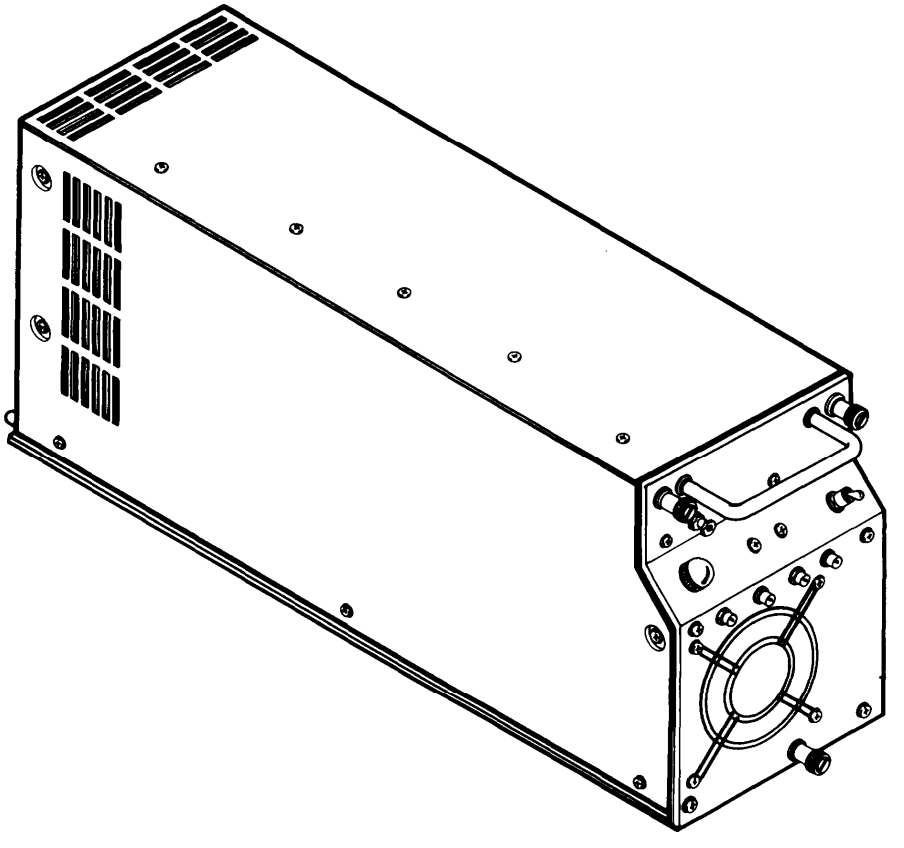
TM 11-6130-429-12

OPERATOR'S
AND
ORGANIZATIONAL
MAINTENANCE MANUAL



CONVERTER, DIRECT CURRENT
CV=3734/T
(NSN 7050-01 -130-1499)

HEADQUARTERS, DEPARTMENT OF THE ARMY

20 MAY 1983

WARNING

Before removing or replacing any part in this equipment, make sure your equipment is turned OFF. A shock hazard exists with any electronic equipment. BE CAREFUL. DON'T TAKE CHANCES.

WARNING

Cleaning compound is flammable and its fumes are toxic. Provide adequate ventilation and DO NOT use near flames or extreme heat.

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

TECHNICAL MANUAL
NO. 11-6130-429-12

HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC ,20 May 1983

OPERATOR'S AND ORGANIZATIONAL MAINTENANCE MANUAL
CONVERTER, DIRECT CURRENT CV-3734/T
(NSN 7050-01-130-1499)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual.lf you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in back of this manual direct to: Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. A reply will be sent to you.

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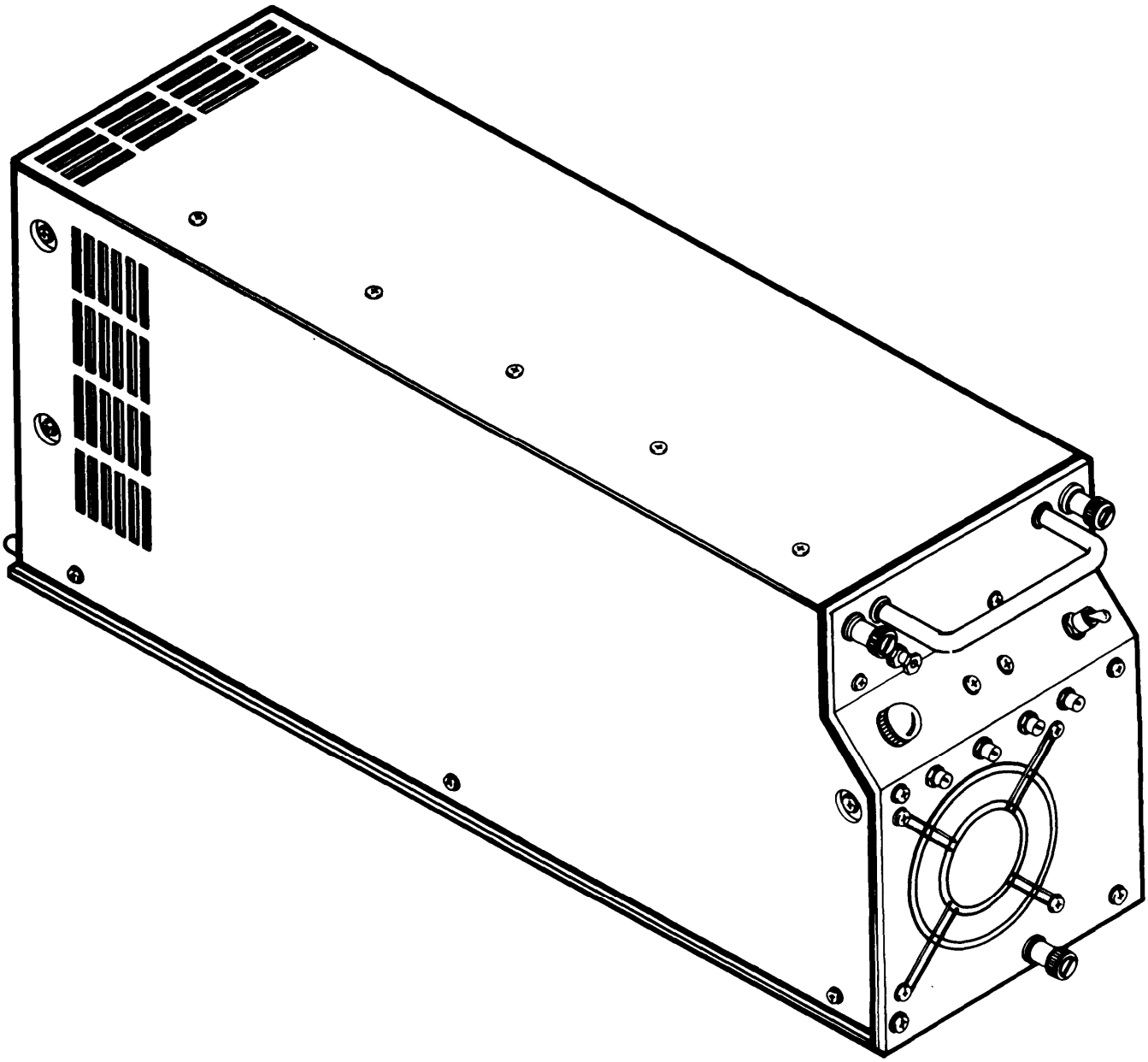


CONVERTER, DIRECT CURRENT CV-3734/T

CHAPTER 1
INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE

TYPE OF MANUAL: Operator's and Organizational Maintenance.

MODEL NUMBER AND EQUIPMENT NAME: Converter, Direct Current CV-3734/T.

PURPOSE OF EQUIPMENT: Designed for use in AN/TTC-38 or AN/TTC-39 mobile, central office telephone switching system.

1-2. MAINTENANCE FORMS, RECORDS, AND REPORTS

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by TM 38-750, The Army Maintenance Management System (TAMMS).

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE

Destruction of Army materiel to prevent enemy use is described in TM 750-244-2.

1-4. PREPARATION FOR STORAGE OR SHIPMENT

Preparation will be performed in accordance with TM 740-90-1.

1-5. OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS

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

OFFICIAL NOMENCLATURE	COMMON NAME
Converter, Direct Current CV-3734/T	Converter

1-6. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR)

If your converter 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 us at Commander, US Army Communications-Electronics Command and Fort Monmouth, ATTN: DRSEL-ME-MP, Fort Monmouth, New Jersey 07703. We'll send you a reply.

1-7. WARRANTY INFORMATION

Converter CV-3734/T, is warranted by Transistor Devices Inc. for ninety (90) days from date of delivery to the Government. It starts on the date found in block 23 DA Form 2408-9, in the logbook. Report all defects in material or workmanship to your supervisor, who will take appropriate action through your organizational maintenance shop.

This warranty does not apply to the converter or any of its components if: (a) the item has been repaired, worked upon, disassembled or altered by persons not authorized by the Army in such a manner as to injure the stability or reliability of the item, (b) the item has been subjected to misuse, negligence or accident, (c) the item has not been connected, installed, used or adjusted in accordance with the procedures of this manual, (d) the serial number of the item has been altered, defaced or removed, or (e) problem is caused by normal wear and tear from usage.

Section II. EQUIPMENT DESCRIPTION

1-8. EQUIPMENT CHARACTERISTICS, CAPABILITIES, AND FEATURES

PURPOSE OF CONVERTER

- Supplies regulated DC voltage to equipment used in AN/TTC-38 or AN/TTC-39 mobile telephone switching system.

CAPABILITIES AND FEATURES

- External shutdown capability, from equipment or control panel converter supplies.
- Automatic shutdown in the event of overload or underload conditions.
- Emergency voltage adjustment.
- Test points for monitoring output circuits.

1-9. EQUIPMENT DATA

WEIGHT AND DIMENSIONS

Rack Mounted

Weight	11.350 Kg (25 lbs., approximate)
Length	44.45 cm (17.50 in.)
Width	12.4 cm (4.88 in.)
Height	17.78cm (7.0 in.)

ENVIRONMENTAL CONDITIONS

Ambient temperature	–70°F(–57°C) to + 125°F(+52°C)
Relative humidity	98 per cent
Altitude	Up to 25,000 feet (7,500 meters) above sea level

TECHNICAL CHARACTERISTICS

Output voltage	+5 volts direct current
Output current	+75 amperes
Nominal power	315 watts
Operating power requirements	21-30 volts direct current
Regulation – Peak-to-Peak	0 to 10% ±3% of full load,
Ripple and noise	10% to full load ±2%

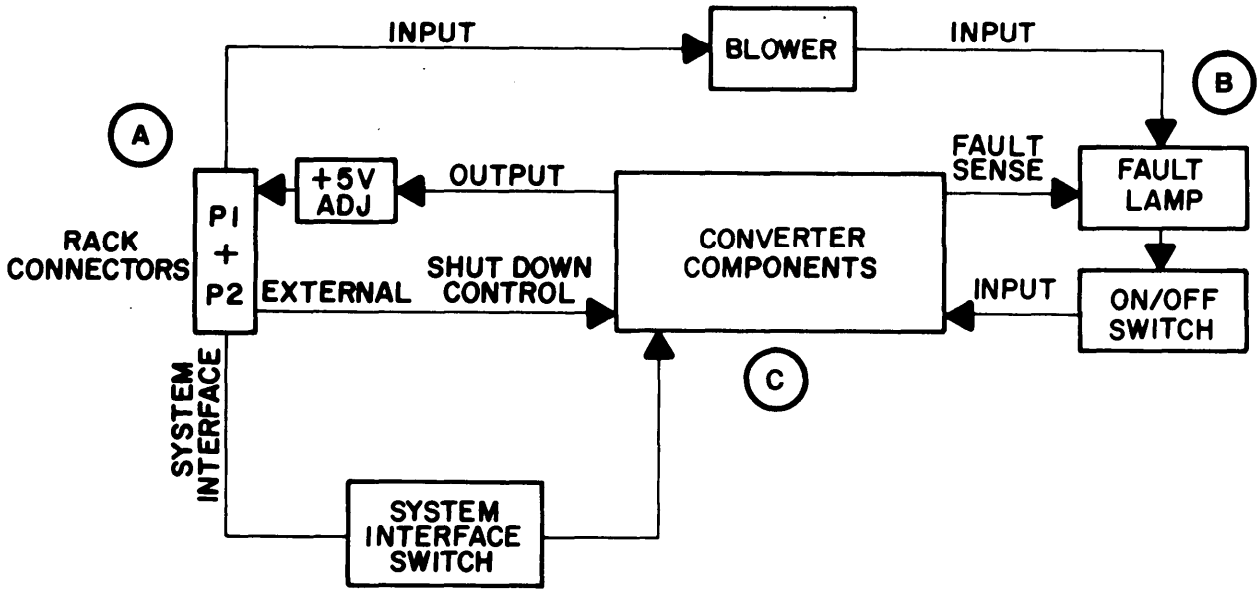
1-10. EQUIPMENT FUNCTION

Converts applied input voltage into regulated power source for operating electronic equipment.

(A) **PLUGS P1 AND P2.** Interface external/internal connections with working components of converter.

(B) **FAULT LAMP.** Monitors internal/external fault sense capabilities of converter.

(C) **CONVERTER COMPONENTS.** Perform electronic functions to produce regulated output.



CONVERTER BLOCK DIAGRAM.

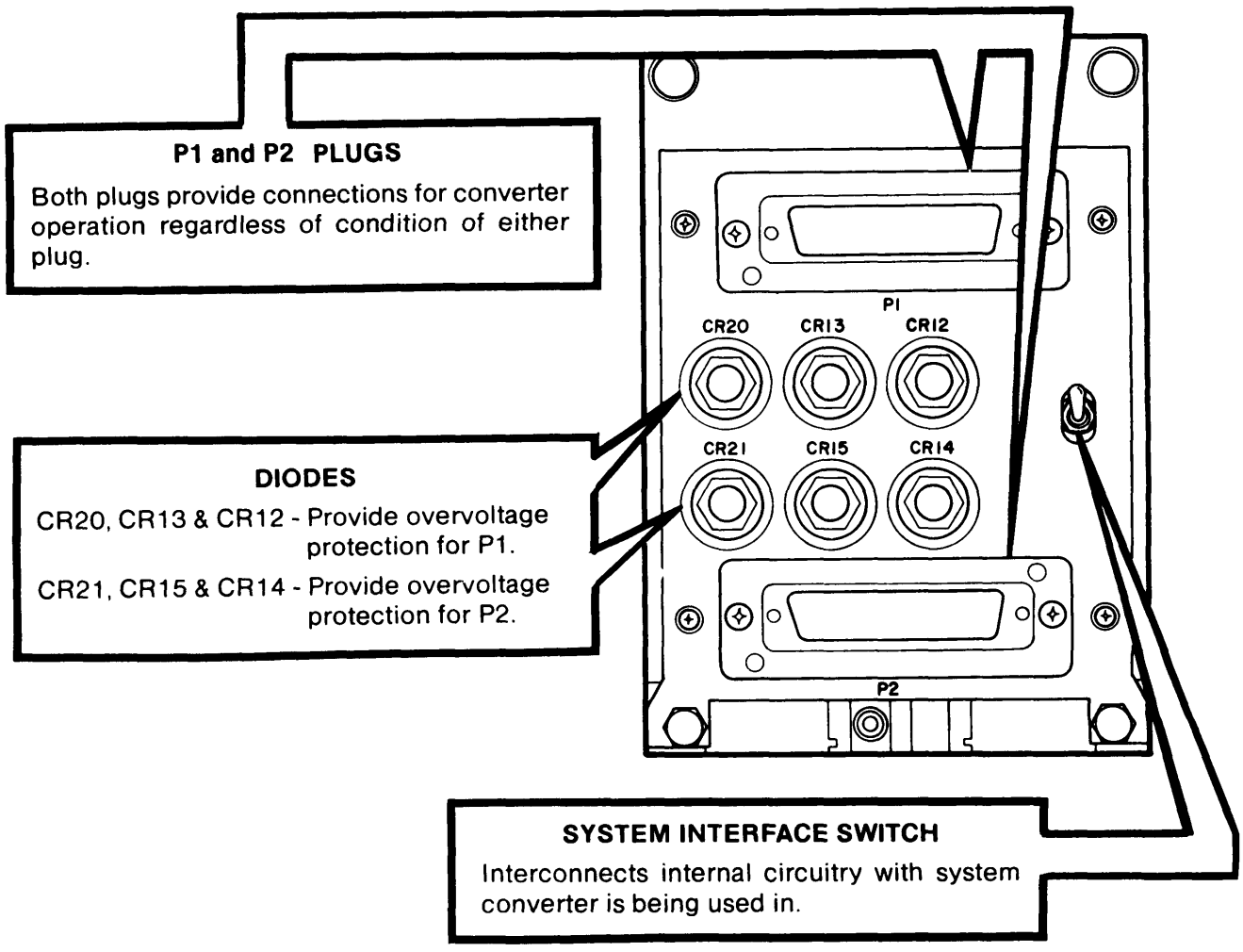
Refer to Chapter 2 of this manual for Description and Use of Controls, Indicators, and Receptacles.

CHAPTER 2
OPERATING INSTRUCTIONS

Section I. DESCRIPTION AND USE OF CONTROLS, INDICATORS, AND RECEPTACLES

2-1. GENERAL

The converter has receptacles for connection to the system on the rear panel, as shown below. In addition, the system interface switch and overvoltage protection diodes are located on the rear panel. The front panel is shown and described on the following page.



CONVERTER REAR PANEL

+5V VOLT ADJ

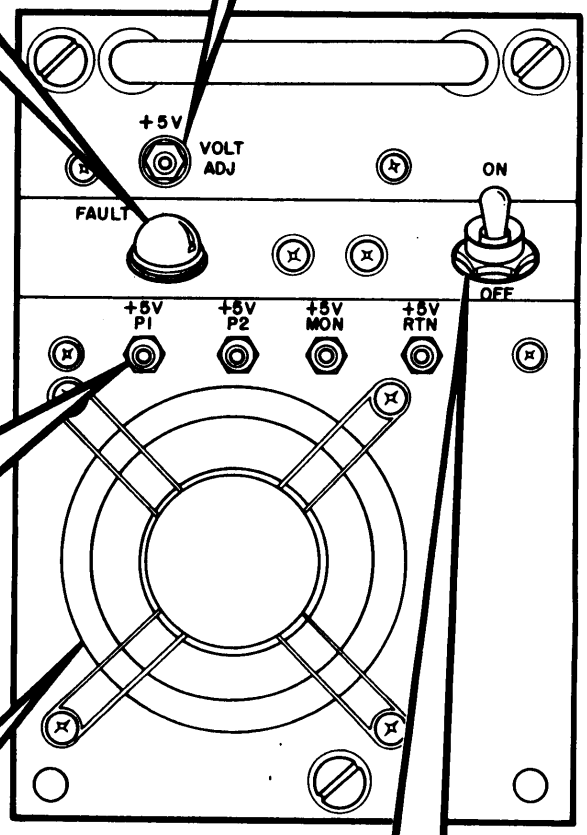
Allows maintenance personnel to make emergency output voltage adjustments.

FAULT INDICATOR

Indicates input power is available when ON/OFF switch is in OFF position and indicator lamp is lighted.

Indicates input power is available, but output not being used, when ON/OFF switch is in ON position and indicator lamp is lighted.

Indicates output power is being used when ON/OFF switch is in ON position and indicator lamp is not lighted.



TEST POINTS

Allow maintenance personnel to check converter internal operation.

+5V P1 (TP4)	- Verifies output power is available at plug P1.
+5V P2 (TP3)	- Verifies output power is available at plug P2.
+5V MON (TP2)	- Indicates power available to +5V P1 and +5V P2.
+5V RTN (TP1)	- Common (ground) to test points (TP's).

BLOWER

Rotron intake fan provides necessary cooling for internal circuitry.

With input power available, blower will run all the time.

ON - OFF SWITCH

Controls converter operation

ON - Input power is applied to internal circuitry for conversion to regulated output.

OFF - Input power returns to standby, no output available.

CONVERTER FRONT PANEL

Section II. OPERATION UNDER USUAL CONDITIONS

2-2. ASSEMBLY AND PREPARATION FOR USE

The converter is completely assembled and ready for use. Organizational maintenance personnel will install the converters for operator's use.

NOTE

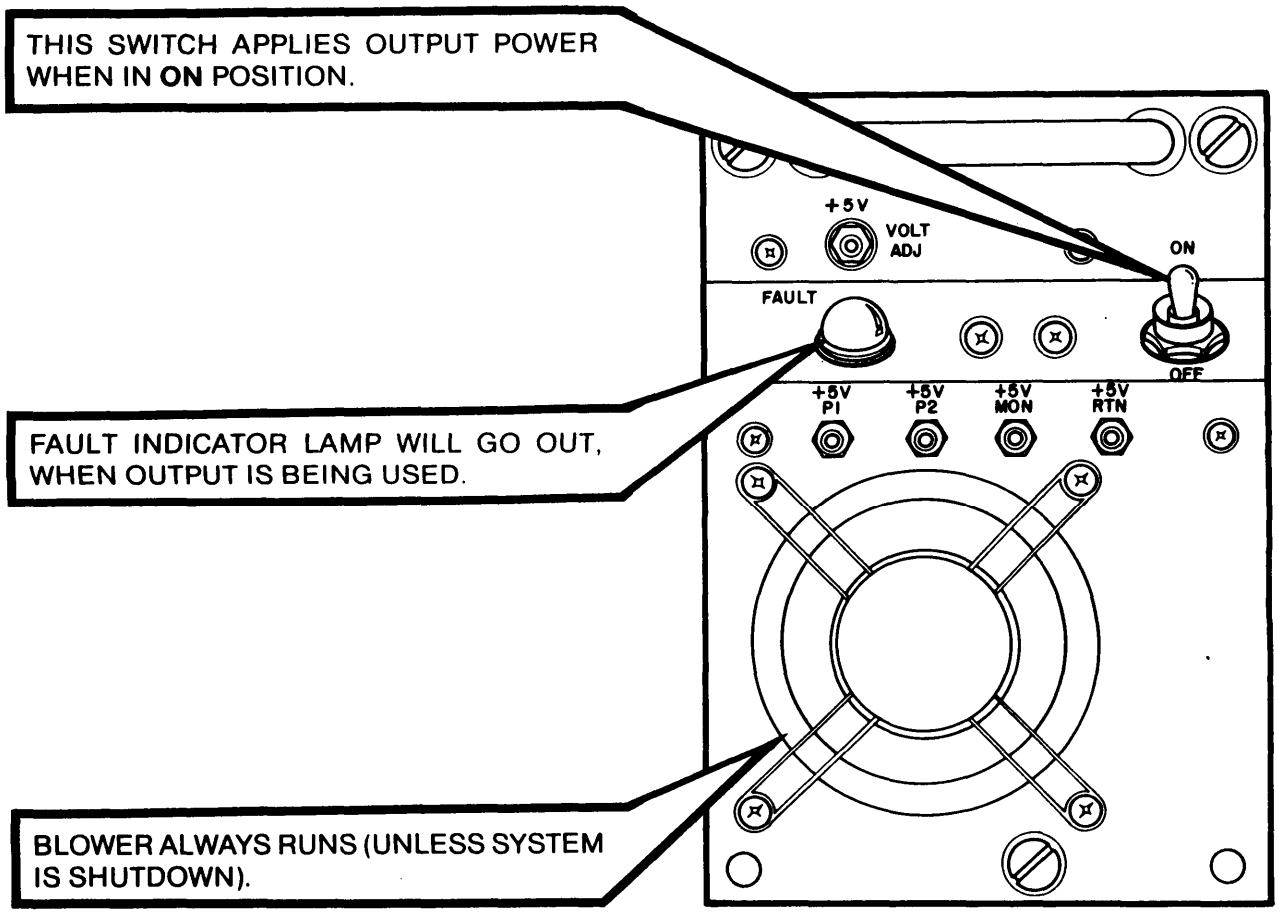
If blower is not operating and fault indicator lamp is lighted, notify organizational maintenance.

2-3. OPERATING PROCEDURE

TURN ON - Place ON/OFF switch to ON position.
FAULT indicator lamp goes out.

NOTE

If FAULT indicator remains lighted with ON/OFF switch in ON position, have your supervisor check downstream to see if output is being used.



2-4. SHUTDOWN PROCEDURE

TURN OFF - Operate ON/OFF switch to OFF position.

- FAULT lamp lights.
- Blower continues to operate.

STANDBY - Converter may be put on standby by external control.

- FAULT lamp lights with ON/OFF switch in ON position (no demand downstream).

EMERGENCY SHUTDOWN - Converter has internal/external fault sensing which automatically protects the equipment against damage.

Emergency procedures are as directed by the system converter is being used in.

STANDBY - Converter may be put on standby by external control.

FAULT lamp lights with ON/OFF switch in ON position (no demand downstream).

CHAPTER 3.
OPERATOR'S MAINTENANCE INSTRUCTIONS

This chapter is not applicable.

- No lubrication is required.
- No operator troubleshooting or maintenance is required for this equipment.
- Report any malfunctions or equipment failures as instructed by TM 38-750.

CHAPTER 4.
ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I REPAIR PARTS, SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT

4-1. COMMON TOOLS AND EQUIPMENT

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

4-2. SPECIAL TOOLS; TEST, MEASUREMENT AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

The Maintenance Allocation Chart (MAC), Appendix B of this manual,list TMDE and support equipment required for organizational maintenance.

No special tools are required.

4-3. REPAIR PARTS

Repair parts are listed and illustrated in the repair parts and special tools list in TM 11-6130-429-20P for organizational maintenance.

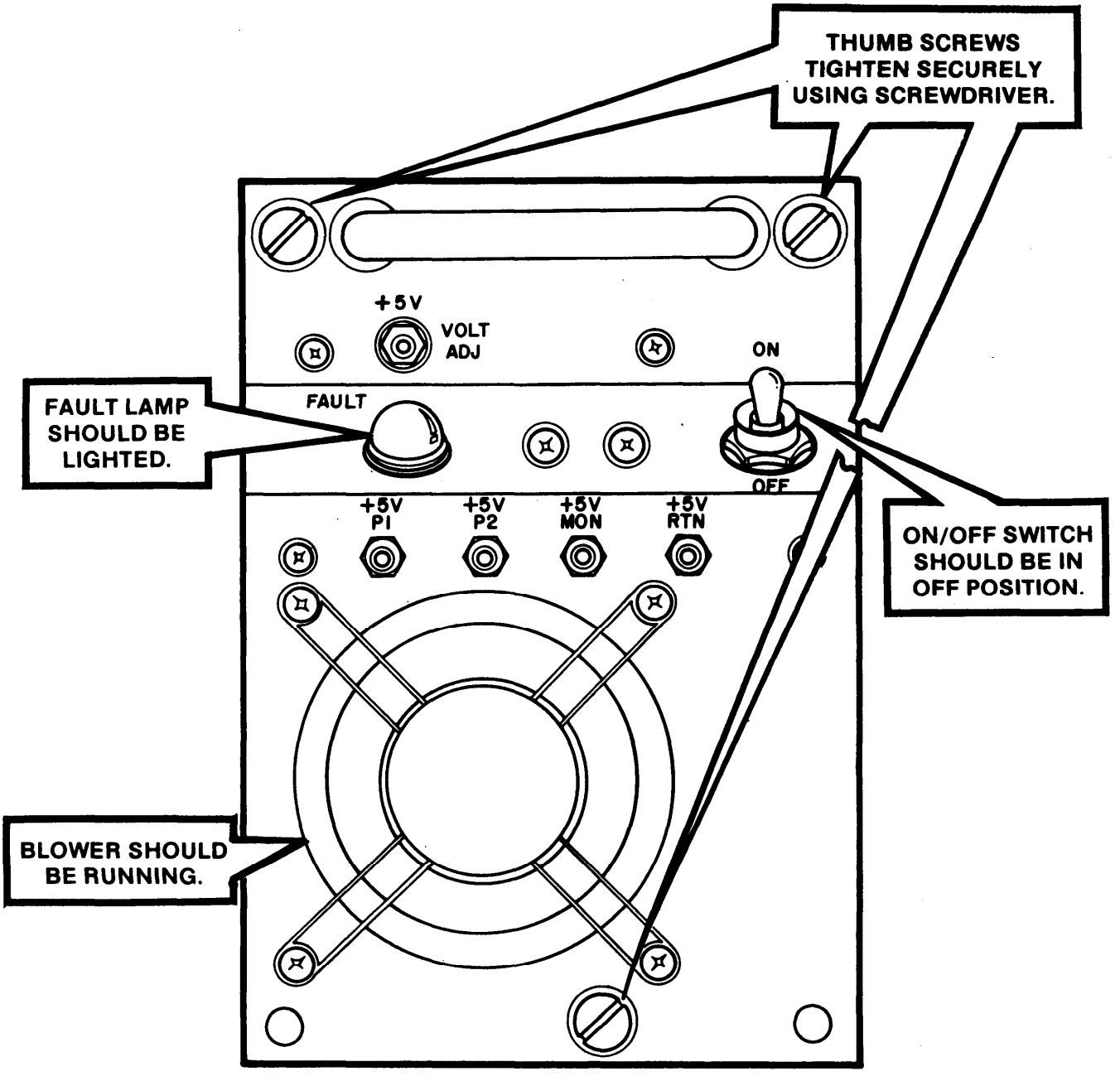
Section II. SERVICE UPON RECEIPT

4-4. SERVICE UPON RECEIPT CHECKS AND INSPECTIONS

LOCATION	ITEM	ACTION	REMARKS
UNPACKING			
1. Installation site	Carton	Inspect for evidence of damage.	
	Converter	a. Unpack.	
		b. Inspect for damage caused during shipment.	Report any damage on SF 364, Discrepancy in Shipment Report.
		c. Compare with packing list,	Be sure shipment is complete. Report any discrepancies in accordance with with TM 38-750. If packing list is not available, check the equipment against the Components of End Item (COEI) list in Appendix C. Report shortages on SF 364.
		d. Check for modifications.	Check on the front panel near the nomenclature plate, for any modification work order (MWO) numbers. They will appear ONLY if the unit has been used or reconditioned.

4-4. SERVICE UPON RECEIPT CHECKS AND INSPECTIONS - Continued

2. Front panel	FAULT Lamp	Lights.
	Blower	Operates.
	Thumb screws	Aline with rack mounting plates.
		Tighten, using screwdriver or fingers.
	Handle	Pull slightly to ensure converter is properly installed.



4-4. SERVICE UPON RECEIPT CHECKS AND INSPECTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
INSTALLATION			
1. Shelter	Rack	Inspect.	Ensure rack connections will mate with converter plugs.
2. Rear panel	Plugs P1&P2	Inspect for defects.	
	Switch	Check position.	Ensure switch matches system converter is being used in.

Converter	Aline with rack slides.	
	Push firmly to rear of rack.	
	Alinement pins will guide connectors to proper interconnection.	

INITIAL SETUP

Test Equipment

Multimeter ME-450/U

Support Equipment

Tool Kit, Electronic Equipment TK-101/G

Special Tools

None

Special Environmental Conditions

Shelter S-280B

Material/Parts

None

General Safety instructions

ON/OFF switch OFF

4-4. SERVICE UPON RECEIPT CHECKS AND INSPECTIONS - Continued

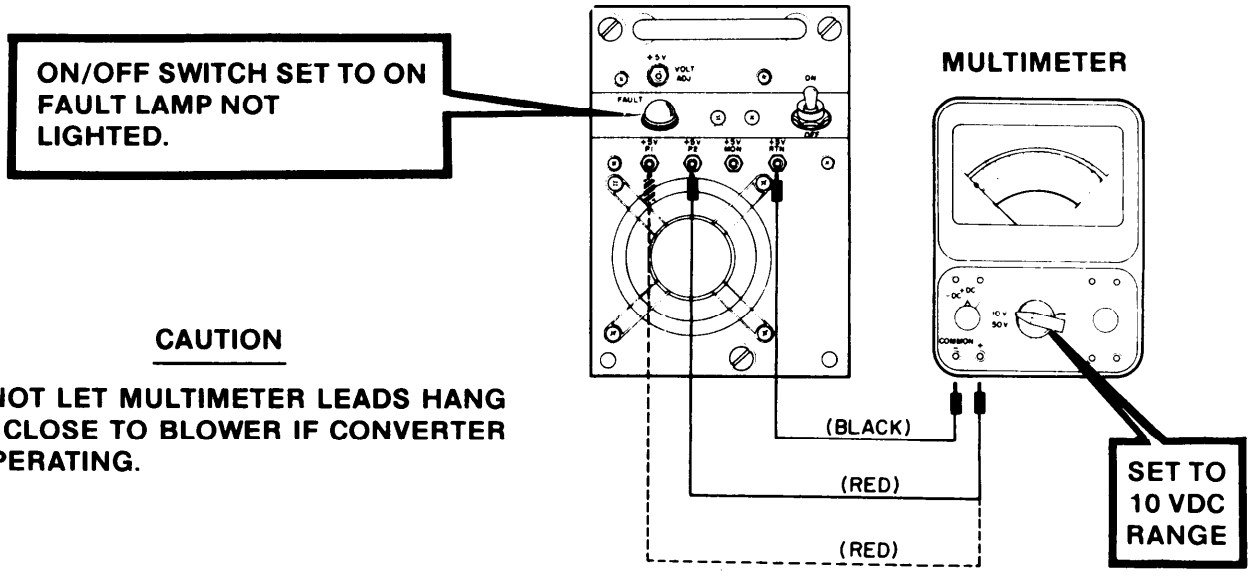
LOCATION	ITEM	ACTION	REMARKS
PERFORMANCE CHECK			
1. Multimeter	Function switch	Set to 10 Vdc scale.	
2. Front panel	ON/OFF switch	OFF (applies to initial installation only).	
	+5V RTN	Insert multimeter BLACK lead.	
	+5V P1	Insert multimeter RED lead.	
	ON/OFF switch	ON.	
3. Multimeter	Range scale	Observe indication; should be +5 volts ±0.1 Vdc.	If voltage is between +4.5 and +5.5 volts, no adjustment is necessary. If voltage is less than +4.5, or more than +5.5 volts dc perform ADJUSTMENT procedures.
4. Front panel	ON/OFF switch	OFF.	
	+5V P1	Remove multimeter RED lead.	
	+ 5V P2	Insert multimeter RED lead.	
	ON/OFF switch	ON.	
5. Multimeter	Range scale	Observe indication; should be +5 volts ±0.1 Vdc.	Same remark as for step 3 above.
6. Front panel	ON/OFF switch	OFF.	
		Remove multimeter leads from equipment.	
		Converter is now ready for operator's use.	

CAUTION

DO NOT LET MULTIMETER LEADS HANG TOO CLOSE TO BLOWER IF CONVERTER IS OPERATING.

4-4. SERVICE UPON RECEIPT CHECK AND INSPECTIONS – Continued

LOCATION	ITEM	ACTION	REMARKS
ADJUSTMENT			
1. Front panel	ON/OFF switch	ON.	If FAULT lamp is lighted voltage cannot be adjusted by +5V ADJ trimpot.
	FAULT lamp	OFF.	
2. Multi-meter	Function switch	Set to 10 Vdc scale.	
3. Front panel	+5V RTN	Insert multimeter BLACK lead.	
	+5V P1 or + 5V P2	Insert multimeter RED lead.	Adjustment determined by PERFORMANCE test.
4. Front panel	+5 ADJ	Loosen jam nut, using 5/16th inch nut driver. Use standard 6 inch screwdriver to rotate trimpot.	
5. Multi-meter	Range scale	Observe indication: When indication is +5 volts ±0.1 Vdc secure +5V ADJ trimpot finger tight. Recheck +5V P1, or +5V P2 output voltage. If voltages are correct, converter is ready for operator's use. Remove multimeter leads.	



CAUTION

DO NOT LET MULTIMETER LEADS HANG TOO CLOSE TO BLOWER IF CONVERTER IS OPERATING.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

4-5. GENERAL

There are no regular preventive maintenance checks and services performed by organizational maintenance for this equipment. Only single interval checks are to be performed when equipment is reported down, or not ready.

4-6. RECORDS AND REPORTS

Records and reports of Preventive Maintenance Checks and Services must be made in accordance with requirements set forth in TM 38-750, The Army Maintenance Management System (TAMMS). Use your PMCS Table Item No. Column to get the number for the TM ITEM No. Colum of DA Form 2404, Equipment Inspection and Maintenance Worksheet.

4-7. PROCEDURE

- **SEQUENCE** – Perform procedures in Item Number order.
  - PMCS table column headings explained:
    - **ITEM NUMBER(S)** - Gives the order in which the procedures are to be done. Also these item numbers are used to identify individual procedures in the PMCS table.
    - **ITEM TO BE INSPECTED** - Tells what part or function the procedure will check or service.
    - **PROCEDURE** - Gives details of what is to be done, the required order for doing any steps, and results which are acceptable.

NOTE

When equipment is installed or reinstalled, all items in organizational PMCS table shall be performed.

4-8. ROUTINE CHECKS

Routine checks are not listed in the PMCS table. They are checks such as: :

- Cleaning
- Dusting
- Washing
- Checking for frayed cables
- Storing items not in use
- Covering unused receptacles
- Checking for loose nuts, bolts and screws

Routine checks are things that you should do anytime you see that they must be done.

If you find any damage during PMCS, instructions contained in this chapter will tell you how to correct it. If instructions are not contained in this chapter, notify your supervisor. A higher category of maintenance may be required.

Table 4-1. ORGANIZATIONAL PREVENTIVE MAINTENANCE CHECKS AND SERVICES SEMIANNUAL SCHEDULE

Item No.	Item to be Inspected	Procedures
1	Front Panel	Check ON/OFF switch for proper operation. Make sure blower is clean and free from clogging.
2	Rear Panel	Slide converter out of rack. Check rear connectors and system cabling for signs of wear.

Section IV. TROUBLESHOOTING

4-9. GENERAL

- Troubleshooting at organizational maintenance level requires you to locate any trouble as quickly as possible.
- Once trouble is located, repair it if you are authorized to do so, or determine if a higher category of maintenance is required. Repairs by organizational maintenance personnel are limited by tools, test equipment and replacement parts allocated to that level by the Maintenance Allocation Chart (MAC) in Appendix B.
- Removal and replacement of any defective component is done by a higher category of maintenance (general support).

NOTE

Before using the troubleshooting chart, check your work order and talk to the operator, if possible, for a description of trouble symptom(s).

4-10. USE OF TROUBLESHOOTING CHART

- A troubleshooting chart for the converter is provided in this section. Only those corrective actions which are within the scope of organizational maintenance are listed in this chart. If these actions do not restore the converter to normal operation, refer to higher category of maintenance for corrective action.
- When a trouble appears, refer to the proper step in the chart for correction of the trouble. If higher level maintenance is not required, perform the listed corrective action.

WARNING

Before removing or replacing any part in this equipment, make sure your equipment is turned OFF. A shock hazard exists with any electronic equipment, BE CAREFUL, DON'T TAKE CHANCES.

Table 4-2. ORGANIZATIONAL MAINTENANCE TROUBLESHOOTING

STEP	INSTRUCTION	INDICATION	YES	NO	REMARKS
1	POWER OFF	Blower operates	x		Continue trouble-shooting.
				x	Observe FAULT lamp.
		FAULT lamp lighted	x		Blower not operating; replace converter.
				x	Blower not operating; check rack power source; Blower operating replace indicator bulb.
2	POWER ON	FAULT lamp goes out	x		Go to 3.
				x	Continue trouble-shooting,
		Demand downstream	x		FAULT lamp lighted; replace converter.
				x	Go to 3.
3	Using multimeter, check output at +5V P1 and +5V P2.	+5V ± 1.5 volts	x		Return to service.
				x	If FAULT lamp is lighted, voltage cannot be adjusted. . Adjustment pro-cedures are listed in paragraph 4-4.

Section V. MAINTENANCE PROCEDURES

4-11.MAINTENANCE INSTRUCTIONS

LOCATION	ITEM	ACTION	REMARKS

MAINTENANCE

INITIAL SET UP

Test Equipment

None

Special Tools

None

Support Equipment

Tool Kit, Electronic Equipment TK-101/G

Materials/Parts

Bulb, incandescent
Brush, soft bristled, non metallic
Cleaning Compound
Paint

General Safety Instructions

ON/OFF switch OFF

CLEANING

WARNING

Cleaning compound is flammable and its fumes are toxic. Provide adequate ventilation and do not use near flames or extreme heat.

The following instructions are provided to help meet serviceability requirements during organizational maintenance and should be done whenever needed.

1.	Case Exterior	Remove loose dirt and dust from front panel using soft clean cloth (item 4, Appendix E) and/or soft bristled brush (item 1, Appendix E). Remove ground-in dirt or grease using lint-free cloth (item 4, Appendix E) dampened (not wet) with cleaning compound (item 5, Appendix E). Rinse cleaned areas with clean water and allow to dry.
2.	Blower Screen	Remove dust and dirt from screen using soft bristled, non metallic brush (item 1, Appendix E).

4-11. MAINTENANCE INSTRUCTIONS - Continued

LOCATION	ITEM	ACTION	REMARKS
PAINTING			
			Minor damage to finishes, such as small scratches, require touchup painting to the affected areas only.
1.	Case	Touchup Procedures: l Remove all rust and corrosion by lightly sanding the affected areas with fine sandpaper (item 7, Appendix E). l Clean with solvent and abrasive and (item 3, Appendix E) and allow to dry. l Brush two (2) coats of paint (item 6, Appendix E) on the bare metal to protect it from further corrosion.	
REPLACEMENT			
1. Front panel	ON/OFF switch	OFF.	
	FAULT lamp	To remove indicator lamp: • Unscrew indicator lens. • Pull lamp straight out from lens. • Push in serviceable lamp and reinstall indicator.	
	ON/OFF switch	OFF- Indicator lamp should be lighted.	
REMOVAL			
1.	ON/OFF switch	OFF.	
	Thumb screws	Using screwdriver, or fingers, loosen thumb screws.	
	Handle	Lift converter out of rack.	
		Replace converter with serviceable equipment. Perform procedures in Section II of this chapter whenever equipment is installed or reinstalled.	

4-11. MAINTENANCE INSTRUCTIONS – Continued

LOCATION	ITEM	ACTION	REMARKS
FINAL INSPECTION			
		Final inspection insures that all maintenance functions contained in this technical manual have been complied with before the equipment is returned to service.	
		• PMCS-Assure that all requirements in Section III of this chapter have been accomplished. • Completeness-Inspect converter for completeness. Refer to Appendix B for a list of components.	Converter should meet all requirements of this section before operating, packaging, or storage.
		• Be sure all items listed in Basic Issue Items List are on hand. • Check to see that each item is correctly stock numbered. • Be sure that the correct quantity is available.	If the operational check, PMCS, or maintenance action cannot be performed satisfactorily, contact general support maintenance.
PLACING IN SERVICE			
		Organizational maintenance personnel will insure that the converter is in serviceable condition before turning the equipment over to operating personnel.	

APPENDIX A

REFERENCES

A-1. SCOPE

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

A-2. FORMS

Recommended Changes to Publications and Blank Forms . . . . . DA Form 2028

Equipment Inspection and Maintenance Worksheet . . . . . DA Form 2404

Discrepancy in Shipment Report... . . . . .. SF 364

Quality Deficiency Report . . . . SF 368

A-3. FIELD MANUALS

First Aid Manual . . . . FM 21-11

A-4. TECHNICAL MANUALS

Organizational Repair Parts and Special Tools List for Converter, Direct Current CV-3734/T TM11-6130-429-20P

The Army Maintenance Management System (TAMMS) ., ... TM 38-750

Procedures for Destruction of Electronics Material to prevent Enemy Use (Electronics Command) . . . . . TM 750-244-2

A-5. MISCELLANEOUS PUBLICATIONS

Consolidated Index of Army Publications and Blank Forms . . . . DA Pam 310-1

Painting and Preservation of Supplies Available for Field Use for Electronics Command Equipment . . . . . SB 11-573

Preservation, Packaging, Packing and Marking Materials, Supplies and Equipment Used by the Army SB38-100

Sets, Kits, and Outfits, Components List: Tool Kit, Electronic Equipment, TK-101/G SC5180-91-CL-R13

APPENDIX B

MAINTENANCE ALLOCATION

Section I. INTRODUCTION

B-1. GENERAL

This appendix provides a summary of the maintenance operations for the converter. It authorizes categories of maintenance for specific maintenance functions on repairable items and components and the tools and equipment required to perform each function. This appendix may be used as an aid in planning maintenance operations,

B-2. MAINTENANCE FUNCTION

Maintenance functions will be limited to and defined as follows:

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

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

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

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

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

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

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

j. OVERHAUL. That maintenance effect (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (ie., 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.

B-3. COLUMN ENTRIES

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

b. Column 2: COMPONENT ASSEMBLY. Column 2 contains the noun names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

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

d. Column 4: MAINTENANCE 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 of complexity of the tasks within the listed maintenance function varies 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. Column 6 contains an alphabetic code which leads to the remark in Section IV, Remarks, which is pertinent to the item opposite the particular code.

B-4. TOOLS AND TEST EQUIPMENT REQUIREMENTS

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 (5 digit) Federal Supply Code for Manufacturers in parentheses.

B-5. REMARKS

a. REFERENCE CODE. This code refers to the appropriate item in Section II, Column 6.

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

Section II. MAINTENANCE ALLOCATION CHART FOR CONVERTER, DIRECT CURRENT CV-3734/T

(1) GROUP NUMBER	(2) COMPONENT ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY					(5) TOOLS AND EQPT.	(6) REMARKS
			C	O	F	H	D		
00	DC TO DC CONVERTER – TYPE 10	INSPECT							
		SERVICE		0.2				1	A
		REPLACE		0.2				1	B
		ADJUST		0.5				1,2	C
		REPAIR		0.3		0.5		3	D
		OVERHAUL					3.0		
01	BASEPLATE ASSEMBLY	REPAIR				0.3		3	E
02	PRINTED CIRCUIT CARD A1	REPLACE				0.3		3	
		REPAIR				2.0		2,3,4	
		ADJUST				0.4			F
03	FRONT PANEL ASSEMBLY	INSPECT		0.2					
		REPAIR		0.4				1	G
		SERVICE		0.2				1	H
		REPAIR				0.4		2,3	I
04	REAR PANEL ASSEMBLY	REPAIR				0.5		2,4	J
05	HEATSINK ASSEMBLY	REPAIR				0.5		3	
0501	A2 AND COMPONENT BRACKET ASSEMBLY	REPAIR				0.4		3,4	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR CONVERTER, DIRECT CURRENT CV-3734/T

TOOL OR TEST EQUIPMENT REF CODE	MAINTENANCE CATEGORY	NOMENCLATURE	NATIONAL/NATO STOCK NUMBER	TOOL NUMBER
1	O	TOOL KIT, ELECTRONIC EQUIPMENT TK-101/G	5180-00-064-5178	
2	O,H,D	MULTIMETER ME-450/U (SIMPSON 260)	6625-00-149-6301	
3	H,D	TOOL KIT, ELECTRONIC EQUIPMENT TK-100/G	5180-00-605-0079	
4	H	OSCILLOSCOPE (BALLANTINE MODEL 1066B)	6625-01-043-0262	

Section IV. REMARKS

REFERENCE CODE	REMARKS
A	BY CLEANING FRONT PANEL ASSEMBLY AND CONVERTER COVER.
B	WHEN REPLACING CONVERTER, MAKE SURE SYSTEM SELECTOR SWITCH IS IN APPROPRIATE POSITION (AN/TTC-38 OR AN/TTC-39) AND LOCKING PLATE IS SECURED.
C	EMERGENCY +5 VOLT OUTPUT ADJUSTMENT. THIS ADJUSTMENT NORMALLY PERFORMED AT GS LEVEL USING A DIGITAL VOLTMETER.
D	MECHANICAL REPAIRS OF CHASSIS.
E	REPLACEMENT OF CAPACITORS C4 AND C5 AND INDUCTORS L1 AND L2.
F	CURRENT LIMIT ADJUSTMENT, OVERVOLTAGE – UNDERVOLTAGE ADJUSTMENT.
G	REPLACEMENT OF LENS AND LAMP DS1.
H	CLEAN DIRT FROM FAN.
I	REPLACEMENT OF POTENTIOMETER R8, TP1, TP2, TP3 AND TP4, RESISTOR R1, SWITCH S1, AND BLOWER B1.
J	REPLACEMENT OF RECTIFIERS AND CONNECTORS.

APPENDIX C

COMPONENTS OF END ITEM AND BASIC ISSUE ITEMS LIST

Section I. INTRODUCTION

C-1. SCOPE

This appendix lists components of end item and basic issue items for the converter to help you inventory items required for safe and efficient operation.

C-2. GENERAL

The Components of End Item and Basic Issue Items Lists are divided into the following sections:

a. Section II. Components of End Item. This listing is for informational purposes only, and is not authority to requisition replacements. These items are part of the end item, but are removed and separately packaged for transportation or shipment. As part of the end item, these items must be with the end item whenever it is issued or transferred between property accounts. Illustrations are furnished to assist you in identifying the items.

b. Section III. Basic Issue Items. These are the minimum essential items required to place the converter in operation, to operate it, and to perform emergency repairs. Although shipped separately packaged BII must be with the converter during operation and whenever it is transferred between property accounts. The illustrations will assist you with hard-to-identify items. This manual is your authority to request/requisition replacement BII, based on TOE/ MTOE authorization of the end items.

C-3. EXPLANATION OF COLUMNS

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

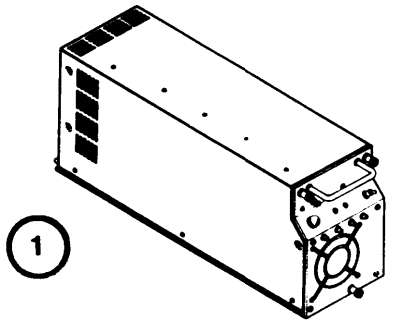
a. Column (1) - Illustration Number (Illus Number). This column indicates the number of the illustration in which the item is shown.

b. Column (2) - National Stock Number. Indicates the National stock number assigned to the item and will be used for requisitioning purposes.

c. Column (3) - Description. Indicates the National item name and, if required, a minimum description to identify and locate the item. The last line for each item indicates the FSCM (in parentheses) followed by the part number. If item needed differs for different models of this equipment, the model is shown under the “Usable On” heading in this column. “Usable On” codes do not apply to this equipment.

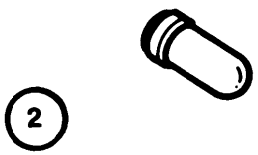
d. Column (4) - Unit of Measure (U/M). Indicates the measure used in performing the actual operational/maintenance function. This measure is expressed by a two-character alphabetical abbreviation (e.g., ea, in, pr).

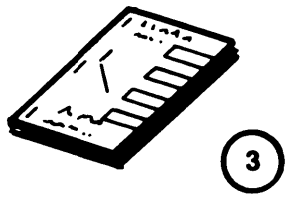
e. Column (5) - Quantity required (Qty rqr). Indicates the quantity of the item authorized to be used with/on the equipment.



Section II. COMPONENTS OF END ITEM

(1) ILLUS. NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM AND PART NUMBER	USABLE ON CODE	(4) U/M	(5) QTY. RQR.
1		CONVERTER, DIRECT CURRENT (80058) CV-3734/T		EA	1





Section III. BASIC ISSUE ITEMS

(1) ILLUS. NO.	(2) NATIONAL STOCK NUMBER	(3) DESCRIPTION FSCM AND PART NUMBER	USABLE ON CODE	(4) U/M	(5) QTY. RQR.
2		LAMP, INCANDESCENT (96312) 927		EA	1
3		PUBLICATION TM 11-6130-429-12		EA	1

APPENDIX D

ADDITIONAL AUTHORIZATION LIST

NOT APPLICABLE

APPENDIX E

EXPENDABLE SUPPLIES AND MATERIALS LIST

Section I. INTRODUCTION

E-1 . SCOPE

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

E-2. EXPLANATION OF COLUMNS

a. Column 1- Item Number. This number is assigned to the entry in the listing and is referenced in the narrative instructions to identify the material (e.g., “Use cleaning compound, item 5, App. E").

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

C - Operator/Crew
O - Organizational Maintenance
F - Direct Support Maintenance
H - General Support Maintenance

c. Column 3- National Stock Number. This is the national stock number assigned to the item, use it to request or requisition the item.

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

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

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) ITEM NO.	(2) LEVEL	(3) NATIONAL STOCK NUMBER	(4) DESCRIPTION	(5) U/M
1	0	8020-00-245-4509	BRUSH, CAMELS HAIR	EA
2	0	8020-00-205-6512	BRUSH, PAINT	EA
3	0	5350-00-221-0872	CLOTH, ABRASIVE	SH
4	0	7920-00-924-5700	CLOTH, CLEANING	SH
5	0	7930-00-395-9542	COMPOUND, CLEANING	QT
6	0		PAINT, ENAMEL (GRAY)	QT
7	0	5350-00-598-5905	SANDPAPER NO. 000	ST

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Stateside Army Depot
ATTN: AMSTA-US
Stateside, N.J. 07703

DATE SENT
10 July 1975

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 11-5840-340-12	23 Jan 74	Radar Set AN/PRC-76

BE EXACT PIN-POINT WHERE IT IS

PAGE NO	PARAGRAPH	FIGURE NO	TABLE NO	IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:
2-25	2-28			Recommend that the installation antenna alignment procedure be changed throughout to specify a 2° IFF antenna lag rather than 1°. REASON: Experience has shown that with only a 1° lag, the antenna servo system is too sensitive to wind gusting in excess of 25 knots, and has a tendency to rapidly accelerate and decelerate as it hunts, causing strain to the drive train. Hunting is minimized by adjusting the lag to 2° without degradation of operation.
3-10	3-3		3-1	Item 5, Function column. Change "2 db" to "3db." REASON: The adjustment procedure the the TRANS POWER FAULT indicator calls for a 3 db (500 watts) adjustment to light the TRANS POWER FAULT indicator.
5-6	5-8			Add new step f.1 to read, "Replace cover plate removed in step e.1, above." REASON: To replace the cover plate.
		F03		Zone C 3. On J1-2, change "+24 VDC to "+5 VDC." REASON: This is the output line of the 5 VDC power supply. +24 VDC is the input voltage.

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER
SSG I. M. DeSpiritof 999-1776

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SSG I. M. DeSpiritof

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