 AWG. All Wiring to the volt-meter, ammeter, and pilot lamps is No. 18 AWG. All other wiring is No. 14 AWG.

Page 40, paragraph 47. After subparagraph p, add subparagraph p.1:

p.1. Check to be sure that the drain plug in the floor is securely tightened to prevent leakage.

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

Distribution:

Active Army:

DASA (6)
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USATC FA (2)
USATC Inf (2)
USAOMC (3)
Svc Colleges (2)
Br Svc Sch (2)
GENDEP (2) except
Atlanta GENDEP (none)
Sig Sec, GENDEP (5)
Sig Dep (12)
WRAMC (1)
USA Trans Tml Comd (1)
Army Tml (1)
POE (1)
OSA (1)
USAEPG (2)

AFIP (1)
AMS (1)
Army Pictorial Cen (2)
EMC (1)
Yuma Test Sta (2)
USACA (3)
USASSA (20)
USASSAMRO (1)
USASEA (1)
USA Caribbean Sig Agcy (1)
USA Sig Mal Spt Agcy (13)
Sig Fld Maint Shops (3)
USA Corps (3)
JBUSMC (2)
AFSSC (1)

Units org under fol TOE:

(2 cy each UNOINDC)

5-600
5-605
7
11-5
11-7
11-8
11-55
11-57
11-58
11-97
11-117
11-137
11-155
11-157
11-165
11-166
11-500 (AA-AE) (4)
11-557
11-587
11-592
11-597
11-608
17
54-2
54-102

NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR 320-50.

TECHNICAL MANUAL
 No. 11-5805-211-15

HEADQUARTERS,
 DEPARTMENT OF THE ARMY
 WASHINGTON 25, D.C., 13 July 1959

MANUAL TELEPHONE CENTRAL OFFICE AN/MTC-7

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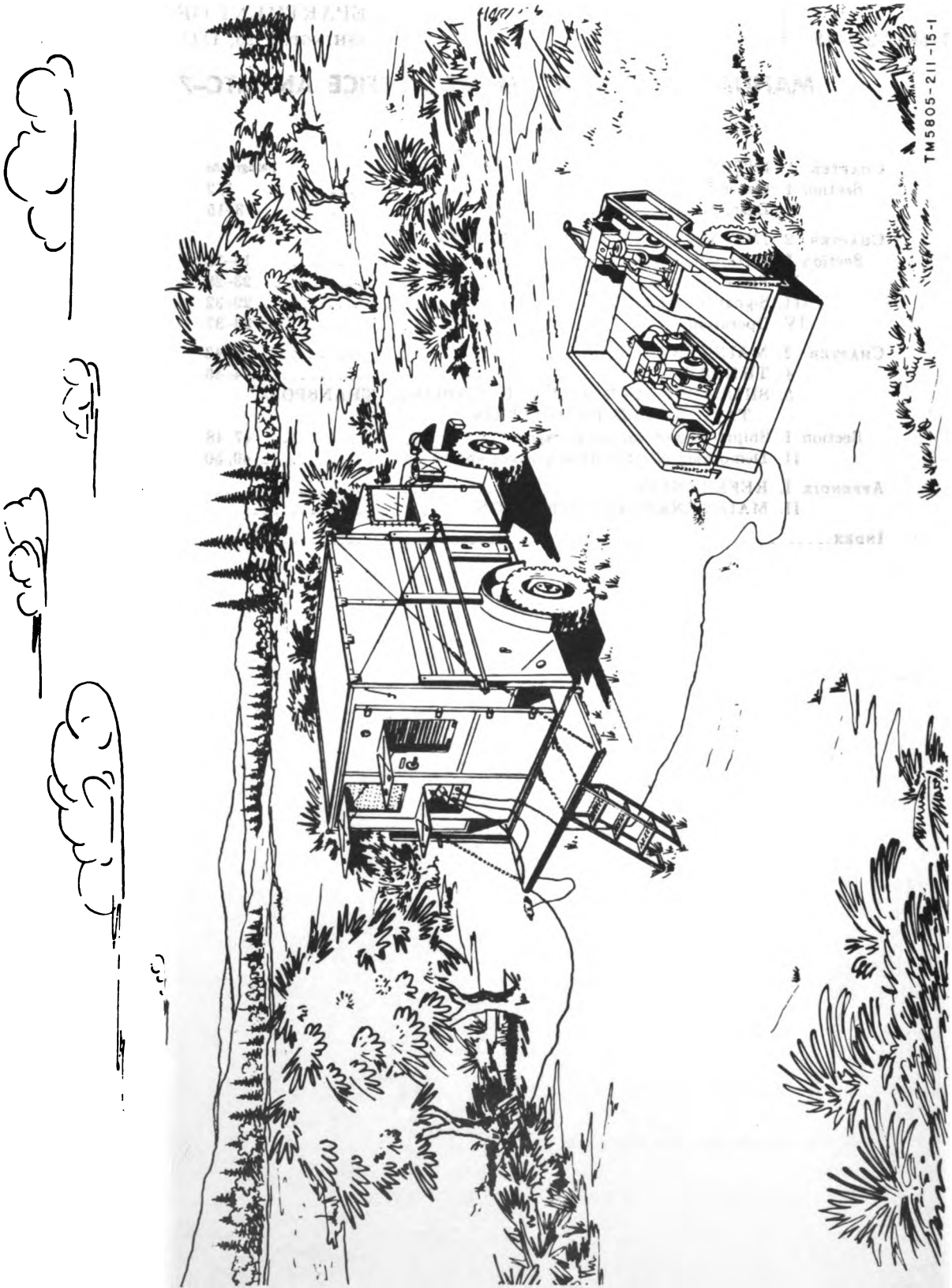


Figure 1. Manual Telephone Central Office AN/MTC-7, connected for operation.

CHAPTER 1

INTRODUCTION

Section I. GENERAL

1. Scope

a. This manual contains a description of Manual Telephone Central Office AN/MTC-7 (fig. 1) and covers its installation, operation, maintenance, and theory. It includes instructions for operation under usual and unusual conditions and cleaning and inspection of the equipment. The major components of the equipment are covered in detail in their respective technical manuals. A complete list of references is contained in appendix I. Information on system and common items for Manual Telephone Central Office AN/MTC-7 is contained in TM 11-5805-204-15.

b. The term *organisational equipment* is used throughout this manual to indicate components of the AN/MTC-7 which are supplied by the using organization. These items of equipment are indicated in the list of components (par. 5).

2. Forms and Records

a. *Unsatisfactory Equipment Report.* Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N.J., as prescribed in AR 700-38.

b. *Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army).

c. *Preventive Maintenance Forms.* Prepare preventive maintenance forms for the main components of Manual Telephone Central Office AN/MTC-7 as specified in appropriate technical manuals (app. I).

d. *Comments on Manual.* Forward all comments on this publication direct to Commanding Officer, U.S. Army Signal Publications Agency, Fort Monmouth, N.J.

Section II. DESCRIPTION AND DATA

3. Purpose and Use

Manual Telephone Central Office AN/MTC-7 (fig. 1) is an air or vehicular transportable central office that contains switching facilities for 60 circuits (Manual Telephone Switchboard SB-86/P and one additional Switchboard Signal Assembly TA-207/P). It is used as a central telephone office by division signal battalion personnel in the division area type communications system. It is used to interconnect local telephone circuits to trunk circuits and to switch local telephone circuits. When connected to Communication Patching Panel SB-611/MRC (TM 11-5805-204-15), carrier derived trunk circuits are available.

4. Technical Characteristics

Technical characteristics for organizational equipment are given in their respective technical

manuals (app. I). Overall technical characteristics for Manual Telephone Central Office AN/MTC-7 are given below.

Lines and trunks served.....	60.
Intershelter communication facilities.....	3.
Type of operation.....	Manual (local or common battery signaling).
Maximum local battery line loop resistance.....	600 ohms.
Maximum local battery line leakage resistance.....	10,000 ohms.
Maximum trunk loop resistance.....	2,000 ohms.
Power requirements:	
Input to shelter.....	115 volts, $\pm 10\%$, 60 cps, single phase.
Power consumption:	
2 blowers.....	248 watts.
1 heater.....	1,500 watts.
All lights.....	185 watts.
Total.....	1,883 watts.

Power requirements—Continued
 Output from PU-322/G----- 115 volts \pm 10%, 60
 cps, single phase,
 2,500 watts.

Weight:
 Shelter (complete with or- 1,410 lb.
 ganizational equipment).
 PU-322/G ----- 2,300 lb.

5. Components of Manual Telephone Central Office AN/MTC-7

The charts in *a* through *d* below list the main components and running spares. A complete list of components is contained in the publications covering repair parts and special tools list for Manual Telephone Central Office AN/MTC-7.

a. Components (Less Organizational Equipment).

Quantity	Item
1	Modified Electrical Equipment Shelter S-144/G (fig. 1) complete with mountings and minor components (60½ in. high, 75½ in. long, 57½ in. wide, 160 cubic foot volume).
1	Trailer Mounted Gasoline Engine Generator Set PU-322/G (fig. 1) (83 in. high, 147 in. long, 73½ in. wide, 520 cubic foot volume).
2	Distribution Box J 1077/U (fig. 7).
1	Electrical Power Cable Assembly CX 4694/U (100 ft).
2	Electrical Power Cable Assembly CX-4693/U (25 ft).
1	Electrical Space Heater HD-375/U (fig. 5).
1	Switch Box SA 331/U (fig. 5).
3	Telephone Cable Assembly CX-4566/G (250 ft).

b. Organizational Equipment)(fig. 5).

Quantity	Item
1	Manual Telephone Switchboard SB-86/P: 1 Manual Telephone Switchboard Section SB-248/P 1 Switchboard Signal Assembly TA-207/P 1 Handset-Headset H-91/U (fig. 7) 1 Power Supply PP-990/G 1 set running spares (canvas roll).
1	Switchboard Signal Assembly TA-207/P.
1	Telephone Set TA-312/PT (less carrying case).
1	Tool Equipment TE-33.
1	Tool Equipment TE-49.

c. Miscellaneous Components (fig. 2). The miscellaneous components stored in the ACCESSORIES & SPARES cabinet are listed below.

Quantity (ea)	Item
1	Extension light.
25	Dummy plug (red).
10	Dummy plug (black).
1	Ground lead.
5	Power cable grip.
20	26-pair cable grip.
2	Shackle.
1 box	Thumbtacks.

d. Running Spares (fig. 3).

Quantity	Item	Location
2	Fluorescent lamp, 20 watts, 115 volts, 24 inches.	Ceiling.
1	Extension light incandescent lamp, 50 watts, 115 volts.	ACCESSORIES & SPARES cabinet.
1	Shelter neon lamp, 3 watts, 105-120 volts.	ACCESSORIES & SPARES cabinet.
3	POWER DISTRIBUTION PANEL neon lamp, ¼ watt, 105-120 volts.	ACCESSORIES & SPARES cabinet.
3	Fluorescent starter	Ceiling.
1	Flashlight incandescent lamp.	Flashlight.

6. Common Names

Components of Manual Telephone Central Office AN/MTC-7 to which common names have been assigned are listed below.

Component	Common name
Cable Reel RC-435/U	Cable reel
Connector Adapter UG-1312/U	Junction box.
Distribution Box J-1077/U	Drop line box.
Electrical Connector Plug U-185/G	26-pair connector
Electrical Connector Receptacle U-186/G.	26-pair receptacle.
Electrical Cord Assembly CX-4695/U (2 ft).	Telephone cord.
Electrical Power Cable Assembly CX-4693/U (25 ft).	Power stub.
Electrical Power Cable Assembly CX-4694/U (100 ft).	Power cable.
Electrical Space Heater HD-375/U	Heater.
Ground Rod MK-148/G	Ground rod.
Manual Telephone Switchboard SB-86/P with additional Switchboard Signal Assembly TA-207/P.	Switchboard.
Handset-Headset H-91/U	Operator's telephone set.
Manual Telephone Switchboard Section SB-248/P.	Keyshelf section.
Power Supply PP-990/G	Power pack.
Switchboard Signal Assembly TA-207/P.	Jack field section.

Component	Common name
Modified Electrical Equipment Shelter S-144/G.	Shelter.
Switch Box SA-331/U.....	Switch box.
Telephone Cable Assembly CK-4566/G (250 ft).	26-pair cable.
Telephone Set TA-312/PT.....	Telephone set.
Trailer Mounted Gasoline Engine Generator Set PU-322/G.	Generator set.
¼-ton 2-wheel Cargo Trailer M101.	Trailer.

7. Description of Manual Telephone Central Office AN/MTC-7

(fig. 1)

The AN/MTC-7 is a self-contained housed shelter, 60-line telephone central office with power source (Trailer Mounted Gasoline Engine Generator Set PU-322/G (par. 9)). It is usually furnished to the using organization less the *organizational equipment* (par. 5b). The equipment arrangement inside the shelter is shown in figures 5 through 9. Components of the AN/MTC-7 which are the same as components of other shelter-housed facilities used by division signal battalion personnel in an area type communications system are described in TM 11-5805-204-15. The components distinctive to the AN/MTC-7 are described in paragraphs 8 through 16.

8. Modified Electrical Equipment Shelter S-144/G

(fig. 4)

Modified Electrical Equipment Shelter S-144/G is a lightweight shelter adapted for both truck and helicopter transportation that is fully insulated, watertight, and airtight. The left and right sides of the shelter are recessed to provide clearance for the wheel wells of the truck. Two exhaust blower vents with hinged covers are located on the outside front wall. Skids are bolted to the bottom of the shelter. Accessory D-rings on the left and right sides can be used for tying equipment to the shelter. A two-section door is provided at the rear of the shelter; this permits entrance into the shelter when it is truck mounted and the tail gate is up.

a. Left Wall. The components of the AN/MTC-7, mounted on and next to the left wall, are shown in figure 5. The three battery boxes (two for the jack field sections, one for the operator's telephone set) contain batteries normally

mounted in the jack field and keyself sections of the switchboard. Tool Equipment TE-49 contains tools required for organizational maintenance. The switch box is removed from its mounting and placed on the trailer of the generator set when operating. Miscellaneous components (par. 5c), Tool Equipment TE-33, and running spares are stored in the ACCESSORIES & SPARES cabinet.

b. Right Wall (fig. 6). The right wall, above the wheel well recess, is covered completely by the tackboard. The first-aid kit and the wastepaper basket are mounted on the tackboard. The ground rod is stored on the right wall when the AN/MTC-7 is not in use.

c. Front Wall. The components of the AN/MTC-7, mounted on and next to the front wall, are shown in figure 7. When not in use, the operator's telephone set, two drop line boxes, a sledge hammer, and fire extinguisher are mounted on the front wall. Spare fuses for the switchboard are stored in the fuse holder. The equipment technical manuals and a complete list of components of the AN/MTC-7 are contained in the manual holder.

d. Rear Wall (fig. 8). The SIGNAL & POWER ENTRANCE and the SIGNAL BINDING POSTS boxes are located in the rear wall. When not in use, the two junction boxes, used to interconnect the power cables and power stubs, are mounted on the door. The air vent in the door contains a filter. The brackets on the left of the door provide storage for the cable reel holders.

e. Floor (fig. 9). The floor of the shelter has several mountings for components of the AN/MTC-7. Recessed cable reel mountings, located near the right wall, are used to retain the reels. The ladder is attached to the reels. Other mountings are provided for component storage during transit.

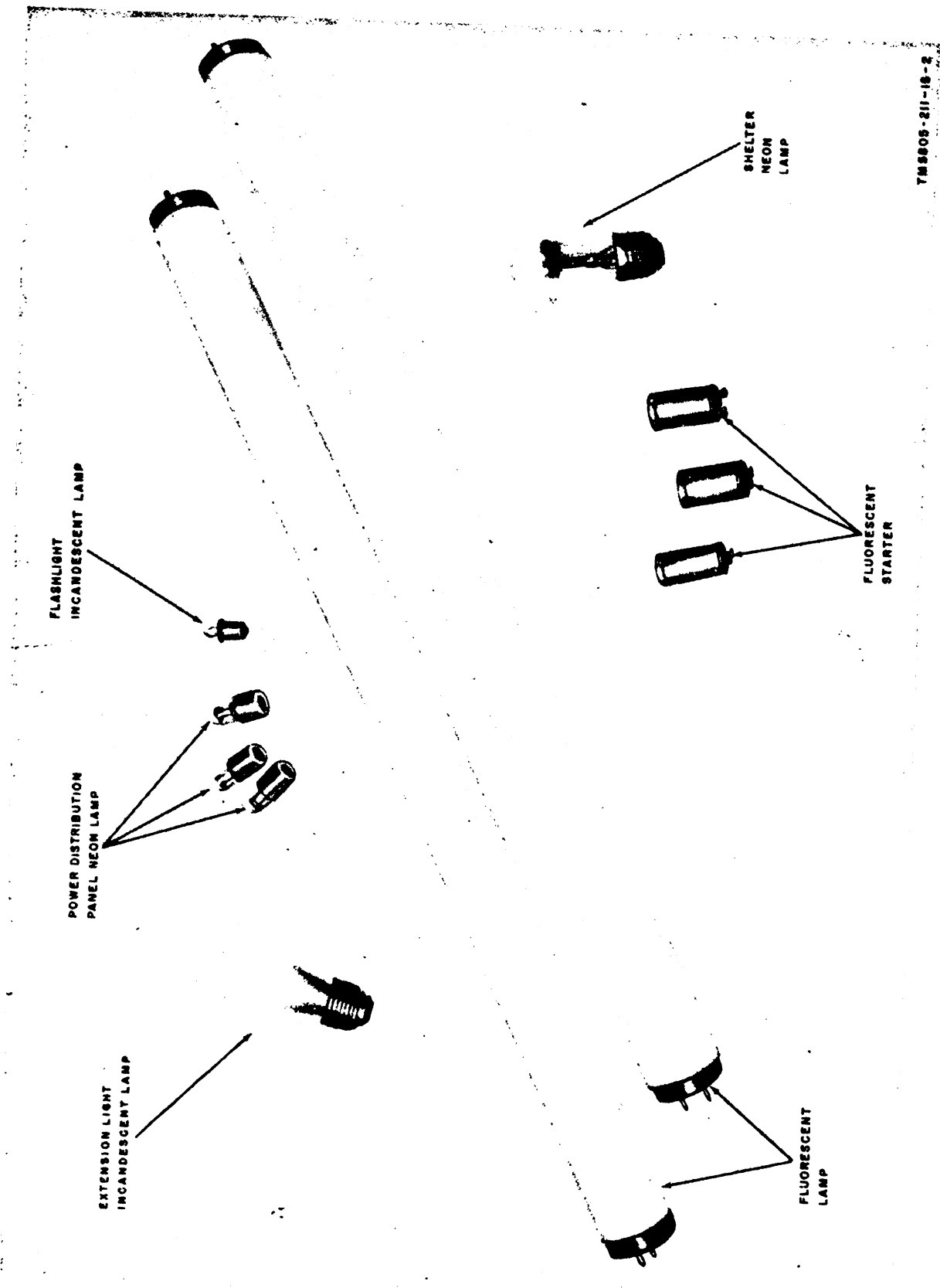
f. Lighting. Four 20-watt fluorescent lamps provide the general lighting for the shelter. A neon lamp (fig. 8) is provided next to the door. The NEON, NORMAL-BLACKOUT, FLUORESCENTS, and FLUORESCENT switches are mounted near the door. With the NORMAL-BLACKOUT switch in the BLACKOUT position, the shelter lights will go out when the door is opened.

g. Power and Wiring. Alternating current (ac) is connected to the shelter at the SIGNAL & POWER ENTRANCE box (fig. 11) and is routed



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Figure 2. Miscellaneous components stored in ACCESSORIES & SPARES cabinet.



TM 5805-211-18-2

Figure 3. Running spares.

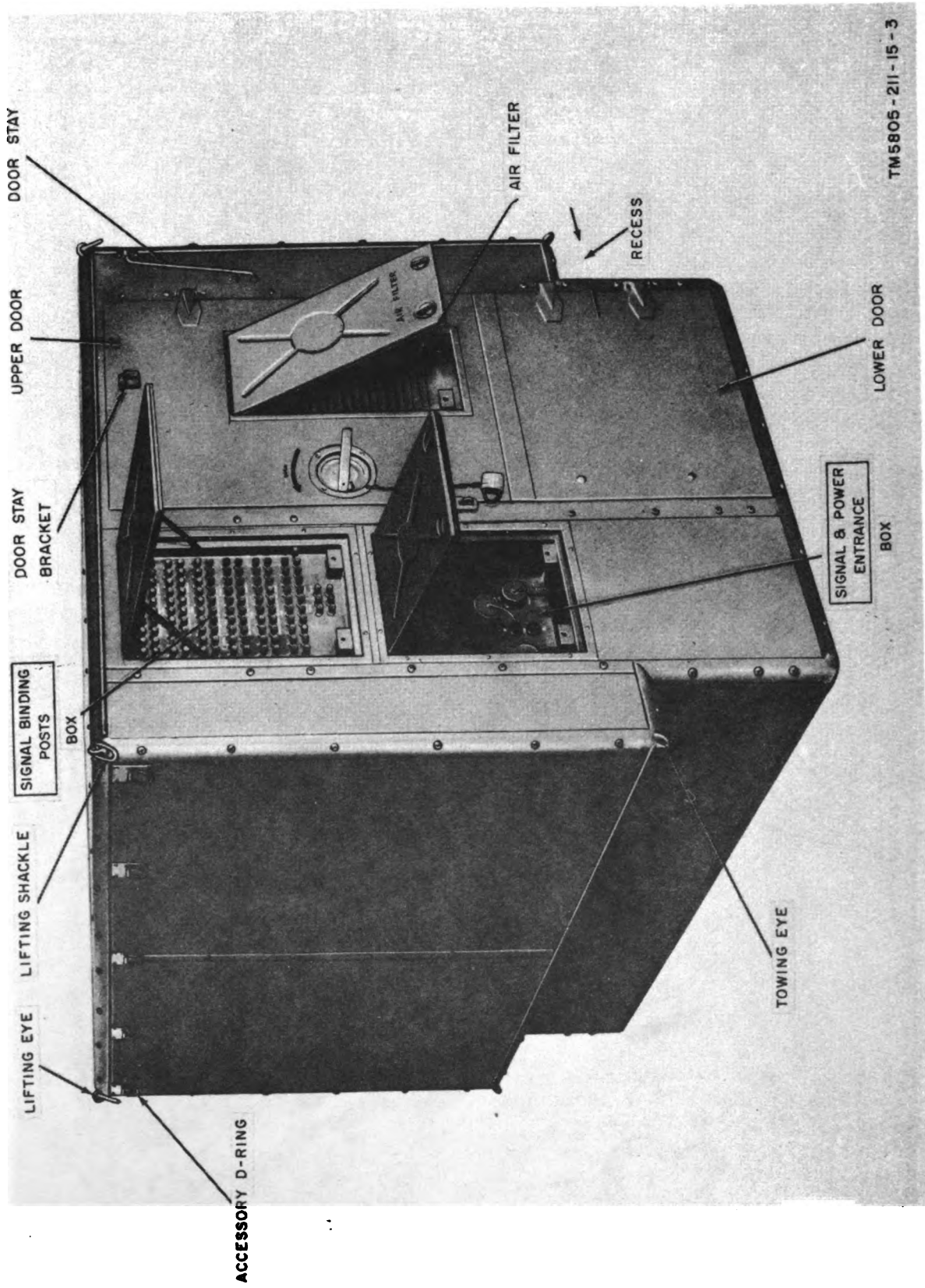
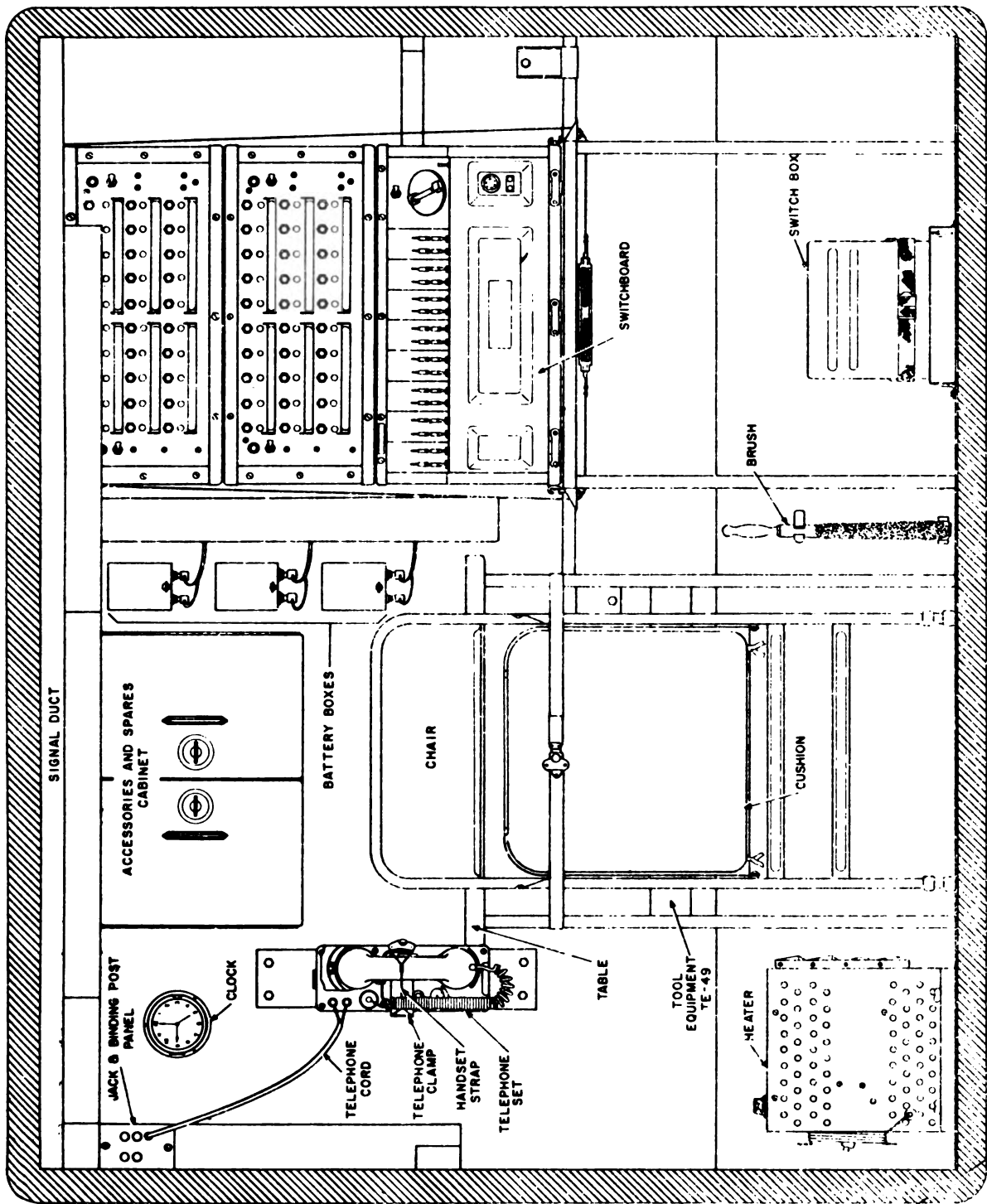
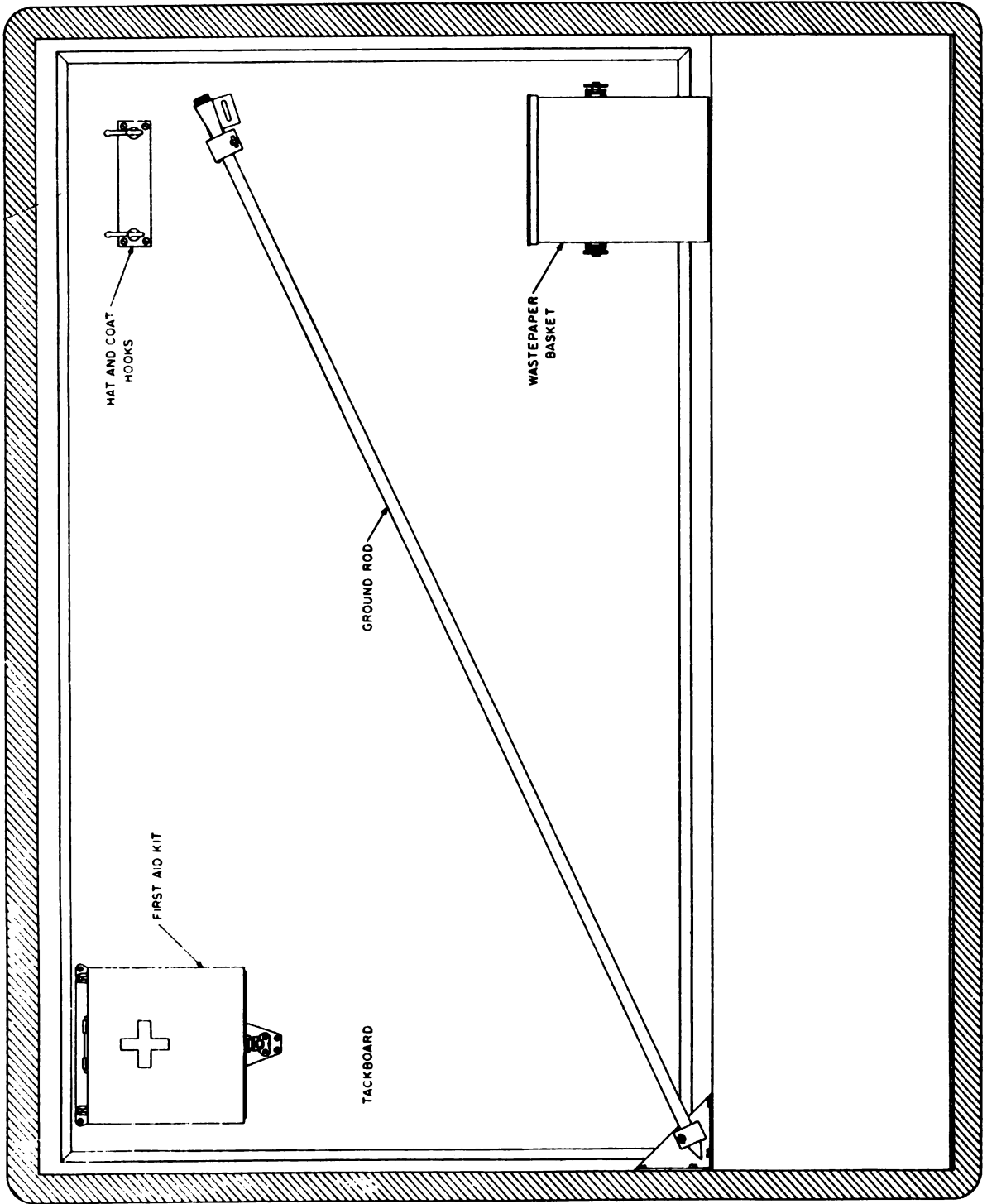


Figure 4. Modified Electrical Equipment Shelter S-144/G.



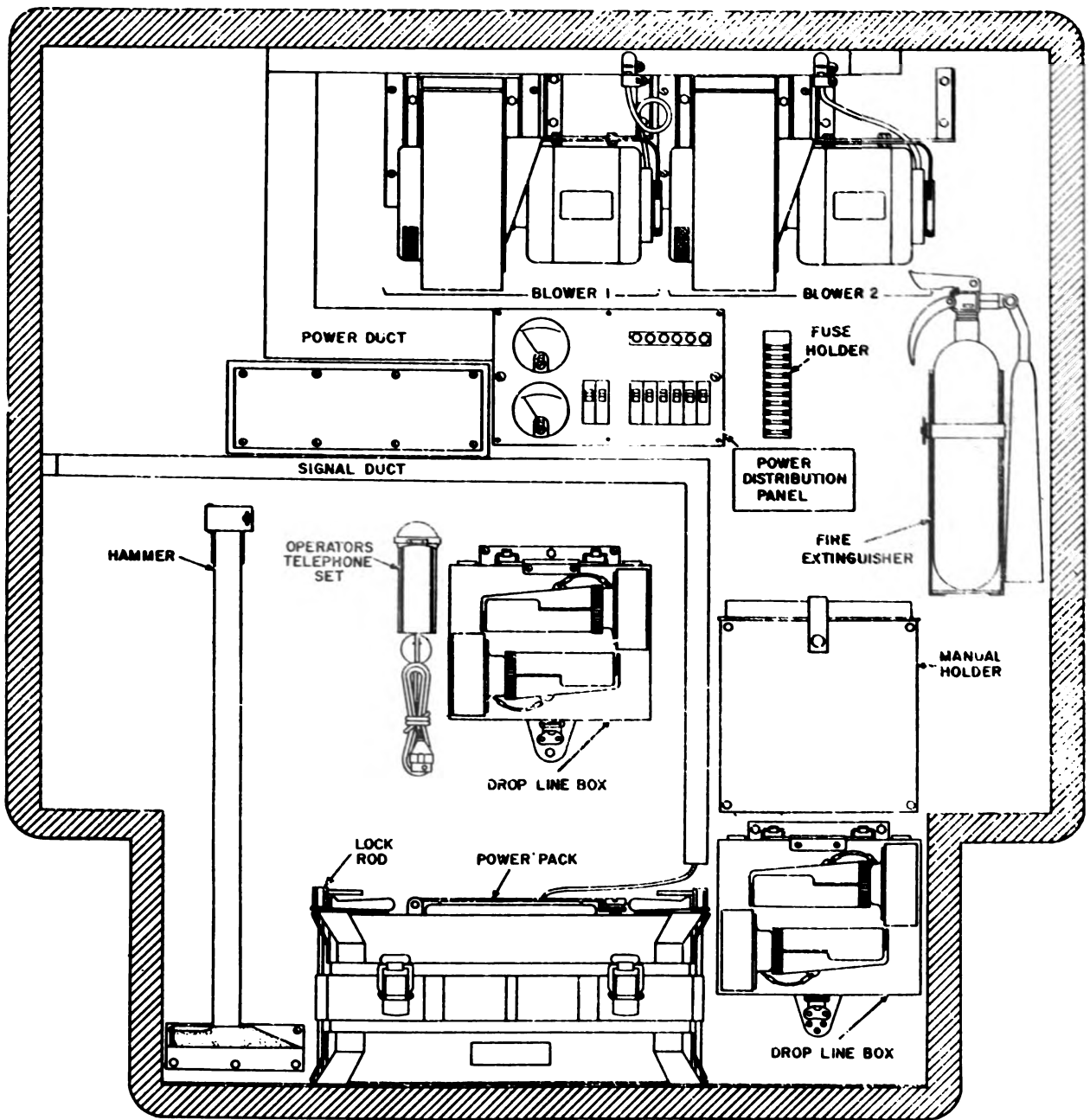
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Figure 5. Shelter, left wall.



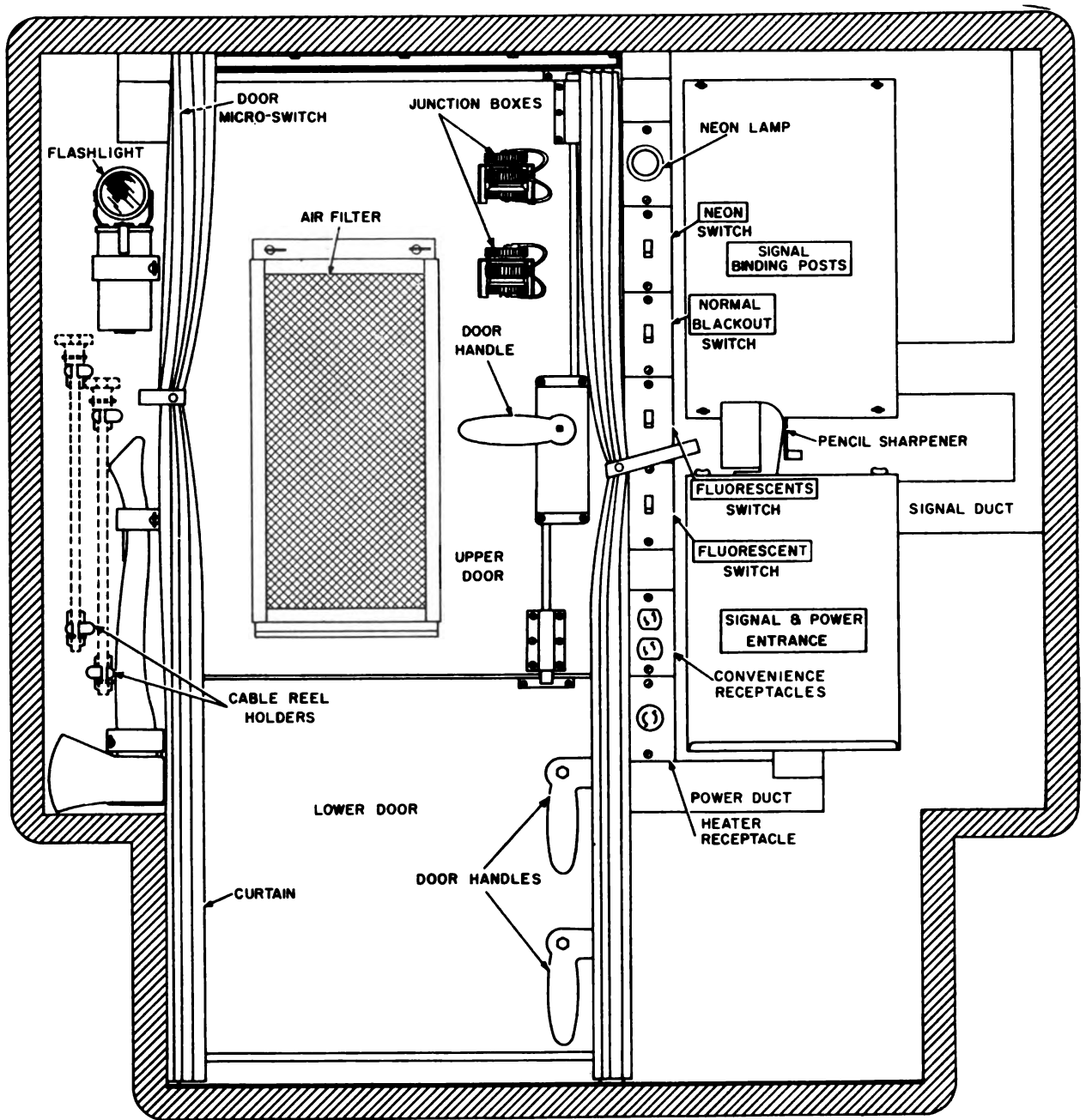
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Figure 6. Shelter, right wall.



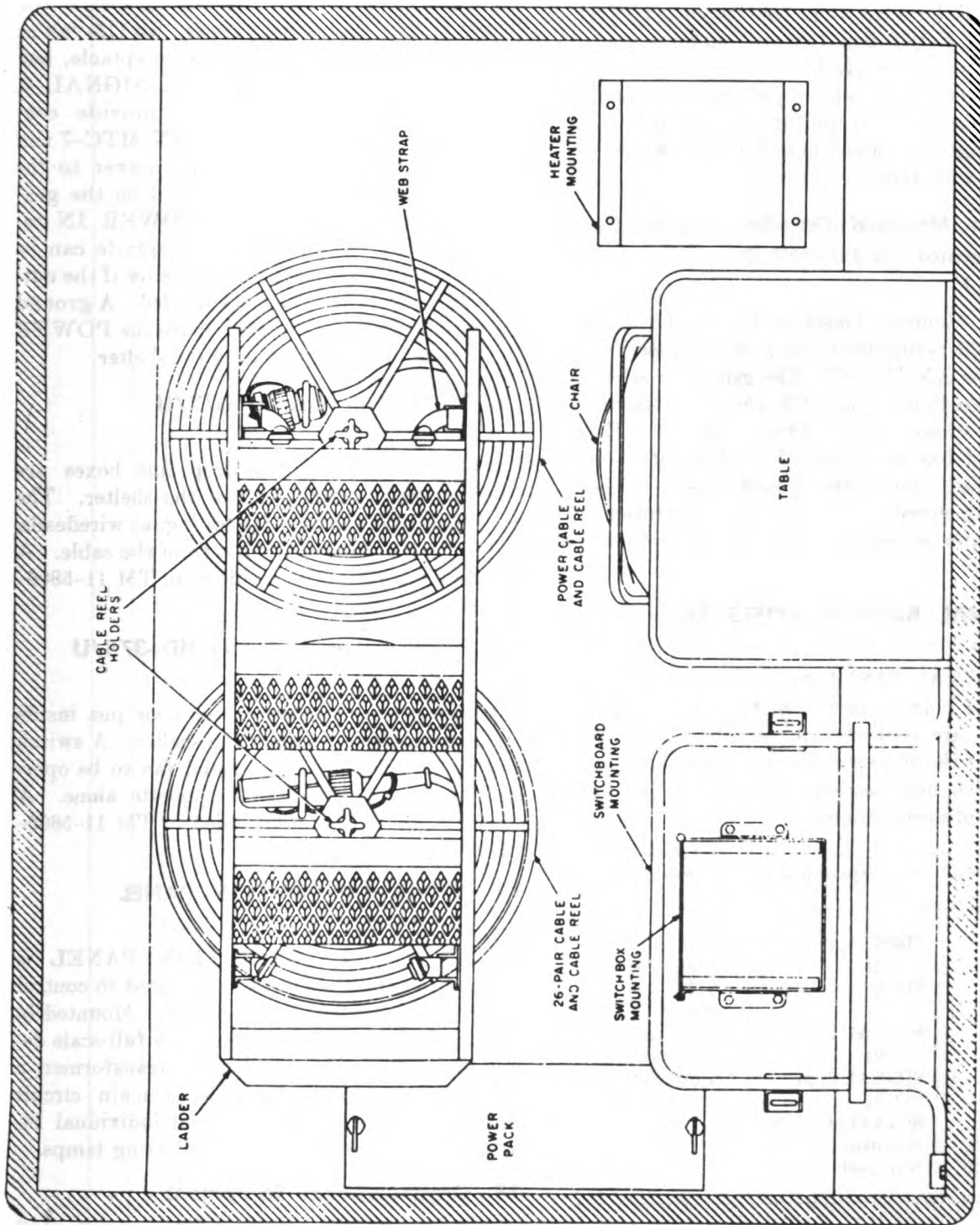
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Figure 7. Shelter, front wall.



TM5805-211-15-14

Figure 8. Shelter, rear wall.



TM5903-24-15-20

Figure 9. Shelter, floor plan.

through the POWER DISTRIBUTION PANEL (fig. 12) to the individual circuits. The telephone lines are connected to the shelter at the SIGNAL & POWER ENTRANCE box or the SIGNAL BINDING POST box (fig. 10) and are routed through the SIGNAL DUCT to the jack and binding post panel and the jack field sections of the switchboard. All the interior shelter wiring and cabling is contained in metal ducts which are equipped with removable covers.

9. Trailer Mounted Gasoline Engine Generator Set PU-322/G

(fig. 1)

Trailer Mounted Gasoline Engine Generator Set PU-322/G supplies the ac power necessary to operate the AN/MTC-7. The generator set consists of two Power Units PE-75-AF mounted in ¾ ton, 2-wheel, Cargo Trailer M-101. Each power unit has an output of 2½-kilowatt (kw), single phase, 60-cycle per second (cps), 120-volt alternating current. A complete description of the generator set is included in TM 11-5805-204-15.

10. SIGNAL BINDING POSTS BOX

(fig. 10)

The SIGNAL BINDING POSTS box contains 63 pairs of binding posts which, except for pairs A and B, are connected in parallel to specified contacts of the 26-pair cable receptacles and jacks on the jack field section. The following chart lists the interconnections:

Binding post pair No.	26-pair cable receptacles	Switchboard Jack No.
1 to 24	SIGNAL 1, pr 1-24	TA-207 NO. 1, 1-24
25 to 30	SIGNAL 3, pr 1-6	TA-207 NO. 1, 25-30
31 to 54	SIGNAL 2, pr 1-24	TA-207 NO. 2, 1-24 (31 to 54)
55 to 60	SIGNAL 3, pr 7-12	TA-207 NO. 2, 25-30 (55 to 60)
SIG 3	SIGNAL 3, pr 26	
A (note 2)	Not used	
B (note 2)	Not used	

Notes.

1. Pairs 25 and 26 of SIGNAL 1 and SIGNAL 2 receptacles and pairs 13 through 25 of SIGNAL 3 receptacle are spares and are not connected within the AN/MTC-7.
2. Binding posts A and B are wired to binding posts in the jack and binding post panel.

11. SIGNAL & POWER ENTRANCE BOX

(fig. 11)

The SIGNAL & POWER ENTRANCE box contains three 26-pair receptacles, two 115-volt ac power receptacles, a convenience receptacle, and a ground lug. The SIGNAL 1, SIGNAL 2, SIGNAL 3 26-pair receptacles, provide connections for circuits between the AN/MTC-7 and the SB-611/MRC. The incoming power to the shelter from the switch box located on the generator set is connected to the POWER IN receptacle. The POWER OUT receptacle can be used to supply power to a second shelter if the output of the generator set is not exceeded. A ground lug with a wingnut is located above the POWER OUT receptacle for grounding the shelter.

12. Distribution Box J-1077/U

(fig. 7)

When not in use, two drop line boxes are mounted on the front wall of the shelter. The drop line boxes are used for testing, as wiredeads, and to drop extension circuits from the cable. A complete description is included in TM 11-5805-204-15.

13. Electrical Space Heater HD-375/U

(fig. 5)

The heater is mounted on the floor just inside the door on the left side of the shelter. A switch permits the heating element and fan to be operated together or the fan to operate alone. A complete description is included in TM 11-5805-204-15.

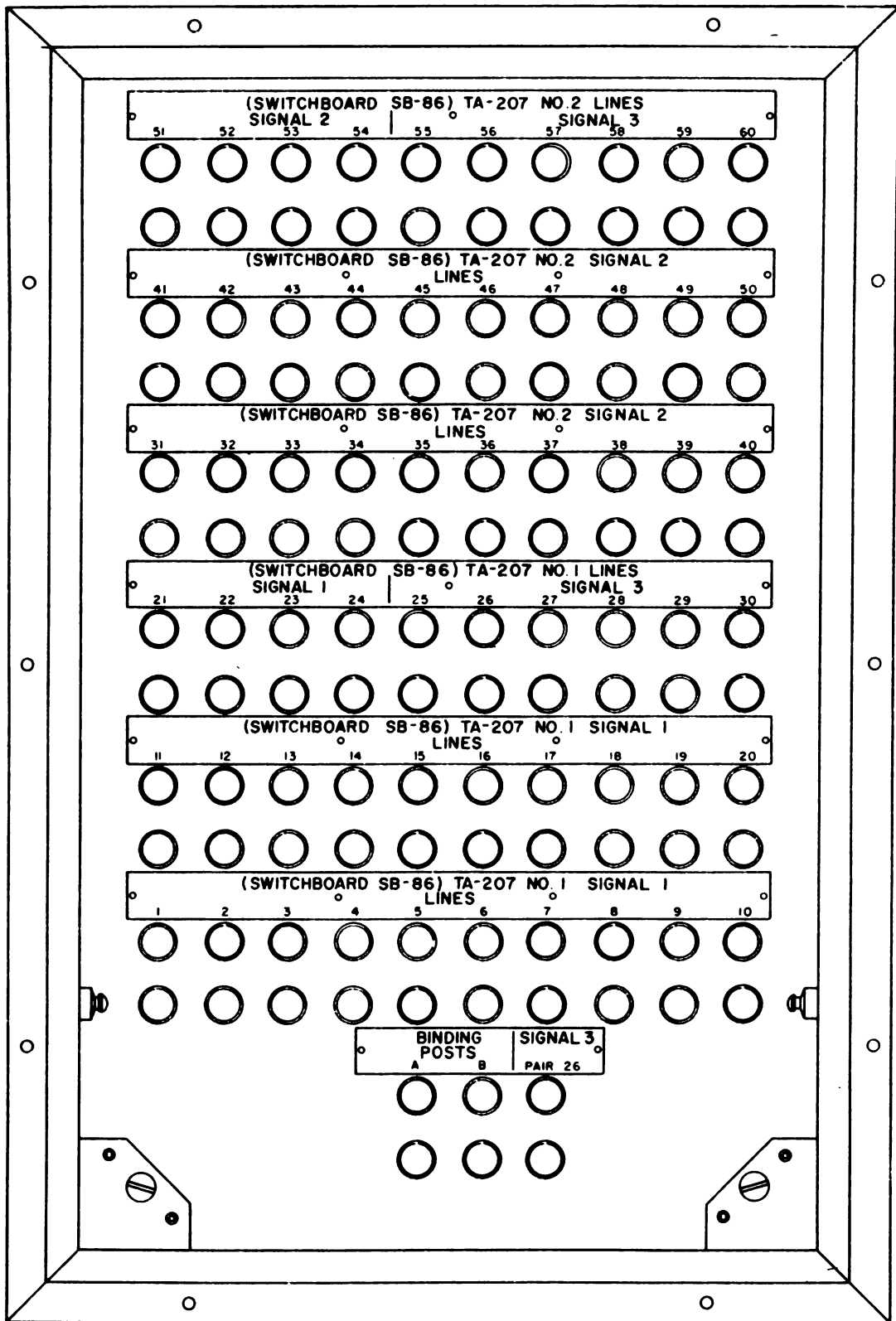
14. POWER DISTRIBUTION PANEL

(fig. 12)

A POWER DISTRIBUTION PANEL is mounted on the front wall. It is used to control the ac power circuits of the shelter. Mounted in the panel is an ac ammeter having a full-scale deflection of 50 amperes, a current transformer, a voltmeter with a 0-150 scale, a main circuit breaker rated at 50 amperes, and individual 15-ampere circuit breakers with indicating lamps.

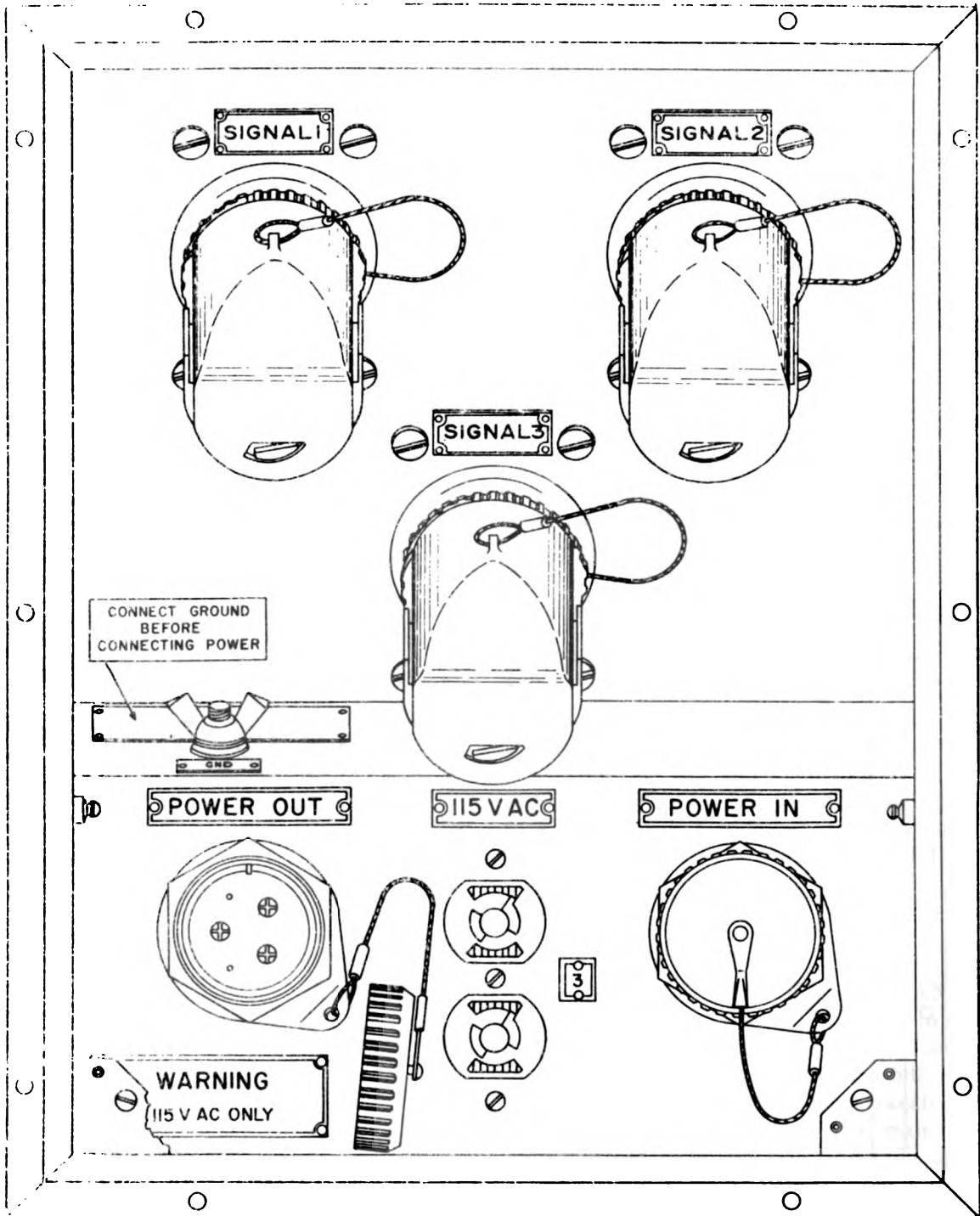
15. Organizational Equipment

a. *Manual Telephone Switchboard SB-86/P and Switchboard Signal Assembly TA-207/P (TM 11-2134).* The SB-86/P is a local battery,



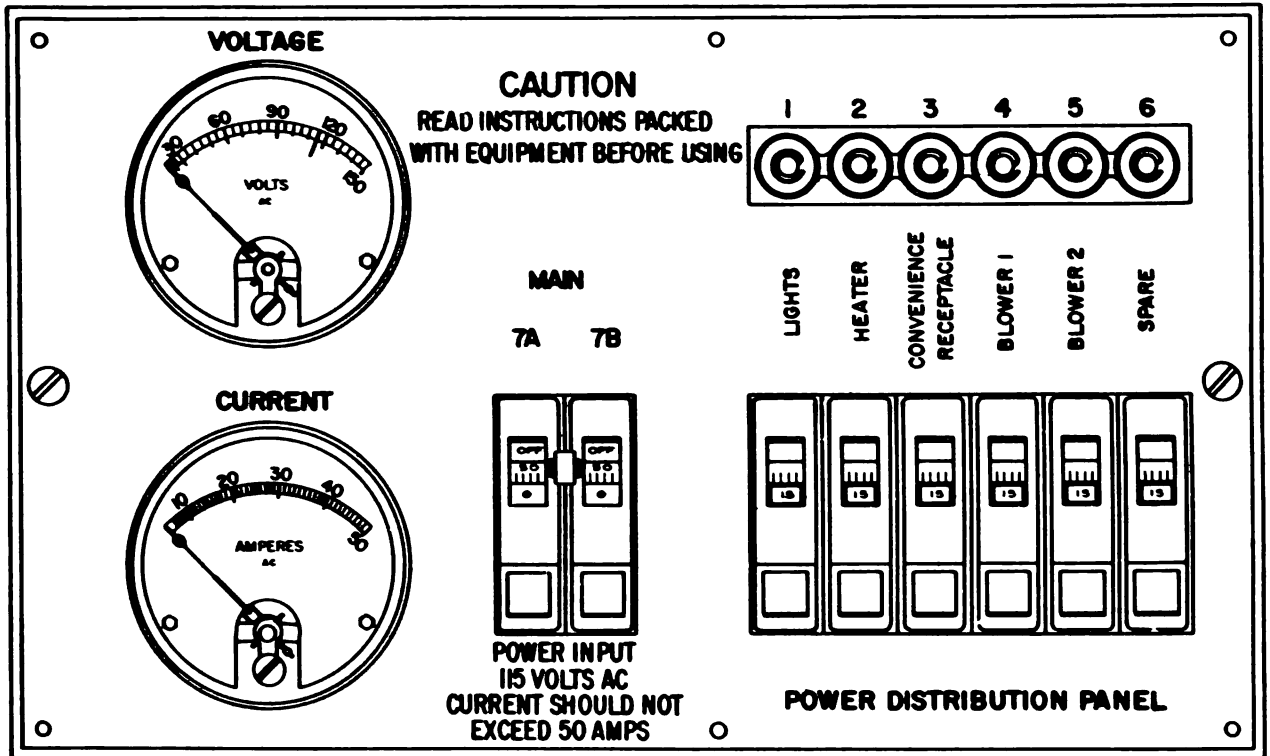
TM5805-211-15-19

Figure 10. SIGNAL BINDING POSTS BOX.



TM5805-211-15-16

Figure 11. SIGNAL & POWER ENTRANCE BOX.



TM5805-211-15-17

Figure 12. POWER DISTRIBUTION PANEL.

field-type unit that switches telephone or voice frequency teletypewriter lines. With an additional jack field section, the switchboard can serve up to 60 lines and trunks. The switchboard is mounted on the left wall (fig. 5) and its power pack on the floor near the front wall (fig. 7).

b. *Telephone Set TA-312/PT* (TM 11-2155). The telephone set (less carrying case) is mounted on the left wall (fig. 5) next to the table. It is

arranged for local battery manual telephone operation and used for communication between shelters.

c. *Tool Equipments* (fig. 5). Tool Equipment TE-33 is stored in the ACCESSORIES AND SPARES cabinet. Tool Equipment TE-49 is stored under the table located next to the left wall. The tool equipments are used for the installation and maintenance of the AN/MTC-7.

CHAPTER 2

INSTALLATION AND OPERATION

Section I. INSTALLATION OF ORGANIZATIONAL EQUIPMENT

16. Procedures

Usually, the shelter is received without organizational equipment (par. 5b) installed. To install the organizational equipment, follow the procedures in the sequence given below:

Note. If the organizational equipment is installed when the shelter is received, unpack and check the equipment (par. 17); perform the preoperational procedures (pars. 23-28); make the necessary signal connections (pars. 29-32) and operate the equipment (pars. 33-37).

- a. Unpack and check the equipment (par. 17).
- b. Prepare to install the switchboard (par. 18).
- c. Interconnect the switchboard (par. 19).
- d. Test the interconnections to the switchboard (par. 20).
- e. Install the switchboard (par. 21).
- f. Install and interconnect the miscellaneous organizational equipments (par. 22).

17. Unpacking and Checking

Note. When packed for shipment, Manual Telephone Central Office AN/MTC-7 is placed in a crate. The crate is constructed so that the door can be opened and the organizational equipment installed. Shelter uncrating instructions are included in TM 11-5806-204-15.

a. Removing Contents. When preparing the shelter for checking the equipment, follow the procedures listed below:

- (1) Unlock and open the shelter door.
- (2) Unfasten the four web straps which secure the ladder to the cable reels (fig. 9).
- (3) Remove the ladder from the shelter and place it on the ground or against the tailgate of the truck.
- (4) Unscrew the cable reel holders which secure the cable reels to the floor and place them in their mountings.
- (5) Remove the cable reels from the shelter.

b. Checking Contents. Check the contents of the shelter against the list of components which is contained in the manual holder (fig. 7). When the component list is not available, the table of components (par. 5) may be used as a general check to indicate the equipment which *probably* was packed.

c. Unpacking and Checking Organizational Equipment. To unpack and check organizational equipments, refer to the appropriate technical manuals (app. I).

18. Preparation for Installing and Interconnecting Manual Telephone Switchboard SB-86/P

(fig. 13)

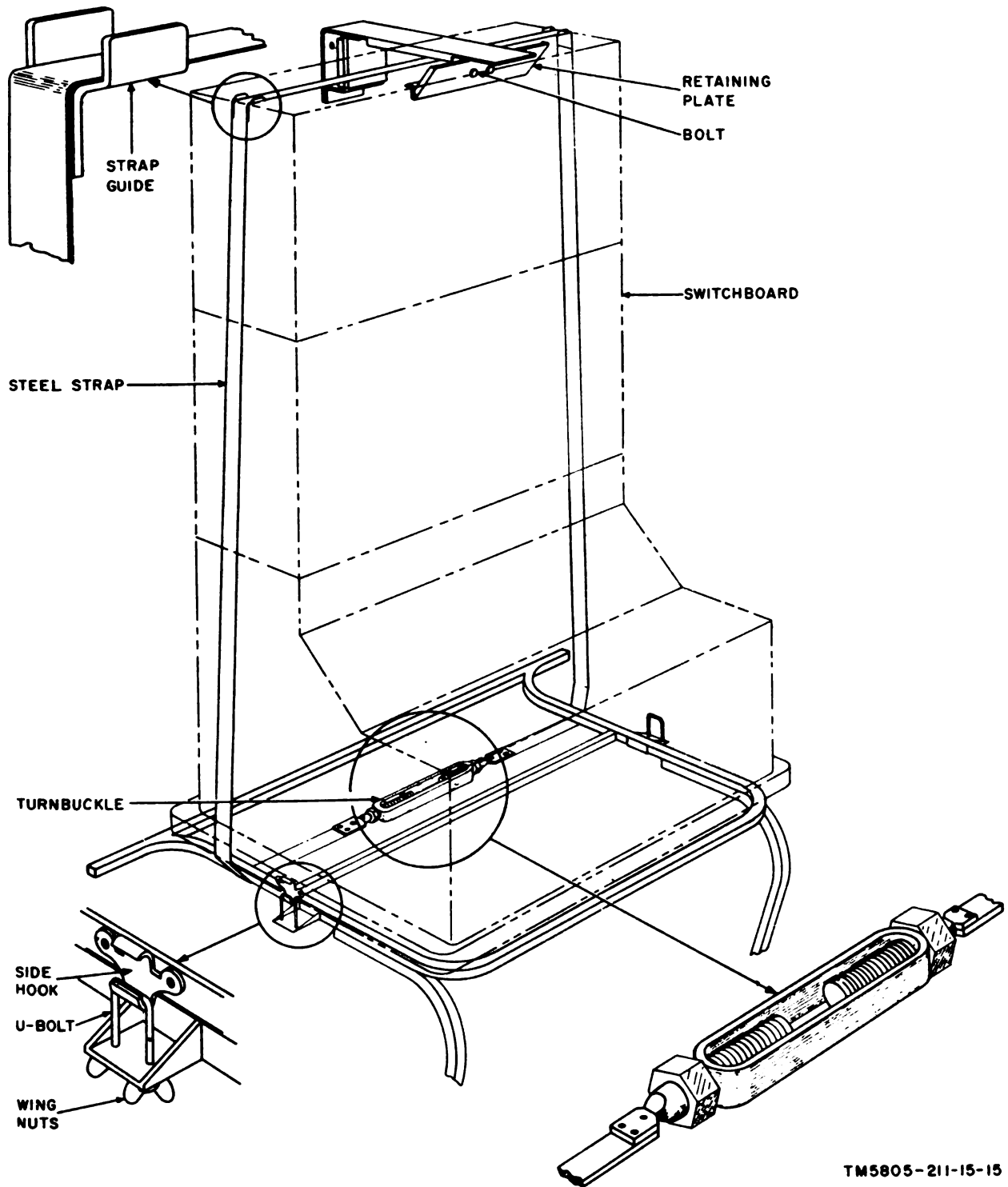
The switchboard mounting secures the switchboard flush against the left wall. Battery boxes are provided in place of the battery compartments at the rear of the switchboard; this permits changing batteries without moving the switchboard. Interconnecting cables are provided for each section of the switchboard. These cables are long enough to allow the individual switchboard sections to be moved to a nearby table for repairs or troubleshooting.

a. Switchboard Mounting Preparation.

- (1) Loosen the U-bolts on the sides of the mounting.
- (2) Unscrew the turnbuckle of the steel strap.
- (3) Remove the retaining plate bolts, the retaining plate, and the steel strap from the ceiling.

b. Switchboard Interconnection Preparation.

- (1) Place the SB-86/P (Keyshelf section and one jack field section) on the mounting with the front facing toward the rear wall.



TM5805-211-15-15

Figure 13. Installation of SB-86/P.

- (2) Remove the log plate.
- (3) Mount and secure the additional jack field section on top of the other jack field section of the switchboard.
- (4) Open all covers at the rear of the switchboard.
- (5) Remove the operator's telephone set from the bag on the keyshelf section cover and

place it on its mounting on the front wall.

- (6) Remove the canvas rolls containing the running spares from the battery compartment in each jack field section. Place the canvas rolls in the ACCESSORIES & SPARES cabinet.

c. Powerpack Interconnection Preparation.

- (1) Install Batteries BA-200/U (TM 11-2134).
- (2) Place the powerpack on the floor in the designated area near the front wall.
- (3) Unscrew the knurled nut on the powerpack and open the cover.

19. Switchboard Connection

(fig. 17)

a. Keyshelf Section. Feed the cable designated SB-86/P SB-248/P through the power cord entry of the keyshelf section and connect it as follows:

- (1) Connect the violet and white wires of the cable designated OPRS EXT BAT to the + and - OPRS EXT BAT binding posts, respectively.
- (2) Connect the two white wires designated -24V and the two black wires designated +24V to the -24V and +24V binding posts, respectively.
- (3) Connect the wire designated ST VIB to the ST VIB binding post.
- (4) Connect the black and white wires designated EXT GEN to the EXT GEN binding posts.
- (5) Connect the two black wires designated GND to the two EARTH GND binding posts.

b. Jack Field Section No. 1 (TA-207 No. 1). Feed the cable designated SB-86P TA-207 No. 1 through the field wire entry and the fanning rings of the bottom jack field section.

- (1) Connect the violet and white wires designated TA-207/P PANEL LAMPS AND NIGHT ALM to the -3V and +3V binding posts, respectively.
- (2) Connect the two white wires designated -24V and the two black wires designated

+24V to the -24V and +24V binding posts respectively.

- (3) Connect the two black wires designated GND to the EARTH GND binding post.
- (4) Connect the pairs of the cable to the jack field binding posts as indicated in the chart below. Connect the tip lead to the upper binding post and the ring lead to the lower binding post of each pair.

Binding post pair No.	SB-86/P TA-207/P No. 1 cable	
	Tip, lead	Ring, lead
1.....	White	Yellow
2.....	White	Orange
3.....	White	Black
4.....	White	Pink
5.....	White	Light Brown
6.....	White	Dark brown
7.....	White	Silver
8.....	White	Dark green
9.....	White	Light green
10.....	White	Violet
11.....	White	Slate
12.....	White	Light blue
13.....	White	Dark blue
14.....	Black	Silver
15.....	Black	Slate
16.....	Black	Light brown
17.....	Black	Dark brown
18.....	Black	Yellow
19.....	Black	Light blue
20.....	Black	Dark blue
21.....	Black	Light green
22.....	Black	Dark green
23.....	Black	Orange
24.....	Black	Violet
25.....	White	Yellow
26.....	White	Orange
27.....	White	Black
28.....	White	Pink
29.....	White	Light brown
30.....	White	Dark brown

c. Jack Field Section No. 2 (TA-207/P No. 2). Feed the cable designated SB-86P TA-207/P No. 2 through the field wire entry and the fanning rings of the top jack field section. Follow the procedures listed in b(1) through (3) above to connect the power leads. Connect all other leads as indicated in the chart below.

Binding post pair No.	SB-86/P TA-207/P No. 3 cable	
	Tip lead	Ring lead
1	White	Yellow
2	White	Orange
3	White	Black
4	White	Pink
5	White	Light brown
6	White	Dark brown
7	White	Silver
8	White	Dark green
9	White	Light green
10	White	Violet
11	White	Slate
12	White	Light blue
13	White	Dark blue
14	Black	Silver
15	Black	Slate
16	Black	Light brown
17	Black	Dark brown
18	Black	Yellow
19	Black	Light blue
20	Black	Dark blue
21	Black	Light green
22	Black	Dark green
23	Black	Orange
24	Black	Violet
25	White	Silver
26	White	Dark green
27	White	Light green
28	White	Violet
29	White	Slate
30	White	Light blue

d. Powerpack. Connect the cable designated SB-86/P PP-990/G to the powerpack as follows:

- (1) Connect the white wire designated -24V and the black wire designated +24V to the 24V - and + binding posts, respectively.
- (2) Connect the black and white wires designated RING SUP to the two RING SUP binding posts.
- (3) Connect the red wire designated ST VIB to the ST VIB binding post.

20. Equipment Installation Test

a. Install two Batteries BA-30 in each of the three battery boxes (fig. 5) as indicated below:

- (1) Open the cover of the battery box.
- (2) Insert one BA-30 into the battery box so that the center (top) terminal is against the negative (-) terminal; insert the other BA-30 so that the center (top) terminal is against the spring.
- (3) Close and fasten the cover.

b. Lift the designation strips on the jack field sections and check to see that each line selector switch is set to the M position.

c. On the telephone set, check the following:

- (1) Batteries BA-30 are properly installed.
- (2) EXT-INT switch is operated to the INT position.
- (3) Circuit selector switch is set to the LB position.

d. Remove a drop line box from the shelter.

e. Connect one end of a 26-pair cable (par. 30), to SIGNAL 1, 2, or 3 receptacle (fig. 11) in the SIGNAL & POWER ENTRANCE box and the other end to the drop line box.

f. Remove the telephone set from the shelter.

g. Connect a field wire pair between the telephone set binding posts and the No. 1 binding post pair on the drop line box.

h. Turn the hand ringing generator of the telephone set.

i. The line signal above the corresponding jack on the jack field section will indicate white. If the night alarm switch is in the visual position, the panel lamps will light; if it is in the audio position, the buzzer will sound.

j. Answer the incoming call (TM 11-2134).

k. Check to be sure that transmission is satisfactory in both directions.

l. Initiate a call from the switchboard and talk.

m. Repeat the procedures given in *g* through *k* above for other pairs of binding post pairs in the drop line box and SIGNAL 1, 2, and 3 receptacles as indicated in the chart below.

Signal receptacle	Drop line box binding post pair number	Jack field section designation
SIGNAL 1	1 through 24	TA-207/P NO. 1, 1 through 24.
SIGNAL 2	1 through 24	TA-207/P NO. 2, 1 through 24.
SIGNAL 3	1 through 6	TA-207/P NO. 1, 25 through 30.
SIGNAL 3	7 through 12	TA-207/P NO. 2, 25 through 30.

21. Installation of Manual Telephone Switchboard SB-86/P

(fig. 13)

a. Replace the rear covers of the switchboard and fasten all the camlock fasteners.

b. Turn the switchboard on the mounting until it is properly positioned between the two U-bolts

with the back of the switchboard flush against the wall.

c. Hook the U-bolts into the side hooks on the lower edge of the keyshelf section and tighten the wing nuts.

d. Place the steel strap over the top of the switchboard, down the sides of the switchboard, and around the mounting. Check to be sure that the two strap guides are to the top edges of the switchboard. Join the turnbuckle underneath the mounting. Tighten the turnbuckle until the switchboard is held rigidly to the mounting.

Caution: Do not overtighten the turnbuckle.

e. Replace the retaining plate on the ceiling against the top edge of the switchboard and secure it into position.

f. Place the powerpack with the two holes in the outer case of the powerpack directly above the two anchor nuts inserted in the floor.

g. Fasten the powerpack to the floor with the lock rods (fig. 7) previously used to fasten the powerpack into the outer cover assembly of the switchboard.

h. Close and secure the cover on the powerpack.

22. Installation of Telephone Set TA-312/PT and Storage of Tool Equipments (fig. 5)

a. Telephone Set TA-312/PT.

- (1) Open the telephone clamp on the wall mounting.
- (2) Remove the telephone set from its canvas carrying case.

- (3) Place the telephone set in the holder and remove the handset from the handset bracket.

- (4) Replace and fasten the telephone clamp over the telephone set.

- (5) Replace the handset in the handset bracket and fasten the handset strap over the handset.

- (6) Remove the telephone cord from the storage cabinet.

- (7) Connect the leads of the telephone cord to the telephone set binding posts.

- (8) Insert the plug of the telephone cord in the jack SIG 3 PAIR 26 on the jack and binding post panel.

- (9) Test the circuit as follows:

- (a) Connect a pair of wires between the SIGNAL 3 PAIR 26 binding posts and LINES 1 binding post in the SIGNAL BINDING POSTS box.

- (b) From the telephone set, signal the switchboard operator. When the switchboard operator answers, check to be sure that transmission is satisfactory in both directions.

- (c) Remove the wire pair that was connected for testing ((a) above).

b. *Tool Equipment TE-49.* Place Tool Equipment TE-49 in its mounting and fasten it down with the webbing straps.

c. *Tool Equipment TE-33.* Place Tool Equipment TE-33 in the ACCESSORIES & SPARES cabinet.

Section II. PREOPERATIONAL PROCEDURES

23. Siting

a. The location of the AN/MTC-7 will depend upon its use in the division-area-type communications system. The considerations affecting the siting of the AN/MTC-7 and the factors governing the distance of the AN/MTC-7 to other shelters are covered in TM 11-5805-204-15. The factors governing the distance of the AN/MTC-7 to other shelters are also covered in the SB-611/MRC manual.

b. When the shelter is placed on the ground, it should be located on firm, dry ground with good drainage. The site should be prepared and leveled and, if possible, the shelter should be placed on concrete blocks or wooden beams.

c. Locate the generator set approximately 75 feet from the shelter.

24. Installation of Shelter

Note. To install the shelter on the ground or on a truck, a crane, winch, or helicopter capable of lifting 2,000 pounds is required.

a. *Loading* (fig. 14). If the shelter is to be located on a truck, proceed as follows:

- (1) Hook the four sling assemblies to the lifting shackles.

- (2) Lay the sling assemblies on top of the shelter.

- (3) Remove the pins from the four sling shackles. Hook each sling shackle in the lifting ring and replace the pins.

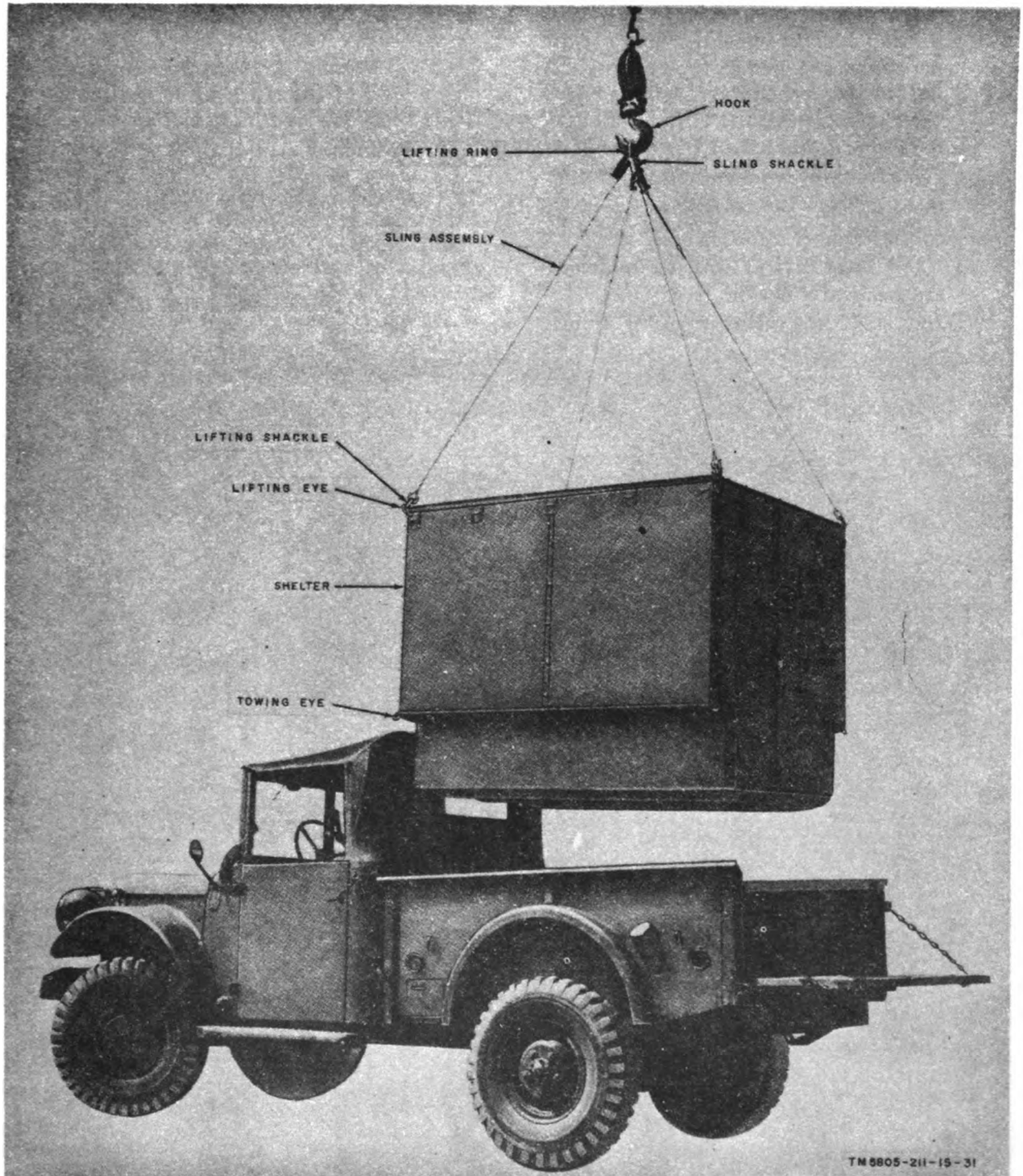


Figure 14. Loading shelter.

- (4) Slip the ring over the hook of the lifting unit.

Warning: To avoid injury to personnel and damage to equipment, only the personnel engaged in the actual loading operation should be permitted near the truck, crane, and shelter. To eliminate confusion, all instructions must come from the loading crew supervisor.

- (5) Tie a ½-inch rope (at least 15 feet long) to each of the rear towing eyes.
- (6) Check to see that all tools and equipment are removed from the truck body.
- (7) Slowly lift the shelter from the ground

to a position high enough to clear the truck body.

- (8) Back the truck into position under the shelter.

Warning: All personnel must remain clear of the truck while the shelter is being lowered into position.

- (9) Position a man at each of the ½-inch ropes to hold the shelter in position. Slowly lower the shelter into the truck body.

Note. The door of the shelter must be at the rear of the truck, and the front of the shelter must be placed solidly against the front of the truck body.

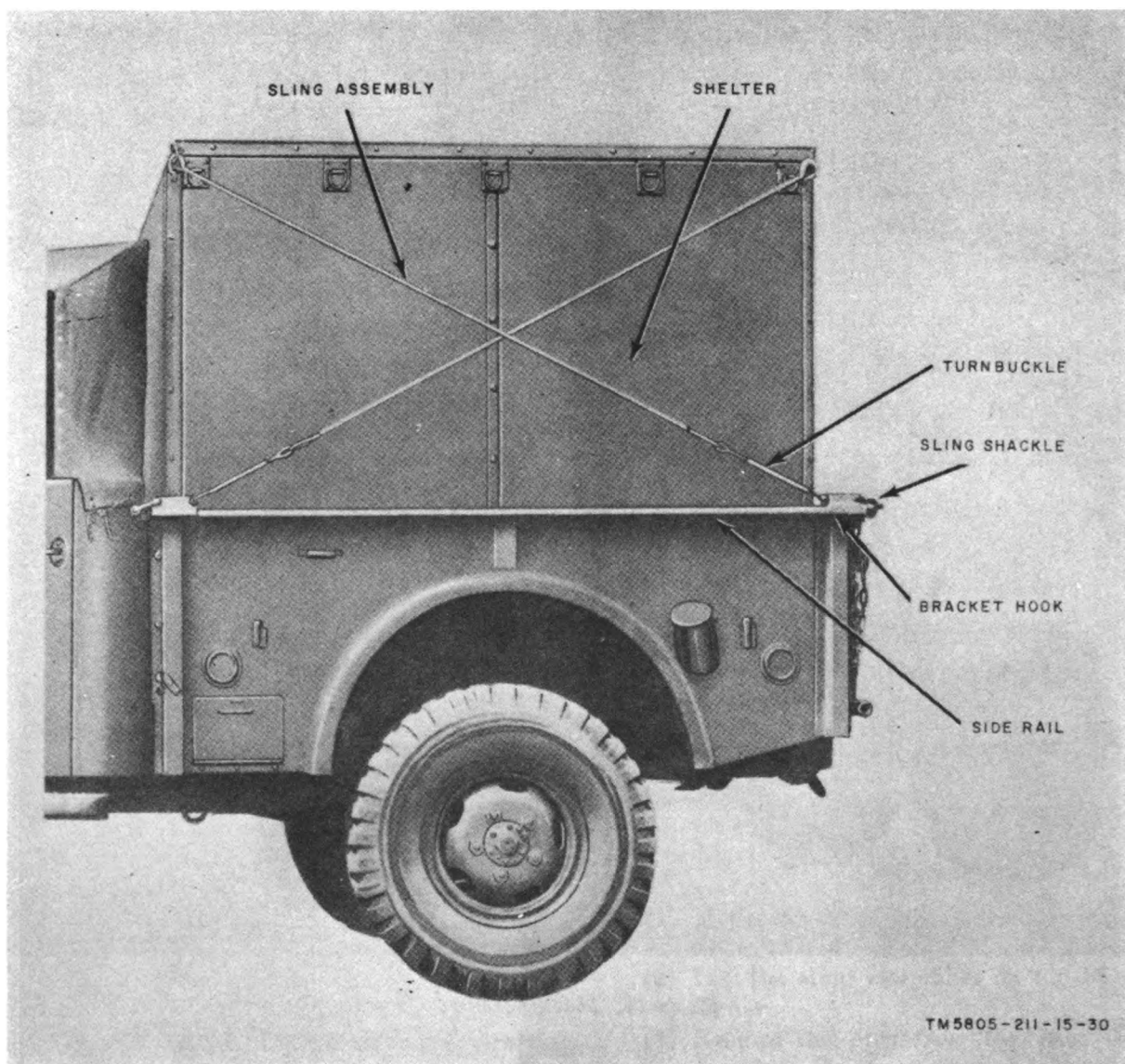


Figure 15. Shelter mounted on truck.

c. Heater Switches (TM 11-5805-204-15).

Control or instrument	Function and description
OFF-HEAT-FAN ONLY switch.....	Three-position switch. <i>See Para</i> <i>Function</i> OFF..... Cuts off ac power from heater. HEAT..... Applies ac power to heater element and fan motor. FAN ONLY..... Applies ac power to fan motor only.
OFF-HI-MED-LO switch.....	Four-position switch. Controls amount of heat from heater.
RESET circuit breaker.....	Rating: 15 amperes. Overload protection to heater.

d. Switch Box Switch (TM 11-5805-204-15).

Control or instrument	Function and description
POWER SUPPLY switch.....	Two-position switch. Used to transfer the connections to Switch Box SA-331/U to one of two alternate sources of ac power.

26. Grounding

Manual Telephone Central Office AN/MTC-7 must be properly grounded before connecting the power. Select a site for the ground rod that will not interfere with the entrance to the shelter, field wires, or power and signal cables. Ground both the shelter and the generator set as follows:

a. Shelter.

- (1) Loosen the fasteners and lift the cover of the SIGNAL & POWER ENTRANCE box (fig. 4).
- (2) Fold the side flaps out from under the cover.
- (3) Insert the side flaps onto the retaining studs at each side of the SIGNAL & POWER ENTRANCE box.
- (4) Remove the switch box (fig. 5), the ground rod (fig. 6), and the sledge hammer (fig. 7) from their mountings.
- (5) Install the ground rod as follows:
 - (a) Select the lowest, dampest site within 10 feet of the shelter, preferably in clay or loamy soil.
 - (b) Scoop out a small hole about 6 inches deep in the selected location.
 - (c) Remove any paint or grease from the ground rod.
 - (d) Drive the ground rod into the hole until the top is approximately 3 inches above the bottom of the hole.
 - (e) Saturate the ground around the rod with water to keep it moist.
- (6) Remove the ground lead from its ACCESSORIES & SPARES cabinet.

- (7) Connect one end of the ground lead to the ground rod and the other end to the GRD lug (fig. 11) in the SIGNAL & POWER ENTRANCE box to ground the shelter.
- (8) Place the switch box in the trailer of the generator set (fig. 1).

b. Generator Set.

- (1) Remove the ground rod from its mounting.
- (2) Install the ground rod (a(5) above).
- (3) Remove the ground lead from the ACCESSORIES box.
- (4) Connect one end of the ground lead to the ground rod and the other end to the GRD lug on the switch box.

27. Power Connections

Before making any power connections, see that all circuit breakers and switches are in their OFF positions (figs. 8 and 12).

Warning: The AN/MTC-7 must be grounded (par. 26) before power is connected.

a. When the PU-322/G is used to supply power, proceed as follows:

- (1) Remove the power cable and power stubs from their reel (fig. 9).
- (2) Connect the red and white leads of one power stub to the neutral terminal and the black lead to the positive terminal of the filter box of one generator set.
- (3) Remove the cover from the connector of the power stub ((2) above) and connect the power stub to the INPUT No. 1 re-

ceptacle on the switch box (TM 11-5805-204-15).

- (4) Connect the other power stub to the other generator set and to the INPUT No. 2 receptacle on the switch box ((2) and (3) above).
- (5) Remove the covers from both connectors of the power cable and connect the female connector to the POWER IN receptacle in the SIGNAL & POWER ENTRANCE box (fig. 11) and the other connector to the OUTPUT receptacle on the switch box.

b. When a commercial power source is used, proceed as follows:

- (1) Operate the switch to cut off the main lines from the source terminals.
- (2) Remove the power cable and one power stub from their reel (fig. 9).
- (3) If the power supply is 50-60 cps, 120 volts, single phase, or 120/240 volts, three-wire, two phase, connect the red and white leads of the power stub to the neutral wire and the black lead to the other wire.
- (4) If the power supply is a 50-60 cps, 120/208-volt, four-wire, three-phase distribution system, connect the red and white leads to the neutral wire and the black lead either to phase 1 wire, phase 2 wire, or phase 3 wire.
- (5) Remove the covers from the connector of the power stub and the junction box (fig. 8) and connect the power stub to the male side of the junction box.
- (6) Remove the cover from the male connector of the power cable and connect it to the junction box.
- (7) Remove the covers from the female con-

connector of the power cable and the POWER IN receptacle in the SIGNAL & POWER ENTRANCE box and interconnect the connector and receptacle.

28. Energizing Ac Circuits

a. When the generator set is used to supply the power, start Power Unit PE-75-AF (TM 11-900A).

b. When a commercial power source is used, operate the switch to restore power to the source terminals.

c. Operate the MAIN circuit breaker to the ON position (fig. 12).

d. Check the voltmeter. It should indicate 115 volts ac.

e. Check the ammeter. It should indicate zero.

f. Operate the LIGHTS circuit breaker.

g. Operate the NEON, FLUORESCENTS, and FLUORESCENT switches to ON (fig. 8).

h. Operate the NORMAL-BLACKOUT switch to the NORMAL position. When blackout conditions are required, operate the switch to BLACKOUT.

Caution: Open the blower vents and the air filter cover on the outside of the shelter before operating the blowers.

i. Operate BLOWER 1 and 2 circuit breakers to the ON position. Check to see that the blowers are operating. Operate BLOWER 1 or 2 circuit breaker to the OFF position. One of the blowers is used as a spare.

j. Operate the HEATER circuit breaker to the ON position as required.

k. Operate the heater OFF-HEAT-FAN ONLY switch to the position required.

l. Check the ammeter. It should indicate less than 16 amperes.

Section III. SIGNAL CONNECTIONS

29. Circuit Planning

(fig. 17)

A total of 60 circuits may be connected to the switchboard in the AN/MTC-7. A minimum of 13 circuits may be established between the AN/MTC-7 and SB-611/MRC. One circuit will be established for intershelter communication, and 12 circuits will be available for local or trunk connections. The remaining circuits at the AN/MTC-7 are available for local connection. Local,

trunk, or special circuits may be connected to the AN/MTC-7 through the SIGNAL BINDING POSTS box on the SIGNAL & POWER ENTRANCE box. Each binding post in the SIGNAL BINDING POSTS box is connected in parallel with a corresponding contact of a 26-pair cable receptacle in the SIGNAL & POWER ENTRANCE box; therefore, when a 26-pair receptacle is used for connection of a cable to the SB-611/MRC, the corresponding binding posts are

not available for local circuits unless a dummy plug is inserted in the patch panel of Communication Patching Panel SB-611/MRC.

a. Local Circuits. Local circuits may be connected to the binding posts in the SIGNAL BINDING POSTS box or to a drop line box.

- (1) *SIGNAL BINDING POSTS box.* Local circuits may be connected through the SIGNAL BINDING POSTS box by connecting field wire to a pair of binding posts (par. 31).
- (2) *Drop line box.* Local circuits may be connected through a drop line box by connecting a 26-pair cable between one of the 26-pair receptacles on the drop line box and one of the 26-pair receptacles in the SIGNAL & POWER ENTRANCE box (par. 30). Field wire is then connected to a pair of binding posts on the drop line box (par. 31).

b. Trunk Circuits. Trunk circuits can be established either directly, or through a drop line box, to the SB-611/MRC. Depending on the number of trunk circuits required, use the following information as a guide:

- (1) *Twelve circuits.* When from 1 to 12 trunk circuits are required, a 26-pair cable is connected between SIGNAL 3 receptacle of the AN/MRC-7 and a SIG IN receptacle of the SB-611/MRC. These trunk circuits will appear on lines 25 through 30 on the TA-207 No. 1, and on lines 25 through 30 (55-60) on the TA-207 No. 2 of the switchboard.
- (2) *Twenty-four circuits.* When more than 12 but less than 25 trunk circuits are required, a 26-pair cable is connected between either SIGNAL 1 or SIGNAL 2 receptacle of the AN/MTC-7 and a SIG IN receptacle of the SB-611/MRC. These trunk circuits will appear either on the TA-207 No. 1 or TA-207 No. 2 of the switchboard (par. 10).
- (3) *Thirty-six circuits.* When more than 24 but less than 37 trunk circuits are required, 26-pair cables are connected between SIGNAL 3 receptacle ((1) above) and either SIGNAL 1 or SIGNAL 2 receptacle ((2) above) of the AN/MTC-7 and SIG IN receptacles of the SB-611/MRC.

Note. If more than 36 circuits are required, connect 26-pair cables to SIGNAL 1, SIGNAL 2, and SIGNAL 3 receptacles.

c. Special Circuits. An intershelter communication circuit is established on pair No. 26 when a 26-pair cable is connected between SIGNAL 3 receptacle of the AN/MTC-7 and a SIG IN receptacle of the SB-611/MRC. When SIGNAL 3 receptacle is not used, the circuit can be established by connecting field wire between the SIGNAL 3 PAIR 26 binding posts in the SIGNAL BINDING POSTS box of the AN/MTC-7 and a corresponding pair of binding posts in the other shelter. The A and B binding posts in the SIGNAL BINDING POSTS box and on the jack and binding post panel provide an entry into the shelter. These binding posts can be used to interconnect additional telephone sets or other equipment inside and outside the shelter.

30. Cable Connections, 26-Pair

Connections of 26-pair cables to either the SIGNAL & POWER ENTRANCE box or the drop line box are made in the same way. To connect a 26-pair cable, proceed as follows:

a. Remove a 26-pair cable assembly from its reel.

b. Remove the protective cover from the signal receptacle in the SIGNAL & POWER ENTRANCE box or the drop line box and from the 26-pair cable as follows:

- (1) Twist the sleeve of the cover counterclockwise until the orange mark on the sleeve is in line with the OPEN mark on the cover.
- (2) Disengage the slot on the cover from the cam on the connector.
- (3) Lift the cover off the connector.

c. Connect the cable connector of the 26-pair cable to the signal receptacle as follows:

- (1) Place the connector on the receptacle so that the male and female portions of the cable connector mate with those of the receptacle and press them firmly together.
- (2) Twist the sleeve of the receptacle counterclockwise until the orange mark on the sleeve is in line with the CLOSED mark on the receptacle.
- (3) Twist the sleeve of the cable connector clockwise until the orange mark on the sleeve is in line with the CLOSED mark on the cable connector.

31. Field Wire Connections

Make field wire connections to the binding posts in the SIGNAL BINDING POSTS box or the drop line box as shown below:

a. SIGNAL BINDING POSTS Box.

- (1) Loosen the fasteners and lift the cover of the SIGNAL BINDING POSTS box.
- (2) Pull out the flaps and fasten them to the side of the SIGNAL BINDING POSTS box; a slot on the flap engages a stud on the side of the box.
- (3) For switchboard connections to local circuits, connect field wire to the binding posts (pairs 1-60) as required (par. 10). Record the connections made.
- (4) To connect to the telephone set, use the SIGNAL 3 PAIR 26 binding posts.
- (5) When the A or B binding posts in the SIGNAL BINDING POSTS box (fig. 10) are used, connect field wire between the binding posts of the telephone set and the A or B binding posts on the jack and binding post panel.

b. Drop Line Box.

- (1) Connect a 26-pair cable assembly to the drop line box (par. 30).
- (2) Loosen the snap slide fastener of the cover and lift the cover.
- (3) Connect field wire to the binding posts as required (par. 10).

32. Preoperational Tests

a. *Trunk Circuit Test.* For the following test procedure, it is assumed that all of the trunk circuits have been connected through the SB-611/MRC.

- (1) Connect the terminals of a plug-ended cord (telephone cord) to the LINE binding posts of the telephone set.
- (2) Insert the plug of the cord into the LISTEN jack of the first trunk circuit on the patch panel in the SB-611/MRC.
- (3) Signal the switchboard operator in the

AN/MTC-7. When the switchboard operator answers, check to be sure that transmission is satisfactory in both directions.

- (4) Before moving to the next trunk circuit, ask the switchboard operator to signal the telephone set to be sure that the switchboard is operating properly.
- (5) Repeat the procedure given in (2) and (3) above for each circuit connected from the AN/MTC-7 to the SB-611/MRC. Do not repeat the procedure given in (4) above.

b. *Local Circuit Test.* The following procedure should be performed by the personnel installing local telephone lines and telephone sets.

- (1) After the telephone set has been installed and connected to the line, signal the switchboard operator.
- (2) When the switchboard operator answers, check to be sure that transmission is satisfactory in both directions.
- (3) Request the switchboard operator to signal the telephone set.
- (4) After it has been determined that the line and telephone set are operating properly, inform the using personnel that the telephone set is ready for service.

c. Special Circuit Tests.

- (1) *Sole user trunks.* Insert the plug of the cord into the LISTEN jack associated with the sole user trunk on the patch panel in the SB-611/MRC, and signal the telephone at the local end of the trunk. Check to be sure that transmission is satisfactory in both directions. Request the installer at the telephone to signal back to be sure that all equipment is operating properly.
- (2) *A and B binding post circuits.* Complete a call between the AN/MTC-7 and the shelter to which they are connected, using the equipment provided (telephone set). Be sure that both equipments provide proper signaling and transmission.

Section IV. OPERATION

33. Types of Operation

Manual Telephone Central Office AN/MTC-7 is arranged primarily for local battery telephone switchboard operation. Each line circuit in the switchboard can be operated as a magneto line or

as a common battery signaling line. With magneto signaling, ringing current from a hand generator on a field telephone operates the signals on the switchboard. With common battery signaling, lifting the telephone handset from its

handset retaining bracket operates the signals on the switchboard.

34. Operating Procedures

- a. Check to see that all circuit breakers are in the OFF position.
- b. Start one Power Unit PE-75-AF. (TM 11-900A).
- c. Energize the ac circuits (par. 28).
- d. Operate the switchboard (TM 11-2134).

35. Power Transfer

After one of the power units has been in operation for 4 hours or if the power unit begins to make unusual noise, follow the procedures below:

- a. Start the standby power unit (TM 11-900A).
- b. When the standby power unit is running properly, operate the POWER SUPPLY switch on the switch box to the standby power unit (No. 1 to No. 2 or No. 2 to No. 1).
- c. Stop the power unit and perform the service procedures (TM 11-900A).

36. Stopping Procedures

a. *Emergency.* To turn the power off in an emergency, operate the MAIN circuit breaker to the OFF position.

b. *Normal.*

- (1) Operate the switches and circuit breakers listed in the chart below to their OFF positions.

Circuit breaker or switch	Location
BLOWER 1 or BLOWER 2	POWER DISTRIBUTION PANEL (fig. 12).
NEON	AC POWER DUCT (fig. 8).
FLUORESCENTS	AC POWER DUCT (fig. 8).
FLUORESCENT	AC POWER DUCT (fig. 8).
OFF-HEAT-FAN ONLY	Heater (TM 11-5805-204-15).
HEATER	POWER DISTRIBUTION PANEL (fig. 12).
LIGHTS	POWER DISTRIBUTION PANEL (fig. 12).
MAIN	POWER DISTRIBUTION PANEL (fig. 12).

- (2) Stop the generator set (TM 11-900A).

37. Operation Under Unusual Conditions

The AN/MTC-7 has been designed to meet conditions of extreme cold and hot climates. The shelter offers complete protection from the elements to personnel and equipment; however, if the SIGNAL & POWER ENTRANCE box and the SIGNAL BINDING POSTS box of the shelter and the power terminals of the generator set are exposed to adverse conditions, the following precautions are necessary.

a. *Cold Climates.* Extreme cold causes cables and wires to become hard, brittle, and difficult to handle. Take extra care when handling the cables and connecting them to equipment so that kinks and unnecessary loops will not result in permanent damage. See that binding posts, receptacles, and connectors are free of frost, snow, and ice by replacing the covers over the connectors and receptacles and closing the cover over the SIGNAL & POWER ENTRANCE box and the SIGNAL BINDING POSTS box when they are not in use. Replace the connector or receptacle cover as soon as it is disconnected from the equipment; never drag or place an open connector or receptacle in the snow.

Warning: Be sure that the shelter is always properly ventilated.

b. *Hot Climates.* In hot dry climates, the connectors, receptacles, and binding posts are subject to damage from dirt and dust. Cover the SIGNAL & POWER ENTRANCE box and the SIGNAL BINDING POSTS box when they are not in use and replace the covers over the connectors and receptacles. Never drag or place an open connector or receptacle on the ground.

c. *Warm Damp Climates.* In warm damp climates, the equipment is subject to damage from moisture and fungus. Wipe all moisture and fungus from the exterior of the equipment with a lint-free cloth. Follow the procedures in *b* above.

CHAPTER 3

MAINTENANCE

38. Scope of Organizational Maintenance

The operator must clean and inspect all components of Manual Telephone Central Office AN/MTC-7 regularly to keep them in good working condition. Detailed preventive maintenance procedures pertaining to the major components are described in the appropriate technical manuals (app. I).

a. Use a clean, dry, lint-free cloth or brush for dusting.

b. For cleaning, if necessary, moisten the cloth or brush with Cleaning Compound (Federal stock No. 7930-395-9542); after cleaning, wipe dry with a cloth.

Warning: Prolonged breathing of cleaning compound is dangerous. Make certain that adequate ventilation is provided. Cleaning compound is flammable; do not use near a flame.

c. To clean the electrical contacts, use a cloth moistened in Cleaning Compound and wipe with a dry cloth.

d. Dry compressed air not exceeding 60 pounds per square inch may be used to remove dust from inaccessible places.

Warning: Compressed air is dangerous and can cause serious damage to eyes, ears, nose, and other parts of the body. It can also cause mechanical damage to the equipment. Do not use compressed air to dry parts where cleaning compound has been applied.

39. Daily Preventive Maintenance

a. Check for completeness and general condition of the equipment and spare parts.

b. Remove dirt, dust, grease, and moisture from the exposed parts.

c. Remove rust, corrosion, fungus, dirt, and moisture from binding posts, connectors, and receptacles.

d. Inspect the field wire connections to the binding posts for good contact.

e. Inspect the ground rod connections for good contact.

f. Inspect the writing on designation strips for legibility.

g. Inspect the ground rods.

h. Inspect all exposed cables for kinks, strains, moisture, fungus, and loose terminals, and frayed, cut, or damaged insulation.

i. Tighten loose screws.

40. Weekly Preventive Maintenance

a. Clean and tighten components, racks, mountings, installations, cables, and connections.

b. Inspect components, racks, mountings, installations, and exposed metal surfaces for rust, corrosion, and moisture.

c. Inspect cables and wires for cuts, breaks, fraying, deterioration, kinks, and strain.

d. Inspect for looseness of accessible items: switches, circuit breakers, signal and ac electrical power assemblies, and neon lamps.

e. Clean air filters, name plates, meters, and clock.

f. Inspect meters and clock for damaged glass and cases.

g. Wind the clock (fig. 5).

h. Inspect shelter and generator set for support, installation, rust, corrosion, and moisture.

i. Check entrance boxes, blower exhaust, and filter intake covers for cracks, leaks, damaged gaskets, dirt, and grease.

j. Check for normal operation (par. 42).

41. Monthly Cleaning and Lubrication

a. Lubricate the locks and latches. Use Grease, Graphite, Aircraft (GCA) (TM 11-5805-204-15).

b. Lubricate the door hinges. Use Lubricating Oil, General Purpose, Preservative (PL Special) or Lubricating Oil, Internal Combustion Engine (OE-10) (TM 11-5805-204-15).

c. Lubricate all metal to metal moving parts (TM 11-5805-204-15).

Note. More frequent lubrication intervals may be required in excessively hot, humid, or dusty areas.

Caution: Do not overlubricate.

d. Remove the air filter. Clean the filter with water. Air-dry the filter and replace it in its mounting.

42. Equipment Performance Checklist

The equipment performance checklist is used to systematically check the equipment performance. All corrective measures which the organizational repairman can perform are given in the *Corrective*

measures column. If the action taken does not correct the fault, higher echelon maintenance is required. Note on the repair tag how the equipment performed and what corrective measures were taken. When using the checklist, start at the beginning and follow each step consecutively to locate the trouble. If trouble is suspected in a particular area, however, start checking at that point and continue the steps sequentially. THIS CHECKLIST COVERS ONLY THE AC CIRCUITS OF THE AN/MTC-7. When a fault or condition is localized to a major component, refer to the applicable technical manual (app. I). Operate the equipment as shown in the chart below.

Item No.	Item	Action	Normal indications	Corrective measures
1	All switches and circuit breakers.	Operate to OFF position.		
2	Switch Box SA-331 U switch (generator set).	Operate to NO. 1 or NO. 2 as applicable.		
3	Power Unit PE-75-AF	Start (TM 11-900A)		
4	MAIN circuit breaker on POWER DISTRIBUTION PANEL.	Operate to the ON position.		
5	Voltmeter on POWER DISTRIBUTION PANEL.	Use the flashlight and read.	Voltmeter indicates 115 volts $\pm 10\%$.	Reset the MAIN circuit breaker to OFF and then to ON. Check to connections of the power cable and power stub. Check the position of the switch on Switch Box SA-331 U. Change power cable. Higher echelon maintenance required.
6	Ammeter on POWER DISTRIBUTION PANEL.	Use the flashlight and read	Ammeter indicates zero	Check to see that all other circuit breakers on the POWER DISTRIBUTION PANEL are at the OFF position. Higher echelon maintenance required.
7	LIGHTS circuit breaker 1 on POWER DISTRIBUTION PANEL.	Operate to the ON position. Operate NORMAL-BLACKOUT switch to NORMAL. Operate the following switches to the ON position: NEON FLUORESCENTS FLUORESCENT	Ammeter indicates approximately 2 amperes. Neon lamp over LIGHTS circuit breaker lights. The following lights go on: NEON FLUORESCENTS FLUORESCENT	Any, but not all, of the lights fail to go on, replace the faulty light or starter. Higher echelon maintenance required.

PREPARATORY

	Item No.	Item	Action	Normal indications	Corrective measures
PREPARATORY	7		Depress the door micro-switch and operate the NORMAL-BLACKOUT switch to BLACKOUT. Release the door micro-switch. Operate NORMAL-BLACKOUT switch to NORMAL. Operate to the ON position.	Lights remain on..... Lights go out.....	Higher echelon maintenance required. Higher echelon maintenance required.
	8	CONVENIENCE RECEPTACLE circuit breaker.	Check each convenience outlet with the extension light. Operate circuit breaker to the OFF position.	Neon lamp above the circuit breaker lights. Ammeter indicates approximately 2 amperes. Extension light lamp lights.	Replace neon lamp. Higher echelon maintenance required.
	9	BLOWER 1 circuit breaker 4 on POWER DISTRIBUTION PANEL.	Operate to the ON position. Caution: Vent of the blower must be open.	Neon lamp lights Ammeter indicates approximately 4 amperes. Blower operates.	Neon lamp does not light but the blower operates; replace the neon lamp. Reset circuit breaker to OFF and then to ON. If ammeter reads above 4 amperes higher echelon maintenance required.
	10	BLOWER 2 circuit breaker 5 on POWER DISTRIBUTION PANEL.	Operate BLOWER 1 circuit breaker to OFF. Repeat the procedures listed for item 9.		
	11	HEATER circuit breaker 2 on POWER DISTRIBUTION PANEL.	Connect heater power cord into the heater receptacle (fig. 8). Operate HEATER circuit breaker 2 to the ON position. Operate heater switch to HEAT. Operate heater switch to OFF. Operate HEATER circuit breaker 2 to OFF.	Neon lamp above HEATER circuit breaker 2 lights. Heater fan operates and heat is given.	Replace faulty lamp. Press reset button on heater. Higher echelon maintenance required.
EQUIP PERF	12	Organisational equipment.	Operate the equipment as described in the appropriate technical manuals (app. I).		

	Item No.	Item	Action	Normal indications	Corrective measures
STOP	13	Organisational equipment.	Perform the stopping procedures as described in the appropriate technical manuals (app. I).		
	14	Shelter.....	Perform the stopping procedures (par. 36).		

43. Replacement of Shelter Cables

The signal wiring of the AN/MTC-7 consists of three 26-pair cables between the 26-pair receptacles in the SIGNAL & POWER ENTRANCE box and the binding posts, the SIGNAL BINDING POSTS box, and one 14-pair cable and two 26-pair cables between the SIGNAL BINDING POSTS box and the switchboard (fig. 17). The cables between the SIGNAL BINDING POSTS box and the switchboard are placed in the signal duct and are secured in place (bunched) by plastic straps placed around the cables at specified intervals. Authorized replacement cables ARE NOT identical to those originally furnished in the shelter. Replacement procedures are covered in *a* below and the color coding of the replacement cables is given in *b* below.

a. Replacement of Interior Cables. The interior cables should *not* be replaced when only one or two pairs have become defective. Use the

(1) Color coding, 14-pair cabling.

Pair No.	Original cable color code		Replacement cable color code	
	Tip	Ring	Tip	Ring
1	White	Yellow	White	Blue
2	White	Orange	White	Orange
3	White	Black	White	Green
4	White	Pink	White	Brown
5	White	Light brown	White	Gray (slate)
6	White	Dark brown	Red	Blue
7	White	Silver	Red	Orange
8	White	Dark green	Red	Green
9	White	Light green	Red	Brown
10	White	Violet	Red	Gray (slate)
11	White	Gray (slate)	Black	Blue
12	White	Light blue	Black	Orange
13	White	Dark blue	Black	Green
14	Black	Pink	Black	Brown

spare pairs as replacement for the defective pairs. If the spare pairs have been used previously and the defect can be located, repair the defect by splicing. However, if an entire cable is accidentally cut or damaged beyond repair, or if a cable has been repaired previously and there is not enough slack to permit another repair, the cable must be replaced. To install a replacement cable, first disconnect the defective cable and remove it from the ducts. Cut the new cable to the proper length (same as cable removed), secure it in the ducts. Connect the new cable using the color coding given in *b* below as appropriate.

b. Cable Color Coding. The chart in (1) below compares the color code of each pair of the original 14-pair cabling to the corresponding pairs in the authorized replacement cable; the chart in (2) below compares the color code for the original 26-pair cabling with the authorized replacement cable. Refer to figure 17 for the terminal points of the replacement cables.

(2) *Color coding, 26-pair cabling.*

Pair No.	Original cable color code		Replacement cable color code	
	Tip	Ring	Tip	Ring
1	White	Yellow	White	Blue
2	White	Orange	White	Orange
3	White	Black	White	Green
4	White	Pink	White	Brown
5	White	Light brown	White	Gray (slate)
6	White	Dark brown	Red	Blue
7	White	Silver	Red	Orange
8	White	Dark green	Red	Green
9	White	Light green	Red	Brown
10	White	Violet	Red	Gray (slate)
11	White	Gray (slate)	Black	Blue
12	White	Light blue	Black	Orange
13	White	Dark blue	Black	Green
14	Black	Silver	Black	Brown
15	Black	Gray (slate)	Black	Gray (slate)
16	Black	Light brown	Yellow	Blue
17	Black	Dark brown	Yellow	Orange
18	Black	Yellow	Yellow	Green
19	Black	Light blue	Yellow	Brown
20	Black	Dark blue	Yellow	Gray (slate)
21	Black	Light green	Violet	Blue
22	Black	Dark green	Violet	Orange
23	Black	Orange	Violet	Green
24	Black	Violet	Violet	Brown
25	Black	Pink	Violet	Gray (slate)
26	Dark blue	Pink	White	Red

CHAPTER 4

THEORY

44. General

Manual Telephone Central Office AN/MTC-7 contains facilities for switching or terminating 60 circuits (trunk or local). All signal and power connections are made on the outside of the shelter. Cables from the switchboard are connected to the binding posts which are in parallel with the 26-pair connectors. Wiring, for both signal and ac power, is contained in metal ducts. Ac power in the shelter is controlled in the POWER DISTRIBUTION PANEL. For the theory of operation on blowers, heater, and drop line box, refer to TM 11-5805-204-15.

45. Block Diagram Analysis of Signal Circuits

(figs. 16 and 17)

All incoming and outgoing signals are connected to either the SIGNAL & POWER ENTRANCE box or the SIGNAL BINDING POSTS box. From the SIGNAL & POWER ENTRANCE box, the incoming signals are applied through the SIGNAL BINDING POST box to the jack and binding post panel and the jack field sections of the switchboard.

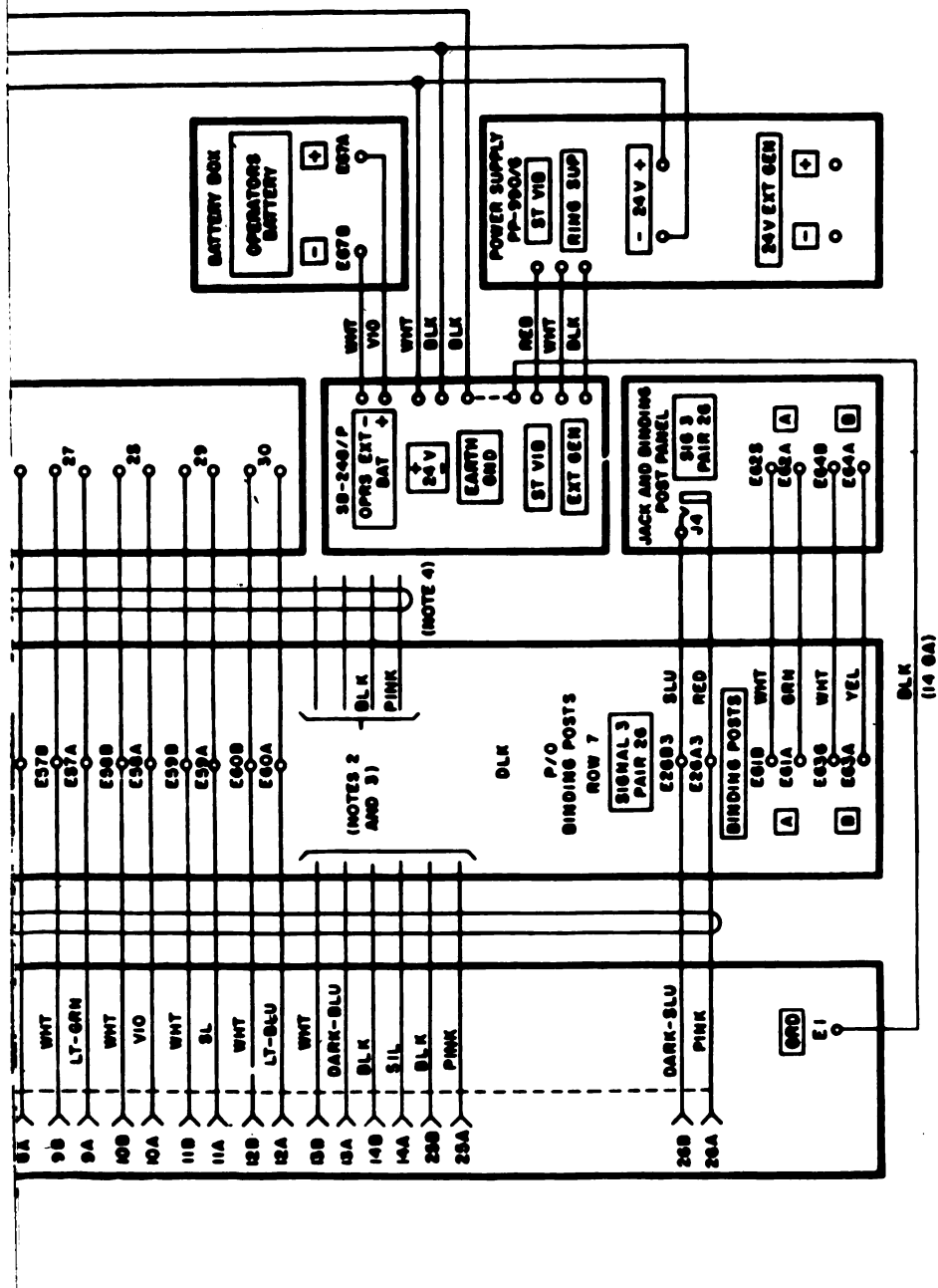
a. Trunk and Local Circuits. The 60 lines of the AN/MTC-7 are made up of both trunk and local lines (par. 29). Trunk lines are usually connected from the AN/MTC-7 to the SB-611/MRC. Local lines may be connected between the AN/MTC-7 and a local subscriber or they may be routed through the SB-611/MRC. A drop line box may be used as a wirehead to connect local subscribers.

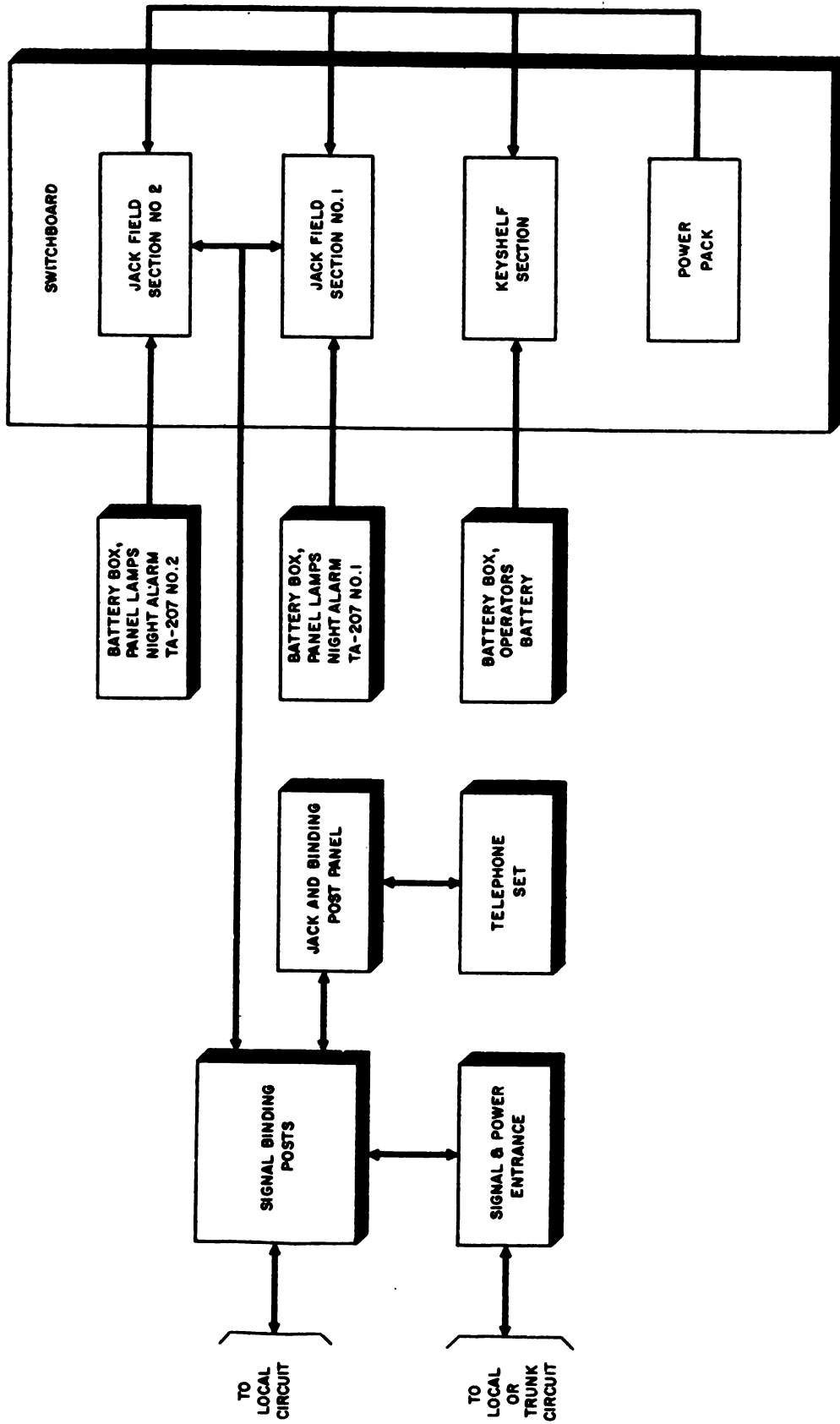
b. Battery Supply. The battery boxes contain the batteries normally in the back of the switchboard. The OPERATOR'S BATTERY box contains the batteries that supply current to the operator's telephone set. The NIGHT ALARM

PANEL LAMPS battery boxes contain the batteries that supply current for operating the night alarm in either the audio or visual positions and also to operate the panel lamps.

c. Cable and Connector Circuit Assignments. The 26-pair receptacle designated SIGNAL 1 is wired to binding posts 1 through 24 with pairs 25 and 26 left as spares (par. 10). The 26-pair receptacle designated SIGNAL 2 is wired to binding posts 31 through 54 and with pairs 25 and 26 left as spares. The third 26-pair receptacle, designated SIGNAL 3, is connected to binding posts 25 to 30 and 55 to 60, and also the jack designated SIG 3 PAIR 26. The 26-pair receptacle contacts are in two groups: male and female. Each group is divided into: A ring and B tip section. The contacts on the 26-pair receptacle are interconnected so that 1A male connects to 1A female. All the contacts in section A male connect to the corresponding numbered contacts in A female. The same applies to the B section of the receptacle. Two 26-pair cables and one 14-pair cable are used to interconnect the binding posts to the switchboard. The cables are housed in a duct. The 14-pair cable is divided so that six pairs are connected to TA-207/P No. 1 and six pairs are connected to TA-207/P No. 2. Two of the pairs in each cable are spares.

d. Special Circuits. One Telephone Set TA-312/PT can be connected through pair 26 of SIGNAL 3 receptacle or through SIGNAL 3 PAIR 26 binding posts in the SIGNAL BINDING POSTS box to provide intershelter communication. In the SIGNAL BINDING POSTS box, two additional pairs of binding posts provide entry of two local circuits into the shelter. These pairs of binding posts, designated A and B, together with the SIGNAL 3 PAIR 26 binding posts, are terminated in the jack and binding post panel.





TMS905-211-15-22

Figure 16. AN/MTC-7, signal block diagram.

46. Ac Power

(fig. 18)

a. Power Supply. All electrical equipment in the AN/MTC-7 is powered by either of the two power units PE-75-AF. Power from the generator sets is connected into a switch box. The switch box has switching facilities to select the output of either generator. From the switch box, power is connected to the SIGNAL & POWER ENTRANCE box. Alternatively, power might be obtained from a commercial source. For connection to a commercial source, refer to paragraph 27.

b. Grounding. The AN/MTC-7 must have the earth ground connected before ac power is connected. This reduces the hazards of electrical shock.

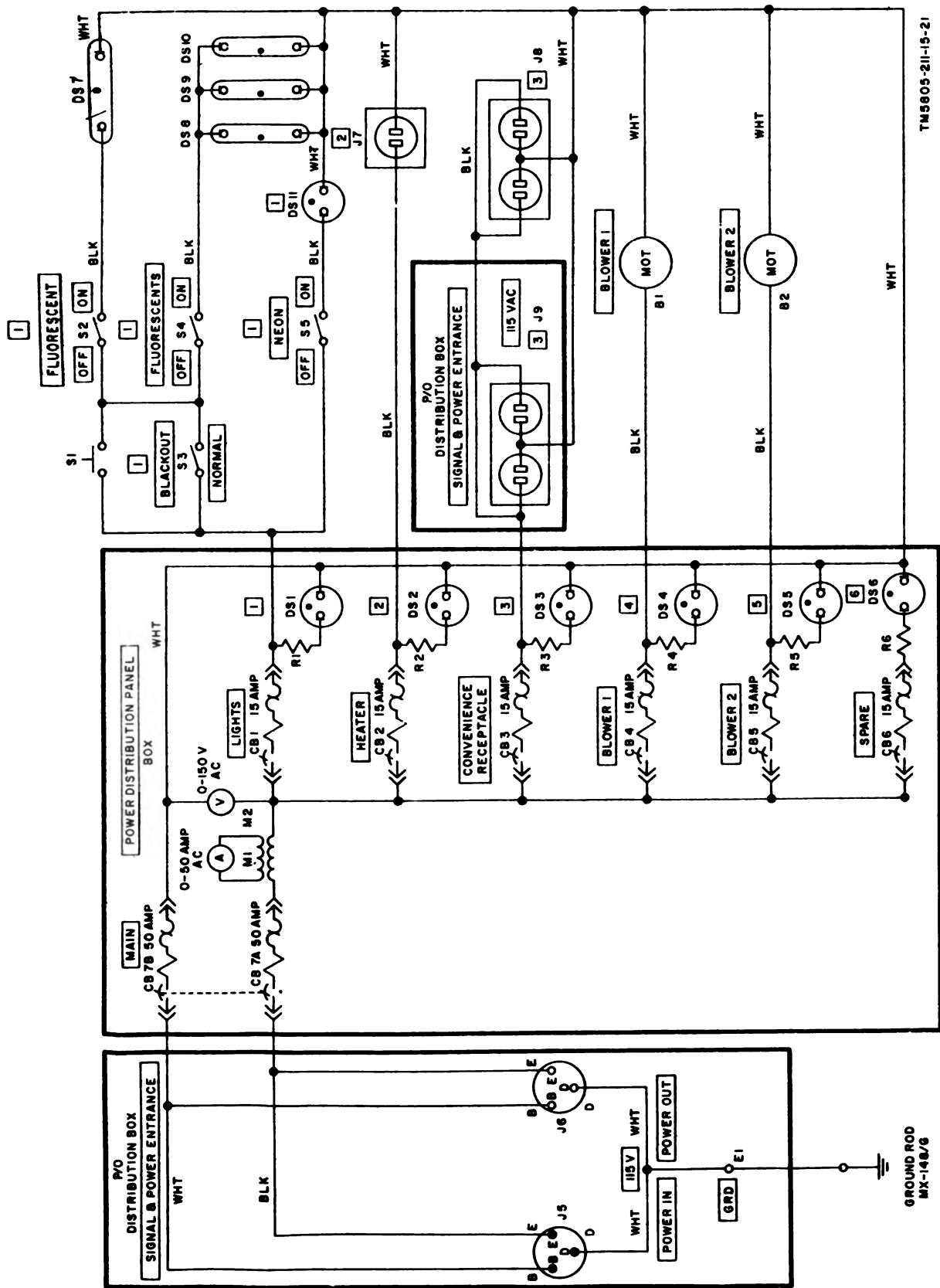
c. Main Power Circuit. A POWER OUT connector is wired in parallel to the POWER IN receptacle so that another shelter may be connected to the same generator if the output of the generator (2,500 watts) will not be exceeded. Power wiring to the POWER DISTRIBUTION PANEL is through ducts. In the POWER DISTRIBUTION PANEL, current flows through a double-pole circuit breaker to the ammeter and to the voltmeter. Power is distributed to the different circuits through circuit breakers. Each circuit has an indicating lamp connected in parallel with the circuit breaker.

d. Voltmeter and Ammeter. The voltmeter wired across the ac input circuit indicates the ac voltage applied to the AN/MTC-7. It has a 0-150

volt, full-scale deflection. A current transformer is necessary for ammeter deflection. This transformer is formed by 3 turns of the wire from the POWER IN receptacle in the SIGNAL & POWER ENTRANCE box wound around an inductor which is connected to the terminals of the ammeter. In this way, the 3 turns serve as the primary and the inductor as the secondary. The transformer so formed becomes a step-down transformer with a ratio of 50 to 5, line to meter. With 50 amperes flowing in the line, 5 amperes will flow in the secondary of the transformer and the meter will deflect to full scale.

e. Tributary Power Circuits. Individual circuit breakers, which are also used for ON-OFF switches, are provided for each blower. Two convenience receptacles, one in the SIGNAL & POWER ENTRANCE box and the other inside the shelter, are connected in parallel. A separate circuit is provided for the heater because of the amount of current it draws.

f. Lamp and Equipment Circuits. A NORMAL-BLACKOUT switch, wired in parallel with the door micro switch S1, controls the flow of current to the light and fluorescent lamps. The NEON lamp has its own ON-OFF switch. With the NORMAL-BLACKOUT switch in the BLACKOUT position, current flows through switch S1. When the door is opened, the switch S1 opens and current cannot flow to the lamps. When the NORMAL-BLACKOUT switch is in the NORMAL position, current flows through this switch and bypasses switch S1.



TMS809-211-15-21

Figure 18. AC power schematic-wiring diagram.

CHAPTER 5

SHIPMENT AND LIMITED STORAGE, TRANSPORTATION, AND DEMOLITION

Section I. SHIPMENT AND LIMITED STORAGE

47. Disassembly of Equipment

If Manual Telephone Central AN/MTC-7 is being moved to a different location, perform the following operations:

- a. Perform the stopping procedures (par. 36).
- b. Disconnect the 26-pair cables in the SIGNAL & POWER ENTRANCE box and replace the covers on the receptacles and connectors (par. 30).
- c. Wind the 26-pair cables on the cable reels.
- d. Disconnect the field wires from the binding posts in the SIGNAL BINDING POSTS box.

e. If the power was obtained from the generator set, proceed as follows:

- (1) Stop the generator set (TM 11-900A).
- (2) Disconnect the power cable and power stub from the switch box and replace the covers on the receptacles and connectors.

f. If the power was obtained from a commercial source, proceed as follows:

- (1) Operate the switch to cut off the main lines from the source terminals.
- (2) Disconnect the power stub from the commercial source.
- (3) Disconnect the junction box from the power cable and power stub and replace the cover on the junction box and both cables.

g. Disconnect the power cable from the POWER IN receptacle in the SIGNAL & POWER ENTRANCE box and replace the covers on the connector and receptacle.

h. Disconnect the ground leads from the GND lug on the switch box and the GND lug in the SIGNAL & POWER ENTRANCE box.

i. Close and secure the covers of the SIGNAL & POWER ENTRANCE and SIGNAL BINDING POSTS boxes with the wing fasteners.

j. Disconnect the ground leads from the shelter and generator set ground rods and store one lead in the ACCESSORIES box of the trailer and the

other in the ACCESSORIES & SPARES cabinet in the shelter (fig. 5).

k. Remove the ground rods from the ground and install them in their mountings in the shelter (fig. 6) and trailer.

l. Fasten the telephone set in its mounting (fig. 5).

m. Fasten the wastepaper basket in its holder (fig. 6).

n. Place the operator's telephone set in its holder (fig. 7).

o. Secure the chairs.

p. Secure the switch box and heater in their mountings (fig. 5 and 9).

q. Place the miscellaneous components (par. 5c) in the ACCESSORIES & SPARES cabinet in the shelter.

r. Check to see that everything is fastened in position.

s. Wind the power stubs first and then the power cable on cable reels.

t. Install the cable reels in the shelter as described below (fig. 9):

- (1) Position the cable reels in the shelter with the center of the hub directly over the mounting plate on the floor.

- (2) Remove the cable reel holders from their mountings and engage the stud with the reel hub and mounting plate and tighten the holder.

u. Place the ladder on top of the cable reels and secure it to the reels with the web straps.

v. Recheck the area for loose items. Be sure that all items are properly stored.

w. Close the blower vents and air filter covers.

x. Close the door and lock it.

48. Transportation

The shelter can be transported to another site either by truck or by helicopter. To load the shelter onto a truck or lift it by helicopter, refer to paragraph 24.

Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

49. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The destruction procedures outlined in paragraph 50 will be used to prevent further use of the equipment.

50. Methods of Destruction

Use any or all of the following methods to destroy the equipment.

a. Smash. Smash the controls, ducts, boxes, furniture, switches, connectors, reels, and meters; use sledges, axes, handaxes, pickaxes, hammer, or crowbars.

b. Cut. Cut all cables and cords and slash the wiring on the switchboards and ducts; use axes, handaxes, or machetes.

c. Burn. Burn cords, and technical manuals; use gasoline, kerosene, oil, flamethrowers, or incendiary grenades.

d. Bend. Bend panels and cabinets.

e. Explode. If explosives are necessary, use firearms, grenades, or TNT.

f. Dispose. Bury or scatter the destroyed parts in slit trenches, foxholes, or throw them into streams.

APPENDIX I

REFERENCES

The following applicable references are available for the operator and installer of Manual Telephone Central Office AN/MTC-7.

TM 11-2134--- Manual Telephone Switchboard SB-86/P, Installation and Operation

TM 11-4134--- Manual Telephone Switchboard SB-86/P, Field Maintenance

TM 11-2155--- Telephone Set TA-312/PT

TM 11-900A--- Power Unit PE-75-AF

TM 11-5805- Communication Patching Panel
204-15. SB-611/MRC Operation and Maintenance

APPENDIX II

MAINTENANCE ALLOCATION

1. General

a. The maintenance chart assigns maintenance functions and repair operations to be performed by the lowest appropriate maintenance echelon.

b. Columns in the maintenance allocation chart are defined as follows:

(1) *Part or component.* Only the nomenclature or standard item name is annotated in this column. Additional descriptive data is included only where clarification is necessary to identify the part. Components and parts comprising a major end item are listed alphabetically. Assemblies and subassemblies are in alphabetical sequence with their components listed alphabetically immediately below the assembly listing.

(2) *Maintenance function.* This column indicates the various maintenance functions allocated to the echelon capable of performing the operation. These are defined as follows:

(*a*) *Service.* To clean, to preserve, and to replenish fuel and lubricants.

(*b*) *Adjust.* To regulate periodically to prevent malfunction.

(*c*) *Inspect.* To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.

(*d*) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages, meters, etc.

(*e*) *Replace.* To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.

(*f*) *Repair.* To restore to a serviceable condition by replacing unserviceable parts or by any other action required utilizing tools, equipment, and skills available, to include welding, grinding, riveting, straightening, adjusting, etc.

(*g*) *Align.* To adjust two or more components of an electrical system so that their functions are properly synchronized.

(*h*) *Calibrate.* To determine, check, or rectify the graduation of an instrument, weapon, or weapons system, or components of a weapons system.

(*i*) *Rebuild.* To restore to a condition comparable to new by disassembling the item to determine the condition of its component parts and reassembling it using serviceable, rebuilt, or new assemblies, subassemblies, and parts.

(3) *1st, 2d, 3d, 4th, 5th echelon.* The symbol X indicates the echelon responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Echelons higher than the echelon marked by X are authorized to perform the indicated operation.

(4) *Tools required.* The numbers in this column are code numbers assigned to each individual tool equipment, test equipment, and maintenance equipment referenced. The grouping of codes in this column of the Maintenance Allocation Chart indicates the tool, test, and maintenance equipment required to perform the maintenance function.

(5) *Remarks.* Entries in this column clarify data in the preceding columns.

c. Columns in the allocation of tools for maintenance functions chart are defined as follows:

(1) *Tools required for maintenance functions.* This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

(2) *1st, 2d, 3d, 4th, 5th echelon.* A dagger symbol indicates the echelons allocated the facility.

- (3) *Tool code.* This column lists the tool code numbers assigned.
- (4) *Remarks.* Entries in this column clarify data in the other columns.

2. Maintenance by Using Organizations

When this equipment is used by signal service organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including fourth echelon are authorized to the organization operating this equipment.

3. Mounting Hardware

The basic entries of this Maintenance Allocation Chart do not include mounting hardware such as screws, nuts, bolts, washers, clamps, etc.

4. References

Additional instructions concerning maintenance of this equipment are contained in—

TM 11-6115-206-20P, Organizational Maintenance Repair Parts and Special Tools List and Maintenance Allocation Chart for Power Unit PE-75-AF.

5. Comments or Suggestions

Any comments concerning omissions and discrepancies in this appendix will be prepared on DA Form 2028 and forwarded direct to Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N.J., ATTN: SIGFM/ES-ML.

MAINTENANCE ALLOCATION CHART

(1) PART OR COMPONENT	(2) MAINTENANCE FUNCTION	(3) 1ST ECH.	(4) 2ND ECH.	(5) 3RD ECH.	(6) 4TH ECH.	(7) 5TH ECH.	(8) TOOLS REQUIRED	(9) REMARKS
MANUAL TELEPHONE SWITCHBOARD AN/MTC-7	service	X						Interior.
	service		X					Exterior.
	inspect		X				2,3	Interior and exterior.
	test		X				1	Continuity.
	repair		X				2,3	
BATTERY BOXES	rebuild					X		Fabricate.
	repair					X		
	rebuild							
CAPS, ELECTRICAL	replace		X					
POSTS, BINDING	replace		X					
RECEPTACLES, TURNLOCK FASTENER	replace		X					
SPACERS, SLEEVE	replace		X					
BRACKETS	replace		X		X			
BULLETIN BOARD	repair		X					
CABLE ASSEMBLIES	repair		X		X			
BAND, MARKER, CABLE	replace			X				
CABLE	replace							
CONNECTORS	replace		X					
GRIPS, CABLE, WOVEN	replace		X					
TERMINAL LUGS (FOR POWER CABLE)	replace		X					
CLOCKS	replace		X					
CONDUIT ASSEMBLIES	repair		X					
BALLASTS, LAMP	replace		X					
BUSHINGS, ELECTRICAL CONDUCTOR	replace		X					
CAPACITORS	replace		X					
CLIPS, SPRING, TENSION	replace		X					
CONNECTORS, RECEPTACLE, ELECTRICAL	replace		X		X			
GLOVES, ELECTRIC LIGHT	replace		X					
HOLDERS, LAMPHOLDER	replace		X					
INSULATORS, BUSHING	replace		X					
JACKS, TELEPHONE	replace		X					
LAMP HOLDERS	replace		X					
LAMPS, FLUORESCENT	replace		X					
LAMP, GLOW	replace		X					
POSTS, BINDING	replace	X						
STARTERS, LAMP, FLUORESCENT	replace	X						
SWITCHES	replace		X					
								Separate MAC for 36 pair connectors.

(1) PART OR COMPONENT	(2) MAINTENANCE FUNCTION	(3) 1ST ECH	(4) 2ND ECH	(5) 3RD ECH	(6) 4TH ECH	(7) BTH ECH.	(8) TOOLS REQUIRED	(9) REMARKS
AN/MTC-7 (Continued) HEATER, SPACE, ELECTRIC	repair		X			X		
BUSSING, ELECTRICAL CONDUCTOR	rebuild		X					
CABLE, POWER, ELECTRICAL	replace		X					
CONNECTORS	replace		X					
HEATING ELDMNT, ELECTRICAL	replace		X					
IMPELLER, FAN, AXIAL	replace		X					
MOTOR, ALTERNATING CURRENT	replace		X					
SWITCHES	replace		X					
HOLDERS, CABLE, REEL	repair							
LIGHT, EXTENSION	replace	X						
LAMP, INCANDESCENT	replace	Y						
PANEL, POWER DISTRIBUTION	repair		X					
CIRCUIT BREAKERS	rebuild		X					
LAMPS, GLOW	replace	X						
LAMP HOLDERS	replace		X					
METERS	replace		X					
RESISTOR	replace		X					Separate MAC
TRANSFORMER	replace		X					Separate MAC.
REEL UNIT RL-31								Separate MAC.
SHELTER S-144/G								Separate MAC.
SWITCHBOARD SIGNAL ASSEMBLY TA-207/P								Separate MAC.
SWITCHBOARD, TELEPHONE, MANUAL SB-R6/P								Separate MAC.
SWITCH BOX SA-331/G			X					Separate MAC.
TELEPHONE SET TA-312/PT	replace		X					Separate MAC
TERMINAL BOX	repair		X					Fabricate.
CAPS, ELECTRICAL	rebuild		X					
DOOR, TERMINAL BOX	replace		X					
GASKETS	replace		X					
POSTS, BINDING	replace		X					
WIRING HARNESS	replace		X					
CABLE, TELEPHONE	repair		X					
	replace							

ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

(1) TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	(2)	(3)	(4)	(5)	(6)	(7)	(8) REMARKS
	1ST ECH	2ND ECH	3RD ECH	4TH ECH	5TH ECH	TOOL CODE	
AN/MTC-7 (Continued) MULTIMETER AN/UIM-105		+	+	+	+	1	If not available, use TS-997/U or TS-382/U.
TOOL KIT. GENERAL MECHANICS		+	+	+	+	2	
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[AG 413.42 (30 Jun 50)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

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USAR: None.

For explanation of abbreviations used, see AR 320-50.

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