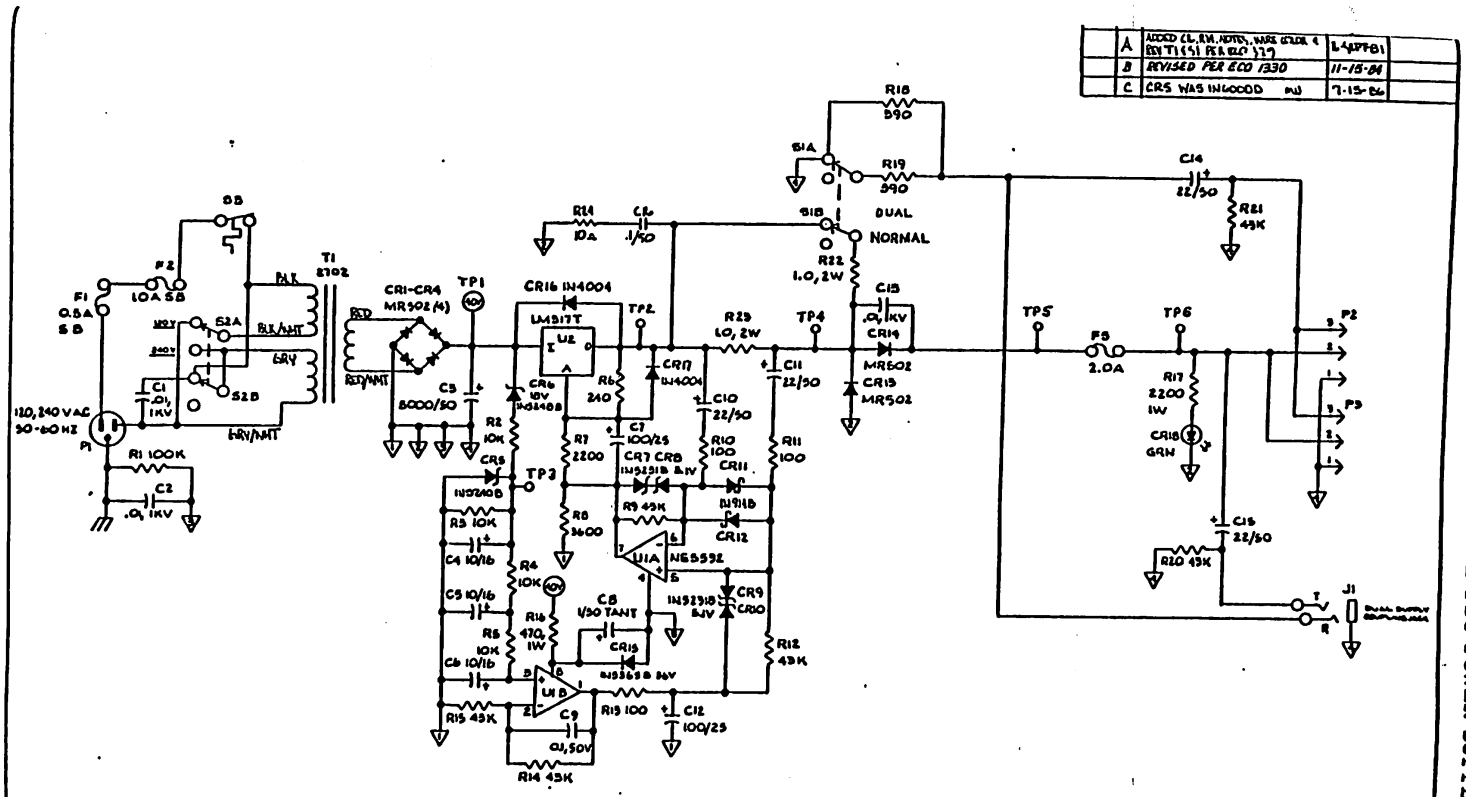
RTS SYSTEMS
PROFESSIONAL INTERCOMMUNICATIONS
PROFESSIONAL AUDIO PRODUCTS
1100 WEST CHESTNUT STREET
BURBANK, CALIFORNIA 91506
~~TWX 910-498-2806~~
TELEX 194855

818-566-6700

Parts
1-800-828-6107

TECHNICAL MANUAL

TW Intercom System
MODEL PS8
Power Supply



2. CAPACITANCE VALUES SHOWN : MICROFARADS / VOLTS.

1. ALL RESISTORS ARE 1/4 WATT , CARBON FILM , ± 5%.

NOTES : (UNLESS OTHERWISE SPECIFIED)

RTS SYSTEMS BURBANK, CALIFORNIA

SCHEMATIC, PS8

SIZE C | FSCM NO. 60572 | SD2717 | REV C

TECHNICAL MANUAL

TM 2809

MODEL PS8 POWER SUPPLY

RTS SYSTEMS, INCORPORATED
BURBANK, CALIFORNIA

SECOND EDITION
JULY, 1986

PROPRIETARY NOTICE

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TECHNICAL MANUAL
TM 2809
MODEL PS8
POWER SUPPLY

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This manual is published by the engineering department of RTS Systems, Inc., which is responsible for its contents.

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Address all communication regarding this publication to:

Director of Engineering
RTS Systems, Inc.
1100 West Chestnut Street
Burbank, CA 91506

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RTS SYSTEMS' LIMITED WARRANTY

The products of RTS Systems, Inc., a California corporation, are warranted to be free from defects in materials and workmanship for a period of one year from the date of sale.

RTS Systems' sole obligation during the warranty period is to provide, without charge, parts and labor necessary to remedy covered defects appearing in products returned prepaid to RTS Systems, 1100 W. Chestnut Street, Burbank, California, 91506, U.S.A.. This warranty does not cover any defect, malfunction or failure caused beyond the control of RTS Systems, including unreasonable or negligent operation, abuse, accident, failure to follow instructions in this Manual, defective or improper associated equipment, attempts at modification and repair not authorized by RTS Systems, and shipping damage. Products with their serial numbers removed or effaced are not covered by this warranty.

To obtain warranty service, follow the procedures entitled "PROCEDURE FOR RETURNS" and "SHIPPING TO MANUFACTURER FOR REPAIR OR ADJUSTMENT" listed below.

This warranty is the sole and exclusive express warranty given with respect to RTS Systems' products. It is the responsibility of the user to determine before purchase that this product is suitable for the user's intended purpose.

ANY AND ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY ARE LIMITED TO THE DURATION OF THIS EXPRESS LIMITED WARRANTY.

NEITHER RTS SYSTEMS NOR THE DEALER WHO SELLS RTS SYSTEMS' PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

UNPACKING INFORMATION AND INSPECTION

Immediately upon receipt of your Model PS8, take the time to carefully examine the package for any discrepancies or damage. Should you discover any, notify the freight company and your dealer at once.

Your shipping container should contain the following components:

NO.	DESCRIPTION	PART NUMBER
1	MODEL PS8 POWER SUPPLY	9010-2732-00
1	Large Rack Ear	9110-2044-02
1	Small Rack Ear	9110-1609-02
4	Rubber Feet	4501-5027-00
1	Owner's Manual	TM 2809
1	Plastic Bag	

Your shipping container should be saved as it is specially designed for transporting this equipment in good condition.

RETURN SHIPPING INSTRUCTIONS

PROCEDURE FOR RETURNS

If repair is necessary, contact the dealer where this unit was purchased.

If repair through the dealer is not possible, contact the RTS Systems Customer Service Department by telephone, as directed below, to obtain a Return Authorization Number.

DO NOT RETURN ANY EQUIPMENT DIRECTLY TO THE FACTORY WITHOUT FIRST OBTAINING A RETURN AUTHORIZATION NUMBER.

Be prepared to provide your company's name, address, phone number, a person to contact regarding the repair, the type and quantity of equipment, a description of the defect, and the serial number(s).

Questions regarding returns for repair should be directed to:

Customer Service Department
RTS Systems, Inc.
1100 W. Chestnut St.
Burbank, CALIFORNIA 91506, U.S.A.

Telephone: (818) 840-7311
TELEX: 194855
TWX: 910-498-4987
TELEFAX: (818) 842-4921

SHIPPING TO MANUFACTURER FOR REPAIR OR ADJUSTMENT

All shipments of RTS Systems, Inc. equipment should be made via United Parcel Service or the best available shipper, prepaid. The equipment should be shipped in the original packing carton; if that is not available, use any suitable container that is rigid and of adequate size. If a substitute container is used, the equipment should be wrapped in paper and surrounded with at least four inches of excelsior or similar shock-absorbing material. All shipments should be directed to the attention of the Customer Service Department and must include the Return Authorization Number.

Upon completion of repairs equipment will be returned via United Parcel Service or specified shipper, collect.

SECTION 1: INTRODUCTION AND SPECIFICATIONS

1.1 INTRODUCTION

In the TW Intercom System, the power supply is considered the heart of the system. The Model PS8 Power Supply is designed to function in applications employing small-size TW Intercom Systems. The unit is completely self-contained and features two-channel operation; one "wet" channel with 32 volts DC and one "dry" channel without voltage potential. Each channel provides an audio termination impedance of 200 ohms.

The Model PS8 is mechanically and electrically built to industrial quality standards, insuring long-term usage and performance. Outputs are protected against short circuit conditions with recovery being automatic and instantaneous. Protection circuitry prevents damage to the power supply from accidental connection to 120 volt AC power lines.

1.2 POWERING

A single PS8 Power Supply powers: twelve user stations without call lights, seven speaker stations without call lights, seven user stations with call lights, or five speaker stations with call lights. Of course, a combination of stations may be used with respect to maximum current capability. See Figure 3-3 and Figure 3-4 for Model PS8 powering capability.

If still more user stations are needed, two PS8 Power Supplies can be audio coupled together to double the powering capability; a 1/4-inch 3-circuit phone jack is available for this purpose. This connector can also be used as a one-way output port when monitoring or recording the intercom audio signals.

1.3 DUAL AUDIO IMPEDANCE

When two PS8's are combined, an impedance select switch on each PS8 maintains, in effect, the 200 ohm line termination while the pair of units provides the equivalent current of what would be approximately a PS20. In the normal position, the switch sets the impedance to 200 ohms while in the dual position, a 400 ohm impedance is established. The parallel combination of 400 ohms between the two power supplies now becomes 200 ohms: the nominal line impedance for the TW Intercom System.

1.4 CONNECTIONS

There are two XLR-type 3-pin male connectors mounted on the rear panel for output interconnection to the user stations. (The PS8 itself does not have program insertion capability).

1.5 PACKAGE

The PS8 is housed in a metal enclosure measuring 1.75 inches high by 8.38 inches wide by 7.5 inches deep. The unit is completely enclosed and may be used free standing, or rack mounted. All electrical components are assembled on a single circuit board allowing easy adjustment or servicing; immediate access is accomplished by removing four screws and sliding the top and bottom covers back along their respective channels.

1.6 SPECIFICATIONS

OUTPUTS:	One powered channel, CH1 (audio + DC + 200 ohm audio termination) One passive channel, CH2 (audio + 200 ohm audio termination)
OUTPUT VOLTAGE:	
Nominal open circuit	+32 volts, +0.5 V,-1.5 V
Full load	+26 volts
OUTPUT IMPEDANCE:	200/400 ohms switchable On powered channel: 200 ohms is maintained from 17 to 32 volts output
OUTPUT CURRENT	
@ 26 volts	0.4 amps
@ 32 volts	0.5 amps
INTERCOM AUDIO:	
NOMINAL LEVEL:	2.0 volts p-p
MINIMUM HEAD ROOM:	6 dB minimum
TERMINATION: Both channels	200 or 400 ohms ±10%
FREQUENCY RESPONSE: -3 dB, no load	75 Hertz to 20 KHz
SIGNAL TO NOISE RATIO: Ref. 2.0 V pp	55 dB

TEMPERATURE:

Operating	0° to +50°C
Storage	-40° to +70°C

POWER REQUIREMENT: 24 volt-amps
(120/240 VAC, 50-60 Hz)

DIMENSIONS:

Height:	1.75 inches (43.62 mm)
Width:	8.375 inches (212.73 mm)
Depth:	7.50 inches (190.50 mm)
Weight:	5 pounds (2.25 kilograms)
Finish:	Light gray enamel paint

SPECIFICATION NOTES:

0 dBu = 0.775 r.m.s.

NOTICE: All production information and specifications are subject to change without notice.

SECTION 2: INSTALLATION

2.1 MECHANICAL INSTALLATION (See Figure 2-1, Outline Drawing Mounting Options, Figure 2-2, Outline Drawing, and Figure 7-3, Installation Diagram.)

The Model PS8 can be installed in 3 ways. A single unit can be mounted in a half rack space using the rack ears provided; or two PS8's can be mounted side by side using the holes provided in the side rail along with the short rack ears; or the units can be free standing using the stick-on rubber feet. The rack ears conform to standard EIA rack sizes and each ear can be used on either side of the unit.

To install the Model PS8 first select the configuration to use in your application. If mounting free standing place the stick-on rubber feet on the bottom of the unit in the four corners.

If rack mounting carefully remove the cover of the unit by removing the screws and sliding off the cover. There are 2 screws on each side rail of the unit. Remove them. Next place the rack ears on the sides of the unit and re-attach the screws to the siderails. The nut and washer go on the inside of the unit. Be careful not to jar or strike any of the electronic components inside of the unit. If using two units side-by-side fasten the two units together through the 2 holes on the common side of each unit; then attach the short rack ears to the opposite sides. Now re-attach the top cover and fasten the unit to the rack.

2.2 OUTPUTS Located on the back panel are the outputs. The PS8 is designed to accept standard XLR 3-pin female connectors.

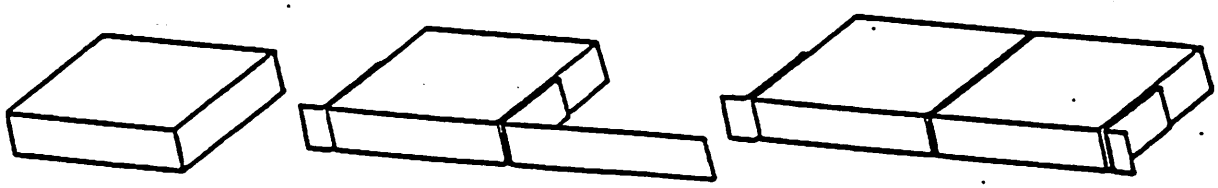


Figure 2-1
Outline Drawing, Mounting Options

2.3 POWER and INPUT POWER SELECTION Located on the back panel, lower left, is the power cord. It is standard 18 gauge, 3 wire cord, 6 feet long with CEE color code. It has a standard North American 3 prong plug.

2.3.1 115/230 CONVERSION SWITCH Located internally, behind the external fuse and mounted on the P.C. board is the 115/230 conversion switch. To gain access to this switch, the top cover must be removed. This is accomplished by removing the two 4-40 phillips head screws in the top cover and sliding the cover open. **WARNING: SEE SECTION 5.3 CONCERNING POTENTIAL SHOCK HAZARD!**

2.3.2 EXTERNAL FUSE Located on the back panel, upper left, is the external fuse. The fuse holder is a standard international type which accepts a standard 1/4 inch by 1 1/4 inch AGC or 3AG slo-blo fuse. Refer to the fuse table for the appropriate fuse size.

2.3.3 INTERNAL FUSE Mounted on the P.C. Board, behind the external fuse is the internal fuse. To gain access, remove the top cover by unscrewing the screws and sliding the cover open. Refer to the fuse table for the appropriate fuse size.

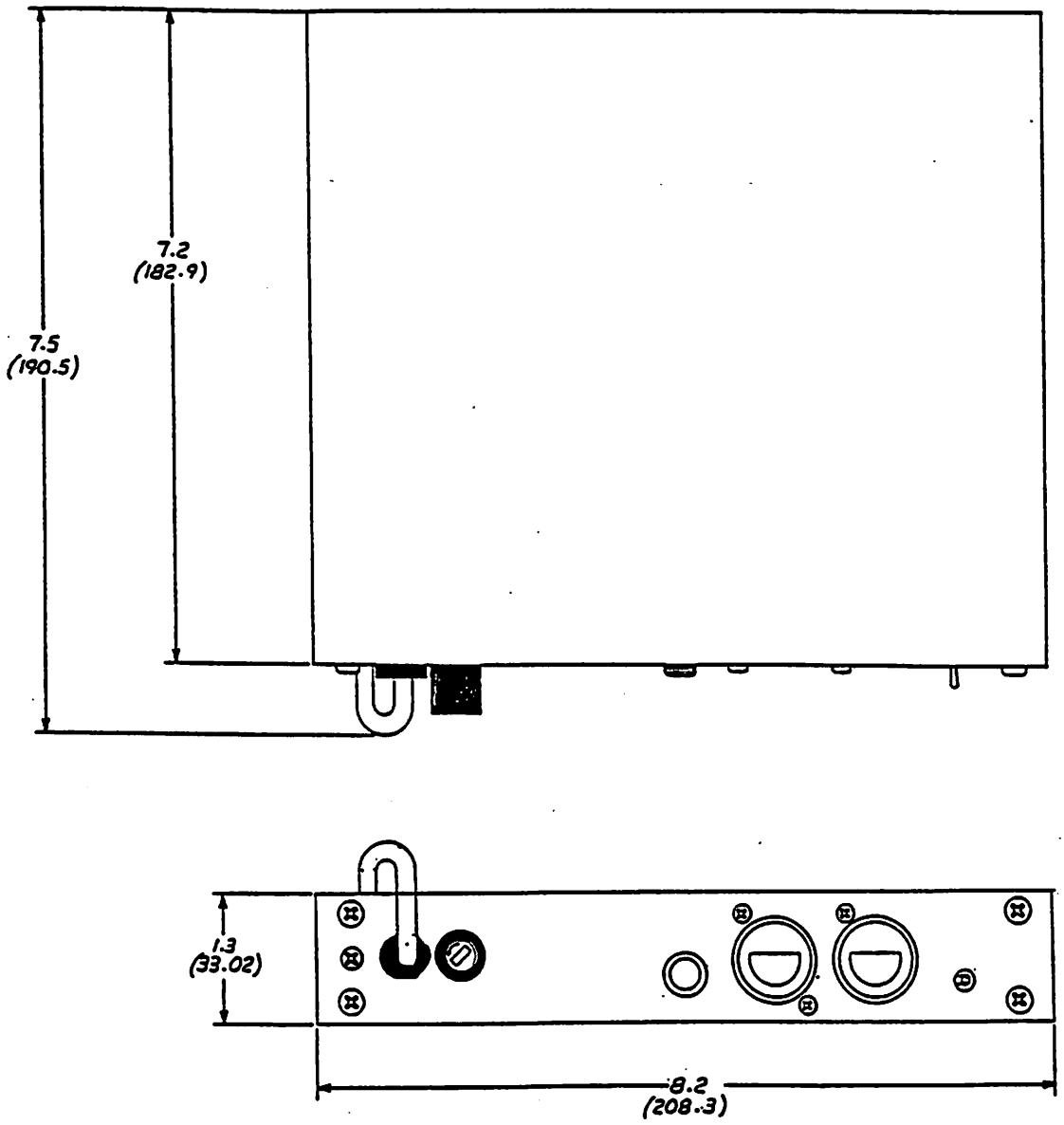
The internal fuse is used as a secondary safety device. It is one fuse larger than the external fuse. If the external fuse is blown and a larger fuse is put into its place, the internal fuse will blow before the unit is destroyed. If the fuses keep on blowing, the unit needs servicing.

FUSE TABLE

	External	Internal
115	1/2 amp, slo-blo	1 amp, slo-blo
230	1/4 amp, slo-blo	1/2 amp, slo-blo

When reinstalling the top cover, the two screws must be installed carefully to insure a good ground connection between the cover and the chassis.

2.3.4 POWER INDICATOR Located on the front panel, bottom right, is the power-on indicator. It is a green light emitting diode (LED).



WEIGHT: 4.0 LBS (1.8 Kg)

Figure 2-2
Outline Drawing, Model PS8 Power Supply
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SECTION 3: OPERATING INSTRUCTIONS

3.0 INTRODUCTION

The operation section is divided into 2 parts: front and back panel description and tandem operation.

3.1 PANEL DESCRIPTION (See Figures 3-1 and 3-2)

REF	NAME	FUNCTION
1	POWER	LED power on indicator.
2	POWER CORD	Goes to ac line, 120 or 240 volts switch selected inside.
3	FUSE	Fuse holder. Use a 1/2 amp slo-blo fuse for 120 volt operation; use a 1/4 amp slo-blo fuse for 240 volt operation. A metric fuse carrier is available to fit this same holder
4	AUDIO COUPLING	A 1/4 inch stereophone jack. Provides an unbuffered audio output. May be used to connect two PS-8's together.
5	OUTPUTS	3-pin male XLR-type connectors. These feed the RTS "TW" user stations.
6	NORM DUAL SWITCH	A toggle switch. Selects 200 or 400 ohm impedance. The NORMal positon is used when the power supply is used singly. The DUAL position is used when two PS-8's are connected together through the audio coupling jack.

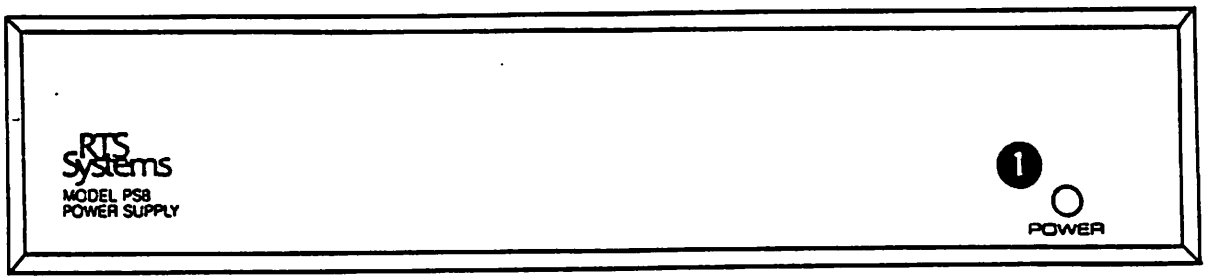

Figure 3-1
PS-8 FRONT PANEL

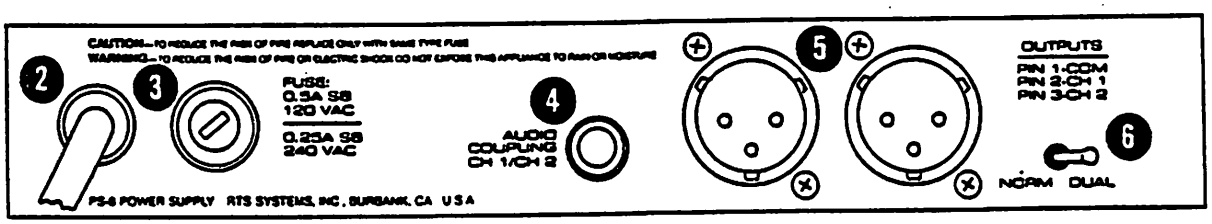

Figure 3-2
PS-8 REAR PANEL

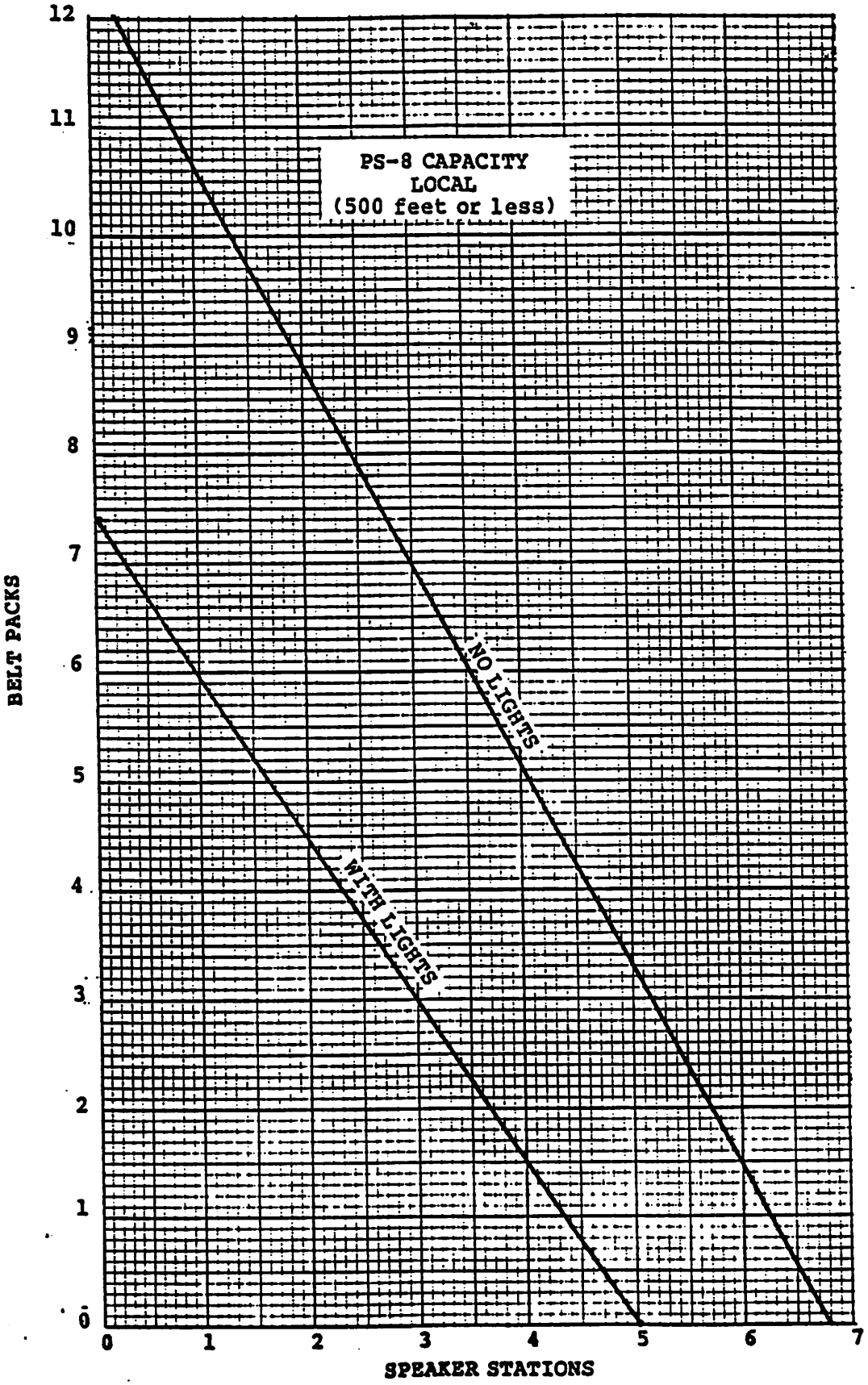

Figure 3-3
PS8 CAPACITY, LOCAL
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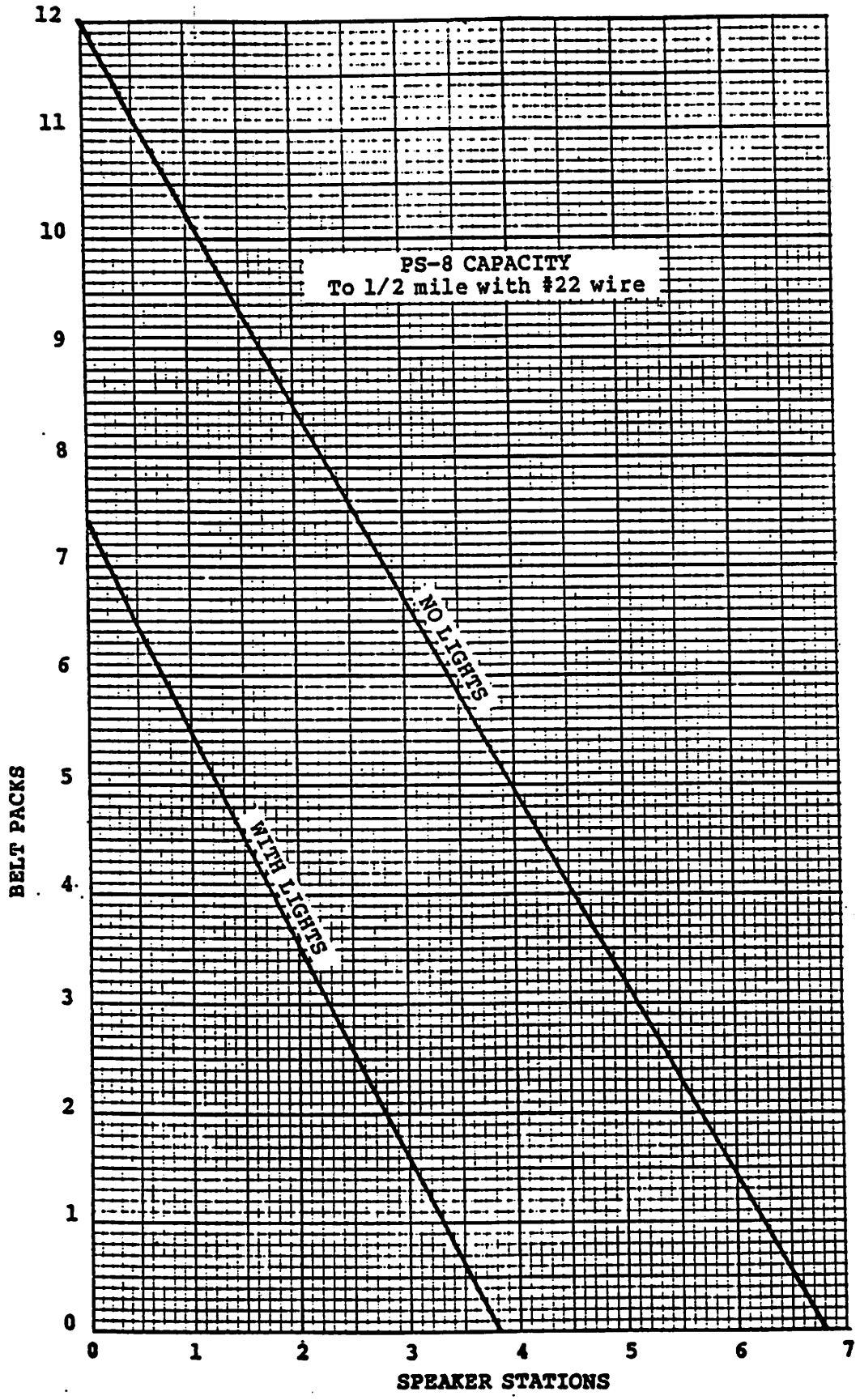


Figure 3-4
PS8 CAPACITY, LONG DISTANCE

3.2 TANDEM OPERATION

Two units can be used in tandem to power up to 16 non speaker user stations. See Figure 3-5, TANDEM OPERATION CONFIGURATION. This set up maintans a 200 ohm line impedance when the termination switch is in the DUAL position. Each PS8 provides the necessary power for a group of user stations. The interconnect cable serves to couple the audio signals together. This configuration now acts as an equivalent would-be PS16. **CAUTION** If more than 16 stations are required, a PS30 POWER SUPPLY should be used.

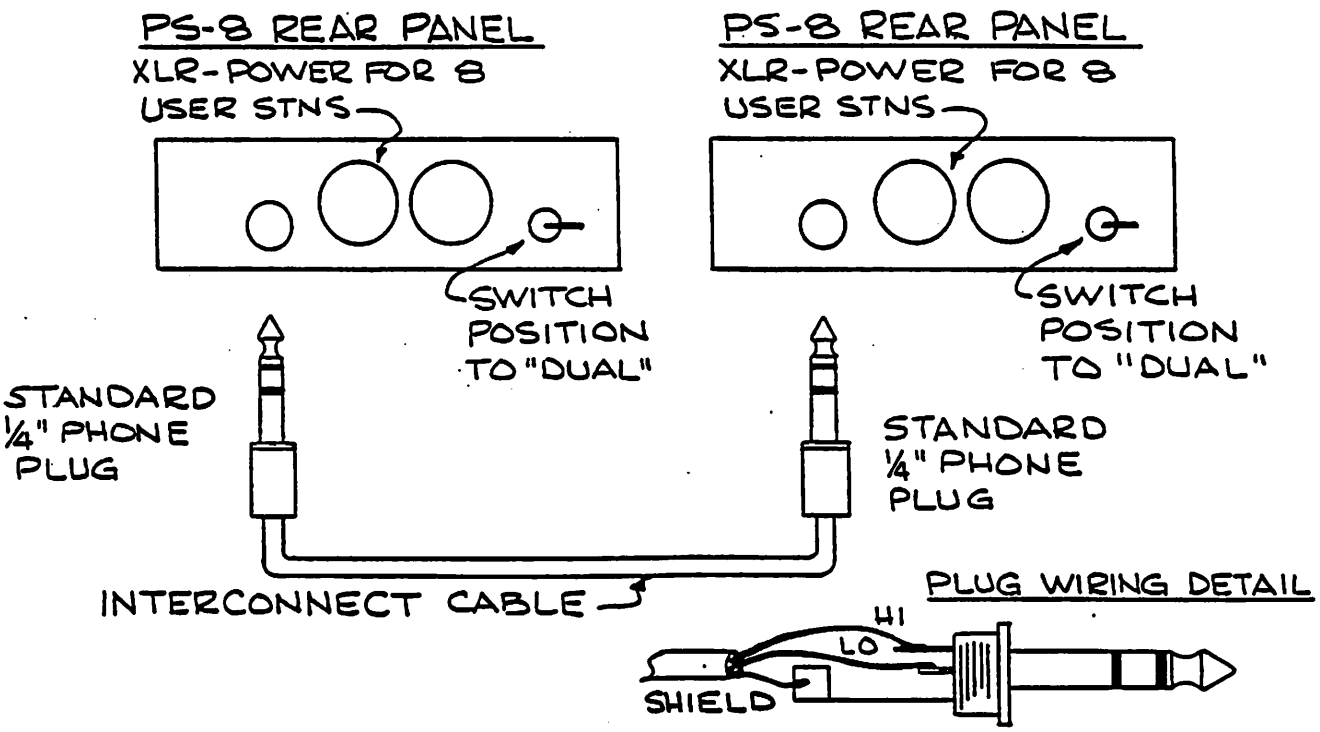


Figure 3-5
TANDEM OPERATION CONFIGURATION

SECTION 4: THEORY OF OPERATION

4.1 GENERAL OVERVIEW

The Model PS8 Power Supply consists of: a raw DC power supply and the impedance-generating electronics.

The raw DC power supply consists of transformer T1 which steps down the AC mains voltage to 28 volts rms. Diodes CR1-CR4 rectify this voltage and capacitor C3 filters out the AC component, leaving 40 volts DC. This voltage feeds: the impedance generator/regulator (U2) which provides the power to all the electronics. Transformer T1 is protected from thermal overload by S3 which automatically opens when the temperature reaches a set point and automatically closes when the temperature cools to a set point.

The 200 ohm impedance generator consists of IC's U1A and U1B, and diode CR14 which serves to protect the internal electronics from an overvoltage on the RTS line.

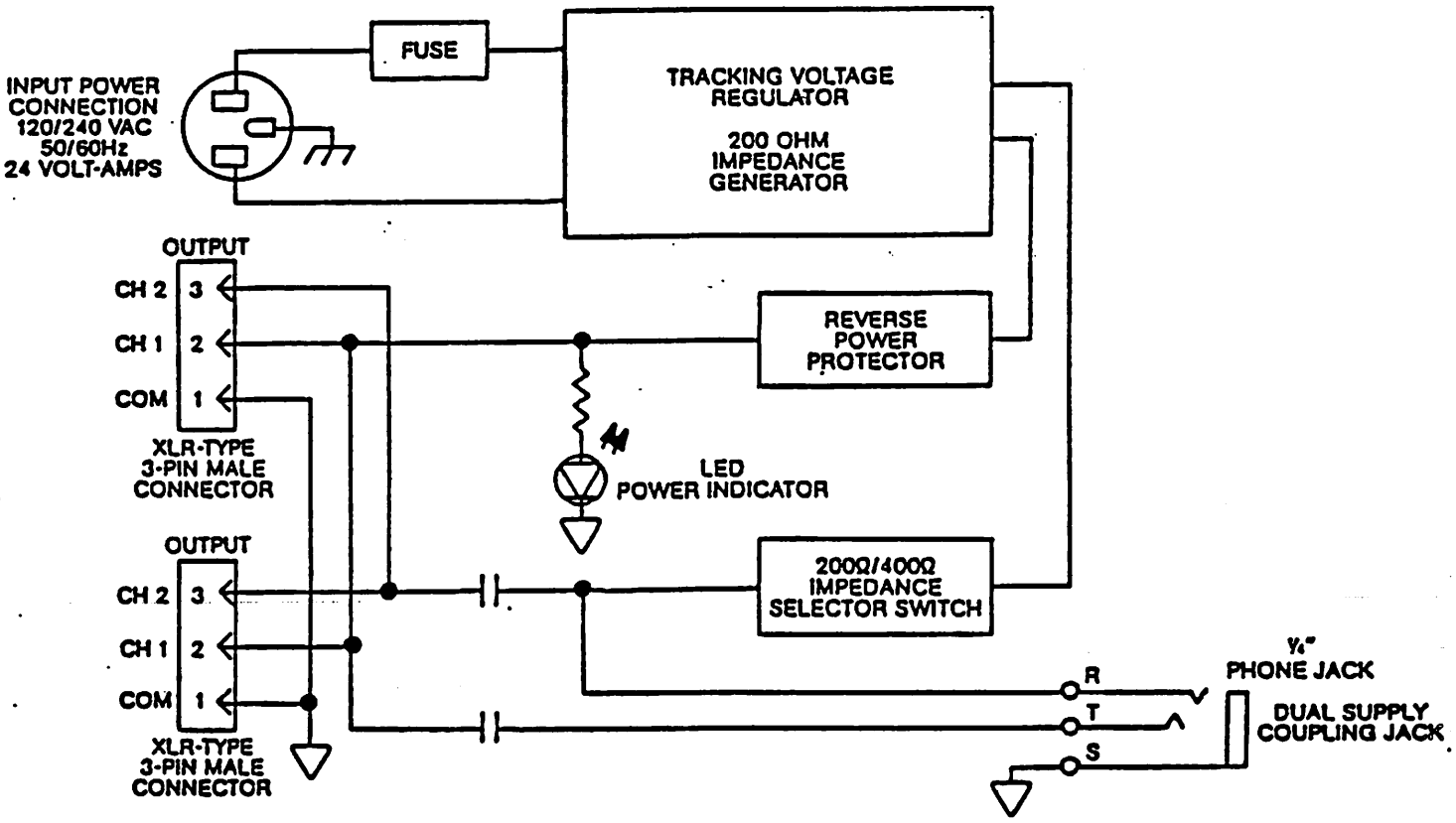


FIGURE 4-1
BLOCK DIAGRAM
Page 21

SECTION 5: MAINTENANCE

5.0 INTRODUCTION

This section provides service information for normal maintenance, factory performance tests and troubleshooting tips.

5.1 WARRANTY INFORMATION

The Model PS8 Power Supply is warranted for a period of one year from the purchase date. A copy of the warranty is located on page five.

5.2 GENERAL MAINTENANCE

These servicing instructions are for qualified personnel only. To avoid electric shock, do not perform any servicing other than that contained in the operating instructions unless qualified to do so.

WARNING: Disconnect ac power before servicing.

5.2.1 SAFETY CONSIDERATIONS

Although this equipment has been designed in accordance with international safety standards, this manual contains information, cautions, and warnings which must be followed to ensure safe operation and to maintain the equipment in safe operating condition. Service and adjustments should be performed only by qualified service personnel.

Any adjustment, maintenance, and repair of the opened equipment while any power or voltage is applied should be avoided as much as possible, and, when inevitable, should be carried out only by a skilled person who is aware of the hazard involved.

W A R N I N G

Any interruption of the protective grounding conductor (inside or outside the equipment) or disconnection of the protective earth is likely to make the equipment dangerous. Intentional interruption of the protective grounding conductor is strictly prohibited.

It is possible for capacitors inside the equipment to still be charged even if the equipment has been disconnected from its power source.

Be certain that only fuses with the required current rating and of the specified type(normal blow, time delay, slow-blow, etc.) are used for replacement. The use of repaired fuses and the short-circuiting of fuse holders must be avoided.

W A R N I N G

The service information presented in this manual is normally used with the protective covers removed and power applied to the equipment. Energy available at many points may, if contacted, result in personal injury.

5.2.2 **ACCESS** To get inside the Model PS8, remove the screws on the top and bottom covers. Slide covers off.

5.2.3 **CLEANING**

Clean the outside of the Model PS8 with denatured alcohol or a mild solution of detergent and water. Clean the interior with dry, low pressure air. The circuit boards can be cleaned with 1,1,1 trichloroethane or Freon TF. Do not allow these or any solvents to get into the pots. Caution: follow the safety instructions on the solvent contaners.

5.3 INPUT POWER SELECTION

The Model PS8 is designed to operate on 100/120, or 200/240 volts AC at 50/60 hertz. To convert from one mains voltage to another, remove covers and refer to Section 2.2.

NOTICE

When converting to 200/240 volt AC power input, the fuse must be changed to 1/4 ampere slo-blo.

5.3.1 FUSE REPLACEMENT

To replace inside fuse, remove covers. Replace only with the recommended fuse:

100/120 volt AC--1 ampere slo-blo
200/240 volt AC--1/2 ampere slo-blo

5.4 TEST PROCEDURE SET UP

EQUIPMENT NEEDED:

Voltage and current metered isolated
variable voltage power transformer:
"VARIAC", "POWERSTAT",or equivalent
Signal generator, 1 KHz, 123m V p-p
Oscilloscope, 20 megahertz minimum bandwidth
Multimeter, 10 M
Power supply test fixture, see Figure 5-1
Tested RTS user station

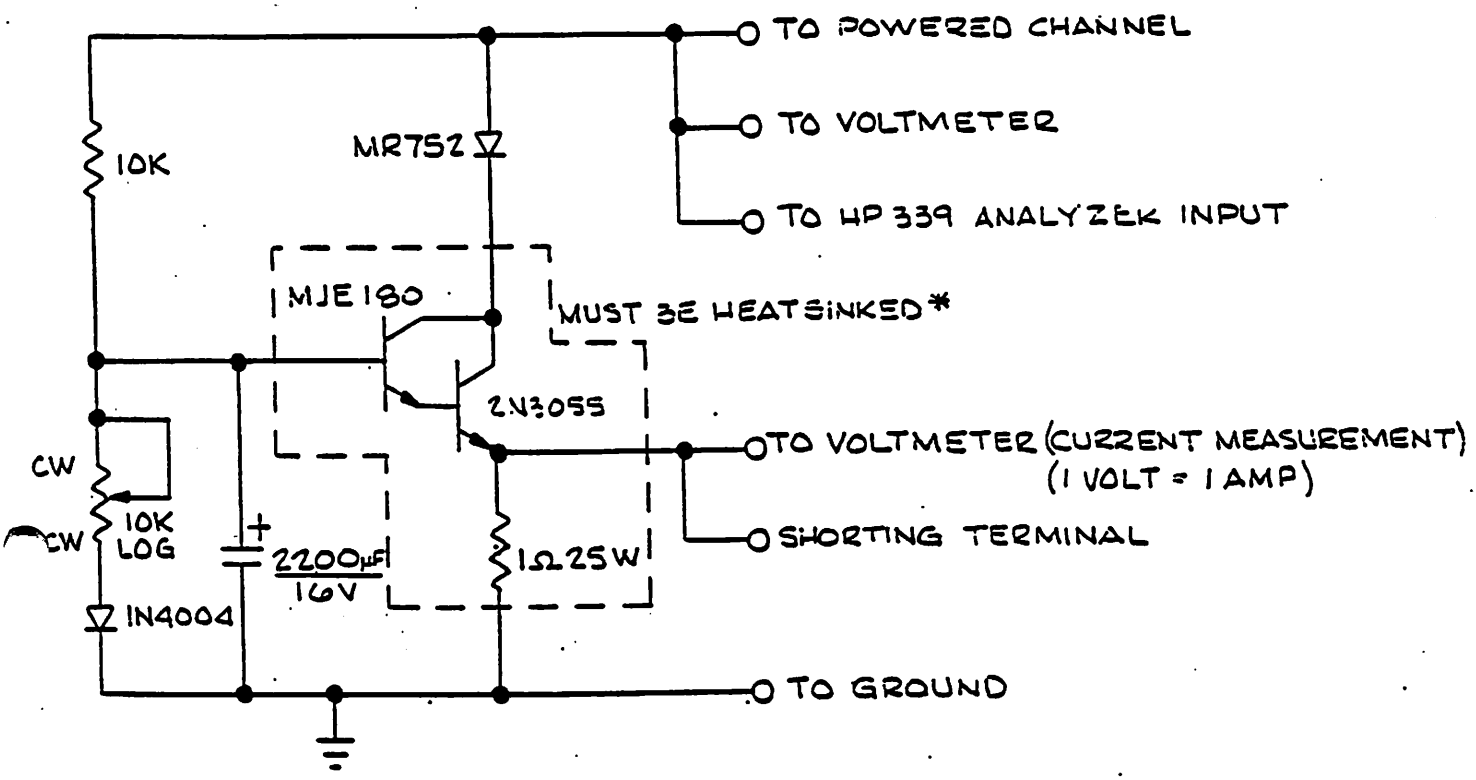
DOCUMENTS REQUIRED:

SD 2717, Schematic Diagram
AS 2717, Assembly Layout Diagram

And for parts replacement:

Temperature controlled soldering iron
Rosin core, 60/40 composition, solder

DO NOT USE SOLDER PASTE!



NOTICE THE HEADSINK THERMAL RESISTANCE MUST BE LESS THAN 0.5° C/WATT. PROLONGED TESTING WILL CREATE DANGEROUSLY HOT TERMERATURES. CARE MUST BE TAKEN TO BUILD A SAFE TEST FIXTURE TO AVOID BURNS.

Figure 5-1
PS8 TEST FIXTURE

5.5 TEST PROCEDURE

5.5.1 INITIAL INSPECTION

5.5.1.1 Verify electrical orientation of power supply capacitors.

5.5.1.2 Verify that the proper fuse is installed in the back panel fuse holder and on the printed circuit board.

F1	1/2 amp slo blo
F2	1 amp slo blo

5.5.1.3 Set S2 (AC power switch) on PC board to desired voltage.

5.5.1.4 Set S1 on back panel to NORM.

5.5.2 SAFETY CHECK

5.5.2.1 With an ohmmeter, verify that the green wire of thre power cord is connected to chassis ground.

5.5.2.2 With an ohmeter, check from circuit ground to chassis ground to be sure that they are isolated from each other.

5.5.3 POWER SUPPLY

5.5.3.1 Connect the Model PS8 to the power supply test fixture. Set the test fixture to minimum load and capacitance. Set-up for channel 1.

5.5.3.2 Turn the unit on through the "Variac." The green power "ON" LED should brighten.

5.5.3.3 Make sure the unit drains no excess current; if it does, stop and troubleshoot.

5.5.3.4 Check for AC voltage leakage on the voltage switch.

5.5.3.5 Check across C3 for +40 V DC. ±3.2 V DC.

5.5.3.6 Check the output voltage for +30V DC to +32.5 V DC. (no load)

5.5.3.7 Check from circuit ground to chassis for any voltage on the case. There should be none.

5.5.4 PERFORMANCE CHECK

5.5.4.1 Attach a RTS user station to the PS8 output while still monitoring the output voltage. Output will drop no more than .4 V DC. Put a 123m V p-p 1 KHz signal ito the user station dynamic mic input. Set user station to channel 1.

5.5.4.2 On the PS8, check for 0.75 V p-p output on channel 1 of the user station, which is the powered channel.

5.5.4.3 Change user station's chanel selector to channel 2 and the power supply test jig to channel 2.

5.5.4.4 On the PS8, check for 0.75 V p-p output on the passive channel.

5.5.4.5 While still monitoring channel 2 for 0.75V p-p output, set S1 on PS8's back panel to "DUAL", the output signal should increase to 1.25 V p-p.

5.5.4.6 Switch connectors. Repeat above.

5.5.4.7 Connect a variable load to pins 1 and 2 of PS8 and switch user station to channel 1.

5.5.4.8 Increase load to 0.9 amps, the output voltage should be +17 V DC ±1 V and the signal output should be 1.25 V p-p, the signal should be free of any distortion.

5.5.4.9 Increase load to maximum (2 amps). The PS8's output voltage should drop to +10 V DC ±2 V and the output signal should disappear.

5.5.4.10 Turn the load off, the PS8's output voltage should return to +31.5 V DC ±1 V and the output signal should return to 1.25 V p-p.

5.5.4.11 Short out DC output to ground and hold for 1 second. Remove short and the output should jump back to 31.5 ±1 V DC.

5.5.4.12 End of test. Disconnect the PS8 from the test fixture and voltage. Return to service.

5.6 TROUBLESHOOTING

SYMPTOM	CHECK
NO OUTPUT & NO LIGHTS	Plug, power
	Fuse, back panel (F1)
	Voltage selection
	Excessive transformer temperature (thermal cut-out will self reset after a cooling period)
	Raw DC supply voltage (should be from 45 to 50 volts)
DISTORTED SOUND	Input connections
	Termination
	DC line voltage
HUM	Input connections
	Wiring layout of RTS lines (too close to AC, lights, etc.)
	User station too close to a power transformer
	PS8 common lead accidently conected to a "humming" chassis ground someplace.
	Mains voltage wiring incorrect
FAULT INDICATOR ON	Shorts on RTS line
	Overloaded RTS line
	Voltage selection is set wrong
	Blown fuse on PCB (F2)

SECTION 6: LISTS OF REPLACEABLE PARTS

6.1 INTRODUCTION This section contains parts lists and instructions for ordering replacement parts. The parts lists are divided into four sections: shipping list, final assembly, rear panel and printed circuit board. Immediately following the description of a part is the manufacturer and the manufacturer's part number.

6.1.1 DIVISION OF PARTS LIST

6.2 HOW TO OBTAIN PARTS Parts may be obtained directly from RTS Systems, Inc.:

RTS SYSTEMS, Inc.
1100 W. Chestnut Street
Burbank, CA 91506
(818) 840-7311

6.3 SHIPPING LIST

QTY	DESCRIPTION	RTS PART NUMBER
1	Model PS8	9010-2732-00
1	Large Rack Ear	9110-2044-02
1	Small Rack Ear	9110-1609-02
4	Rubber Feet	4501-5027-00
1	Model PS8 Shipping carton	
1	Instruction manual	TM 2809
1	Plastic bag	

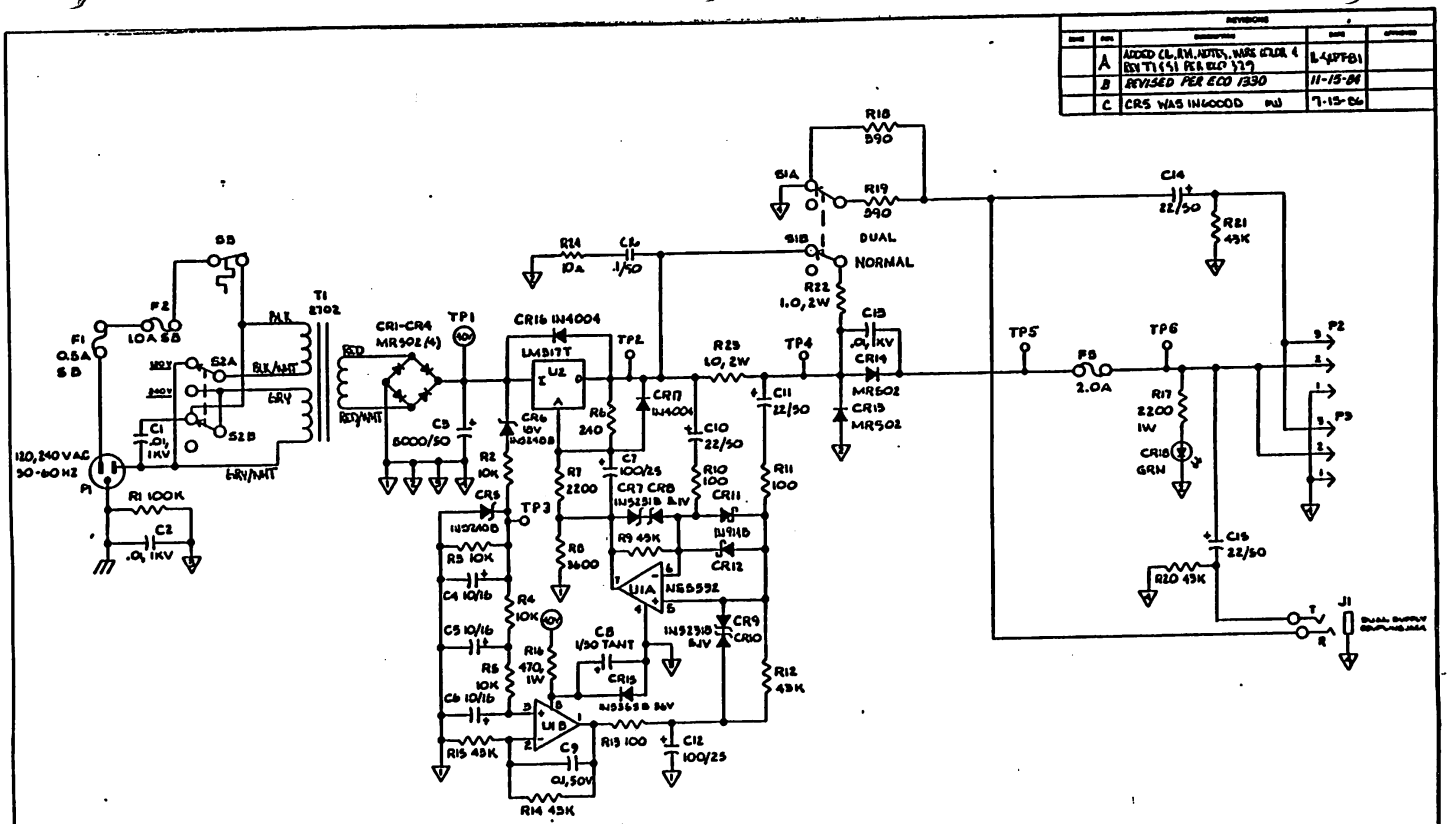
REF	QTY	DESCRIPTION	RTS PART NUMBER
6.4		**MODEL PS8 FINAL ASSEMBLY**	
FA1	1	L.E.D., green Oshino OLG-147	1801-0147-0G
FA2	1	Back panel assembly	9020-2716-00
FA3	1	Printed circuit board assembly	9030-2717-00
FA4	1	Chassis	9090-1823-09
FA5	2	Cover	9100-1690-03
6.5		**MODEL PS8 BACK PANEL ASSEMBLY**	
BP1	1	Back panel	9080-2716-00
BP2	1	Lug, solderless #6 Zierick 505	1003-0006-00
BP3	1	Washer, internal tooth, lock #4	1006-0003-00
BP4	1	Washer, nylon shoulder Smith2668	1006-0004-00
BP5	1	Nut, hex 6-32	1007-0005-00
BP6	4	Screw, 4-40 x 3/8" pan hd, phil, black ox	1008-4013-00
BP7	1	Screw, 6-32 x 3/8" phil, pan hd black	1008-6014-00
BP8	1	Power cord 6' grey Belden 17237	2504-0004-00
BP9	1	Strain relief Heyco 1137	2509-1137-00
BP10	1	Wire, 18 AWG, 6" long, green	2511-0080-00
BP11	1	Wire, 18 AWG, 6" long, black	2511-0126-00
BP12	1	Fuse, 1/2 amp slo blo Littlefuse 313.500	2801-0005-00
BP13	1	Fuse carrier, Schurter FEK 031.1666	2802-0002-00
BP14	1	Fuse holder body, Schurter 031.1653	2802-0003-00
6.6		**MODEL PS8 PRINTED CIRCUIT BOARD ASSEMBLY**	
C1-C2		Capacitor, C.D. radial, .01/1KV	1510-R103-2R
C3	-	Capacitor electro axial 5000/50V	1513-A508-4I
C3A	-	Capacitor electro axial 3300/50V	1513-A338-4I
C3b	-	Capacitor electro axial 3300/50V	1513-A338-4I
C4-C6		Capacitor, electro radial, 10/16V	1513-R106-4E
C7	-	Capacitor, electro radial, 100/25V	1513-R107-4F
C8	-	Capacitor, tantalum, dipped radial, 1/50V	1515-R105-3I
C9	-	Capacitor, cer mono radial, .1/50V	1511-R104-2I
C10-C11		Capacitor, electro radial, 22/50V	1513-R226-4I
C12	-	Capacitor, electro radial, 100/25V	1513-R107-4F
C13	-	Capacitor, C.D. radial, .01/1KV	1510-R103-2R
C14-C15		Capacitor, electro radial, 22/50V	1513-R226-4I
C16	-	Capacitor, cer mono radial, .1/50V	1511-R104-2I

REF	QTY	DESCRIPTION	RTS PART NUMBER

6.6 MODEL PS8 PRINTED CIRCUIT BOARD ASSEMBLY, (Continued):

CR1-CR4		Diode, rectifier, 3 amp, MR502	1601-0502-00
CR5	-	Diode, zener, 10 V, ±1% IN5240B	1601-5240-0B
CR6	-	Diode, zener, 18 V, ±5%, 500 mw, IN524848B	1601-5248-00
CR7-CR10		Diode, zener, 5.1V, ±5%, 500 mw, IN5231B	1601-5231-0B
CR11-CR12		Diode, Signal IN914B	1601-0914-0B
CR13-CR14		Diode, rectifier, 3 amp, MR502	1601-0502-00
CR15	-	Diode, zener, 36V, ±5%, 5W, IN5365B	1601-5365-0B
CR16-CR17		Diode, rectifier, 1 amp IN4004	1601-4004-00
S1	-	Switch, short toggle, P.C.B. mount	1903-0002-00
S2	-	Switch, slide, Switchcraft 11A-1101A	1902-0001-00
S3	-	Thermal cut-out Klixon 9700K5-11	1914-0001-00
R1	-	Resistor, C.F. 1/4W ±5% 100K ohm	1402-1003-5D
R2-R5		Resistor, C.F. 1/4W ±5% 10K ohm	1402-1002-5D
R6	-	Resistor, C.F. 1/4W ±5% 240 ohm	1402-2400-5D
R7	-	Resistor, C.F. 1/4W ±5% 2.2K ohm	1402-2201-5D
R8	-	Resistor, C.F. 1/4W ±5% 3.6K ohm	1402-3601-5D
R9	-	Resistor, C.F. 1/4W ±5% 43K ohm	1402-4302-5D
R10-R11		Resistor, C.F. 1/4W ±5% 100 ohm	1402-1000-5D
R12	-	Resistor, C.F. 1/4W ±5% 43K ohm	1402-4302-5D
R13	-	Resistor, C.F. 1/4W ±5% 100 ohm	1402-1000-5D
R14-R15		Resistor, C.F. 1/4W ±5% 43K ohm	1402-4302-5D
R16	-	Resistor, C.F. 1W ±5% 470 ohm	1402-4700-5F
R17	-	Resistor, C.F. 1W ±5% 2.2K ohm	1402-2201-5F

REF	QTY	DESCRIPTION	RTS PART NUMBER
6.6		**MODEL PS8 PRINTED CIRCUIT BOARD ASSEMBLY, (Continued):**	
R18-R19		Resistor, C.F. 1/4W ±5% 390 ohm	1402-3900-5D
R20-R21		Resistor, C.F. 1/4W ±5% 43K ohm	1402-4302-5D
R22-R23		Resistor, C.F. 2W ±5% 1 ohm	1402-01R0-5D
R24	-	Resistor, C.F. 1/4W, ±5% 10 ohm	1402-10R0-5D
J1	1	Phone jack, P.C.B. mount SMKS67713	2013-0001-00
T1	1	Power transformer	9140-2702-00
XT1	4	Standoff, Swage, 6-32 x 1/4 dia x 3/16" long	1001-0033-00
XT1	8	Nylon shoulder washer	1006-0017-00
XT1	4	Screw, 6-32 x 7/8, pan hd, phil	1008-6044-00
XT1	4	# 6 flat washer	1006-0005-00
U1	-	Integrated circuit Dual op-amp, NE5532N	1603-5532-0N
U2	-	Integrated circuit regulator LM317T	1603-0317-0T
XU1	-	8 pin I.C. sockett Burndy DIL8P-1081	2001-0001-00
F1	-	Fuse, 1 amp Slo Blo	2801-0007-00
F2	-	Fuse, 2 amp Normal	2801-0009-00
XF	4	Fuse clips	2802-0005-00
	1	Heatsink IERC LAT0127B4CB	4502-0008-00
	2	Screw 4-40 x 1/2, pan hd slotted cad	1008-4004-00
	2	Kep nut, 4-40	1007-0001-00
	-	Thermal grease	4002-0249-00
XC3	2	Ty-rap	2516-0002-00



2. CAPACITANCE VALUES SHOWN : MICROFARADS / VOLTS.

1. ALL RESISTORS ARE 1/4 WATT , CARBON FILM , ± 5%.

NOTES : (UNLESS OTHERWISE SPECIFIED)

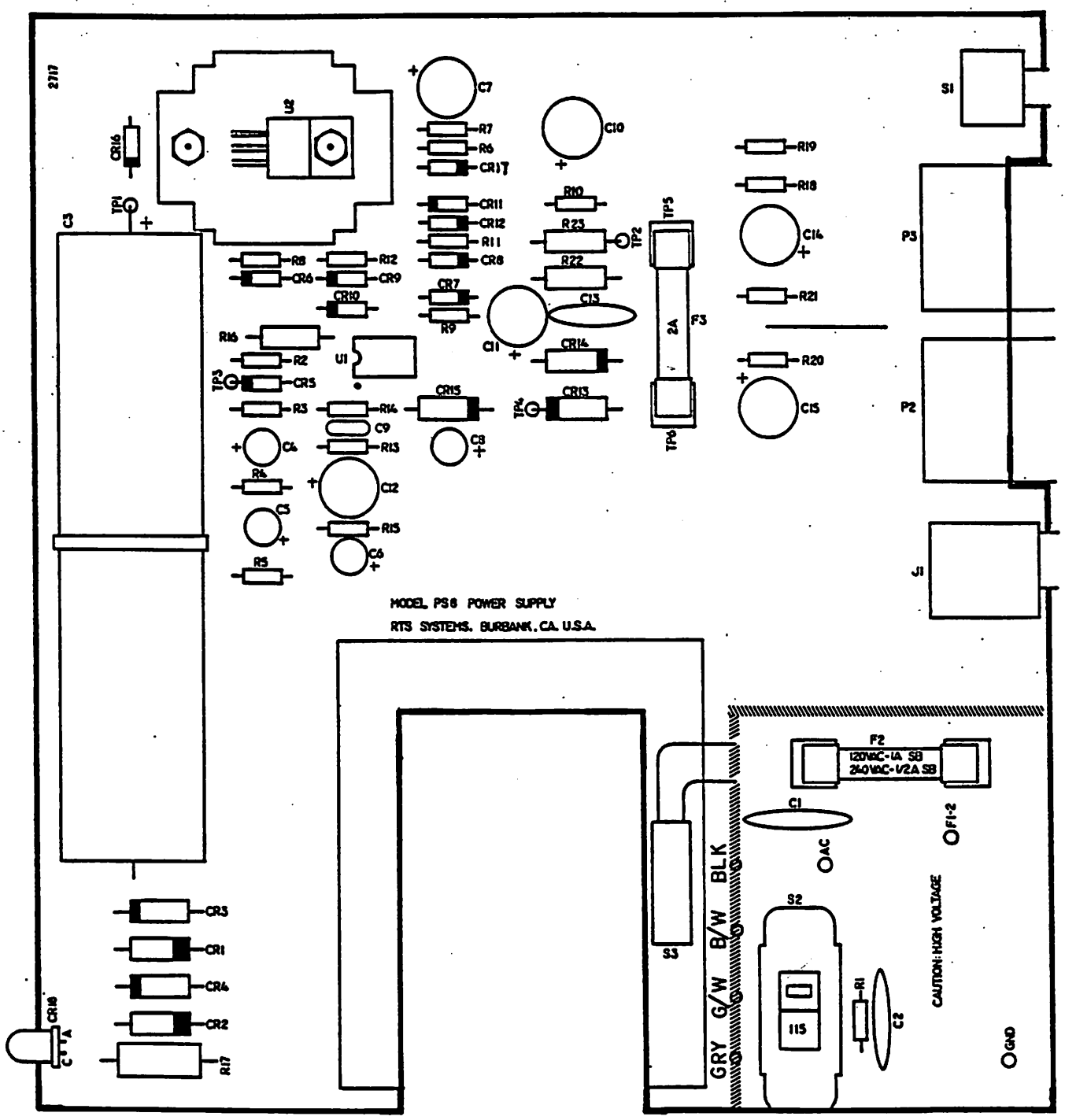
RTS SYSTEMS BURBANK, CALIFORNIA

SCHEMATIC, PS8

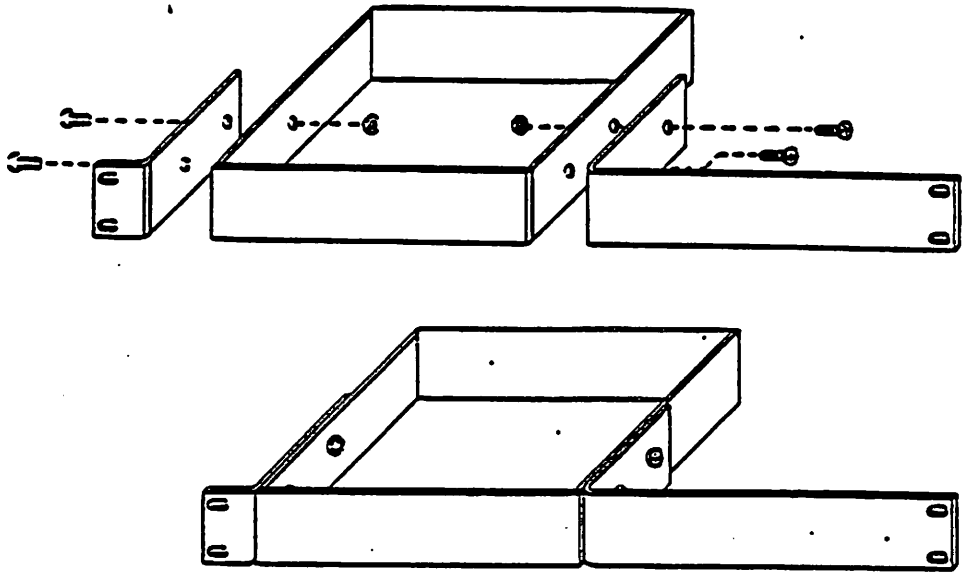
SIZE C | FSCM NO. 60572 | DWG. NO. SD2717 | REV. C

SCALE — | SHEET 1 of 1

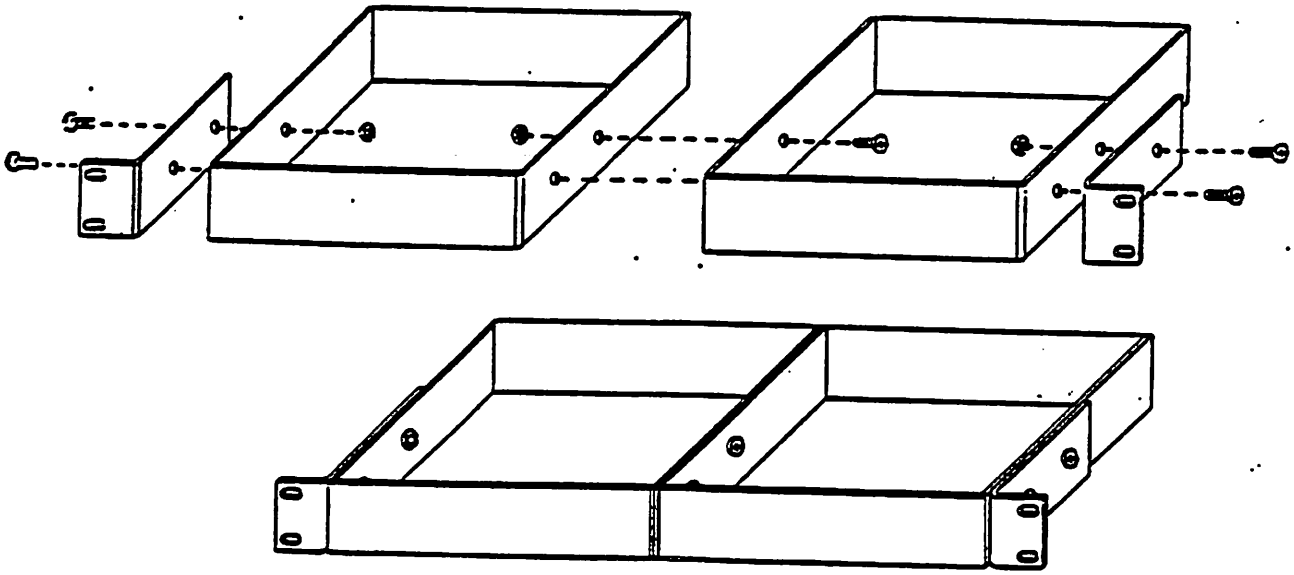
DO NOT SCALE DRAWING



Drawing 7-2
Model PS8 Printed Circuit Board Assembly
Page 34

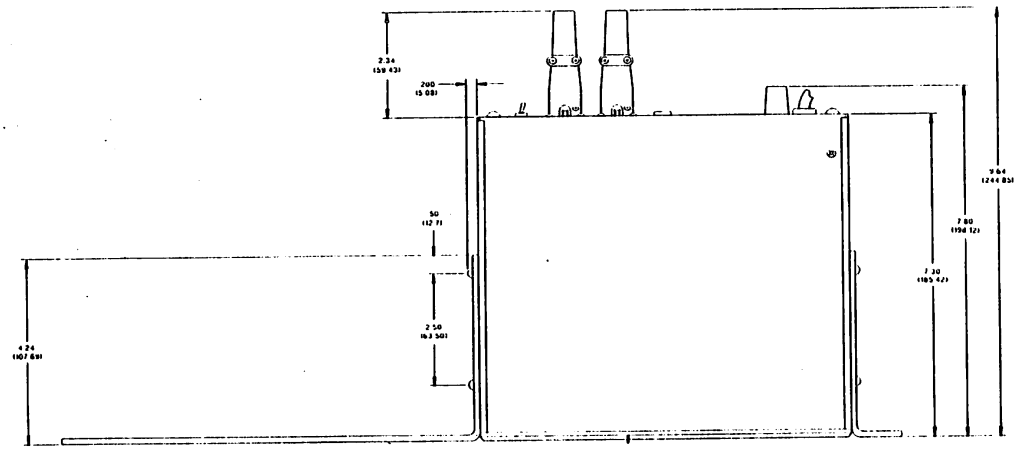


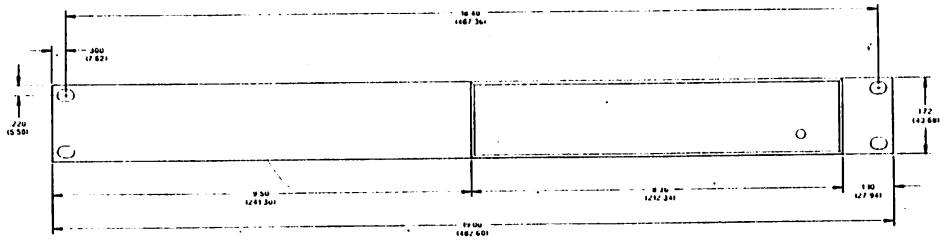
Single Installation



Tandem Installation

Drawing 7-3
Model PS8 Mounting Options





NOTES

2 WEIGHT 40 lbs (18 kg)

1 ALL DIMENSIONS INCHES (mm)

DO NOT SCALE DRAWING

RTS SYSTEMS BURBANK, CALIFORNIA

INSTALLATION DRAWING,

POWER SUPPLY, MODEL PSB

R. NELSON 10-29-87

D 60572 ID 4034