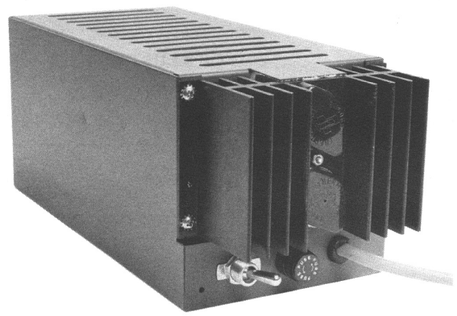
ERICSSON

Mobile Communications

13 AMPERE POWER SUPPLY
19A704647P1-P3



CAUTION

THESE SERVICING INSTRUCTIONS ARE FOR USE BY QUALIFIED PERSONNEL ONLY. TO AVOID ELECTRIC SHOCK DO NOT PERFORM ANY SERVICING OTHER THAN THAT CONTAINED IN THE OPERATING INSTRUCTIONS UNLESS YOU ARE QUALIFIED TO DO SO. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING:
TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD. DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CAUTION:
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CARD. RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

The lightning flash and arrowhead withing the triangle is a warning sign alerting you of "dangerous voltage" inside the product.	**CAUTION** RISK OF ELECTRIC SHOCK DO NOT OPEN CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	The exclamation point within the triangle is a warning sign alerting you of important instructions accompanying the product.
See Marking On Bottom/Back Of Product		

Maintenance Manual

ERICSSON

Ericsson GE Mobile Communications Inc.
Mountain View Road • Lynchburg, Virginia 24502

Printed in U.S.A.

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

SPECIFICATIONS*

POWER	
INPUT	121 or 242 Vac Nominal (Selectable)
OUTPUT	13.8 Vdc ±5% at 13 amps
DUTY CYCLE**	20%: 1 minute ON, 4 minutes OFF
SIZE	12 x 4-5/8 x 4-5/8 inches
WEIGHT	9-3/4 pounds

* These specifications are intended primarily for the use of the serviceman. Refer to the appropriate Specification Sheet for the complete specifications.

** There is a thermal protection circuit that will automatically reduce the output voltage if the output stays on too long at 13 amperes.

WARNING

This unit contains dangerous voltage levels. It is strongly recommended that defective units be returned to the manufacturer for repairs.

If field repair is necessary, remove input power and then use a load resistor to manually discharge each capacitor before working on the circuits.

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LBI-31801

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THIS MANUAL** - It contains important safety and operating instruction for Models 19A704647 Pl, P2, P3.

2. Do not use auxiliary equipment not recommended or sold by the manufacturer. To do so may result in a risk of fire, electric shock, or injury to persons.

3. Do not expose unit to rain, snow or other type of moisture.

4. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting unit.

5. Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.

6. An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:

   a. That pins on plug of extension cord are the same number, size and shapes those of plug on unit.

   b. That extension cord is properly wired in good condition, and

   c. That wire size is large enough for AC ampere rating of unit as specified in Table l.

Table 1 - Recommended Minimum Size For Extension Cords

LENGTH OF EXTENSION CORD (FT.)	25	50	100	150
AWG SIZE OF EXTENSION CORD	18	18	16	14

7. Do not operate unit with damaged cord or plug - replace them immediately.

8. Do not operate unit if it has received a sharp blow, been dropped, or otherwise damaged in any way; return to a qualified service shop.

9. Do not disassembly unit; return to a qualified service shop when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.

10. To reduce risk of electric shock, unplug unit from outlet before attempting any maintenance or cleaning.

11. **GROUNDING AND AC POWER CORD CONNECTION** - To reduce risk of electrical shock use only a properly grounded outlet. The unit is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. Be sure that the outlet is properly installed and grounded in accordance with all local codes and ordinances.

12. **DANGER** - Never alter AC cord or plug. If it will not fit outlet, have a proper outlet installed by a qualified electrician. Improper connection can result in risk of an electric shock.

13. This unit is for use on a 121-volt circuit, and has a grounding plug that looks like the plug illustrated in Figure 1. A temporary adapter, which looks like the adapter illustrated in sketches B and C, may be used to connect this plug to a two pole receptacle as shown in sketch B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician.

14. **DANGER** - Before using adapter as illustrated, be certain that center screw of outlet plate is grounded. The green-color rigid ear or lug extending from adapter must be connected to a properly grounded outlet-- make certain it is grounded. If necessary, replace original outlet cover plate screw with a Ionger screw that will secure adapter ear or lug to outlet cover plate and make ground connection to grounded outlet.

15. The Model 19A704647P3 is for use on a circuit having a nominal rating more than 121 volts AC and is factory equipped with a specific electric cord to permit connection to an acceptable electric circuit. Make sure that the unit is connected to an outlet having the same configuration as the plug. No adapter should be used with this unit.

16. Care should be taken when placing the unit in service to insure proper top and bottom ventilation. A minimum of 1/4" is required between the bottom of the unit and the surface on which it sits.

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IMPORTANT SAFETY INSTRUCTIONS

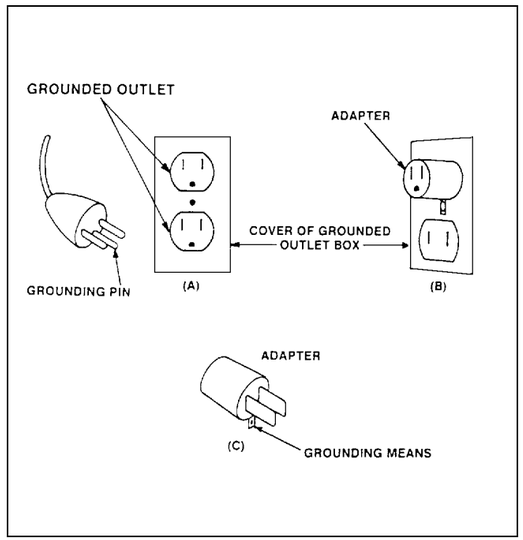

Figure 1 - Grounding Methods

The following are reproductions of labels on the product relating to product safety.

OUTPUT USES CLASS 1 WIRING ONLY FOR 13.8 VDC & 13 A AT 20% DUTY CYCLE 1 MIN. ON, 4 MIN. OFF

HOT	WARNING	HOT

TO REDUCE THE RISK OF ELECTRIC SHOCK OR FIRE DO NOT REMOVE TOP COVER. NO USER SERVICEABLE PARTS INSIDE. REFER SERVICE TO QUALIFIED SERVICE PERSONNEL. DO NO EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE. REPLACE THE FUSE ONLY WITH SAME TYPE OF 4A—250V—FAST BLOW FUSE. THE EQUIPMENT ELEC. RATING IS 4A—121 VAC—60HZ INPUT AND 13A—13.8V-DC AT 20% DUTY CYCLE OUTPUT (1 MINUTE ON, 4 MINUTES OFF).
TELEPHONE (804) 295-7200 FOR THE MANUFACTURER
A-SYSTEMS INC., 1500 AVON ST., CHARLOTTESVILLE, VA
LISTED
UL
35E9
COMMERCIAL AUDIO POWER SUPPLY
MODEL NO. 19A704647
SERIAL NO.

INTRODUCTION

This unit is a linear power supply with a step-down transformer input, capacitor filter section and linear transistor regulator on the output. It converts 121/242 volts RMS AC to 13.8 volts DC at 13 amperes maximum.

The AC input voltage is transformed to approximately 24 volts AC, rectified and filtered by a capacitor filter. The filtered DC voltage is then regulated. This circuit monitors the output voltage, compares this voltage with a reference voltage and corrects the output to provide 13.8 volts DC for varying load currents. Output overvoltage and overtemperature protection are provided.

CIRCUIT DESCRIPTION

INPUT SECTION

The input circuitry consists of fuse Fl, switch S1, transformer T1, MOV's VI-V3 and rectifiers D1 - D3. The transformer isolates and reduces the 121/242 Vac input to approximately 24 Vac. The metal oxide varistors provide protection for voltage surges that appear on the AC input line. Bridge rectifier D I provides DC power to the high current filter section. Diodes D2 and D3 provide DC power for the integrated circuit regulator filter. The AC input voltage is selectable between 121 Vac and 242 Vac by selecting proper primary windings of the transformer. Wire nuts allow the transformer leads to be wired properly. See the schematic diagram for further details.

FILTER SECTION

The high current filter section consists of capacitor CI. Resistor RI (two .075 ohms resistors) provides surge protection at turn-on for DI.

The regulator filter section consists of capacitor C2. Capacitor C3 prevents the regulator IC1 from oscillating. The voltage at the input of IC1 normally is about 2 volts higher than the high current filter section when the supply is under load. This allows the supplys' output to remain regulated at low AC input voltages. It should be noted that a problem with bridge DI may also upset the IC regulators supply due to the current path of the regulators rectifier/filter section.

REGULATOR SECTION

The regulator section consists of the control regulator 1C 1 which contains a reference voltage source plus comparator circuitry. This circuitry monitors the feedback voltage developed by resistors R4 and R5. This voltage is compared to the IC internal reference at pin 4 of IC 1. IC 1 then adjusts the current to transistors to achieve an output voltage of I 3.8 volts DC on the emitters of Q1 and Q2. Capacitor C4 smoothes the output of ICI and prevents QI and Q2 from oscillating. Capacitor C5 filters the regulator output to provide low ripple and good transient response.

OUTPUT PROTECTION SECTION

The output protection consists of an overvoltage monitor circuit comprised of zener diode D4 and resistors R6 and R7. This network divides the output voltage down and triggers SCR1 when the output voltage exceeds 16 volts. When SCR 1 fires the output is shorted through power resistor R8 and the input fuse is blown. Capacitor C6 prevents SCRl from false triggering on noise. If the output is greatly overloaded, the input fuse will blow. Small overloads which do not blow the fuse but lead to overheating are protected against by the temperature monitoring circuitry in the IC regulator. When the heatsink temperature exceeds 150 degrees C, the IC regulator will shut down the output section. After the heatsink cools, the circuitry resets automatically.

OPERATION

I. Connect 13 Vdc output to the load using the mating connector.

2. With the ON/OFF switch in OFF position, connect AC power cord to a 120 Vac power source.

3. Place the ON/OFF switch to the ON position to turn on the power supply.

MAINTENANCE

WARNING

This unit contains dangerous voltage levels. It is strongly recommended that defective units be returned to the manufacturer for repairs.

If field repair is necessary, remove input power and then use a load resistor to manually discharge each capacitor before working on the circuits.

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For disassembly, remove 4 screws and lift off top cover. This disassembly is required before working on this power supply. When replacing any component be certain to use an identical component Thermal joint component is required under D1, Q1, Q2, IC1 and SCR1. R8 must be spaced above the printed circuit board by 3/32 inch minimum. Observe wire routing when resoldering circuits. Failure to do so may lead to excessive ripple or poor regulation.

Should the overvoltage monitor circuit be suspected of blowing the fuse proceed as follows:

1. Connect the supply to a resistive load (not the desk station!).

2. Remove resistor R8 from the circuit by disconnecting one end.

3. Turn on the supply and observe whether the fuse blows. If the fuse no longer blows the overvoltage monitor circuit was the cause.

TROUBLESHOOTING

The checks in the following tables should be followed when troubleshooting a suspected defective power supply. When a component or assembly has been identified as being defective, replace the defective component and also check associated components before apply power to the unit in the event that a series of components are defective.

When replacing any component be certain to use an identical component. Thermal joint component is required under D1, Q1, Q2, IC1 and SCR1. R8 must be spaced 3/32 inch above the printed circuit board. Observe wire routing when resoldering circuits. Failure to do so may lead to excessive ripple or poor regulation.

Recommended test equipment for maintenance of this power supply includes:

- Digital multimeter
- 50 amp DC meter
- Resistive load
- a Oscilloscope

ADJUSTMENTS

This power supply has no adjustments or controls other than the ON/OFF switch.

NOTE

In some cases a 220k Ohm resistor R9 has been paralleled with R5 at the factory in order to achieve the required output voltage.

INSTALLATION

The power supply can be mounted using the mounting holes on the chassis.

NOTE

Insure that ventilation holes in the unit are not obstructed when the unit is mounted or in operation.

The power supply is designed for operation from either a 121 Vac or 242 Vac source. Before connecting the power supply measure the source voltage and then connect input transformer accordingly. Refer to the Schematic diagram for details.

FUSE REPLACEMENT

To replace a defective fuse, perform the following procedure:

1. Place ON/OFF switch to OFF position.

2. Remove cap from fuse holder and replace fuse with a similar type and size [4 amp, 250V (121 Vac input), 2.5 amp, 250V (242 Vac input)].

3. Replace cap and place ON/OFF switch to ON position.

If trouble persists, check with a qualified service personnel.

TROUBLESHOOTING TABLE

SYMPTOM	AREA TO CHECK
FUSE BLOWS	1) shorted output 2) 230 volts AC applied with 115 volt tap selected 3) shorted D1, Q1, Q2, T1, C1, SCR1 4) overvoltaged on output causing SCR1 to fire
NO OUTPUT	1) shorted output 2) proper voltage range selected 3) output properly connected 4) overtemperature shutdown 5) failed Q1, Q2, D1, IC1
OUTPUT VOLTAGE LOW	1) proper input voltage range selected 2) output overloaded 3) ICI failure
OUTPUT VOLTAGE HIGH	1) failed SCR1, failed IC1, failed Q1

POWER SUPPLY VOLTAGE READING

LOCATION	READING (TYPICAL)
C1 PLUS	APPROXIMATELY +25 VOLTS DC
C2 PLUS	APPROXIMATELY +27 VOLTS DC
IC1 PIN4	APPROXIMATELY +4.7 VOLTS DC
OUTPUT	+13.1 TO 14.1 VOLTS DC
IC1 PIN 3	0.7 VOLTS ABOVE OUTPUT

APPLICATION

The 19A704647P2 and P3 units include mounting feet and omits the mounting bracket. A mating connector and mating male contacts are provided to mate with the 13 Vdc output connector.

The 19A70467P3 unit operates from a 242 Vac input. A power cord is supplied less a power plug (customer provided) on end of cord.

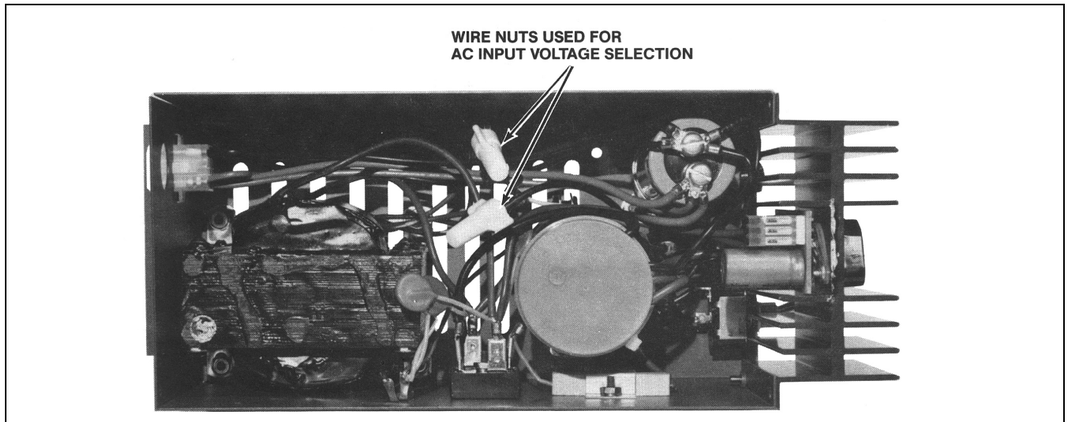
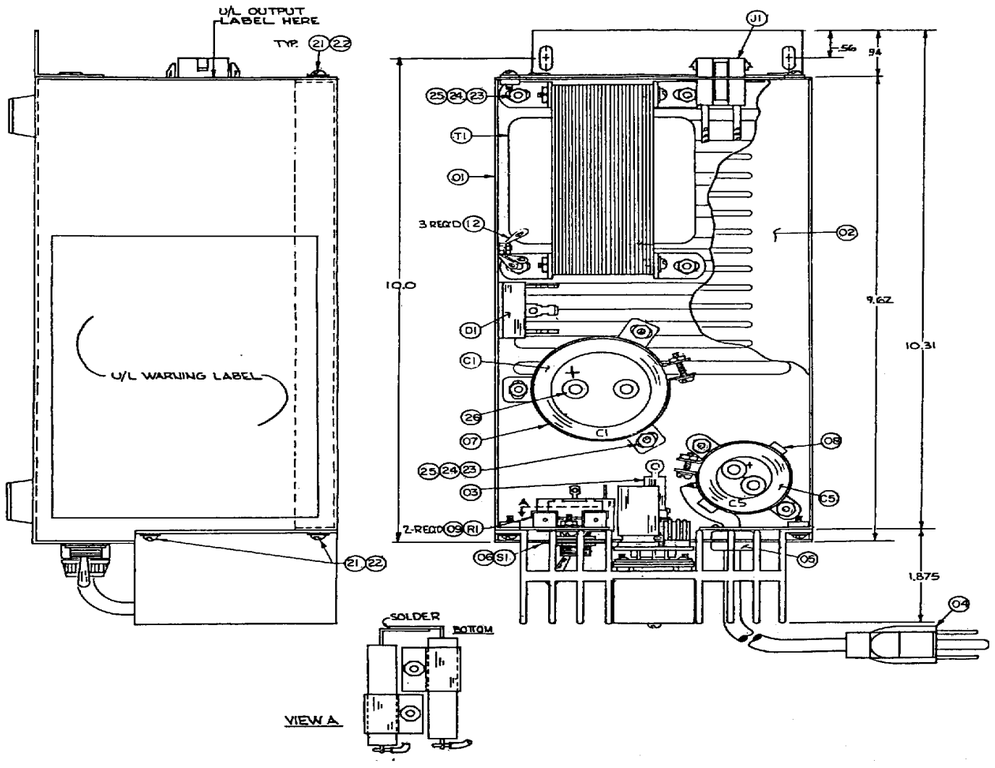


Figure 2 - Top View With Cover Removed

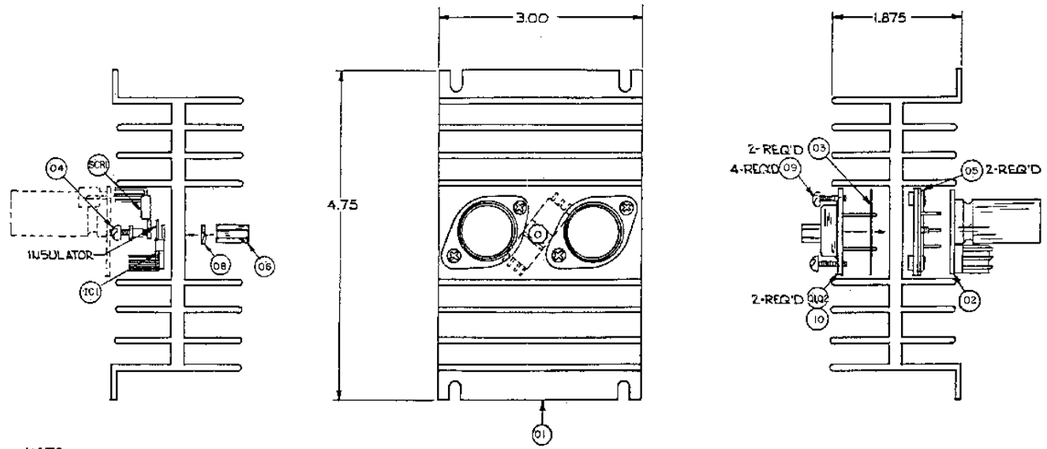
POWER SUPPLY ASSEMBLY



WIRE CONNECTION							
WIRE#	LENGTH	COLOR	AWG.	FROM	TERM. TYPE	TO	TERM. TYPE
1.	2½" LG.	BLACK	18	CONNECTOR PIN 1	CONN. CONTACT	CONNECTOR PIN 4	CONN. CONTACT
2.	"	RED	"	CONNECTOR PIN 3	"	CONNECTOR PIN 6	"
3.	9 "LG.	BLACK	"	CONNECTOR PIN 4	"	- SIDE OF C5 CAP.	TERM. RING
4.	"	RED	"	CONNECTOR PIN 6	"	+ SIDE OF C5 CAP.	"
5.	"	BLACK	14	CONNECTOR PIN 7	"	- SIDE OF C5 CAP	"
6.	"	RED	"	CONNECTOR PIN 9	"	+ SIDE OF C5 CAP	TERM. RING
7.	2½"	BLACK	18	GND. LUG	SOLDER	DIODE BRIDGE - OUTPUT	FAST ON #1
8.	—	—	—	(MOV) GND. LUG	—	DIODE BRIDGE INPUT-1	FAST ON #2
9.	—	—	—	"	—	DIODE BRIDGE INPUT-2	" #4
10.	.5"	BLACK	14	DIODE BRIDGE OUTPUT-	FAST ON #1	- SIDE OF C1 CAP	TERM RING
11.	—	—	—	DIODE BRIDGE OUTPUT +	" #3	ONE SIDE OF IT. 9 RES.	—
12.	—	—	—	(MOV) DIODE BRIGDE INPUT-1	#2	(MOV) DIODE BRIGDE INPUT	FAST ON #4
13.	5	BLACK	14	- SIDE OF C1 CAP.	TERM. RING	- SIDE OF C5 CAP	TERM RING
14.	—	—	—	R10 TO GND LUG IT. 40	—	WIRE #17, 18, 19 WIRE NUT	
15.	—	GREEN	"	FROM TOP OF TRANSFORMER	—	DIODE BRIDGE INPUT-1	FAST ON #2
16.	—	"	"	FROM BOTTOM OF TRANSFORMER	—	DIODE BRIDGE INPUT-2	" #4
17.	—	BRN. / WHT.	16	"	—	WIRE NUT	—
18.	—	BLK. / WHT.	"	"	—	"	TIE WIRES TOGETHER
19.	3"	WHITE	18	POWER CORD		"	—
20.	—	BLACK	16	FROM BOTTOM OF TRANSFORMER	—	WIRE NUT	—
21.	—	BROWN	"		—	"	TIE WIRES TOGETHER
22.	5"	BLACK	18	LEFT SIDE OF ON/OFF SWITCH	SOLDER	"	—
23.	5"	GREEN	"	POWER CORD	—	TO GND LUG	—
24.	6"	BROWN	14	+ SIDE OF C1 CAP.	TERM. RING	OTHER IT. 9 RES.	SOLDER
25.	6"	"	"	"	"	TO W1 ON P.C. BD.	"
26.	3"	RED	"	+ SIDE OF C5 CAP.	"	TO W2 ON P.C. BD.	"
27.	6½	GREEN	18	P2 PIN 1	TERM CRIMP	DIODE BRIGDE INPUT-1	FAST ON #2
28.	6½	"	"	P2 PIN 3	"	DIODE BRIGDE INPUT-2	" #4
29.	2½"	BLACK	"	P2 PIN 2	"	- SIDE OF C5 CAP.	TERM RING
30.	1½"	"	"	POWER CORD	—	MIDDLE POST ON FUSE	SOLDER
31.	3/4"	"	"	SIDE TERMINAL ON FUSE	SOLDER	RIGHT SIDE OF ON/OFF SWITCH	"
32.	2½"	BLACK	16	CONNECTOR PIN 2	CONN. CONTACT	CONNECTOR PIN 7	CONN. CONTACT
33	"	RED	"	CONNECTOR PIN 8	"	CONNECTOR PIN 9	"

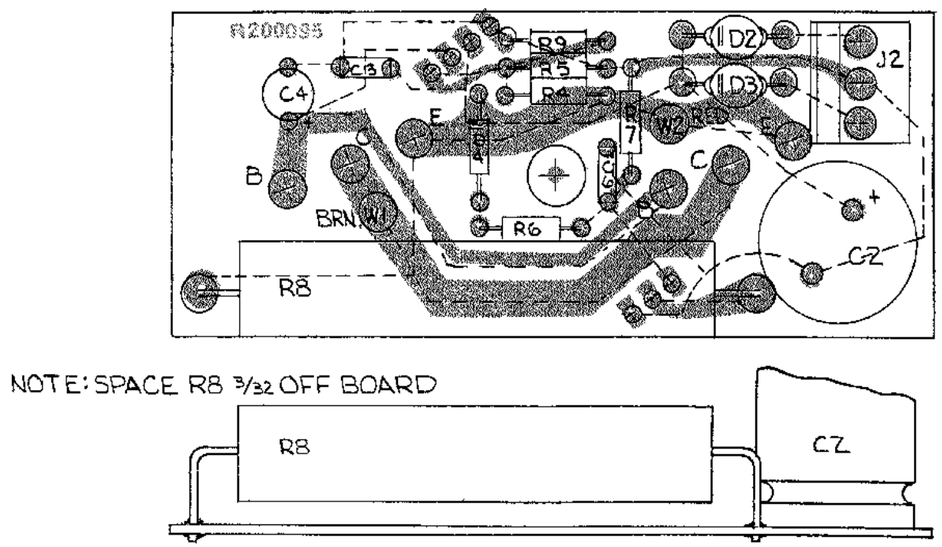
POWER SUPPLY

HEAT SINK ASSEMBLY

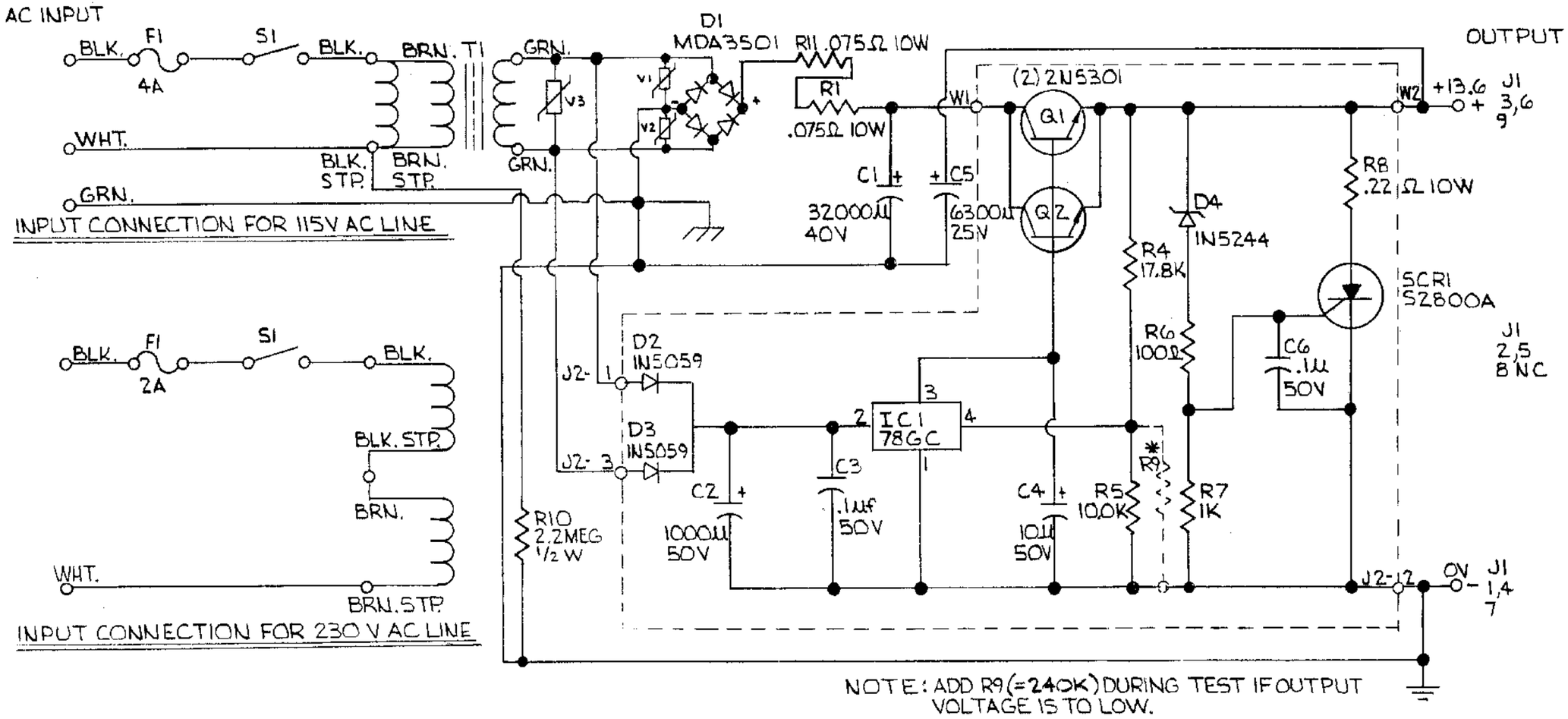


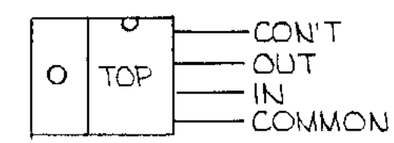
NOTE:
1. ADD THERMAL JOINT COMPOUND TO TRANSISTOR'S AND IC REGULATOR.
2. ITEM 1, 7 & 8 ARE PART OF R200095 ASSY.
3. OMITTED BRACKET FOR CLARITY OF DRAWING.

PRINTED CIRCUIT BOARD ASSEMBLY

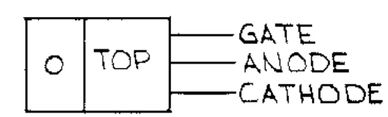


HEAT SINK ASSEMBLY AND CIRCUIT BOARD ASSEMBLY





IC1 REG-78GC



SCR1-S2800A

POWER SUPPLY

PARTS LIST

DELTA POWER SUPPLY ASSEMBLY
A19/B3000960
ISSUE 3

SYMBOL	GE PART NO.	DESCRIPTION
		WHEN ORDERING REPLACEMENT PARTS, ALL NUMBERS SHOULD BE PRECEDED BY THE FOLLOWING THREE DIGIT PREFIX: "A19/".
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C1	36DE363G040BC2A	Aluminum: 32000 uF + or -10%, 40 VDCW.
C5	16DX632G025AB2B	Aluminum: 6300 uF + or -10%, 25 VDCW.
		- - - - - - - - - - CONNECTORS - - - - - - - - - -
J1		Connector. Includes:
	1-480672-0	Connector, female, 9 pin plug.
	350390-1	Contact.
		- - - - - - - - - - DIODES - - - - - - - - - -
D1	MDA3501	Bridge diode.
		- - - - - - - - - - FUSES - - - - - - - - - -
F1	312-004	Fuse, 4 amp, 250 volt.
F1	312-02.5	Fuse, 2.5 amp, 250 volt. (Used with Part 1 only).
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R1	CPL-10-.075-10%	Wire wound: .075 ohms + or -10%, 10 w.
R10	IBT-.50-2.2M-5%	Carbon composition: 2.2M ohms + or -5%, 1/2 w.
		- - - - - - - - - - SWITCHES - - - - - - - - - -
S1	82601	SPST, 125 volt, 15 amp.
		- - - - - - - - - - TRANSFORMERS - - - - - - - - - -
T1	19A116037P1*	Delta, PS.
		- - - - - - - - - - VARISTER - - - - - - - - - -
V1 thru V3	V47ZA7	Metal Oxide Varister: 38 volt, 1000 amp, .45 w.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
01	83001468	Case, Delta PS.
02	R200092C	Cover, Delta PS.
03	342-014	Fuse Holder, 20 amp, 250 volt.
04	7501-8	Cordset, 8 feet, 250 volt.
05	822	Hardware, strain relief.
06	20590-1A8	Dial plate, ON-OFF.
07	VR8A	Capacitor clamp, 2 inch diameter. (Used with C1).
08	VR3A	Capacitor clamp, 1 3/8 inch diameter. (Used with C5).
09	R100D54	Resistor clamp. (Used with R1).
10	50635-1	Terminal, fast-on, 14 AWG.
11	30697	Terminal ring, 16-22 AWG.
12	904	Solder lug, No. 6.
13	1857/19BLK	Wire, black: 18 AWG, 600 volt.
14	1857/19RED	Wire, red: 18 AWG, 600 volt.
15	1857/19GRN	Wire, green: 18 AWG, 600 volt.
		* DO NOT PROCEED PART NUMBER WITH "A19/".

*COMPONENTS ADDED, DELETED OR CHANGED BY PRODUCTION CHANGES

SYMBOL	GE PART NO.	DESCRIPTION
16	1859/19BLK	Wire, black: 14 AWG, 600 volt.
17	1859/19BRN	Wire, brown: 14 AWG, 600 volt.
18	1859/19RED	Wire, red: 14 AWG, 600 volt.
19	1858/19BLK	Wire, black: 16 AWG, 600 volt.
20	1858/19RED	Wire, red: 16 AWG, 600 volt.
21		Machine screw: No. 6-32 x 3/8.
22		Washer: No. 6ET, SS.
23		Washer, flat: No. 6.
24		Washer, split lock: No. 6.
25		Nut: No. 6-32.
26	56-02-20	Insulator, SI-RUB, 1 x .26.
27	PLT2.5I	Cable tiea, 9.7 inches.
28	841210	Insulator fuse cap.
29	R200147	Angle bracket. (Used in Part 1,3 only).
30	2440 BUMPER	Bumper, .5DX.4H. (Used in Part 2 only).
31	30-651	Connector, wire out.
32	SSP-42	Pop rivet, steel. (Used in Part 1,3 only).
33	1-480633-0	Connector, 9 pin, housing. (Used in Part 2,3 only).
34	350391-1	Contact, pin. (Used in Part 2,3 only).
35	640431-3	Connector, female, 3 pin, .156 housing.
		PRINTED CIRCUIT BOARD ASSEMBLY A19/B200095
		- - - - - - - - - - CAPACITORS - - - - - - - - - -
C2	UPC1H102MRH	Aluminum: 1000 uF + or -20%, 50 VDCW.
C3	IC20X7R104K050B	Ceramic: .1 uF + or -10%, 50 VDCW.
C4	UPC1H100MAH	Aluminum: 10 uF + or -20%, 50 VDCW.
C6	IC20X7R104K050B	Ceramic: .1 uF + or -10%, 50 VDCW.
		- - - - - - - - - - DIODES - - - - - - - - - -
D2 and D3	1N5059	SI, 200 Volt, 1.5 Amp.
D4	1N5244A	Zener, 14 Volt, 10%.
		- - - - - - - - - - CONNECTORS - - - - - - - - - -
J2	640383-3	Male, 3 Pin, .156, Head.
		- - - - - - - - - - RESISTORS - - - - - - - - - -
R4	GF55-TO-18.2K-1%	Metal film: 18.2K ohms + or -1%, 1/4 w.
R5	GF55-TO-10K-1%	Metal film: 10K ohms + or -1%, 1/4 w.
R6	CF-.25-100-5%	Carbon film: 100 ohms + or -5%, 1/4 w.
R7	CF-.25-1K-5%	Carbon film: 1K ohms + or -5%, 1/4 w.
R8	PW-10-.22-10%	Wire wound: .22 ohms + or -10%, 10 w.
		- - - - - - - - - - CABLES - - - - - - - - - -
W1	1859/19BRN	Wire, 14 AWG, brown.
W2	1859/19RED	Wire, 14 AWG, red.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
1	30697	Terminal, ring. (Used with W1 and W2).
		HEAT SINK ASSEMBLY A19/B200097
		- - - - - - - - - - INTEGRATED CIRCUITS - - - - - - - - - -
IC1	UA78G01C	Linear, ADJ REG, TO220.

SYMBOL	GE PART NO.	DESCRIPTION
		- - - - - - - - - - TRANSISTORS - - - - - - - - - -
Q1 and Q2	2N5302	NPN, 30 Amp, 60 Volt, TO3.
		- - - - - - - - - - RECTIFIERS - - - - - - - - - -
SCR1	S2800A	SCR, 10 Amp, 125 Volt, TO220.
		- - - - - - - - - - MISCELLANEOUS - - - - - - - - - -
Q1	R200101	Heat Sink, Delta PS.
Q2	R200095	Printed Circuit Board Assembly, Delta PS.
Q3	4662	Insulator, Mica, TO3.
Q4	488D	Mounting Kit, TO220.
Q5	R100056	Bracket, Delta PS.
Q6	1921B	Spacer, SS, No. 4 x .50, Hex.
Q7		Machine Screw: No. 4-40 x 3/8, SS.
Q8		Washer: No. 4EL, SS.
Q9		Machine screw: No. 6-20 x 1/2, SMET, SS.
10	120-8	Compound, SI, Oil Base.

PRODUCTION CHANGES

Changes in the equipment to improve performance or to simplify circuits are identified by a "Revision Letter", which is stamped after the model number on the unit. The revision stamped on the unit includes all previous revisions. Refer to the Parts List for the descriptions of parts affected by these revisions.

REV. A - 19A7D4647P1 POWER SUPPLY
Added V1-V3,changed C3 capacitor voltage rating to 50 volts and changed input ground wiring connection.

REV. B - 19A7D4647P1 POWER SUPPLY
Added top cover and plastic cap over angulator transistor.

REV. C - 19A7D4647P1 POWER SUPPLY
Added new mechanical case and improved circuit.

REV. D - 19A7D4647P1 POWER SUPPLY
Obtained U.L. approval.