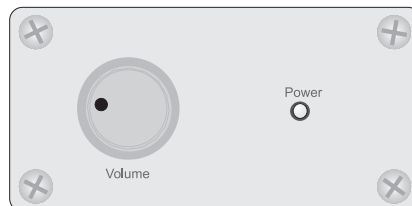
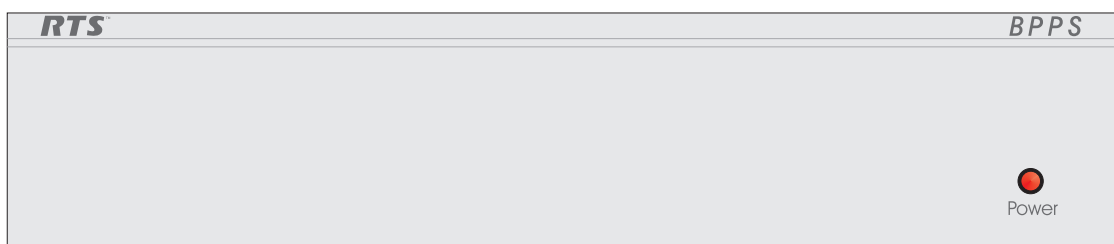


# USER INSTRUCTIONS

## MODELS BPPS, CBPU, RBPU FOUR WIRE BELT PACK SYSTEM



# **RTS**<sup>TM</sup>

## **PROPRIETARY NOTICE**

The RTS product information and design disclosed herein were originated by and are the property of Telex Communications, Inc. Telex reserves all patent, proprietary design, manufacturing, reproduction, use and sales rights thereto, and to any article disclosed therein, except to the extent rights are expressly granted to others.

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## **UNPACKING AND INSPECTION**

Immediately upon receipt of the equipment, inspect the shipping container and the contents carefully for any discrepancies or damage. Should there be any, notify the freight company and the dealer at once.

## **WARRANTY INFORMATION**

RTS products are warranted by Telex Communications, Inc. to be free from defects in materials and workmanship for a period of three years from the date of sale.

The sole obligation of Telex during the warranty period is to provide, without charge, parts and labor necessary to remedy covered defects appearing in products returned prepaid to Telex. This warranty does not cover any defect, malfunction or failure caused beyond the control of Telex, including unreasonable or negligent operation, abuse, accident, failure to follow instructions in the Service Manual or the User Manual, defective or improper associated equipment, attempts at modification and repair not authorized by Telex, 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".

This warranty is the sole and exclusive express warranty given with respect to RTS 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 TELEX NOR THE DEALER WHO SELLS RTS PRODUCTS IS LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND.

## **CUSTOMER SUPPORT**

Technical questions should be directed to:

Customer Service Department  
RTS/Telex  
12000 Portland Avenue South  
Burnsville, MN 55337 U.S.A.  
Telephone: (952) 848-4051  
Fax: (800) 323-0498

## **RETURN SHIPPING INSTRUCTIONS**

### **PROCEDURE FOR RETURNS**

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

If repair through the dealer is not possible, obtain a RETURN AUTHORIZATION from:

Customer Service Department  
Telex Communications, Inc.  
Telephone: (877) 863-4169  
Fax: (800) 323-0498

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

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

### **SHIPPING TO MANUFACTURER FOR REPAIR OR ADJUSTMENT**

All shipments of RTS products 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 must be sent to the following address and must include the Return Authorization.

Factory Service Department  
Telex Communications, Incorporated  
West 1st Street  
Blue Earth, MN 56013 U.S.A.

Upon completion of any repair the equipment will be returned via United Parcel Service or specified shipper collect.

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## INTRODUCTION

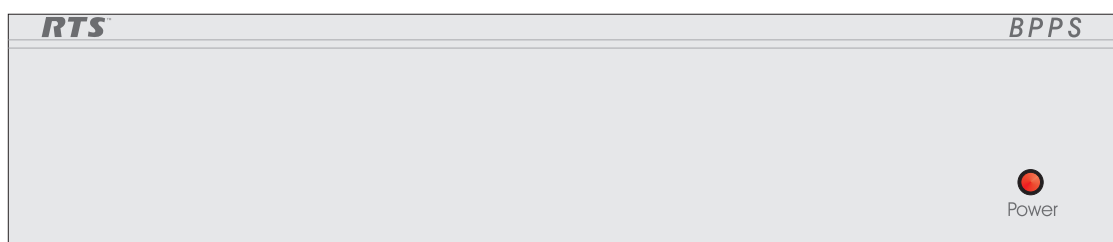
### Description

The RTS™ Models BPPS, CBPU and RBPU comprise a new four wire belt pack system for use with ADAM, ADAM CS and ZEUS matrix intercoms. The BPPS (Belt Pack Power Supply) provides power for the CBPU (Coordinator Belt Pack Unit) and the RBPU (Reporter Belt Pack Unit). The CBPU provides a headset connection as well as an audio pass-thru feed to the RBPU. The CBPU can accept nominal input levels of 0 dBu to +8 dBu with +4 dBu being the factory setting. The CBPU can provide output levels from 0 dBu to +8 dBu with +4 dBu being the factory setting. The RBPU can also accept nominal input levels of 0 dBu to +8 dBu with +4 dBu being the factory setting. The RBPU provides three common outputs suitable for use with earphones.

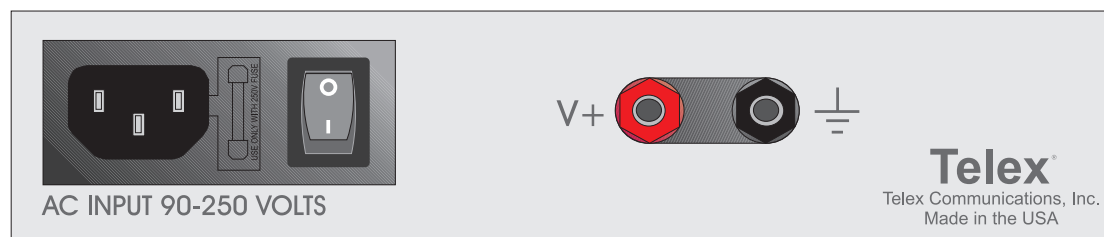
The system utilizes a dedicated talker and listener Part Line (PL) setup. There are no data connections to the matrix via the belt pack system.

### Component Identification

**Figure 1.1** BPPS front panel.



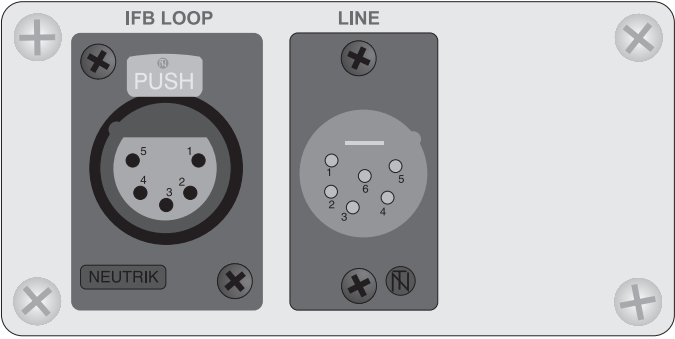
**Figure 1.2** BPPS rear panel.



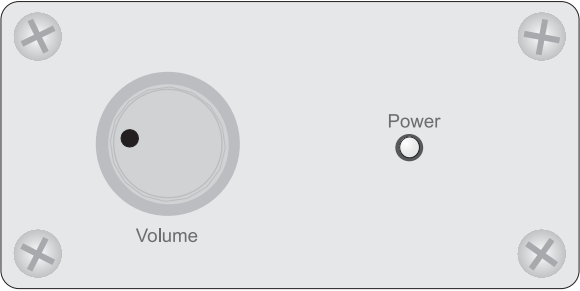
**Figure 1.3** CBPU front panel.



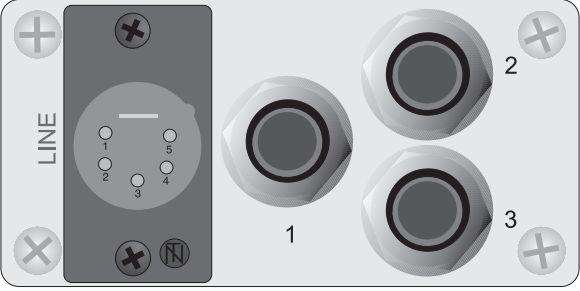
**Figure 1.4** CBPU rear panel.



**Figure 1.5** RBPU front panel.



**Figure 1.6** RBPU rear panel.



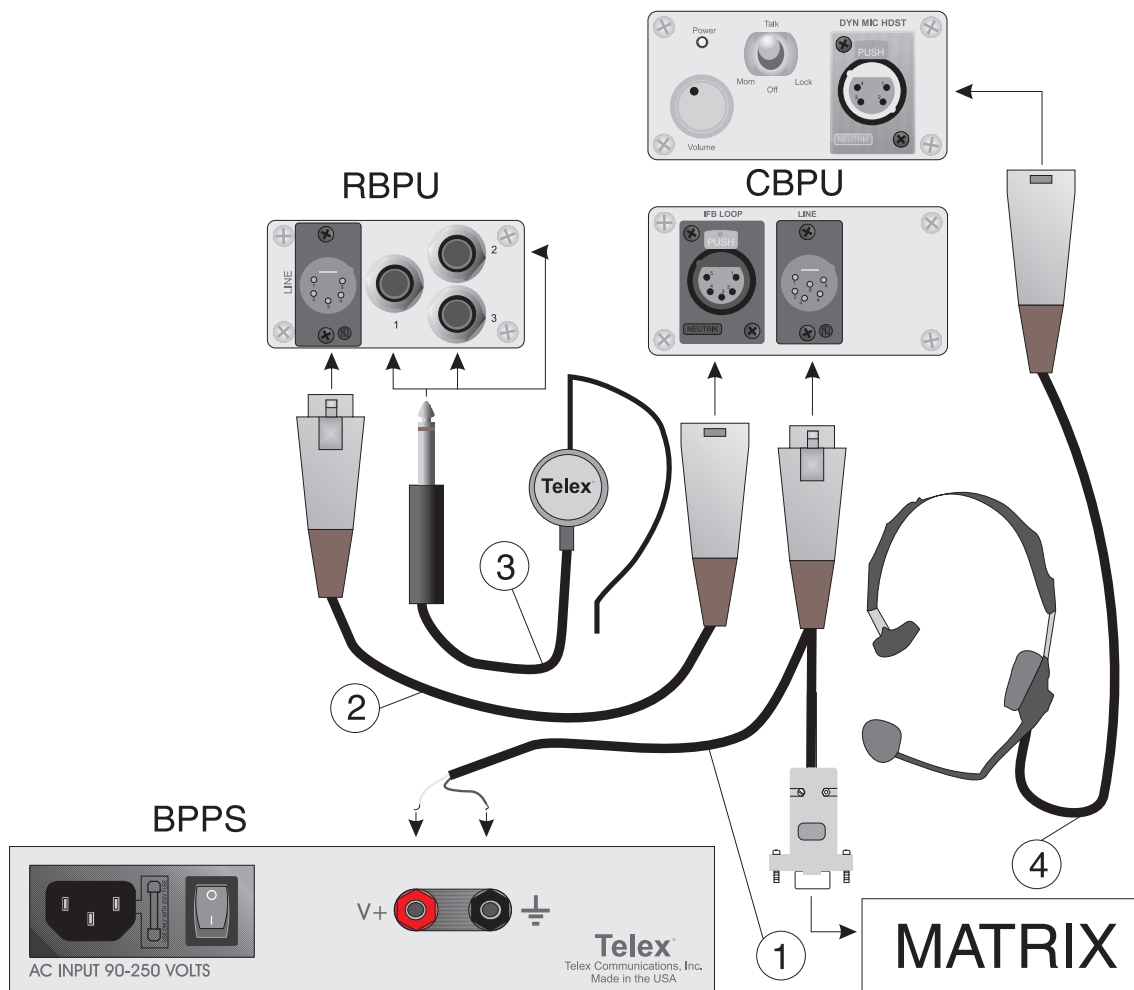


# INSTALLATION

## System Diagram

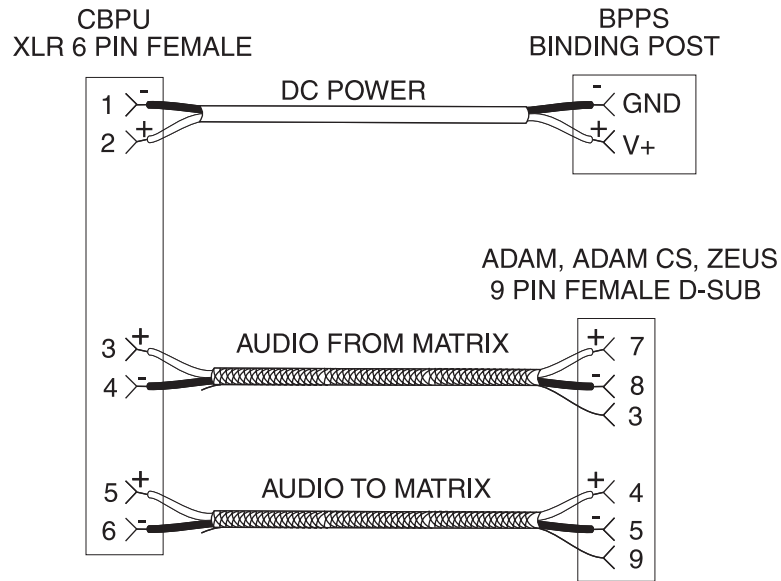
The units are connect to form a system as shown in Figure 2.1. In Figure 2.1, the number located in the bubble pointing to a cable refers to the wiring diagram for that particular cable.

**Figure 2.1** Four wire belt pack system diagram.



# Wiring Diagrams

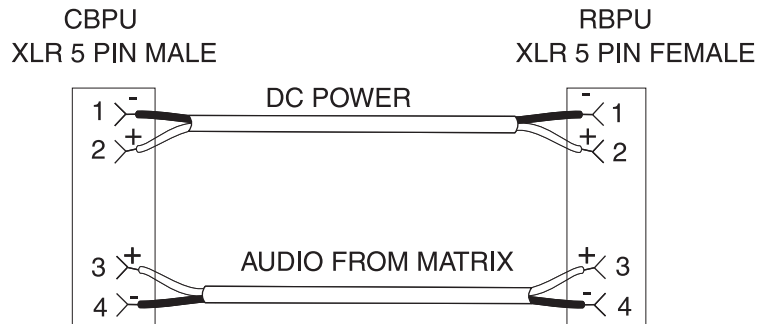
**Figure 2.2** Cable diagram 1 - CBPU to Matrix and BPSS.



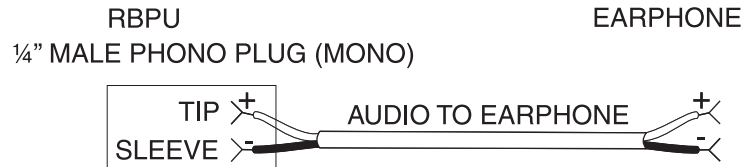
**IMPORTANT!** When connecting to an ADAM CS back panel, use only low-profile cable connectors such as AMP Part No. 747516-3 (Telex Part No. 59926-678).

**Note** Shielded connections at the matrix end of the intercom are optional. Use of them may cause ground loops.

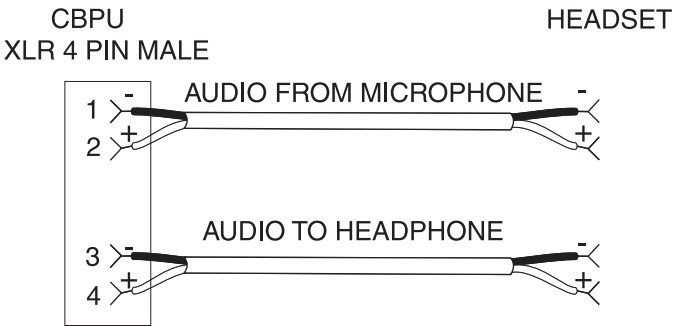
**Figure 2.3** Cable diagram 2 - CBPU to RBPU.



**Figure 2.4** Cable diagram 3 - RBPU to earphone.



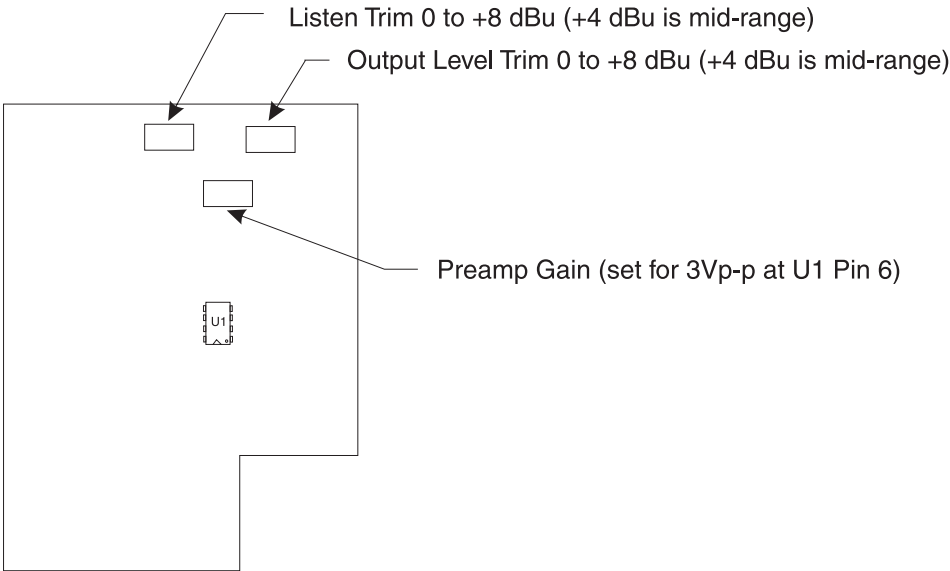
**Figure 2.5** Cable diagram 4 - CBPU to headset.



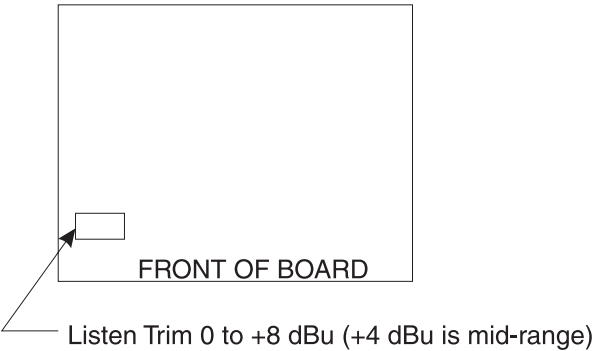
## Adjusting System Levels

The four wire belt pack system ships with all internal adjustments set for a nominal level of +4 dBu. Should the levels need to be adjusted, use Figure 2.6 and Figure 2.7 to locate the necessary adjustment points.

**Figure 2.6** CBPU internal adjustments.



**Figure 2.7** RBPU internal adjustments.



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## SPECIFICATIONS

### Belt Pack Power Supply (BPPS)

---

#### Power

---

Input Power Requirements	90-240 VAC, 50-60 Hz
Output Voltage:	24 VDC $\pm$ 1 VDC
Output Current:	1 A

#### Environmental Conditions

---

Operating Temperature	32°F to 122°F (0°C to 50°C)
Humidity	5% to 95% non-condensing

#### Front Panel Indicator(s)

---

Red Power LED

Note LED is clear when unit is not powered.

#### Connectors

---

- (1) IEC Fused AC power entry module.
- (2) 5 Way binding posts:
  - RED - Power +
  - Black - Power GND

#### Physical

---

Dimensions	5.12" D x 1.73" H x 8.25" W
Weight	1.8 lbs.

# Coordinator Belt Pack Unit (CBPU)

---

## Power

---

Input Voltage:	+18 to +35 VDC
Input Current:	60 mA $\pm$ 10%

## Input

---

Impedance:	600 Ohms, min. @ 1 kHz
Level:	0 dBu to +8 dBu ( $\pm$ 1 dB)

Note Nominal level is +4 dBu from factory.

## Output

---

Impedance:	600 Ohms, min. @ 1 kHz
Level:	0 dBu to +8 dBu

Note Nominal level is +4 dBu from factory.

Signal to noise ratio: -65 dB

## Microphone Preamplifier

---

Input Impedance:	470 Ohms/dynamic microphone
Source Impedance:	200 Ohms, nominal
Max. Input Level:	150 mV
Frequency Response:	100 Hz to 10 kHz $\pm$ 3 dB
Limiter Range:	40 dB

## Headphone Amplifier

---

Voltage Gain:	34 dB
Output Voltage:	8 Vp-p into 25 Ohms
Output Power:	½ Watt peak into 25 Ohms
Frequency Response:	150 Hz to 8 KHz $\pm$ 3 dB
Headphone Impedance:	25 to 600 Ohms

## Environmental

---

Operating Temperature:	0°F to 122°F (0°C to 60°C)
Storage Temperature:	-40°F to 185°F (-40°C to 85°C)
Operating and Storage Humidity:	5% to 95% non-condensing

## Connectors

---

### Headset Connector

Type:	XLR 4 pin female
Pinout:	1 - Mic GND
	2 - Mic +
	3 - Headhphone GND
	4 - Headphone +

### Line Connector

Type:	XLR 6 pin male
Pinout:	1 - DC GND
	2 - DC + (power)
	3 - Audio Input + (from matrix)
	4 - Audio Input - (from matrix)
	5 - Audio Output + (to matrix)
	6 - Audio Output - (to matrix)

### IFB Loop Connector

Type:	XLR 5 pin female
Pinout:	1 - DC GND
	2 - DC + (power)
	3 - Audio Output + (to RBPU)
	4 - Audio Output - (to RBPU)
	5 - No Connection

## Controls & Adjustments

---

### Front Panel

3 position talk switch (momentary, off, lock)

Volume control knob

Red power indicator

Note LED will be clear when unit is not powered.

### Internal

Listen trim

Output trim

Premap gain

## Physical

---

Dimensions:	5.84" D x 1.75" H x 3.50" W
Weight:	1.42 lbs.

## Reporter Belt Pack Unit (RBPU)

---

### Power

---

Input Voltage:	+18 to +35 VDC
Input Current:	200 mA

### Input

---

Impedance:	600 Ohms, min. @ 1 kHz
Level:	0 dBu to +8 dBu
Note	Nominal level is +4 dBu from factory.
Signal to noise ratio:	-65 dB

### Earphone Amplifier

---

Voltage Gain:	20 dB
Output Voltage:	8 Vp-p into 10 Ohms
Output Power:	½ Watt peak into 10 Ohms
Frequency Response:	75 Hz to 10 kHz +0, -6 dB
Headphone Impedance:	10 to 600 Ohms
Nominal Output Level:	+7 dBu into 10 Ohms

### Connectors

---

#### Earphone Connector

Type:	(3) ¼" mono phono plug
Pinout:	Tip - Signal high Sleeve - Signal low

#### Line Connector

Type:	XLR 5 pin male
Pinout:	1 - DC GND 2 - DC + (power) 3 - Audio Input + (from CBPU) 4 - Audio Input - (from CBPU) 5 - No Connection



## Controls & Adjustments

---

### Front Panel

Volume control knob

Red power indicator

Note LED will be clear when unit is not powered.

### Internal Adjustments

Listen trim

### Physical

---

Dimensions: 4.25" D x 1.50" H x 3.00" W

Weight: 0.9 lbs.

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## SERVICE

### WARNING

---

The information on the following pages is for use by qualified service personnel only. Hazardous voltages and currents may exist. Please refer all servicing to qualified personnel.

A

B

C

D

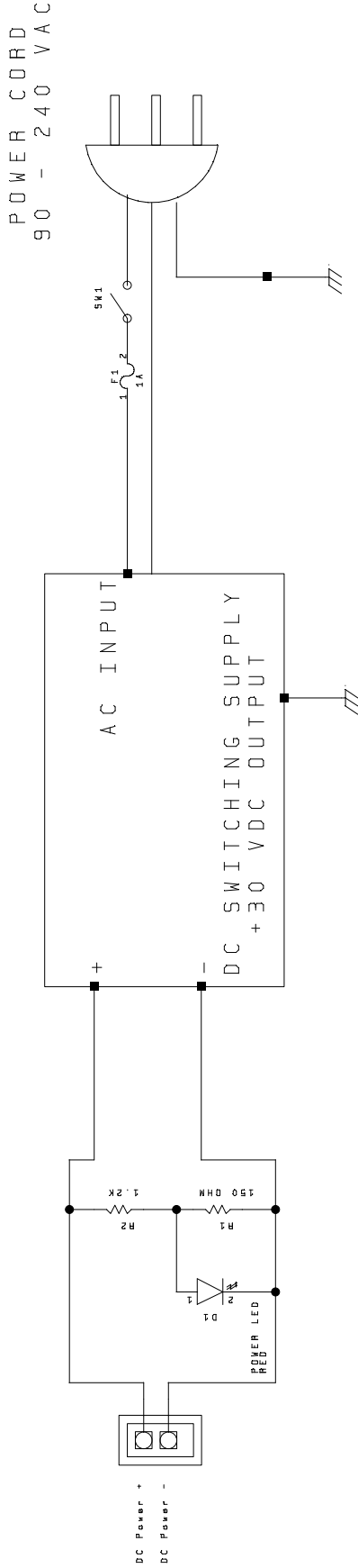
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LOC.	REV.	DESCRIPTION	ECO NO.	DRFT.	CHKR	APP	DATE
	B	REVISED DRAWING		SJA			6-10-99
	C	REVISED DRAWING		SJA			1/28/99

1

2

3

4



4

DRAWN: S. ANDERSON		DATED: 8-10-99	RTS <sup>by</sup> TELEX				
CHECKED:		DATED:	BPPS POWER SUPPLY				
QUALITY CONTROL:		DATED:	CODE:	SIZE:	DRAWING NO.	REV:	
RELEASED:		DATED:		D	9027-7668-000	C	
			SCALE:		NOTE	SHEET: 1 OF 1	

A

B

C

D

REVISION RECORD					
LOC.	REV.	DESCRIPTION	ECO NO.	DRFT.	CHKR.
	D	REVISED VERSION		SJA	
	E	RELEASE TO FACTORY	73074	SJA	

