TM 32-6130-001-14&P

TECHNICAL MANUAL

OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE MANUAL (INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)

POWER SUPPLY
MODEL PXS-EE-28VF
NSN 6130-01-010-3603

HEADQUARTERS, DEPARTMENT OF THE ARMY

MAY 1978

WARNING

DANGEROUS CHEMICALS

are used in cleaning this equipment
DEATH
may result if personnel fail
to observe safety precautions.

WARNING

HIGH VOLTAGE

is used in the operation of this equipment
DEATH ON CONTACT
may result if personnel fail to observe safety precautions.

Learn the areas containing high voltage in each piece of equipment.

Be careful not to contact high-voltage connections when installing or operating this equipment.

Before working inside the equipment, turn power off and ground points of high potential before touching them.

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LIST OF EFFECTIVE PAGES

Insert latest changed pages; dispose of superseded pages in accordance with applicable regulations.

NOTE: On a changed page, the portion of the text affected by the latest change is indicated by a vertical line or other change symbol in the outer margin of the page. Changes to illustrations are indicated by miniature pointing hands; changes to wiring diagrams are indicated by shaded area.

Total number of pages in this manual is 74, consisting of the following:

Page Number	*Change Number
Cover	0
Warning	0
A	0
B blank	0
i thru iv	0
1-1 thru 1-3	0
1-4 blank	0
2-1 thru 2-4	0
3-1 thru 3-3	0
3-4 blank	0
4-1 thru 4-2	0
5-1 thru 5-10	0
6-1	0
6-2 blank	0
7-1 thru 7-4	0
A-1	0
A-2 blank	0
B-1 thru B-5	0
B-6 blank	0
C-1 thru C-23	0
C-24 blank	0
FO-1	0
FO-2 blank	0

*0 indicates an original page.

NOTICE

As contained in this publication, the words he, his and him are intended to include both the masculine and the feminine genders. Any exceptions to this are so noted.

Technical Manual
TM 32-6130-001-14&P

HEADQUARTERS
DEPARTMENT OF THE ARMY
WASHINGTON, DC, 18 May 1978

OPERATOR'S ORGANIZATIONAL, DIRECT SUPPORT and GENERAL SUPPORT MAINTENANCE MANUAL (Including Repair Parts and Special Tools List)

POWER SUPPLY
MODEL PXS-EE-28VF
(NSN 6130-01-010-3603)

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CHAPTER 1

INTRODUCTION

Section I. GENERAL

1-1. Scope.

This manual describes Power Supply Model PXS-EE-28VF and covers its installation, operation, and maintenance. The manual includes operation under usual and unusual conditions, cleaning and inspection, preventive and periodic maintenance procedures, and organizational, direct support, and general support maintenance repair.

1-2. Maintenance Forms and Records.

Department of the Army forms and procedures are used for equipment maintenance will be those prescribed by TM 38-750.

1-3. Destruction of Army Material.

For destruction of Army materiel to prevent enemy use, refer to TM 750-244-2.

1-4. Administrative Storage.

For procedures, forms and records, and inspections required during administrative storage of this equipment, refer to TM 740-90-1.

1-5. Reporting of Errors.

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 forwarded direct to Commander, US Army Electronics Materiel Readiness Activity, ATTN: DRXEM-NM-E, Vint Hill Farms Station, Warrenton, Virginia 22186.

1-6. Reporting Equipment Improvement Recommendations (EIR).

EIR 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 directly to Commander, US Army Electronics Materiel Readiness Activity, ATTN: DRXEM-NM-M, Vint Hill Farms Station, Warrenton, Virginia 22186. A reply will be furnished directly to you.

Section II. DESCRIPTION AND DATA

1-7. Purpose and Use.

Power Supply PXS-EE-28VF (fig. 1-1), hereafter referred to as the power supply, is a shelf mounted unit, arid is used as a source of regulated 0-30 volts DC power.

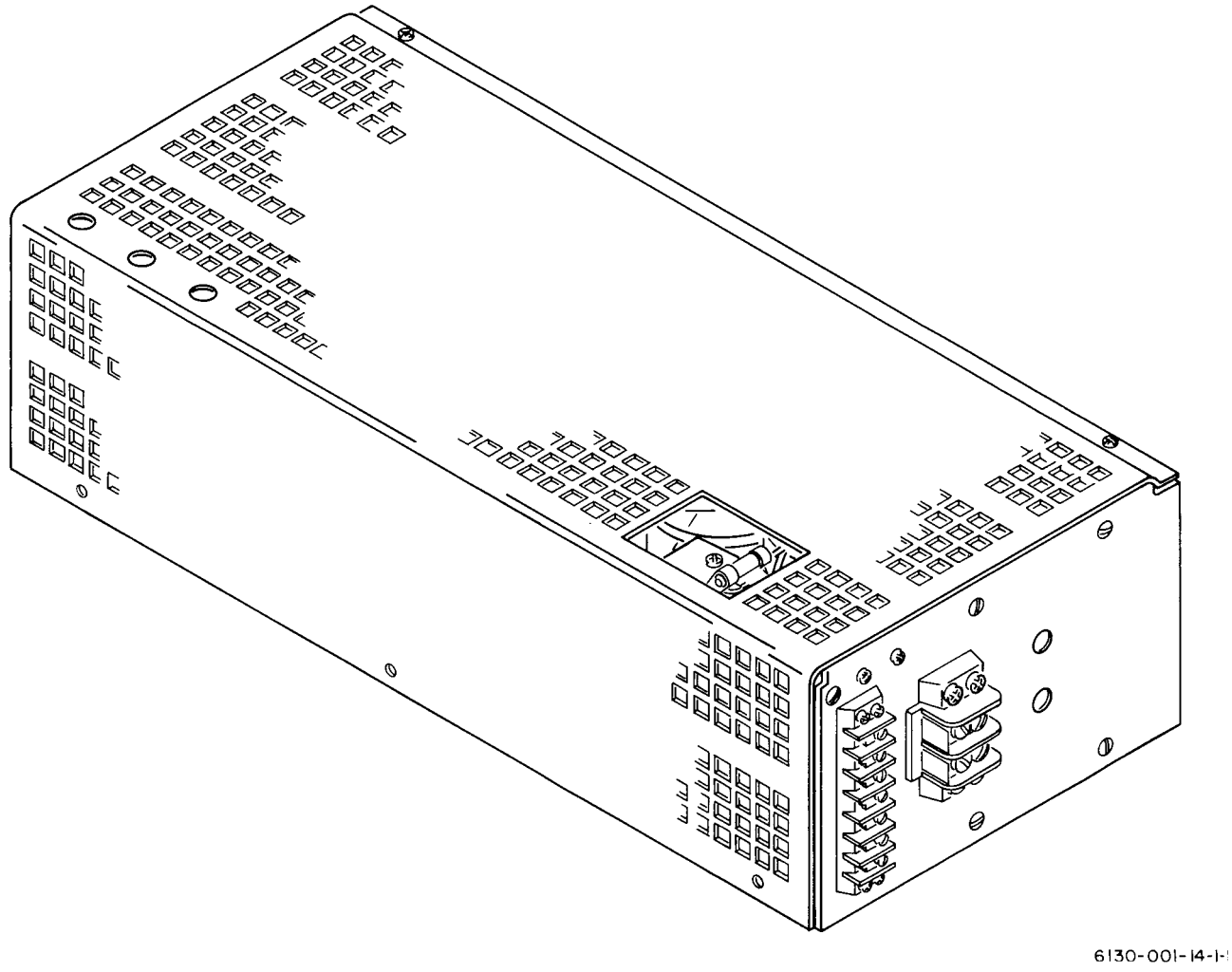


Figure 1-1. Power Supply PXS-EE-28 VF.

1-8. Description.

The power supply, figure 1-2, consists of a perforated metal cover and components mounted in a chassis. Two terminal boards (TB1 and TB2) are mounted on the exterior of the chassis and are used to connect the power supply to input power and provide a means of connecting to the output. A hole in the top of the perforated metal cover provides access to the ON-OFF circuit breaker CB1. Voltage and overvoltage screwdriver adjustments are provided through access in the front panel.

1-9. Tabulated Data.

Input Voltage	105-132 VAC, 47-440 Hz
Output Voltage	28 ± 4 Vdc
Regulation	Line 0. 1% - Load 0.1%
Noise and Ripple	1.5 mv RMS, 5mv peak-to-peak with positive or negative grounded.
Sensing	Provision included for remote sensing of output voltage directly at the load. Also may be connected for local sensing.
Voltage Adjust	Remote or local

Polarity	May be either positive, negative or floating.
Overload and Short Circuit Protection	Solid state protection gives instantaneous recovery and automatic reset. Cannot be damaged by prolonged shorts or overloads.
Dimensions:	
Height	4.75 inches
Depth	16.5 inches
Width	7.5 inches
weight	38 lbs.
Operating Temperature	32°F to 159°F (O°C to 76°C)
Storage Temperature	-67°F to 185°F (-55°C to +85°C)

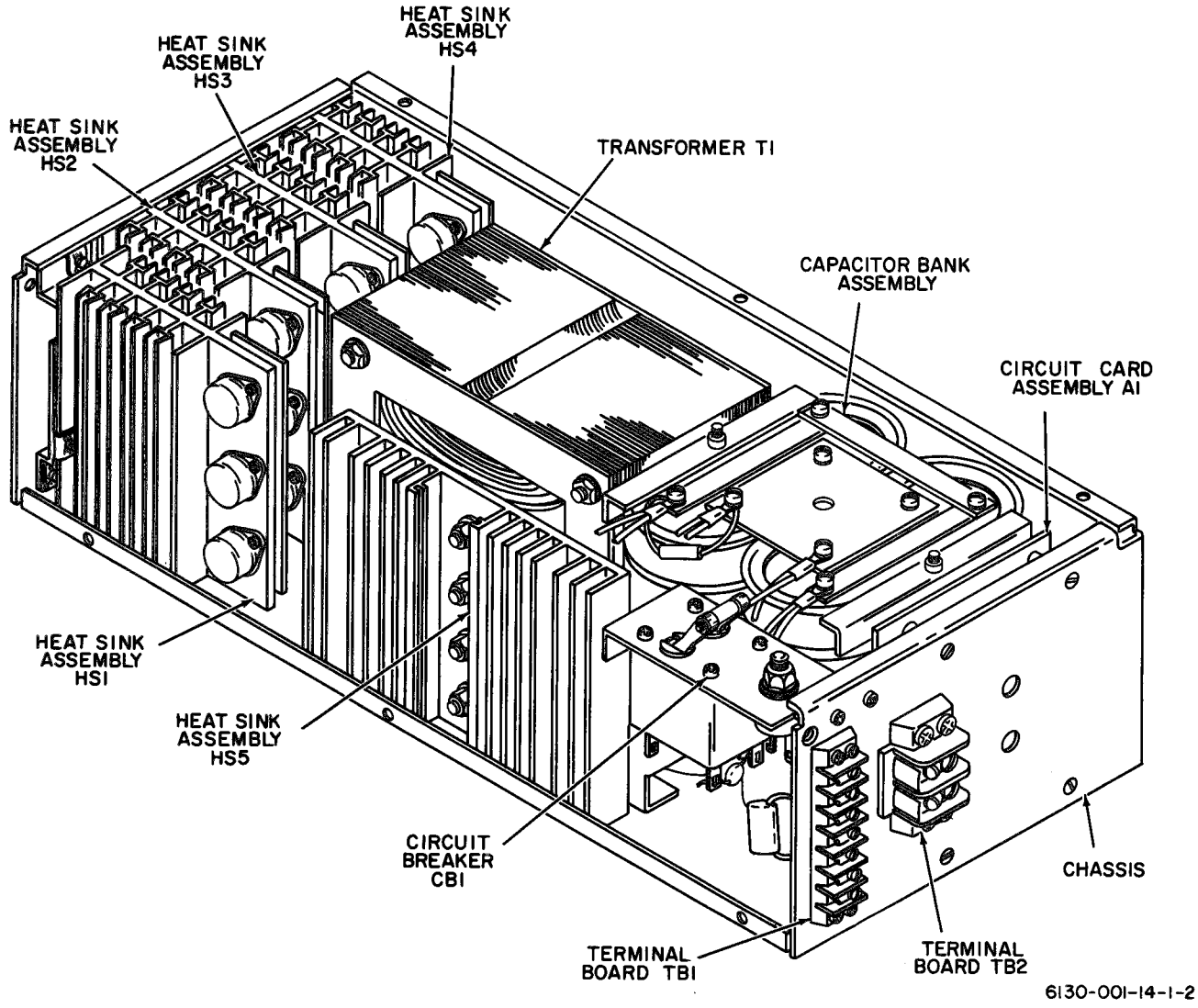


Figure 1-2. Power Supply With Cover Removed.

CHAPTER 2

SERVICE UPON RECEIPT AND INSTALLATION

Section I. SITE AND SHELTER REQUIREMENTS

2-1. General.

There are no special site and shelter requirements for the power supply other than leaving a sufficient amount of space for air flow around the unit. The power supply is designed for convection cooling, therefore, it is important not to impede the air flow across or through the power supply chassis. When chassis mounting the power supply, make sure that the ventilation holes in the chassis are not covered by the mounting chassis. To permit proper air convection is to provide a 1/2 inch space (minimum) between the power supply and the mounting chassis. The power supply should be mounted in such a manner as to keep exposed terminals away from working personnel.

Section II. SERVICE UPON RECEIPT OF MATERIAL

2-2. Unpacking.

Figure 2-1 illustrates a typical packaging of the power supply. To unpack the power supply proceed as follows:

1. Place the packaged power supply in an upright position as close as possible to the specified installation site.

NOTE

When unpacking the power supply, avoid damaging packing material. This material should be saved for use during reshipment or storage.

2. Remove cloth tape around waterproof outer container. Open top flaps of outer container and remove foil-lined barrier bag.

3. Cut open foil-lined barrier bag along heat seal.

4. Cut open inner container.

CAUTION

Exercise care when unpacking power supply to prevent damage to its surface.

5. Remove and inspect humidity indicator. Red tint indicates that unit may be damaged due to excessive humidity. Remove desiccant bag.

6. Carefully lift power supply out of the inner container and remove the foam cushion.

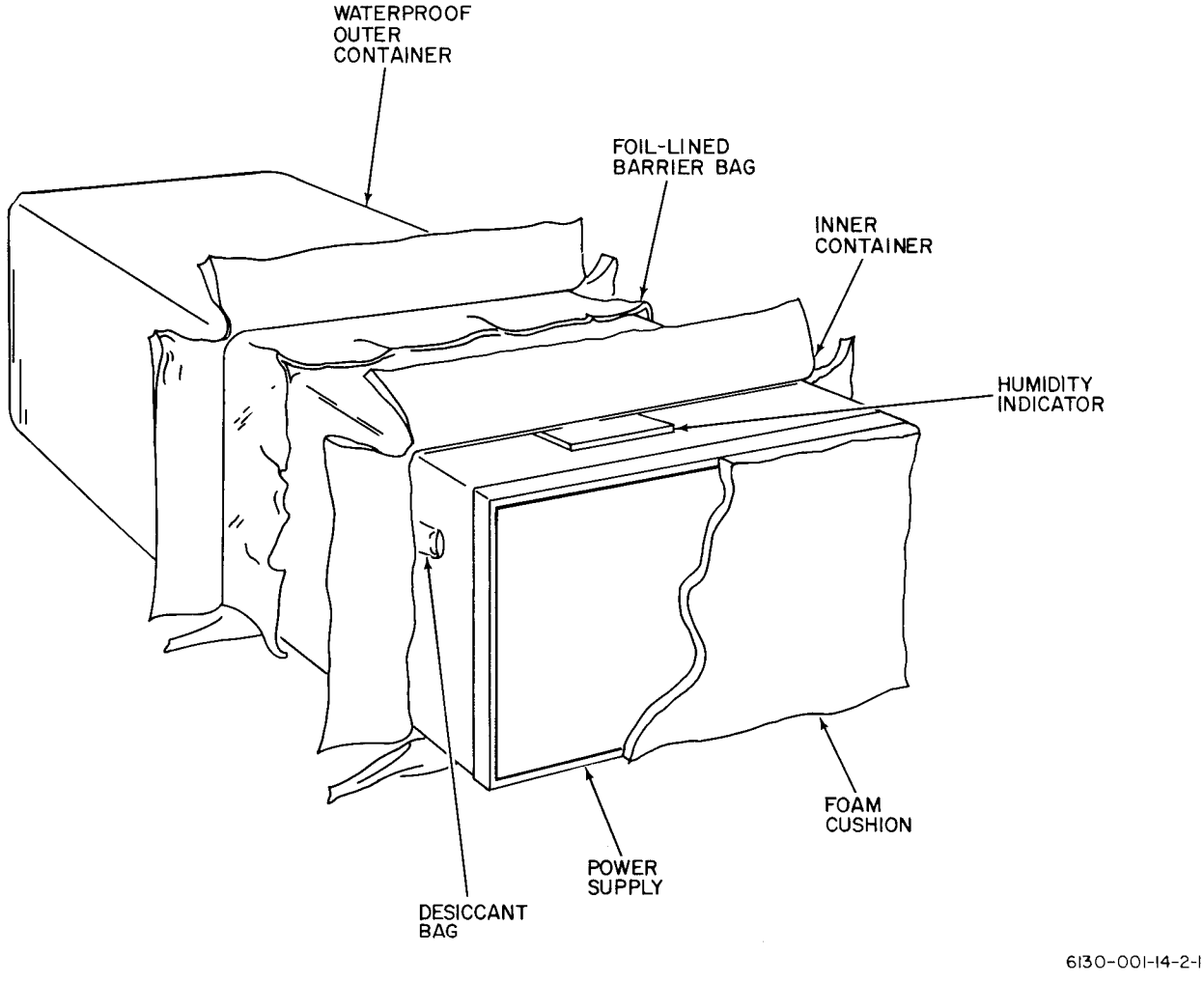


Figure 2-1. Typical Packaging.

2-3. Checking Unpacked Equipment.

a. Inspect the equipment for damage incurred during shipment. If the equipment has been damaged, report the damage on DD Form 6 (para 1-2).

b. Check the equipment against the packing slip to see if the shipment is complete. Report all discrepancies in accordance with instructions described in paragraph 1-2. The equipment should be placed in service even though a minor assembly or part that does not affect proper function is missing.

c. Check to see whether the equipment has been modified. (Equipment which has been modified will have the MWO number on the front panel near the nomenclature plate.) Check also to see whether all currently applicable MWOs have been applied. (Current MWOs applicable to the equipment are listed in USASA PAM 310-6 or DA PAM 310-7 as applicable.)

d. For dimensions, weights, and volume of packaged items, see Army Master Data File (AMDF).

Section III. INSTALLATION INSTRUCTIONS

2-4. Tools, Test Equipment, and Materials Required for Installation.

There are no tools, test equipment, or materials required to install the power supply.

2-5. Installation instructions.

The only requirements for installing the power supply is that sufficient space be allowed for cooling air flow around the unit. The power supply is housed in a metal case and installed in a ventilated area. It is important not to impede the air flow across and through the power supply.

2-6. Interconnections.

a. Load Connections. To keep the load voltage drop to a minimum, the largest practical wire size should be used for load connections. Table 2-1 shows how much drop to expect for a given size wire if the power supply is located 5 feet (10 feet of wire) from the load. For proper power supply operation with remote sensing, the voltage drop in each load lead should not exceed 0.75 V.

Table 2-1. Lead Voltage Drop.

Wire Size	DC Drop in Millivolts Per Ampere
22	155
20	100
18	65
16	40
14	25
12	15
10	10

b. Local/Remote Load Sensing; The power supply has a local/remote load sensing feature. This feature provides for remote sensing of the output voltage directly at the load for improved overall regulation. The power supply can also be connected for local sensing of the output voltage. The power supply as it is shipped is connected for local sensing. Connections for remote or local load sensing are shown in figure 2-2.

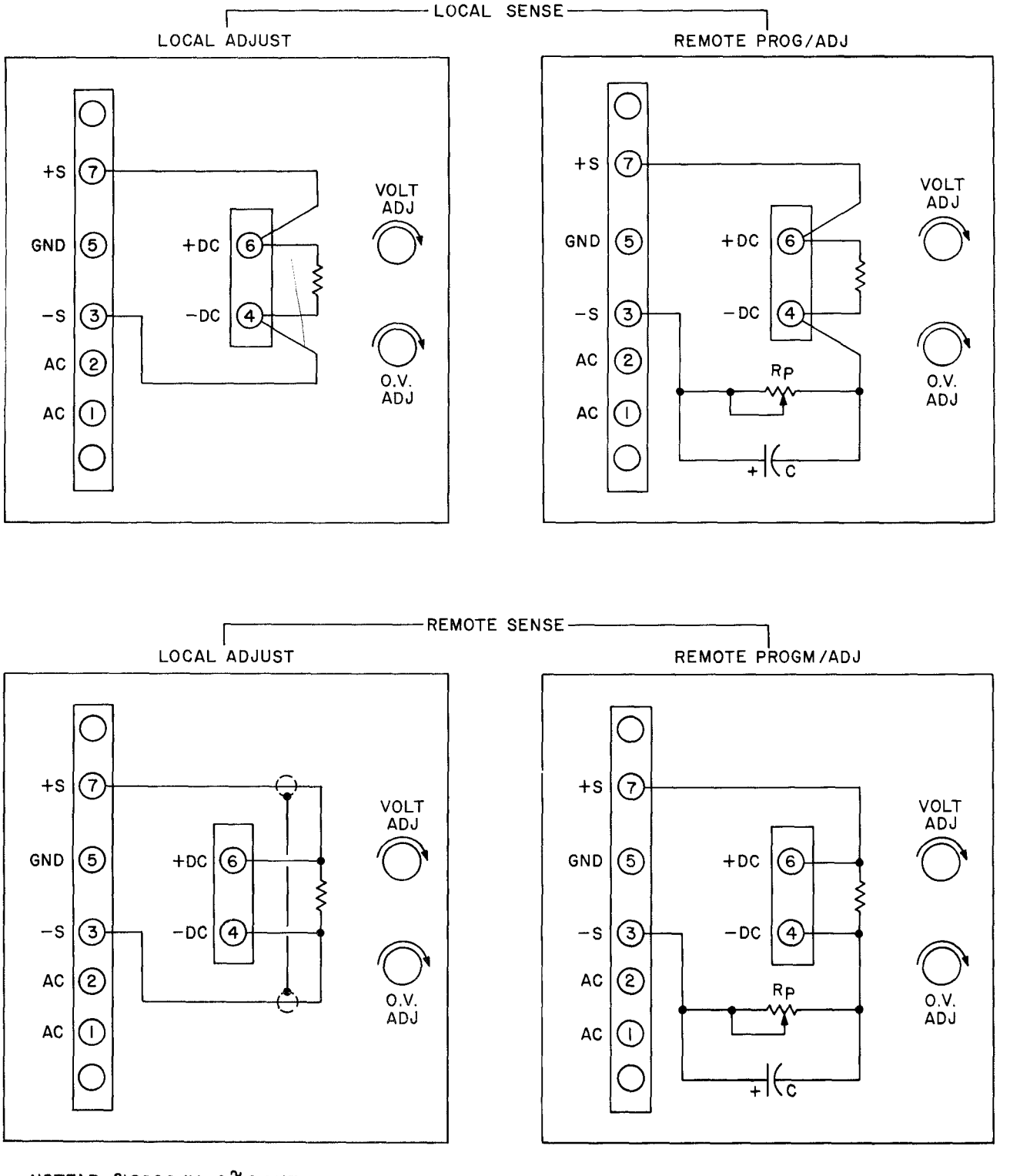


Figure 2-2. Local/Remote Load Sensing Connections.

CHAPTER 3

OPERATING INSTRUCTIONS

Section I. CONTROLS AND INSTRUMENTS

3-1. Operator/Crew Controls.

The operator/crew controls for the power supply are listed in table 3-1. Figure 3-1 illustrates the location of the operator/crew controls.

Table 3-1. Operator's Control.

Control or Connector	Function
VOLTAGE ADJ. control	Permits adjustment of the output voltage of the power supply.
OV ADJ. control	Permits adjustment of the overvoltage trip point of the power supply.
AC 1 terminal	AC input terminal from external power source.
AC 2 terminal	AC input terminal from external power source.
-SEN 3 terminal	Provides a means of connecting the power supply for local or remote load voltage sensing.
GND 5 terminal	Chassis ground.
+ SEN 7 terminal	Provides a means of connecting the power supply for local or remote load voltage sensing.
+ DC 6 terminal	Positive dc voltage output terminal.
- DC 4 terminal	Negative dc voltage output terminal.
AC ON-OFF switch	Permits application of external ac power to the power supply.

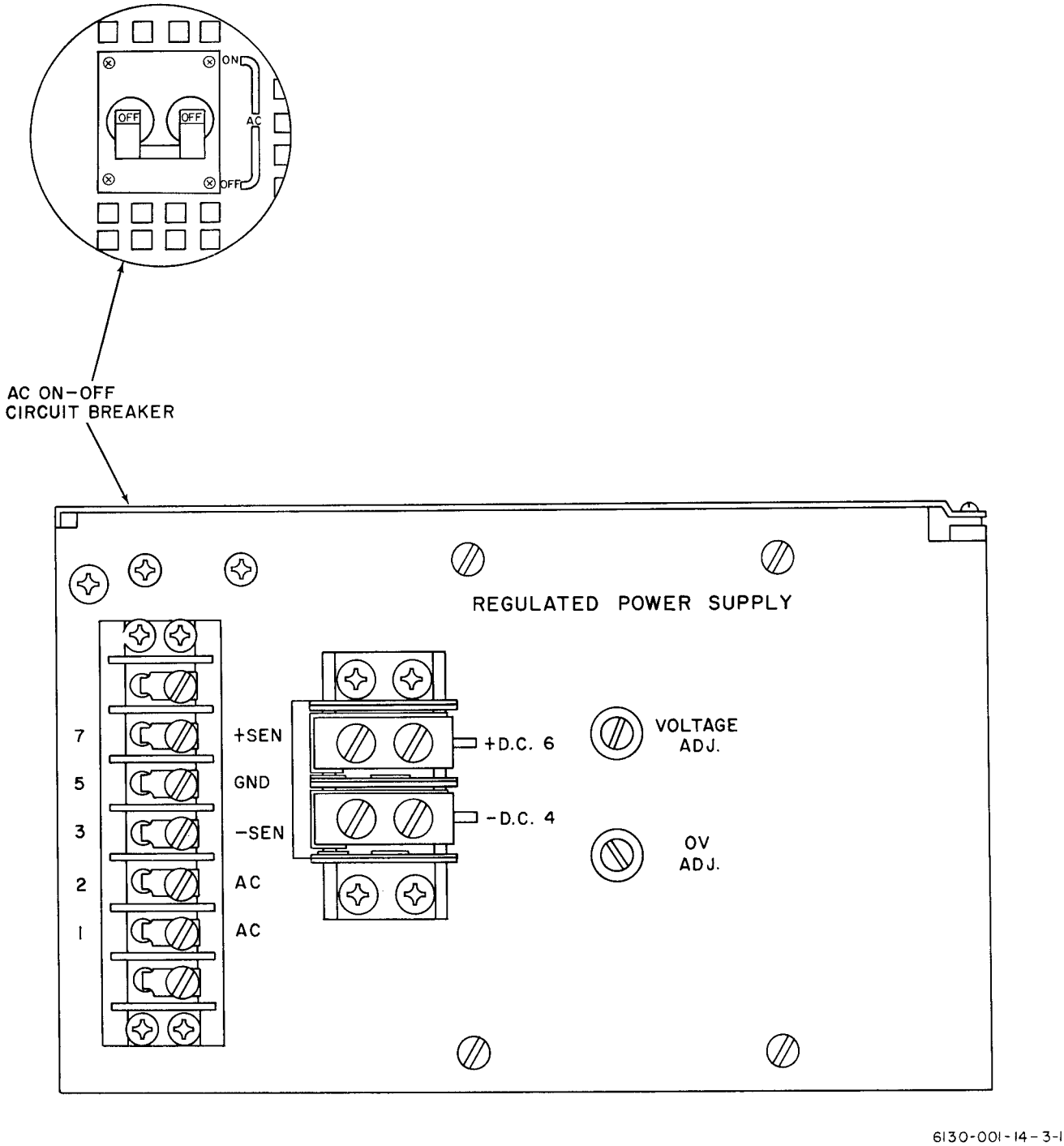


Figure 3-1. Power Supply Operating Controls and Connections.

Section II. OPERATION UNDER USUAL CONDITIONS

3-2. Operating Procedures.

a. Operating the AC ON-OFF circuit breaker to the ON position energizes the power supply.

b. To de-energize the power supply, operate the AC ON-OFF circuit breaker to the OFF position.

Section III. OPERATION UNDER UNUSUAL CONDITIONS

3-3. Arctic Climates.

At extremely low temperatures, the equipment should be operated in a heated environment and should riot be turned off unless repairs are necessary.

3-4. Tropical Climates.

In tropical climates, the high relative humidity causes condensation of moisture on the unit whenever the equipment temperature becomes lower than that of the surrounding air. Adequate ventilation will minimize this condition. Check frequently for fungus or moisture on the unit. Remove any observed fungus or moisture with a lint-free cloth.

3-5. Sandy or Dusty Locations.

When operated in sandy or dusty locations, sand or dust particles may enter the equipment through the perforated metal cover. Attempt to keep power supply as free of foreign material as possible.

Section IV. PREPARATION FOR MOVEMENT

3-6. General.

This section contains instructions for removal and repacking the power supply prior to reshipment. These instructions are also used to repack the equipment for storage for a limited period. Removal and repacking shall be performed by organizational, or higher level maintenance personnel only.

3-7. Disassembly of Equipment.

Use the following instructions as a guide to prepare the power supply for shipment or storage.

1. De-energize AC supply voltage to the power supply.
2. Disconnect output leads from the power supply.
3. Disconnect AC input leads from the power supply.
4. Remove power supply from its mounting.

3-8. Packing for Shipment or Limited Storage.

1. The exact procedure for repackaging depends on the material available and the conditions under which the equipment is to be shipped or stored. Normally, the power supply will be shipped or stored complete.

2. Pack to withstand harsh treatment.

3. Reuse the materials that the power supply was shipped in and reverse the unpacking procedures (para 2-2).

4. Identify the contents of the carton by use of appropriate labels. Mark the outer carton, FRAGILE - ELECTRONIC EQUIPMENT INSIDE, and clearly indicate the shipping destination of the equipment. Refer to TM 740-90-1.

CHAPTER 4

OPERATOR/CREW MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

4-1. General.

There are no tools or equipment necessary for operator/crew maintenance of the power supply. Cleaning materials required and their use are listed below:

NSN	*Item*	*Use*
6850-00-935-1082	Trichloroethane	Clean metal surfaces
8305-00-267-3015	Lint-free cloth	Clean and dry metal surfaces
7920-00-356-4694	1-inch bristle brush	Clean metal surfaces

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

4-2. General.

To insure that the power supply is always ready for operation, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services to be performed by the operator/crew are listed in Table 4-1. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the units will be noted for future correction to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment. Record all deficiencies together with the corrective action taken on forms and records specified in TM 38-750.

4-3. Preventive Maintenance Procedures.

Table 4-1 lists procedures for performing preventive maintenance checks and services. The first column lists the sequence of the checks and services required. The second column lists the item to be inspected and the procedure. The third column lists the worktime required to perform the inspection.

Table 4-1. Operator/Crew Preventive Maintenance Checks and Services

Time Required: 0.3

Sequence No.	ITEM TO BE INSPECTED PROCEDURE	WORK TIME (M/H)
1	**POWER SUPPLY EXTERIOR** Inspect the exterior of the power supply. The exterior surfaces should be clean, free of dust, dirt, and grease. Clean power supply exterior (para 4-6).	0.1

Table 4-1. Operator/ Crew Preventive Maintenance Checks and Services - Continued

Sequence No.	ITEM TO BE INSPECTED PROCEDURE	WORK TIME (M/H)
2	TERMINAL BOARDS Inspect terminal boards for missing hardware. Check for dirt, dust, and grease. Clean terminal boards (para 4-6).	0.1
3	COVER Inspect cover for dents, scratches, nicks, corrosion, dirt, dust, or other visible signs of damage. Clean cover (para 4-6). Refer equipment to a higher category of maintenance if damaged.	0.1

Section III. TROUBLESHOOTING

4-4. General.

No troubleshooting of the power supply shall be performed by the operator/crew personnel. If corrective maintenance or repair is required, refer the equipment to the next higher category of maintenance.

Section IV. MAINTENANCE OF POWER SUPPLY PXS-EE-28VF

4-5. Scope of Operator/Crew Maintenance.

This section contains instructions covering operator/crew maintenance. It consists of cleaning the exterior of the power supply and observing that it operates normally.

4-6. Cleaning.

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 or hot metal forms highly toxic phosgene gas.

a. Remove dust and dirt from the exterior surfaces using a lint-free cloth.

b. Use a l-inch bristle brush or, if available, dry compressed air at a pressure not to exceed 60 psi, to remove dirt and dust from hard to reach areas.

c. Remove grease with trichloroethane, and wipe dry with a clean, dry, lint-free cloth.

d. Remove caked-on dirt with a l-inch bristle brush soaked with trichloroethane. Wipe dry with a clean, dry, lint-free cloth.

CHAPTER 5

ORGANIZATIONAL MAINTENANCE INSTRUCTIONS

Section I. TOOLS AND EQUIPMENT

5-1. Tools.

THE tools required for organizational maintenance are listed in the Maintenance Allocation Chart (MAC), Appendix B. Use of the special tools is listed below:

NSN	*Item*	*Use*
5180-00-605-0079	Tool Kit, Electronic Equipment TK-100/G	Clean, service, and repair equipment.

5-2. Test Equipment.

The test equipment required for organizational maintenance is listed in the Maintenance Allocation Chart (MAC), Appendix B. Use of the test equipment is listed below:

NSN	*Item*	***Use***
662540-999-7465	Multimeter,AN/USM-223	Perform voltage and resistance measurements.
6625-00-781-5769	Ammeter, Weston Model 931-29002001	Perform current adjustment.
6625-00-159-2263	Test Set, Transistor TS-1836C/U	Test transistors.

5-3. Materials.

The following materials are required for organizational maintenance:

NSN	*Item*	*Use*
6850-00-935-1082	Trichloroethane	Clean metal parts
802000246-8806	Soft brush	Clean interior electronic components
7920-00-365-4694	l-inch bristle brush	Clean metal surfaces

Section II. REPAINTING AND REFINISHING INSTRUCTIONS

5.4 Repainting and Refinishing..

Repainting and refinishing of the power supply shall be conducted according to instructions in TB 746-10, Field Instructions for Painting and Preserving Electronics Command Equipment. Necessary paints and finishes shall be in accordance with those specified in SB 11-573, Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment, and AR 746-5, Color and Marking of Army Material.

Section III. PREVENTIVE MAINTENANCE CHECKS AND SERVICES

5-5. General.

To insure that the power supply is always ready for operation, it must be inspected systematically so that defects may be discovered and corrected before they result in serious damage or failure. The necessary preventive maintenance checks and services to be performed are listed in Table 5-1. The item numbers indicate the sequence of minimum inspection requirements. Defects discovered during operation of the units will be noted for future correction to be made as soon as operation has ceased. Stop operation immediately if a deficiency is noted during operation which would damage the equipment. Record all deficiencies together with the corrective action taken on forms and records specified in TM 38-750.

5-6. Preventive Maintenance Procedures.

Table 5-1 lists procedures for performing preventive maintenance checks and services. The first column lists the interval and sequence that a particular check or service is required. The second column lists the item to be inspected and the procedure. The third column lists the worktime required to perform the inspection. These checks should be performed at least once each quarter. Refer any defects that are beyond the organizational level of repair to the next higher level of maintenance.

Table 5-1. Organizational Preventive Maintenance Checks and Services.

Time Required: 1.3

Sequence No.	ITEM TO BE INSPECTED PROCEDURE	WORK TIME (M/H)
1	PERFORATED METAL COVER a. Check perforations for accumulations of dirt, dust, or other foreign matter. Clean cover (para 5-14). b. Check cover for dents, nicks scratches, or other signs of physical damage.	0.1
2	POWER SUPPLY EXTERIOR a. Check power supply exterior for accumulation of dirt, dust, or other foreign matter in ventilating holes. Clean power supply exterior. Clean power supply (para 5-14). b. Check power supply exterior for scratches, nicks, rust, or corrosion. Repaint if necessary (para 5-4).	0.1
3	POWER SUPPLY INTERIOR Remove power supply cover and check interior for accumulations of dirt, dust, grease, or other foreign matter, Clean power supply interior (para 5-14).	0.1
4	WIRING Check for brittle, frayed, or worn insulation. Check for poorly soldered joints.	0.1

Table 5-1. Organizational Preventive Maintenance Checks and Services - Continued

Time Required: 1.0

Sequence No.	ITEM TO BE INSPECTED PROCEDURE	WORK TIME (M/H)
5	PRINTED CIRCUIT BOARD Check for improperly seated or damaged printed circuit board, bent or broken connector pins.	0.1
6	INTEGRATED CIRCUIT/TRANSISTORS/DIODES Check for signs of overheating, cracked or broken case, broken leads.	0.1
7	RESISTORS/POTENTIOMETERS Check for cracked or overheated resistors and smooth travel of potentiometers.	0.1
8	CAPACITORS Check for overheated or bulging capacitors.	0.1
9	CIRCUIT BREAKER Check for positive action of circuit breaker. Check that ON-OFF markings are legible.	0.1
10	TRANSFORMER Check for signs of overheating, bulging, and leakage.	0.1
11	HEAT SINKS Check for clogged or damaged heat sinks.	0.1
12	TERMINAL BOARDS Check for dirt, overheating, arcing, and cracks.	0.1
13	HARDWARE Check for loose or missing hardware, stripped threads.	0.1

5-7. Voltage and Resistance Measurements.

CAUTION

When measuring voltages, use tape or tubing (spaghetti) to insulate the entire test prod, except for extreme tip. A momentary short can ruin a transistor.

a. The power supply contains transistor circuits. Check transistors with an in-circuit transistor checker. If no checker is available, transistors may be checked with an ohmmeter that has a highly limited current capability. Observe proper polarity to avoid error in measurement. The forward transistor resistance is low, but never zero; backward resistance is always higher than forward resistance. Make voltage and resistance measurements as directed by text using the same or equivalent multimeter specified.

CAUTION

Do not use ohmmeter if open circuit voltage exceeds 1.5 volts, since transistors may be damaged.

CAUTION

Since the RX1 range of an ohmmeter normally connects the internal battery directly across the test leads, the comparatively high current (50 ma, or more) may damage a transistor under test. Normally the RX1 range should not be used to test low-power transistors.

b. Before using any ohmmeters to test transistors, check the open-circuit voltage across the ohmmeter test leads.

c. Use a coupling capacitor to connect test equipment (other than multimeter or vacuum tube voltmeter (VTVM) to transistorized circuits to prevent damage to transistors.

NOTE

The leakage resistance obtained from a simple resistance check of a capacitor is not always an indication of a faulty capacitor. In all cases the capacitor is shorted with resistance, some of which have low values. Only a dead short is a true indication of a shorted capacitor.

CAUTION

Replacing one transistor and turning power on before checking for additional faulty components could damage the replaced component.

d. Do not assume trouble is eliminated when one part is replaced. This is especially true when one transistor fails, causing other transistors to fail. When soldering semiconductor devices, hold the lead with a pair of needle nose pliers or a commercial heatsink device placed between the component and the solder joint.

Section IV. TROUBLESHOOTING

5-8. General.

This section contains troubleshooting information for locating and correcting malfunctions in the power supply at the organizational level of maintenance.

5-9. Logical Troubleshooting Procedures,

a. General. Localizing a fault is the first step in servicing a defective power supply. In this step, a fault is traced to a major functional area such as rectifier, series regulator, overvoltage protection circuit, etc., where the defective component is located. Faults such as burned out resistors, overheated transistors, arcing and shorted transformers can often be located by sight, smell, and hearing. However, the majority of faults must be localized by performing standard shop practices.

b. Localization. The checks listed in paragraph 5-10 aid in locating trouble in the power supply. The first step is to locate the component in which the fault occurs by the following method.

(1) *Visual Inspection.* The purpose of the visual inspection is to locate faults without testing or measuring circuits. The cover must be removed to visually inspect the power supply.

(2) *Performance Test.* The performance test of the power supply is used to determine that the unit is operating within specifications. The result of the performance test are used in conjunction with the troubleshooting table to localize a fault to a defective component or major functional area.

c. Isolation. After determining that a fault exists in the power supply by performing a visual inspection and the performance test, refer to table *5-2* for the information necessary to isolate a malfunction to a defective component or stage causing the trouble.

5-10. Fault Localizing.

a. Voltage Measurments. Except where the circuit breaker constantly trips, most electrical faults in the power supply can be isolated by performing voltage and resistance measurements and using the troubleshooting table. Since the power supply is transistorized, use tape or sleeving (spaghetti) to insulate the entire test probe, except for the extreme tip, when measuring voltages. The cover must be removed when measuring voltages and resistances.

b. When diodes or transistors are suspected of causing the trouble, it is necessary to isolate one connection to a diode or two connections to a transistor prior to testing. Check these components as follows:

(1) Check diodes (including zener CR5) by placing the common lead of an ohmmeter (RX1) range on the anode and the other lead on the cathode. A low reading, typically 20 to 25 ohms, should be observed on the ohmmeter. An infinite ohmmeter indication should be observed when the test leads are reversed. Other ohmmeter indications signify a defective diode.

NOTE

If available, a transistor checker should be used. Transistors may appear bad because of shorting to the heat sinks. The collectors of Q1 through Q12 are in direct contact with the heat sink.

(2) Check NPN transistors by placing the common lead of the ohmmeter to the base. A low indication to the emitter and collector should be observed on the ohmmeter. With the test leads reversed, the indication on the ohmmeter (RXl range) should be infinite.

(3) The PNP transistors are checked in the same manner as described in step (2) above except that the test leads are reversed.

5-11. Troubleshooting Table.

The troubleshooting table is used in conjunction with the performance test in determining the faulty area in the power supply. If during the performance test, a Malfunction occurs, the troubleshooting table will be used as a guide in isolating the Malfunction to a component or a major functional area. Each Malfunction listed in table 5-2 is followed by the probable cause and corrective action. Perform the corrective actions in the order listed. Repair at the organizational level is limited to the performance of preventive maintenance and adjustment of the output voltage and current and the overvoltage setting, and the replacement of those components found to be defective. If additional corrective maintenance is required, refer to equipment to the next higher category of Maintenance.

Table 5-2. Organizational Power Supply Troubleshooting.

Malfunction	Probable Cause	Corrective Action
1. No output from power supply	*a.* Power cord not plugged in.	*a.* Insert power cord.
	b. Tripped circuit breaker CB1.	*b.* Reset circuit breaker.
	c. Defective circuit breaker CB1.	*c.* Replace circuit breaker CB1.
	d. Thermostat open.	*d.* Reset by cooling.
	e. Short across output.	*e.* Check for jumpers shorting together at common points.
	f. Open winding on transformer T1.	*f.* Replace transformer T1.
	g. Faulty reference zener diode CR5.	*g.* Replace zener diode CR5.
	h. Faulty integrated circuit. IC1.	*h.* Replace integrated circuit IC1.
	i. Open driver transistor	*i.* Check with ohmmeter. Replace if defective.
	j. Internal short across output.	*j.* Check with ohmmeter. Check SCR CR3 for anode to cathode short.
	k. Defective diode(s) in bridge rectifier (CR1-CR4).	*k.* Check with ohmmeter and replace diode.
	l. Jacks J1, J2, J20 not connected to mating plugs or loose.	*l.* Insure that jacks are connected to mating plugs and are making good contact.
2. Voltage drops to 0V within several minutes after being turned on.	*a.* Thermostat opening due to excessive heat or insufficient air flow around power supply.	*a.* Reinstall power supply leaving 1 inch of space around unit, or use a small fan to provide cooling air.
	b. Defective thermal resistor R21.	*b.* Replace resistor.
3. Output is +0.5 volts to - 1 . 0	Overvoltage protector is operating.	Turn AC power OFF, then ON to reset the SCR. Check SCR and replace if defective. Readjust OVP control.

Table 5-2. ***Organizational Power Supply Troubleshooting - Continued.***

Malfunction	Probable Cause	Corrective Action
4. Output voltage is high-unregulated high 120 Hz ripple, no adjustment.	*a.* Open voltage adjust control or sense leads.	a. Check sense jumpers.
	b. Shorted driver transistor.	*b.* Check driver transistor and replace if necessary.
	c. Shorted darlington or power transistor.	*c.* Check for shorts on P.C. board. Check the lands.
5. Output voltage is too low-high ripple no adjustment.	*a.* Excessive load on supply.	*a.* Remove and reduce the load.
	b. Current limit potentiometer R16 defective.	*b.* Check or readjust current limit potentiometer R16. Replace if necessary.
	c. Emitter resistor on pass transistor of inter-grated circuit is defective.	*c.* Check with ohmmeter should read less than 0.2 ohms, Replace IC1.
6. Output Voltage erratic.	*a.* Defective regulation.	*a.* Check voltage, adjust potentiometer R18 and IC1. Replace if necessary.
	b. Defective input capacitor Cl.	*b.* Check capacitor Cl on input side of trans-former. Replace if necessary.
7. Excessive ripple	Defective filter capacitor(s) C3 through C6.	Check filter capacitor(s). Replace if necessary.
8. Neither output can be grounded to chassis.	Hi pot failure.	Check wiring for melted or pinched insulation due to overheating or to mechanical failure.
9. Voltage output cannot be brought to proper level.	*a.* Defective voltage adjust potentiometer R18	*a.* Check voltage, adjust potentiometer, replace if necessary.
	b. Open on shorted primary windings of transformers.	*b.* Replace transformer T1.

Section V. MAINTENANCE OF POWER SUPPLY PXS-EE-28VF

5-12. Scope of Organizational Maintenance.

a. This section contains instructions covering organizational maintenance of Power Supply PXS-EE-28VF. It consists of those items as specified by the Maintenance Allocation Chart (MAC), Appendix B, that may be accomplished by organizational maintenance personnel.

b. Organizational maintenance of the power supply includes:

(1) Preventive maintenance.

(2) Cleaning of the power supply.

(3) Adjustment of the power supply.

(4) Repair and replacement of those components found to be defective.

c. When removing electrical parts, the position of the part and electrical leads should be noted before removal, and the replacement part should be installed in the original position to prevent shorting and braking of electrical components. Refer to the illustrations in the Repair Parts and Special Tools List (RPSTL), Appendix C, during performance of removal and replacement of parts.

5-13. Disassembly.

Refer to figures C-1 through C-7 in the Repair Parts and Special Tools List, Appendix C, and disassemble the power supply in accordance with the illustrations.

5-14. Cleaning.

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 or hot metal forms highly toxic phosgene gas.

a. Remove dust and dirt from the equipment using a lint-free cloth, if necessary, moisten the cloth with trichloroethane. After cleaning, wipe dry with a clean cloth.

b. Use a l-inch bristle brush to remove dirt and dust from hard to reach areas.

c. Remove grease with trichloroethane, and wipe dry with a clean, dry, lint-free cloth.

d. Remove caked-on dirt with a 1-inch bristle brush soaked with trichloroethane. Wipe dry with a clean, dry, lint-free cloth.

e. Dry compressed air, not to exceed 60 pounds per square inch, may be used to remove dirt and dust from inaccessible areas such as between the heat sinks, and behind the transformer and circuit card.

5-15. Adjustments.

a. Output Voltage Adjustment. To adjust the voltage output of the power supply, proceed as follows:

(1) Set VOLTAGE ADJ control to nominal center position.

(2) Make sure that +D.C. 6 (positive) terminal and +SEN 7 terminal are connected together. Similarly make sure that -D. C. 4 (negative) and -SEN 3 terminal are connected together.

(3) Connect a source of 115 VAC to AC1 and 2 terminals.

(4) Set AC ON-OFF circuit breaker to the ON position.

(5) Connect multimeter to +D.C. 6 (positive) terminal and -D.C. 4 (negative) terminal.

(6) Adjust VOLTAGE ADJ control on the power supply until multimeter indicates +26.6 to 29.4 Vdc.

(7) Set AC ON-OFF circuit breaker to the OFF position.

(8) Turn off and remove 115 Vac source.

(9) Remove multimeter from power supply.

b. Overvoltage Adjustment. To adjust the overvoltage trip point of the power supply, proceed as follows:

(1) Connect a source of 115 Vac to AC1 and 2 terminals.

(2) Make sure that +D.C. 6 (positive) terminal and +SEN 7 terminal are connected together. Similarly, make sure that -D.C. 4 terminal and -SEN 3 terminal are connected together.

(3) Set OV ADJUST control to the full clockwise position.

(4) Set AC ON-OFF circuit breaker to the ON position.

(5) Connect multimeter between +D.C. 6 terminal (positive) and -D.C. 4 terminal (negative).

(6) Adjust VOLTAGE ADJ control on the power supply until multimeter indicates +28 Vdc.

(7) Turn the OV ADJ control slowly counterclockwise until the reading on the multimeter drops approximately 0.6 Vdc at which time the circuit breaker will trip.

(8) Disconnect 115 Vac power source for about 15 seconds, then reconnect.

(9) Adjust VOLTAGE ADJ control until multimeter indicates 28 Vdc.

(10) Set AC ON-OFF circuit breaker to the OFF position.

(11) Disconnect 115 Vac power and multimeter from power supply.

(12) Under certain conditions, the AC input current can become large when the overvoltage protection circuit operates. It is recommended that the following fuse rating be used in the AC input lead to the power supply.

$$\text{Input Fuse Rating (slo-blo type)} = \frac{\text{Output Voltage x output Current x 4}}{\text{Nominal Line Voltage}}$$

c. Current Adjustment. To adjust the output current of the power supply, proceed as follows:

(l) Remove perforated metal cover from power supply.

(2) Connect a 115 Vac power source to the AC1 and 2 terminals of the power supply.

CAUTION

Make sure that the current setting is within the ratings of the power supply otherwise overheating and possible damage may occur to the power supply. Make certain that the output voltage is set to the normal output voltage under normal or open circuit load conditions before adjusting the current setting.

(3) Connect an ammeter across the output terminals of the power supply. Use an ammeter with a range greater than the desired current limit setting.

(4) Remove all other loads from the power supply.

(5) Set AC ON-OFF circuit breaker to the ON position.

(6) Adjust current limit potentiometer to the desired current as indicated on the ammeter. This adjustment will limit the output current from the power supply under all load conditions.

(7) Set AC ON-OFF circuit breaker to the OFF position.

(8) Disconnect 115 Vac source and ammeter.

(9) Install perforated metal cover.

5-16. Repair.

a. Repair of the power supply is limited to the replacement of those parts found to be defective during troubleshooting and the inspection procedures. Refer to the Repair Parts and Special Tools List, Appendix C, for the location and part number of all components. Refer to the following paragraphs when removing and replacing parts.

b. Parts Replacement Aids. Observe the following basic rules:

(1) Replace all parts with the exact duplicate of the original part. If an exact replacement is not available, use a part that conforms to the specifications of the original part.

(2) When replacing parts, use the same ground connections as in the original wiring.

(3) Before unsoldering a part, note the position of the leads and dress the leads of the replacement part so that the leads occupy the same position.

(4) If a part such as a switch has a number of connections, tag each lead before unsoldering.

(5) Be careful not to damage leads of adjacent parts during replacement.

(6) Make well-soldered joints. A poorly soldered joint is one of the most difficult faults to find.

(7) Be careful that drops of solder and pieces of loose wire do not fall into the power supply.

c. Soldering Aids. The following soldering aids are applicable to all hand wired parts such as capacitors, resistors, switches, transformers, etc. Special soldering tools in conjunction with soldering aids should be employed when replacing parts to ensure full equipment restoration.

CAUTION

Special precautions should be observed when replacing parts (especially solid state devices). Parts as well as adjacent wires may be damaged due to excessive or prolonged concentrations of heat imparted by a soldering iron. To avoid overheating with consequential damage to parts, a small, low wattage (50 watts or lower) soldering iron with a narrow point or wedge is recommended.

(1) Use a heat sink when unsoldering or resoldering a solid state device. One method of treating a heat sink is to grasp the solid state lead between the solder joint and body with long nosed pliers before applying the soldering iron. Another method is to use a clamp-type heat sink which is constructed by soldering small copper bars into the jaws of an alligator clip. This method may be more satisfactory because it allows one hand to be free to apply solder to the joint being soldered.

(2) When it is necessary to solder or unsolder a solid state device, use clean, well-tinned pencil soldering iron and a good-quality, low-temperature solder.

(3) Complete the soldering process as quickly as possible.

(4) In the application of solder, remember that the iron must heat the metal to solder-melting temperature before actual soldering can take place.

(5) The flat side of the soldering-iron tip should be held directly against the parts to be soldered. The solder-melting temperature is reached in a matter of seconds (5 to 10 seconds), therefore, the soldering iron and the solder strand must be applied simultaneously.

(6) Apply the solder to the point of soldering-iron contact not to the soldering iron.

(7) Be sure the terminal, lead, or any portion of a part to be soldered has been properly cleaned and tinned before positioning the part for soldering.

5-17. Reassembly.

Refer to the Repair Parts and Special Tools List, Appendix C, figure C-1 through C-7 as a guide to reassembling the power supply.

CHAPTER 6

FUNCTIONING OF EQUIPMENT

6-1. General.

This chapter contains information on the functional operation of Power Supply PXS-EE-28VF. It provides a generalized signal flow and circuit analysis describing the functions and operation of the components.

6-2. Circuit Description. (Fig. FO-1)

a. Input line voltage of 105-132 Vac is applied through circuit breaker CB1 to the primary of transformer T1, where it is stepped down on one of the secondary windings. The output of the transformer is applied to full-wave bridge rectifier consisting of diodes CR 1, CR2, CR3, and CR4. The full-wave bridge rectifier circuit converts the AC voltage from transformer to a raw DC voltage. Capacitors C3, C4, C5, and C6, filter the raw DC voltage into a smooth DC output, which is applied to a bank of 12 power pass transistors (Q1 through Q 12), which are used to handle the current load of the power supply.

b. A second winding on the secondary of transformer T1steps the AC input voltage down to 12 volts where, after being rectified by AlCR2 and AlCR3, it is used as a reference voltage for the error amplifier portion of voltage regulator AlIC 1. The output voltage regulator AlIC1 is applied to the base of transistor Q1 (the pass transistor in A1IC 1). By the control of the voltage drop across this series pass element, the output voltage of the power supply is controlled. This regulating circuitry is built into voltage regulator A1IC 1. The current limiting circuit consists of resistors A1R6 and AlR7 and transistor Q1 (part of voltage regulator AlIC1) whose base and emitter are pins 2 and 3 of the voltage regulator. The circuit compares a reference voltage with voltage drop across current sensing resistors AlR6 and AlR7. If a difference exists, transistor AlIC1Q1 acts to maintain the drop across the current sampling resistors, and thereby the output current of the power supply at a constant value.

c. Voltage regulator AlIC1 has self contained voltage and current amplifiers. Potentiometers A1R16 and A1R18 regulate the current and voltage output of the power supply to the load, respectively.

d. Diode CR3, which is connected across the output of the power supply, is a protective device and forms a part of the circuit breaker used to prevent overloads. Additionally, capacitor A1C12A is connected across the output of the power supply and is employed to slow the time response of the series regulator and prevents high frequency self oscillation.

e. Resistor A1R21 is a thermal cut off device to protect the power supply from excessive heat. When sufficiently cooled, resistor A1R21 will automatically turn the power supply on.

CHAPTER 7

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE INSTRUCTIONS

Section 1. GENERAL

7-1. Scope of Direct Support and General Support Maintenance.

a. This chapter provides direct support and general support troubleshooting, maintenance, and test instructions for the power supply. Maintenance functions beyond the scope of direct support and general support maintenance authorized by the Maintenance Allocation Chart (MAC) shall be performed by higher level maintenance.

b. Direct and general support maintenance includes inspecting, servicing, repairing, and replacing those items specified in the Maintenance Allocation Chart (MAC), Appendix B, and in the Repair Parts and Special Tools List RPSTL), appendix C.

Section II. TOOLS AND EQUIPMENT

7-2. Tools.

The tools required for direct support and general support maintenance are listed in the Maintenance Allocation Chart (MAC), Appendix B. Use of the tools is listed below:

NSN	*Item*	*Use*
5180-00-605-0079	Tool Kit, Electronic Equipment TK-100/G	Service and repair power supply.

7-3. Test Equipment.

The test equipment required for direct support and general support maintenance of the power supply is listed in the Maintenance Allocation Chart (MAC), Appendix B. Use of the test equipment is listed below:

NSN	*Item*	*Use*
6625-00-159-2263	Test Set, Transistor TS-1836C/U	Test transistors
6625-00965-8304	Voltmeter, Differential TS-2843/U	Performance testing of power supply.
6625-00-727-4706	Voltmeter, Electronic (True RMS) AN/USM-224	Performance testing of power supply.
6625-00229-0457	Voltmeter, Electronic (AC) ME-459/U	Performance testing of power supply.
6625-00-781-5769	Ammeter, Weston Model 931-2902001	Test and troubleshoot the power supply.

NSN	*Item*	*Use*
5950-00-201-4291	Variac, Model CN-16B/U (80058)	Performance testing of the power supply.
	Switch, single pole double throw	Performance testing of the power supply.
	Variable Resistor 5K	Performance testing of power supply.
6625-00-999-7465	Multimeter, AN/USM-223	Perform voltage and resistance measurements.

7-4. Materiels Required.

The following cleaning materiels are required for direct and general support maintenance:

NSN	*Item*	*Use*
6850-00-935-3015	Trichloroethane	Clean metal parts.
8305-00-267-3015	Lint-free cloth	Clean metal and glass surfaces.
7920-00-356-4694	1-inch bristle brush	Clean metal surfaces.

Section III. MAINTENANCE OF POWER SUPPLY

7-5. Scope of Direct Support and General Support Maintenance.

This section contains information and procedures for the complete servicing and testing of the power supply. When removing electrical parts, the position of the part and electrical leads should be noted before removal, and the replacement part should be installed in the original position to prevent shorting and breaking of electrical components. Refer to the illustrations in the Repair Parts and Special Tools List, Appendix C, during performance of removal and replacements of parts.

7-6. Cleaning.

Clean the disassembled power supply as follows:

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 to the fumes to an open flame or hot metal forms highly toxic phosgene gas.

a. Remove dust and dirt from components of the power supply using a lint-free cloth.

b. Remove grease with trichloroethane, and wipe dry with a clean, dry, lint-free cloth.

c. Remove caked on dirt with a 1-inch bristle brush soaked with trichloroethane. Wipe parts dry with a clean, dry, lint-free cloth.

7-7. Adjustments.

Refer to paragraph 5-10 for adjustment procedure for the power supply.

Section IV. DIRECT SUPPORT AND GENERAL SUPPORT TESTING PROCEDURES

7-8. General.

This section contains the overall test procedure for the power supply. These procedures are used in conjunction with the troubleshooting table contained in para. 5-11 to isolate a fault within the power supply. The proper functioning of the power supply after repair can be verified using these procedures.

7-9. Power Supply Overall Test Procedure.

a. *Preliminary Setup.* Perform the following preliminary setup procedures before testing the power supply :

(1) Connect power supply and test equipment as shown in figure 7-1.
(2) Apply input power.
(3) Set AC ON-OFF circuit breaker to ON.
(4) Adjust output voltage to 28 Vdc (paragraph 5-1 5).
(5) Adjust variable load until ammeter indicates 17 amps.

NOTE

Allow at least 1/2 hour warmup before performing the following tests.

b. Load Regulation. To test the load regulation of the power supply, proceed as follows:

(1) Adjust variac until AC Voltmeter ME-459/U indicates 115 Vat.
(2) Record output voltage indicated on Differential Voltmeter TS-2843/U.
(3) Open switch S1.
(4) Record output voltage indicated on Differential Voltmeter TS-2843/U.
(5) Difference recorded between readings of steps (2) and (4) should be less than 0.028 volts.

c. Line Regulation. To check the line regulation of the power supply, proceed as follows:

(1) Close switch S1.
(2) Adjust variac until AC Voltmeter ME-459/U indicates 105 Vat.
(3) Record output voltage indicated on Differential Voltmeter TS-2843/U.
(4) Adjust variac until AC Voltmeter ME-459/U indicates 125 Vat.
(5) Record output voltage indicated on Differential Voltmeter TS-2843/U.
(6) Difference recorded between readings of steps (3) and (5) should be less than 0.115 volts

d. Ripple. To check the ripple of the power supply, proceed as follows:

(1) Adjust variac until AC voltmeter ME-459/U indicates 105 Vat.
(2) Record ripple as indicated by True RMS Voltmeter AN/USM-224.
(3) Ripple should be 1.5 mv RMS, 5 mv peak-to-peak.
(4) Disconnect all test equipment,

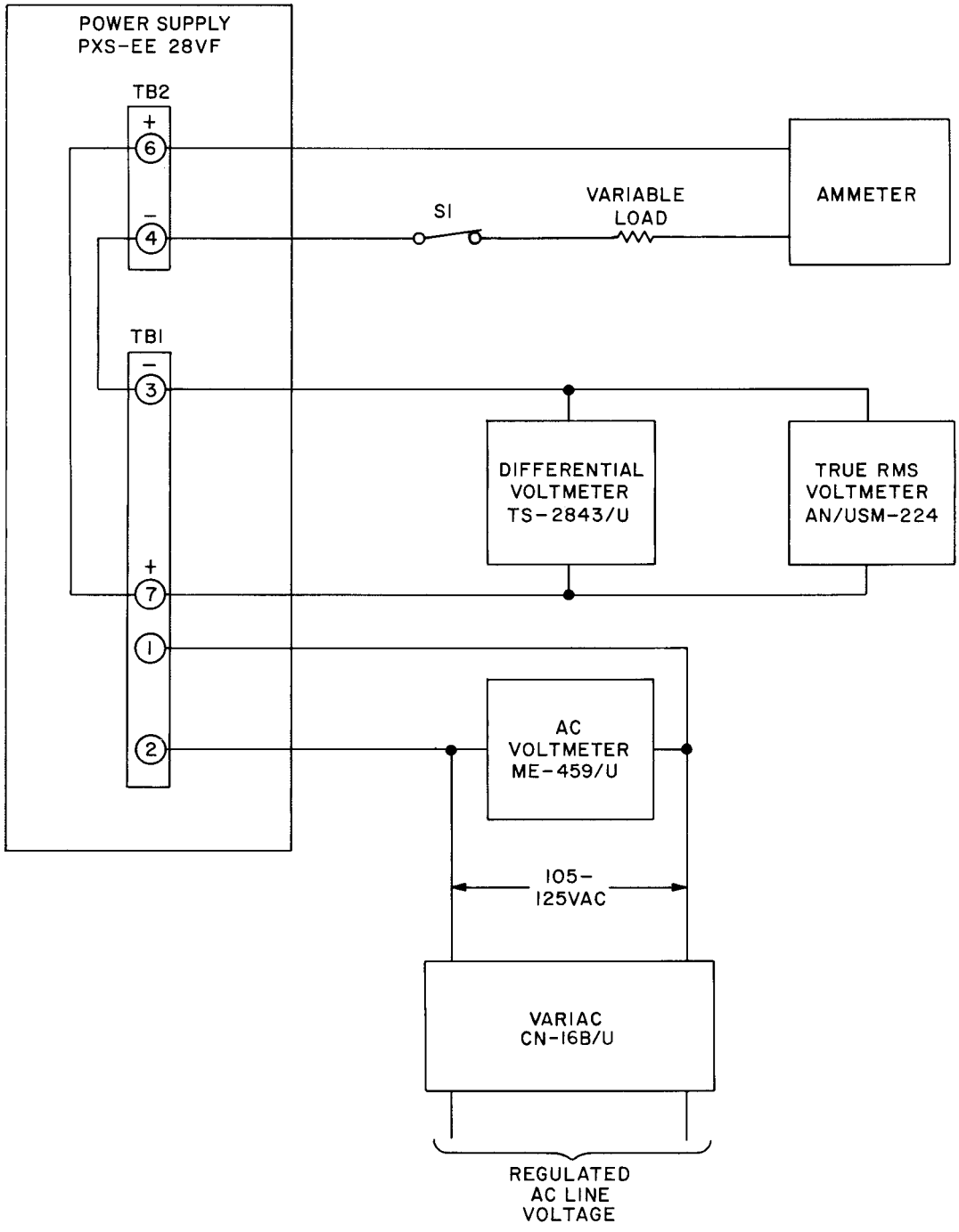


Figure 7-1. Power Supply Test Setup.

APPENDIX A

REFERENCES

AR 746-5	Color and Marking of Army Material.
DA PAM310-4	Index of Technical Manuals, Technical Bulletins, Supply Manuals (types 7, 8, and 9), Supply Bulletins, and Lubrication Orders.
DA PAM 310-6	Index of Supply Catalogs and Supply Manuals (Excluding types 7, 8 and 9).
DAPAM310-7	US Army Equipment Index of Modification Work Orders.
SB 11-573	Painting and Preservation Supplies Available for Field Use for Electronics Command Equipment.
TB 746-10	Field Instructions for Painting and Preserving Electronics Command Equipment.
TB 750-240	Maintenance and Repair for S-141/G, S-144/G, S-250/G, S-280/G and S-3 18/G Shelters.
TM 9-213	Painting Instruction for Field Use.
TM 38-750	The Army Maintenance Management System (TAMMS).
TM 740-90-1	Adminsitrative Storage of Equipment.
TM 750-244-2	Procedures for Destruction of Electronics Material to Prevent Enemy Use.
USASA PAM 310-4	Index of Logistics Publications. (Equipment Manuals (32 Series), Maintenance Bulletins, Installation Bulletins, and Supply Bulletins).

APPENDIX B

MAINTENANCE ALLOCATION CHART

SectionI.Introduction

B-1. General.

This appendix provides a summary of the maintenance operations covered in the equipment literature for Power Supply PXS-EE-28VF.

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 Functions.

Maintenance functions will be limited to and defined as follows:

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

b. Test. To vetify serviceablility 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, preserve, drain, paint, or to replenish fuel/lubricants/hydraulic fluids or compressed air supplies.

d. Adjust. 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 about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test measuring and diagnostic equipment used in precision measurement. Consists of the comparison 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/system.

h. Replace. The act of substituting a serviceable like-type part, subassembly, module (component or assembly for a 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/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 periodic maintenance effort (service/action) necessary to restore an item to a completely serviceable/operational condition as prescribed by maintenance standards (e.g., DMWR) an 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 equipment/components.

B-3. Explanation of Format.

a. Column 1, Group Number. Column 1 lists group numbers, the purpose of which is to identify components, assemblies, subassemblies and module 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.

d. Column 4, Maintenance Category. Column 4 specifies, by the listing of a "worktime" figure in the appropriate subcolumn(s), the lowest level of maintenance authorized to perform the function listed in column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number of complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate "worktime" figures will be shown for each category. The number of man-hours specified by the "worktime" figure represents the average time required to restore an item (assembly, subassembly, component, module, end item or system) to a serviceable conditions 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.

B-4. Tool and Test Equipment Requirements (Table 1).

a. Tools 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.

Section II. MAINTENANCE ALLOCATION CHART

(1) Group Number	(2) Component/Assembly	(3) Maintenance function	(4) Maintenance level					(5) Tools and equipment
			C	O	F	H	D	
00	Power Supply PXS-EE-28VF	Inspect	x					
		Test		x				2 through 10
		Test			x			
		Service	x					1
		Service		x				1
		Adjust		x				1,2
		Install		x				1,2
		Replace		x				1
		Repair		x				1,2
		Overhaul					x	
01	Heat Sink Assembly HS1	Inspect		x				
		Replace		x				1
		Repair		x				1,2
02	Heat Sink Assemblies HS2 thru HS4	Inspect		x				
		Replace		x				1
		Repair		x				1,2

Section II. MAINTENANCE ALLOCATION CHART

(1) Group Number	(2) Component/Assembly	(3) Maintenance function	(4) Maintenance level					(5) Tools and equipment
			C	O	F	H	D	
03	Heat Sink Assembly HS5	Inspect		x				
		Replace		x				1
		Repair		x				1,2
04	Circuit Card Assembly Al	Inspect		x				
		Test		x				2 through 10
		Adjust		x				1,2
		Replace		x				1
		Repair		x				1,2
05	Circuit Breaker Assembly	Inspect		x				
	CB1	Replace		x				1
		Repair		x				1,2
06	Capacitor	Inspect		x				
	Bank Assembly	Replace		x				1
		Repair		x				1,2

SECTION III. TOOL AND TEST EQUIPMENT REQUIREMENTS

(1) REFERENCE CODE	(2) MAINTENANCE LEVEL	(3) NOMENCLATURE	(4) NATIONAL/NATO STOCK NUMBER	(5) TOOL NUMBER
1	OF	TOOL KIT	5180-00-605-0079	TK-100/G
2	OF	MULTIMETER	6625-00-999-7465	AN/USM-233
3	F	TEST SET TRANSISTOR	6625-00-159-2263	TS-1836C/U
4	F	DIFFERENTIAL VOLTMETER	6625-00-965-8304	TS-2843/U
5	F	VOLTMETER	6625-00-727-4706	AN/USM-224
6	F	VOLTMETER	6625-00-229-0457	ME-459/U
7	F	AMMETER	6625-00-781-5769	931-2902001 (65092)
8	F	VARIAC	5950-00-201-4291	CN-16B/U
9	F	SWITCH, SPST		
10	F	RESISTOR, VAR 5K		

APPENDIX C

BASIC ISSUE ITEMS LIST AND ITEMS TROOP INSTALLED OR AUTHORIZED LIST AND ORGANIZATIONAL DIRECT SUPPORT, AND GENERAL SUPPORT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS LIST (INCLUDING DEPOT MAINTENANCE REPAIR PARTS AND SPECIAL TOOLS)

Section I. INTRODUCTION

C-1 . Scope.

This appendix lists basic issue items; items troop installed or authorized, repair parts; special tools; test measurement, and diagnostic equipment (TMDE); and other support equipment required for operation and performance of organizational, direct support, and general support maintenance of the Power Supply PXSEE-28VF.

C-2. GeneraL

This Basic Issue Items, Items Troop Installed or Authorized, Repair Parts and Special Tools List is divided into the following sections:

a. Section II. Basic Issue Items List. A list, in alphabetical sequence, of items which are furnished with and which must be turned in with the end item. This section is not applicable in this publication.

b. Section III. Items Troop Installed or Authorized List. A list, in alphabetical sequence, or items which, at the discretion of the unit commander, may accompany the end item, but should not be turned in with the end item. This section is not applicable in this publication.

c. Section IV. Repair Parts List. A list of repair parts authorized for use in the performance of maintenance. The list also includes parts which must be removed for replacement of the authorized parts, Parts lists are composed of functional groups in ascending numerical sequence, with the parts in each group listed in figure and item number sequence.

d. Section V. Special Tools List. A list of special tools, TMDE, and support equipment authorized for the performance of maintenance at the organizational level. This section is not applicable in this publication.

e. Section VI. National Stock Number and Part Number Index. A list, in ascending numerical sequence, of all National stock numbers appearing in the listings, followed by a list, in alphameric sequence, of all part numbers referenced to each illustration figure and item number appearance. This index is followed by a cross-reference list of reference designations to figure and item numbers when applicable.

C-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. The number used to identify each item called out in the illustration.

b. Source, Maintenance, and Recoverability Codes (SMR).

(1) Source Code. Source codes are assigned to support items to indicate the manner of acquiring support items for maintenance, repair, or overhaul of end items. Source codes are entered in the first and second positions to the Uniform SMR Code format as follows:

Code	Definition
PA	Item procured and stocked for anticipated or known usage.
PB	Item procured and stocked for insurance purpose because essentiality dictates that a minimum quantity be available in the supply systems.
PC	Item procured and stocked and which otherwise would be coded PA except that it is deteriorative in nature.
PD	Support item, excluding support equipment, procured for initial issue or outfitting and stocked only for subsequent or additional initial issues or outfittings. Not subject to automatic replenishment.
PE	Support equipment procured and stocked for initial issue or outfitting to specified maintenance repair activities.
PF	Support equipment which will not be stocked but which will be centrally procured on demand.
PG	Item procured and stocked to provide for sustained support for the lift of the equipment. It is applied to an item peculiar to the equipment which, because of probable discontinuance or shutdown of production facilities, would prove uneconomical to reproduce at a later time.
KD	An item of a depot overhaul/repair kit and not purchased separately. Depot kit defined as a kit that provides items required at the time of overhaul or repair.
KF	An item of a maintenance kit and not purchased separately. Maintenance kit defined as a kit that provides an item that can be replaced at organizational or intermediate levels of maintenance.
KB	Item included in both a depot overhaul/repair kit and a maintenance kit.
MO	Item to be manufactured or fabricated at organizational level.
MF	Item to be manufactured or fabricated at the direct support maintenance level.
MH	Item to be manufactured or fabricated at the general support maintenance level.
MD	Item to be manufactured or fabricated at the depot maintenance level.
AO	Item to be assembled at organizational level.
AF	Item to be assembled at direct support maintenance level.
AH	Item to be assembled at general support maintenance level.
AD	Item to be assembled at depot maintenance level.
XA	Item is not procured or stocked because the requirements for the item will result in the replacement of the next higher assembly.
XB	Item is not procured or stocked. If not available through salvage, requisition.
XD	A support item that is not stocked, When required, item will be procured through normal supply channels.

NOTE

Cannibalization or salvage may be used as a source of supply for any items source coded above except those coded XA, XD, and aircraft support items a restricted by AR 700-42.

(2) Maintenance Code. Maintenance codes are assigned to indicate the levels of maintenance authorized to USE and REPAIR support items. The maintenance codes are entered in the third and fourth positions of the Unifom SMR Code format as follows:

(a) The maintenance code entered in the third position will indicate the lowest maintenance level authorized to remove, replace, and use the support item. The maintenance code entered in the third position will indicate one of the following levels of maintenance:

Code	Application/Explanation
C	Crew or operator maintenance performed within organizational maintenance.
O	Support item is removed, replaced, used at the organizational level.
I	Support item is removed, replaced, used by the direct support element of integrated direct support maintenance.
F	Support item is removed, replaced, used at the direct support level.
H	Support item is removed, replaced, used at the general support level.
D	Support items that are removed, replaced, used at depot, mobile depot, specialized repair activity only.

NOTE

Codes “I” and “F” will be considered the same by direct support units.

(b) The maintenance code entered in the fourth position indicates whether the item is to be repaired and identifies the lowest maintenance level with the capability to perform complete repair (i.e., all authorized maintenance functions). This position will contain one of the following maintenance codes:

Code	Application/Explanation
O	The lowest maintenance level capable of complete repair of the support item is the organizational level.
F	The lowest maintenance level capable of complete repair of the support item is the direct support level.
H	The lowest maintenance level capable of complete repair of the support item is the general support level.
D	The lowest maintenance level capable of complete repair of the support item is the depot level, performed by the Materiel Support Command Depot Activity.
L	Repair restricted to designated specialized repair activity.
Z	Nonreparable. No repair is authorized.
B	No repair is authorized. The item may be reconditioned by adjusting, lubricating, etc., at the user level. No parts or special tools are procured for the maintenance of this item.

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

Recoverability Codes	Definition
Z	Nonreparable item. When unserviceable, condemn and dispose at the level indicated in position 3.
O	Reparable item. When uneconomically reparable, condemn and dispose at organizational level.

Recoverability Codes	Definition
F	Reparable item. When uneconomically reparable, condemn and dispose at the direct support level.
H	Reparable item. When uneconomically reparable, condemn and dispose at the general support level.
D	Reparable item. When beyond lower level repair capability, return to depot. Condemnation and disposal not authorized below depot level.
L	Reparable item. Repair, condemnation, and disposal not authorized below depot/specialized repapir activity level.
A	Item requires special handling or condemnation procedures because of specific reasons (i.e., precious metal content, high dollar value, critical material or hazardous material). Refer to appropriate manuals/directives for specific instructions.

c. National Stock Number. Indicates the National Stock Number assigned to the item and will be used for requisitioning purposes.

d. 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.

NOTE

When a stock numbered item is requisitioned, the repair part received may have a different part number than the part being replaced.

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

f. Description. Indicates the Federal item name and, if required, a minimum description to identify the item.

g. Unit of Measure (U/M). Indicates the standard of the 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.

h. Quantity Incorporated in Unit. Indicates the quantity of the item used in the breakout shown on the illustration figure, which is prepared for a functional group, subfunctional group, or an assembly. A "V" appearing in this column in lieu of a quantity indicates that no specific quantity is applicable (e.g., shims, spacers, etc.).

C-4. Special Information.

a. Usable on codes are shown in the description column. Uncoded items are applicable to all models.

b. (Applicable to revisions or changes only). Action change codes indicated in the left-hand margin of the listing page denote the following:

N - Indicates an added item
C - Indicates a change in data
R - Indicates a change in FSN only

C-5. How to Locate Repair Parts.

a. When National Stock Number or Part Number is Unknown:

(1) First. Using the table of contents, determine the functional group within which the repair part belongs. This is necessary since illustrations are prepared for functional groups and listings are divided into the same groups.

(2) Second. Find the illustration coveting the functional group to which the repair part belongs.

(3) Third. Identify the repair part on the illustration and note the illustration figure and item number of the repair part.

(4) Fourth. Using the Repair Parts Listing, find the figure and item number noted on the illustration.

b. When National Stock Number or Part Number is Known:

(1) First. Using the Index of National Stock Numbers and Part Numbers, find the pertinent National stock number or part number. This index is in ascending NSN sequence followed by a list of part numbers in ascending alphameric sequence, cross-referenced to the illustration figure number and item number.

(2) Second. After finding the figure and item number, locate the figure and item number in the repair parts list.

C-6. Abbreviations. (Not applicable).

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBFFD				GROUP:00 POWER SUPPLY PXS-EE-28VF		
C-1	1	XBOZZ		NO NUMBER	23934	COVER ASSEMBLY	EA	1
C-1	2	XBOZZ	9320-00-935-9155	MILR6130TYP2 GRD A	81349	PAD, RUBBER, 36 X 36 IN.	EA	1
C-1	3	XBOZZ		PH8-32X1-4	COML	SCREW, PAN HEAD, CRES, 8-32, 1/4 IN. LG	EA	1
C-1	4	XBOZZ		FH8-32X1-4	COML	SCREW, FLAT HEAD, CRES, 8-32, 1/4 IN. LG	EA	2
C-1	5	XBOZZ		622-4	75382	TERMINAL BOARD	EA	1
C-1	6	XBOZZ		670A3000-4	75382	TERMINAL BOARD	EA	1
C-1	7	XBOOO		173-25603-28V	23934	CIRCUIT BREAKER ASSEMBLY (REFER TO FIGURE C-6)	EA	1
C-1	8	XBOOF		173-25602-28V	23934	HEAT SINK ASSEMBLY (REFER TO FIGURE C-4)	EA	1
C-1	9	XBOOF		173-25600-28V	23934	HEAT SINK ASSEMBLY (REFER TO FIGURE C-2)	EA	1
C-1	10	XBOOF		173-25601-28V	23934	HEAT SINK ASSEMBLY (REFER TO FIGURE C-3)	EA	3
C-1	11	PAOZZ		173-25599-28V	23934	TRANSFORMER, POWER, 28 VOLT	EA	1
C-1	12	XBOOO		NO NUMBER	23934	CAPACITOR BANK ASSEMBLY (REFER TO FIGURE C-7)	EA	1
C-1	13	XBOFF		226-25502-28V	23934	CIRCUIT CARD ASSEMBLY (REFER TO FIGURE C-5)	EA	1

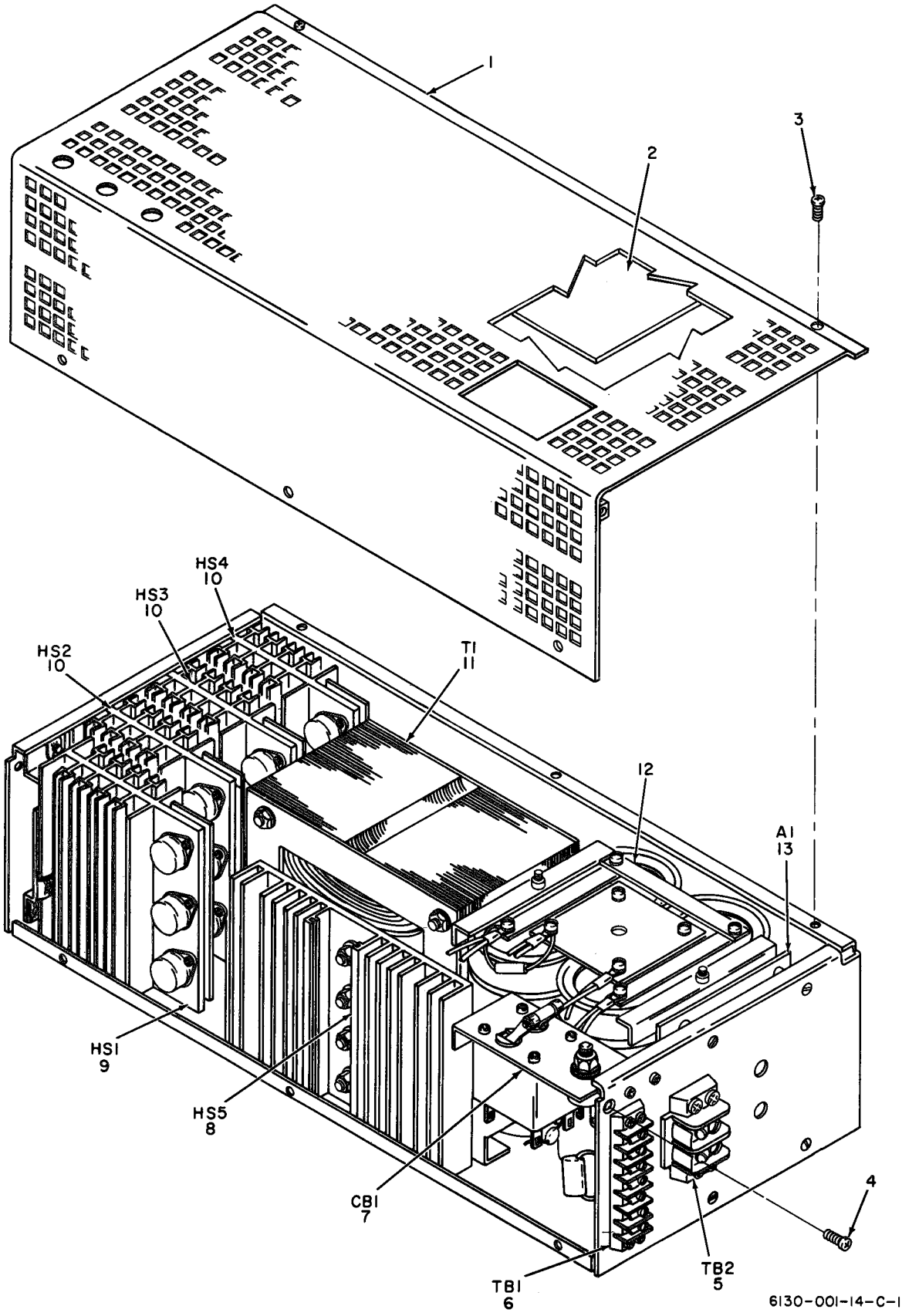


Figure C-1. Power Supply PXS-EE-28 VF.

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOOF				GROUP: 01 HEAT SINK ASSEMBLY HSI		
C-2	1	PAOZZ	5961-00-985-9074	2N3055	81349	TRANSISTOR	EA	3
C-2	2	XBOOO		226-25543-28V	23934	CIRCUIT CARD ASSEMBLY	EA	1
C-2	3	PAOZZ	5905-00-116-8566	RCR20G680JS	81349	RESISTOR, FIXED, 68 OHMS, PORM 10%, 1/2 WATT	EA	1
C-2	4	PAOZZ	5905-00-481-1118	RWR89SR332FR	81349	RESISTOR, FIXED, .33 OHMS, PORM 10%, 3 WATT	EA	2

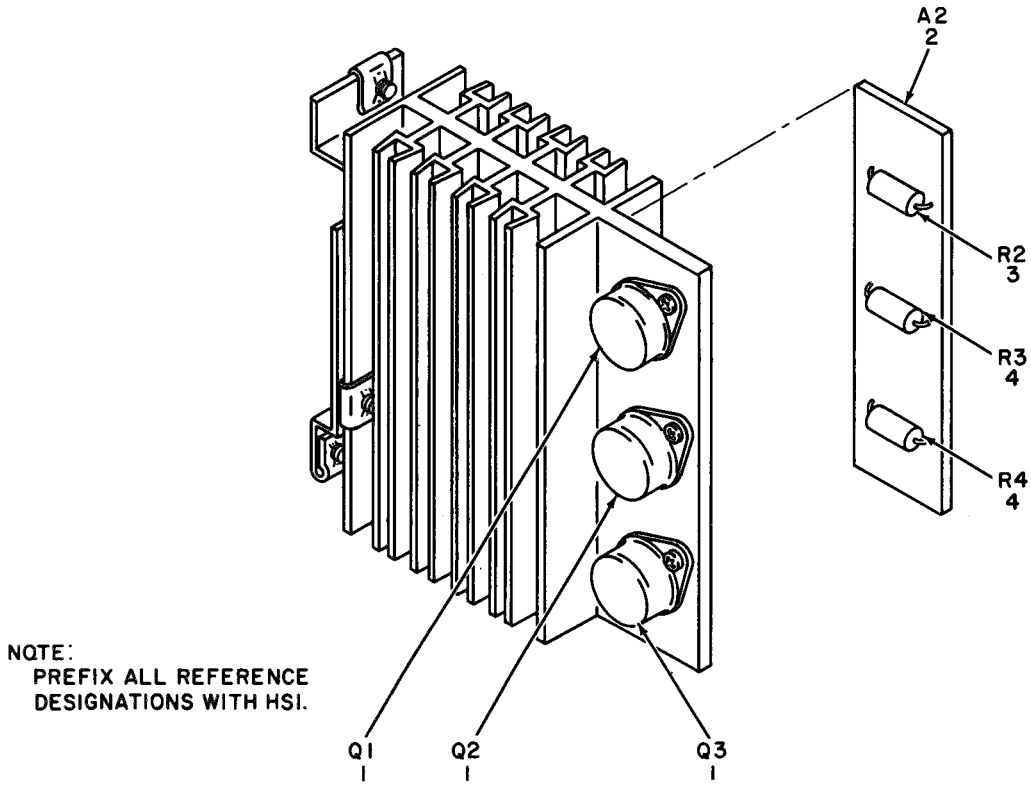


Figure C-2. Heat Sink Assembly HS1.

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOOF				GROUP: 02 HEAT SINK ASSEMBLIES HS2 THRU HS4		
C-3	1	PAOZZ	5961-00-985-9074	2N3055	81349	TRANSISTOR	EA	3
C-3	2	XBOOO		226-25523-28V	23934	CIRCUIT CARD ASSEMBLY	EA	1
C-3	3	PAOZZ	5905-00-481-1118	RWR89SR332FR	23934	RESISTOR, FIXED, .33 OHMS, PORM 10%, 3 WATT	EA	3

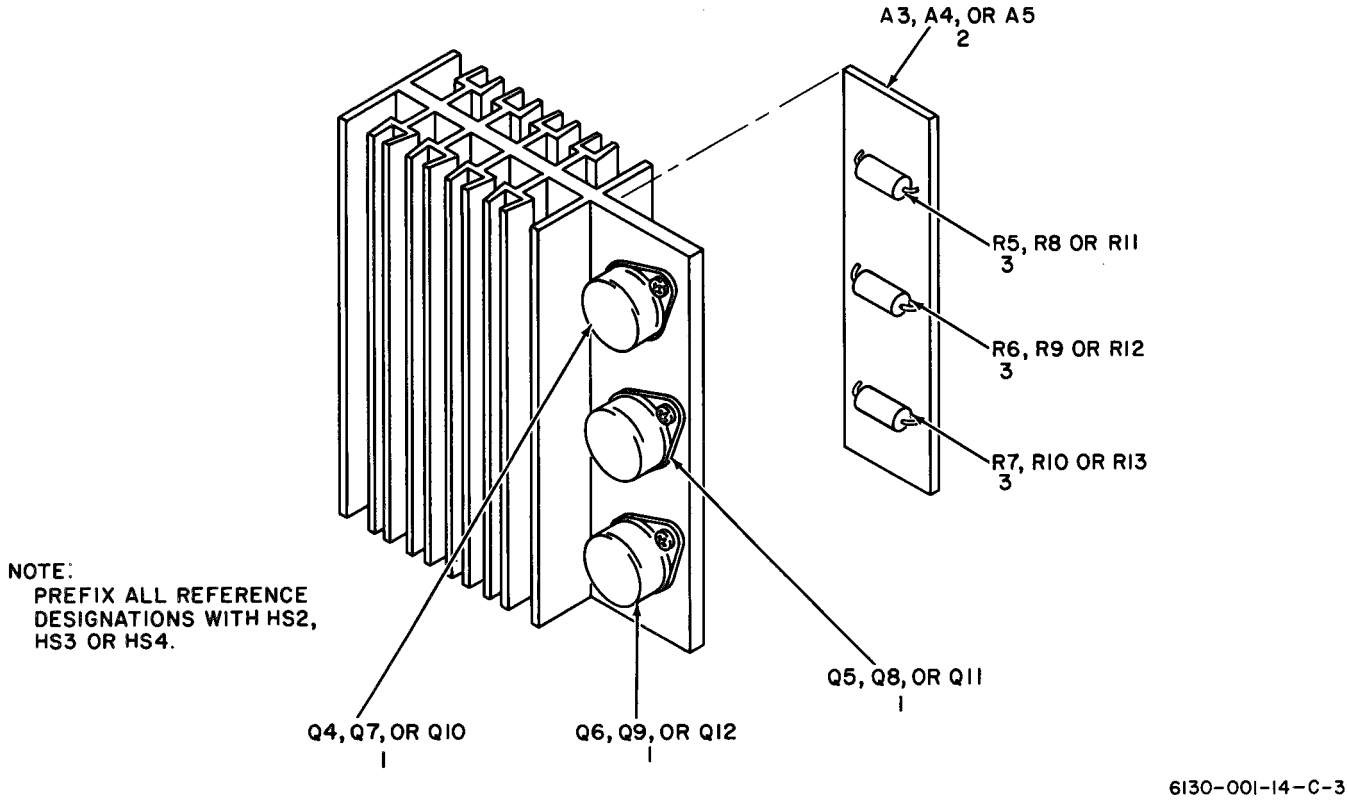


Figure C-3. Heat Sink Assemblies HS2 thru HS4.

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION	USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOOF				GROUP: 03 HEAT SINK ASSEMBLY HS5			
C-4	1	PAOZZ	5961-00-857-1917	1N1185A	81349	RECTIFIER, SEMICONDUCTOR DEVICE		EA	4
C-4	2	PAOZZ		CP322500	23934	CAPACITOR, FIXED, 2.2 UF, 250 VOLT		EA	1

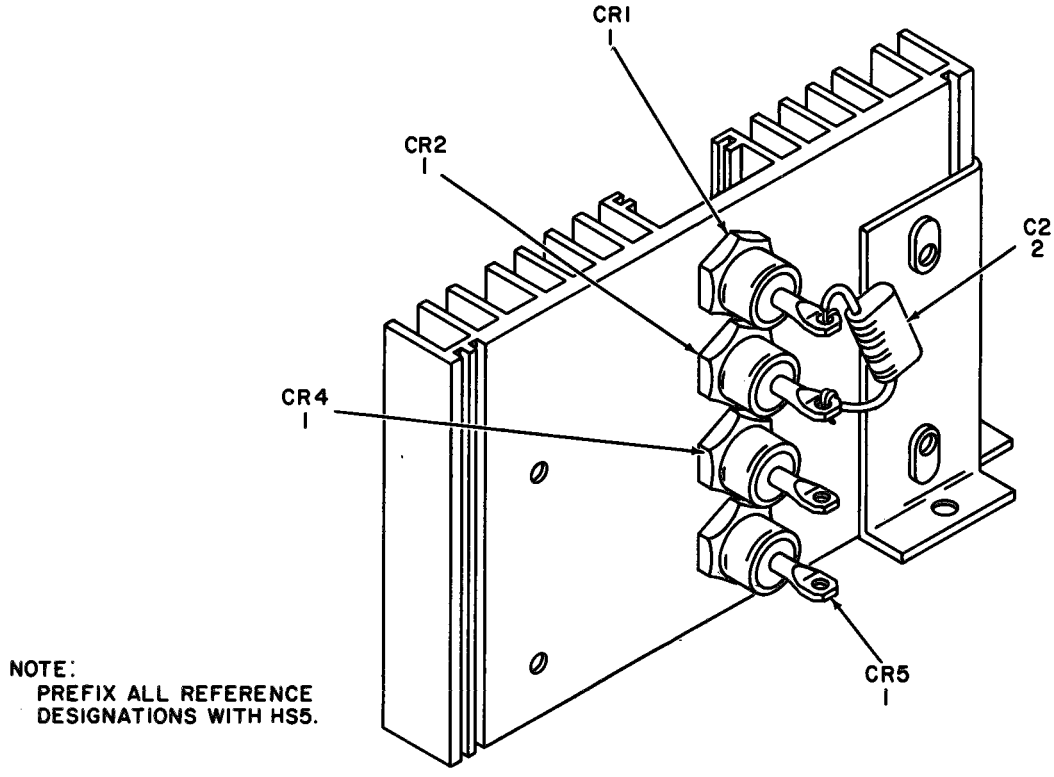


Figure C-4. Heat Sink Assembly HS5.

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOFF				GROUP: 04 CIRCUIT CARD ASSEMBLY A1		
C-5	1	PAFZZ		RC282005	23934	RESISTOR, FIXED, WIRE WOUND	EA	2
C-5	2	PAFZZ		CT247500	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-5	3	PAFZZ	5961-00-048-6882	SI2	11961	SEMICONDUCTOR DEVICE, DIODE	EA	6
C-5	4	PAFZZ	5961-00-979-0108	2N4037	80131	TRANSISTOR	EA	1
C-5	5	PAFZZ		MD4-035-474-20	16299	CAPACITOR, FIXED, PLASTIC DIELECTRIC	EA	2
C-5	6	PAFZZ	5905-00-104-8350	RCR20G221JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	7	PAFZZ	5905-00-106-9344	RCR20G101JS	81349	RESISTOR, FIXED, COMPOSITION	EA	3
C-5	8	PAFZZ		RC327401	23984	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	9	PAFZZ		RC317400	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	10	PAFZZ		PF850200	23934	RESISTOR, VARIABLE	EA	1
C-5	11	PAFZZ		RC139200	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	12	PAFZZ	5962-00-417-1080	M38510-10201 BCB	81349	INTEGRATED CIRCUIT	EA	1
C-5	13	PAFZZ	5905-00-141-0592	RCR20G122JS	81349	RESISTOR, FIXED, COMPOSITION	EA	3
C-5	14	PAFZZ		RC161900	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	15	PAFZZ		RC343201	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	16	PAFZZ		CE125500	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	2
C-5	17	PAFZZ		CD150300	23934	CAPACITOR, FIXED, CERAMIC DIELECTRIC	EA	2
C-5	18	PAFZZ	5961-00-034-5790	1N823	80131	SEMICONDUCTOR DEVICE, DIODE	EA	1
C-5	19	PAFZZ	5905-00-522-1820	PF2501	23934	RESISTOR, VARIABLE	EA	1
C-5	20	PAFZZ	5905-00-141-0593	RCR20G182JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	21	PAFZZ	5961-00-993-2180	2N2102	80131	TRANSISTOR	EA	1
C-5	22	PAFZZ		RF239100	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	23	PAFZZ		S5A1	11961	SEMICONDUCTOR DEVICE, DIODE	EA	1
C-5	24	PAFZZ		CE175700	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-5	25	PAFZZ	5905-00-412-1121	RCR42G221JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	26	PAFZZ		RC218205	23934	RESISTOR, FIXED, WIRE WOUND	EA	2
C-5	27	PAFZZ		RC247000	23934	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	28	PAFZZ		PF220200A	23934	RESISTOR, VARIABLE	EA	1
C-5	29	PAFZZ	5905-00-116-8561	RCR20G270JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	30	PAFZZ		CE180500	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-5	31	PAFZZ		MI204800	23934	RESISTOR, THERMAL	EA	1
C-5	32	PAFZZ		S3A1	11961	SEMICONDUCTOR DEVICE, DIODE	EA	2
C-5	33	PAFZZ		CE10700	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-5	34	PAFZZ		601D208G025JL4	56289	CAPACITOR, FIXED, ELECTROLYTIC	EA	1

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION	(7) UNIT OF MEAS USABLE O CODE	(8) QTY INC IN UNIT
C-5	35	PAFZZ	5961-00-068-1985	2N4036	80131	TRANSISTOR	EA	1
C-5	36	PAFZZ	5905-00-141-1130	RCR20G272JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	37	PAFZZ	5905-00-104-8334	RCR20G331JS	81349	RESISTOR, FIXED, COMPOSITION	EA	1
C-5	38	PAFZZ		CT247400	23934	CAPACITOR, FIXED, ELECTROLYTIC	EA	1
C-5	39	PAFZZ		RC227105	23934	RESISTOR, FIXED, WIRE WOUND	EA	1
C-5	40	XA		226-25502XX	23934	PWB ASSEMBLY	EA	1

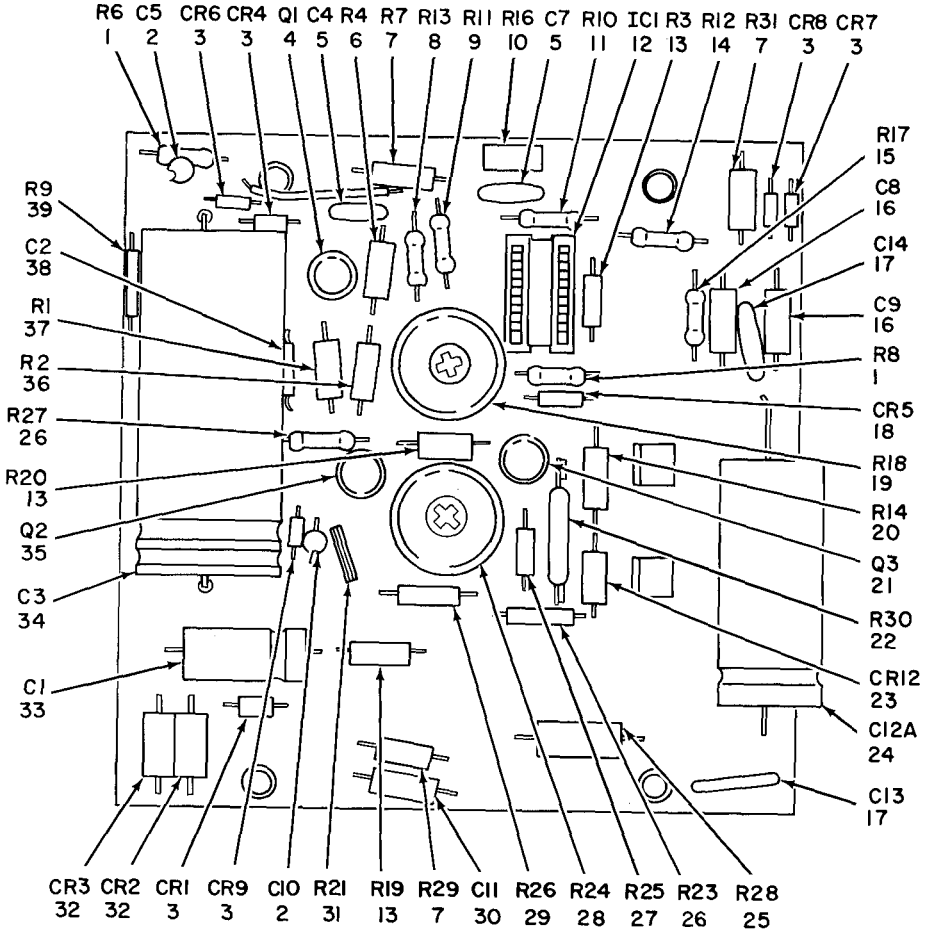
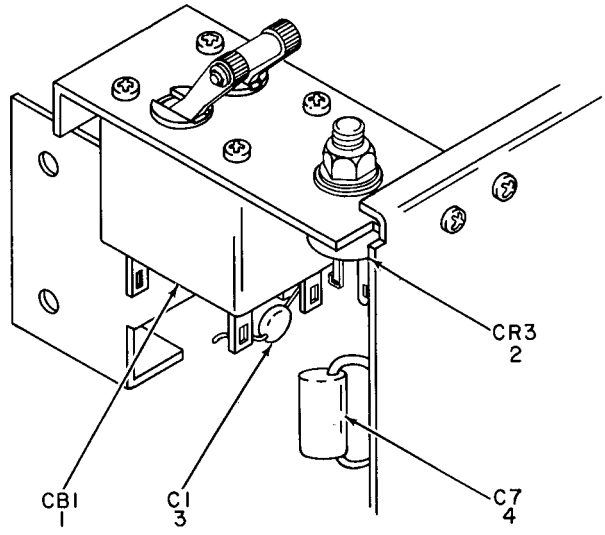


Figure C-5. Circuit

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION	USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOOO				GROUP: 05 CIRCUIT BREAKER ASSEMBLY CB1			
C-6	1	PADZZ		JA2A3B6A20-3	74193	CIRCUIT BREAKER, 30 AMP		EA	1
C-6	2	PADZZ		DS051000	23934	SEMICONDUCTOR DEVICE, CONTROLLED RECTIFIER, 40 AMP, 50 VOLT		EA	1
C-6	3	PADZZ		CP247400	23934	CAPACITOR, FIXED, 47 UF, 250 VDCW		EA	1
C-6	4	PADZZ		CE420600	23934	CAPACITOR, FIXED, 20 UF, 250 VDCW		EA	1

NOTE:
PREFIX ALL REFERENCE DESIGNATIONS WITH CBI.



6130-001-14-C-6

Figure C-6. Circuit Breaker Assembly CB1.

(1) ILLUSTRATION (A) FIG NO.	(B) ITEM NO.	(2) SMR CODE	(3) NATIONAL STOCK NUMBER	(4) PART NUMBER	(5) FSCM	(6) DESCRIPTION USABLE ON CODE	(7) UNIT OF MEAS	(8) QTY INC IN UNIT
		XBOOO				GROUP: 06 CAPACITOR BANK ASSEMBLY		
C-7	1	PAOZZ		91C60CC163	99392	CAPACITOR, FIXED, ELECTROLYTIC 16,000 UF, 60 VDCW	EA	4
C-7	2	XBOZZ		TL475700	23934	LINK, TERMINAL CONNECTING	EA	3
C-7	3	PAOZZ	5905-00-422-3848	RWR89S1001FR	81349	RESISTOR, FIXED, 1K OHMS, PORM, 10%, 3 WATT	EA	1

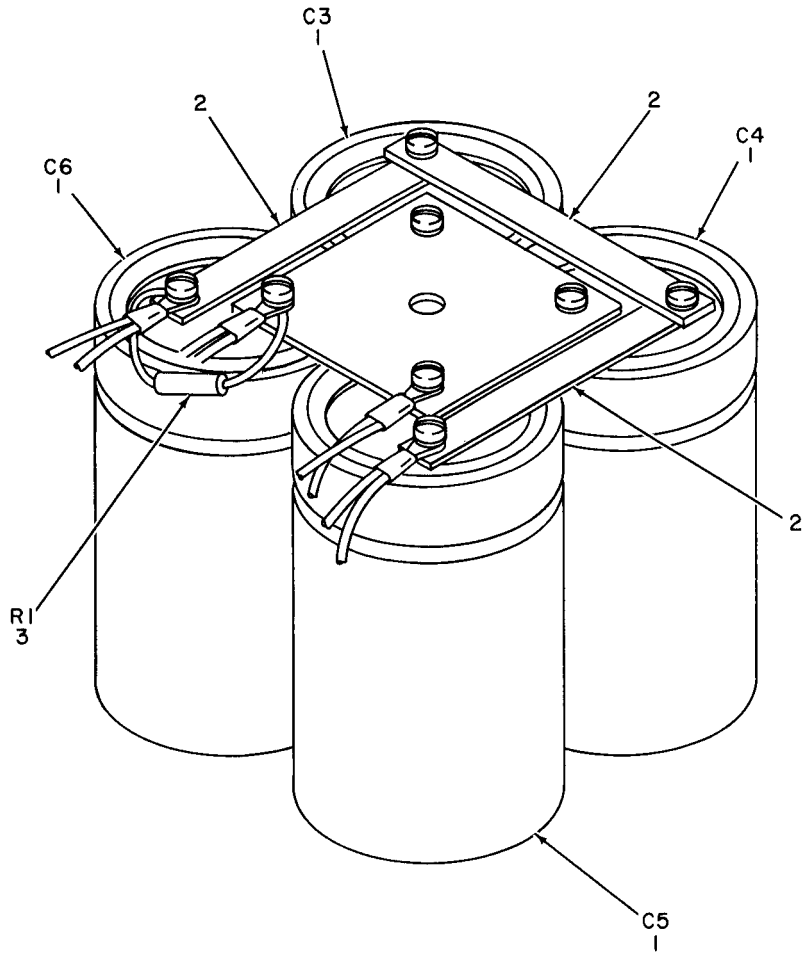


Figure C-7. Capacitor Bank Assembly.

SECTION VI. NATIONAL STOCK NUMBER AND PART NUMBER INDEX

NATIONAL STOCK NUMBER	FIGURE NO.	ITEM NO.	NATIONAL STOCK NUMBER	FIGURE NO.	ITEM NO.
5905-00-104-8334	C-5	37	5905-00-481-1118	C-2	4
5905-00-104-8350	C-5	6	5905-00-481-1118	C-3	3
5905-00-106-9344	C-5	7	5905-00-522-1820	C-5	19
5905-00-116-8561	C-5	29	5961-00-034-5790	C-5	18
5905-00-116-8566	C-2	2	5961-00-048-6882	C-5	3
5905-00-141-0592	C-5	13	5961-00-068-1985	C-5	35
5905-00-141-0593	C-5	20	5961-00-857-1917	C-4	1
5905-00-141-1130	C-5	36	5961-00-979-0108	C-5	4
			5961-00-993-2180	C-5	21
5905-00-412-1121	C-5	25	5962-00-417-1080	C-5	12
5905-00-422-3848	C-7	3	9320-00-935-9155	C-1	2

SECTION VI. NATIONAL STOCK NUMBER AND PART NUMBER INDEX (CONTINUED)

PART NUMBER	FSCM	FIG NO.	ITEM NO.	PART NUMBER	FSCM	FIG NO.	ITEM NO.
CD150300	23934	C-5	17	RC139200	23934	C-5	11
CE125500	23934	C-5	16	RC161900	23934	C-5	14
CE175700	23934	C-5	24	RC218205	23934	C-5	26
CE180500	23934	C-5	30	RC227105	23934	C-5	39
CE420600	23934	C-6	4	RC247000	23934	C-5	27
CE510700	23934	C-5	33	RC282005	23934	C-5	1
CP247400	23934	C-6	3	RC317400	23934	C-5	9
CP322500	23934	C-4	2	RC327401	23934	C-5	8
CT247400	23934	C-5	38	RC343201	23934	C-5	15
CT247500	23934	C-5	2	RF239100	23934	C-5	22
DS051000	23934	C-6	2	RWR89SR332FR	81349	C-2	4
FH8-32X1-4	COML	C-1	4	RWR89SE332FR	81349	C-3	3
JA2A3B6A20-3	74193	C-6	1	RWR89S1001FR	81349	C-7	3
MD4-035-474-20	16299	C-5	5	SI2	11961	C-5	3
MI204800	23934	C-5	31	S3A1	11961	C-5	32
M38510-10201BCB	81349	C-5	12	S5A1	11961	C-5	23
PF220200A	23934	C-5	28	TL475700	23934	C-7	2
PF2501	23934	C-5	19	1N1185A	81349	C-4	1
PF850200	23934	C-5	10	1N823	80131	C-5	18
PH8-32X1-4	COML	C-1	3	173-25599-28V	23934	C-1	11
RCR20G101JS	81349	C-5	7	173-25600-28V	23934	C-1	9
RCR20G122JS	81349	C-5	13	173-25601-28V	23934	C-1	10
RCR20G182JS	81349	C-5	20	173-25602-28V	23934	C-1	8
RCR20G221JS	81349	C-5	6	173-25603-28V	23934	C-1	7
RCR20G270JS	81349	C-5	29	2N2102	80131	C-5	21
RCR20G272JS	81349	C-5	36	2N3055	81349	C-2	1
RCR20G331JS	81349	C-5	37	2N3055	81349	C-3	1
RCR20G680JS	81349	C-2	3	2N4036	80131	C-5	35
RCR42G221JS	81349	C-5	25	2N4037	80131	C-5	4

SETCION VI. NATIONAL STOCK NUMBER AND PART NUMBER INDEX (CONTINUED)

PART NUMBER	FSCM	FIG NO.	ITEM NO.	PART NUMBER	FSCM	FIG NO.	ITEM NO.
226-25502-28V	23934	C-1	13	601D208G025JL4	56289	C-5	34
226-25502XX	23934	C-5	40	622-4	75382	C-1	5
226-25523-28V	23934	C-3	2	670A3000-4	75382	C-1	6
226-25543-28V	23934	C-2	2	91C60CC163	99392	C-7	1

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

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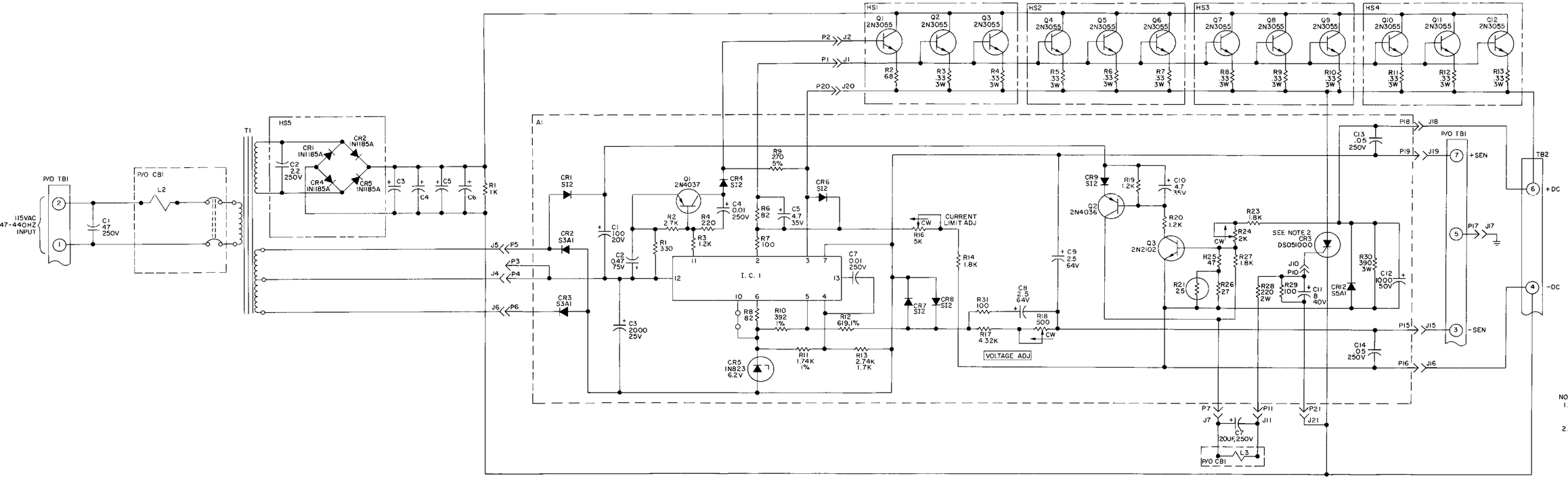

NOTES:
1. UNLESS OTHERWISE SPECIFIED
   ALL RESISTOR VALUES ARE IN OHMS, 10%, 1/2W
   ALL CAPACITANCE VALUES ARE IN MICROFARADS
2. CR3 IS PART OF THE CIRCUIT BREAKER

6130-001-14-6-1

Figure FO-1. Power Supply Schematic Diagram

COMMANDER
US Army Electronics Materiel Readiness Activity
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