

SECTION 8

POWER ENTRY MODULE

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8.1 TECHNICAL DESCRIPTION

8.1.1 General Description

The Power Entry Module (PEM) accepts 120V or 240V AC input power for distribution to the projector power supplies. A 120V/240V switch located behind the plastic fuse cover on the Power Entry Module is set to the input voltage in use.

As well as the distribution of AC power to the power supplies, the module also includes a +5 and +12 VDC standby power supply. The 5 volt supply is used by the Remote Control module. The 12 volt supply powers the IR sensor and the keypad.

8.2 SERVICING AND ALIGNMENT

8.2.1 Disassembly and Access

Module Location:

- front slide-out rack

Tools & Equipment Required:

- 1/4" hex head socket driver

a) Remove the projector lower front and side panels as described in Section 5-2.

b) Trace the yellow/green grounding wire from the Power Entry Module to the grounding point on the projector chassis. See Figure 8-1 (item 1). Disconnect the grounding wire.

c) Remove the two screws securing the front slide-out rack to the projector chassis. Carefully slide the rack out about 3". Disconnect the M18-P1, M18-P2, M18-P3, M18-P4 and M18-P5 connections from the rear of the module.

d) Remove the two hex head screws (item 2) as shown.

e) Remove the Power Entry Module from the front slide-out rack as shown by the arrows in Figure 8-1.

8.2.2 Alignment

Service alignments are not necessary. If the Power Entry Module becomes faulty and cannot be repaired, the module must be replaced.

8.3 COMPONENT LAYOUT AND SCHEMATICS

Refer to the following pages for component layouts and schematics of the Power Entry module.

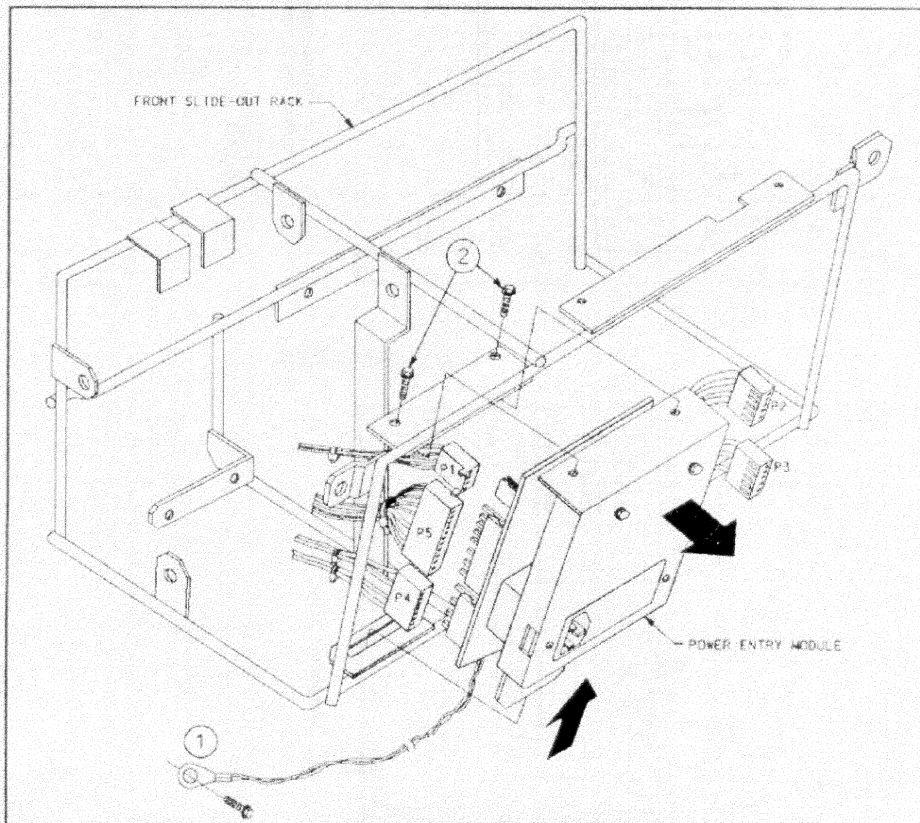


FIGURE 8-1. Power Entry Module Removal

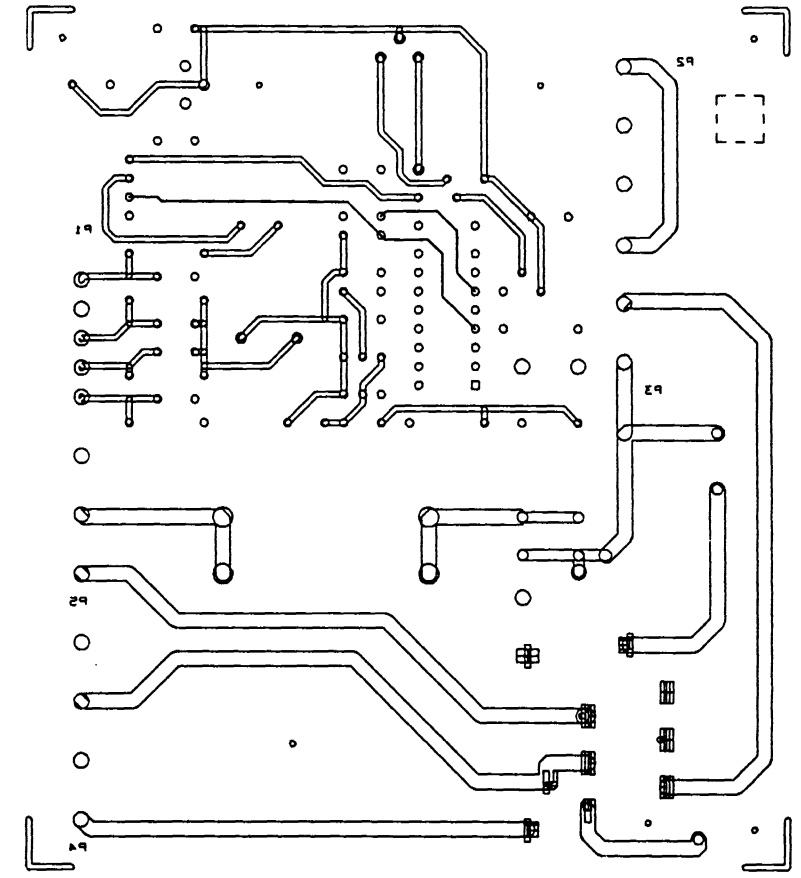
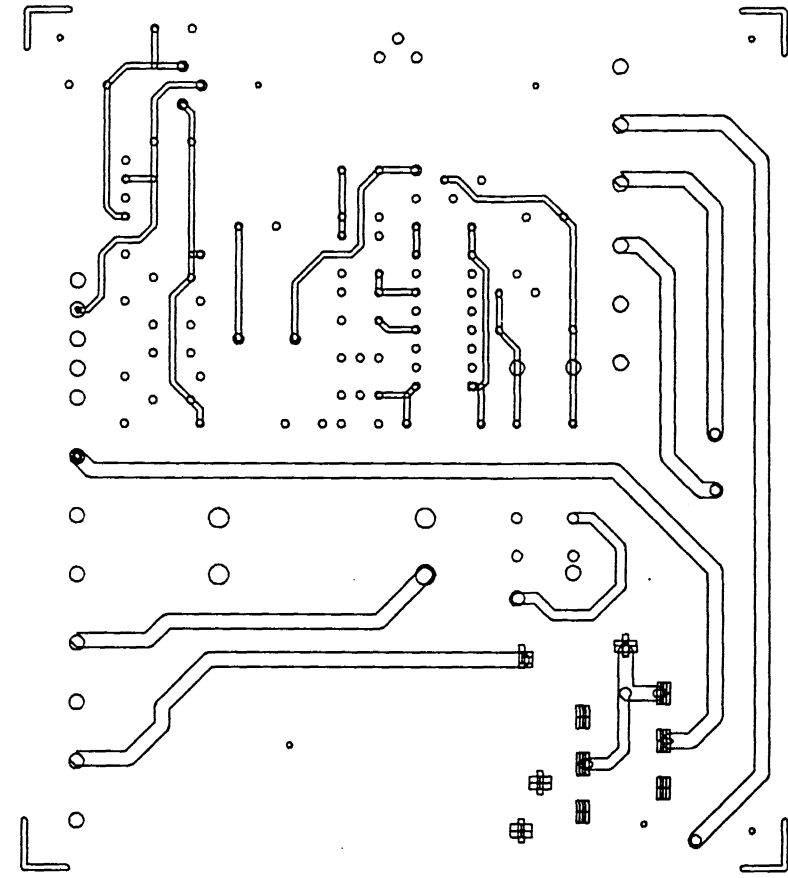
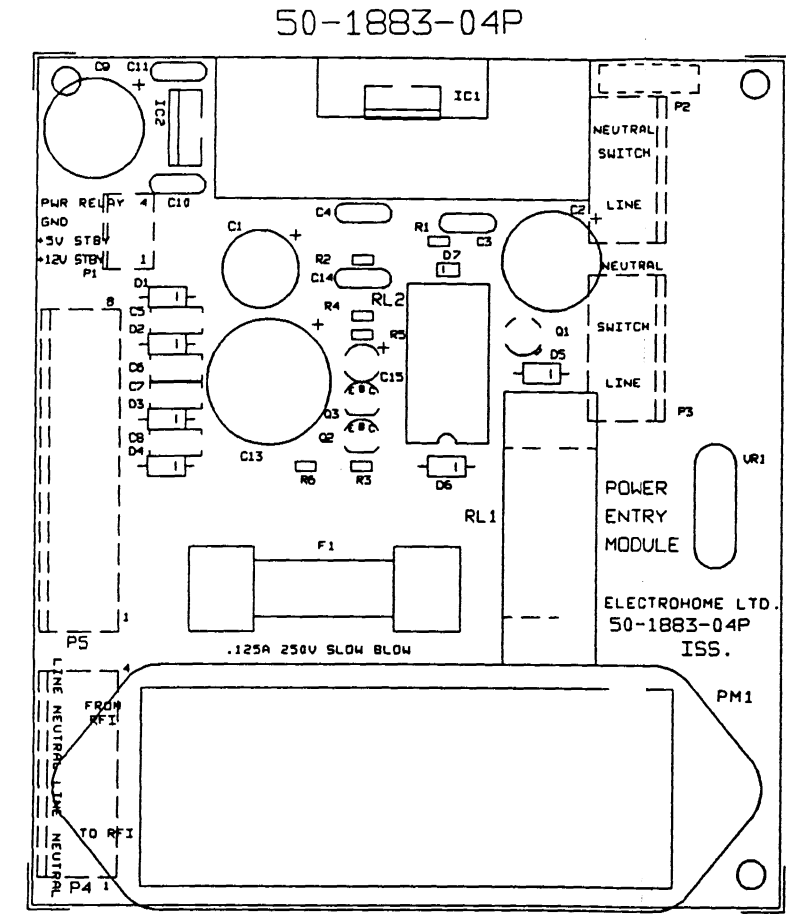


FIGURE 8-2.
Power Entry Module Component Layout

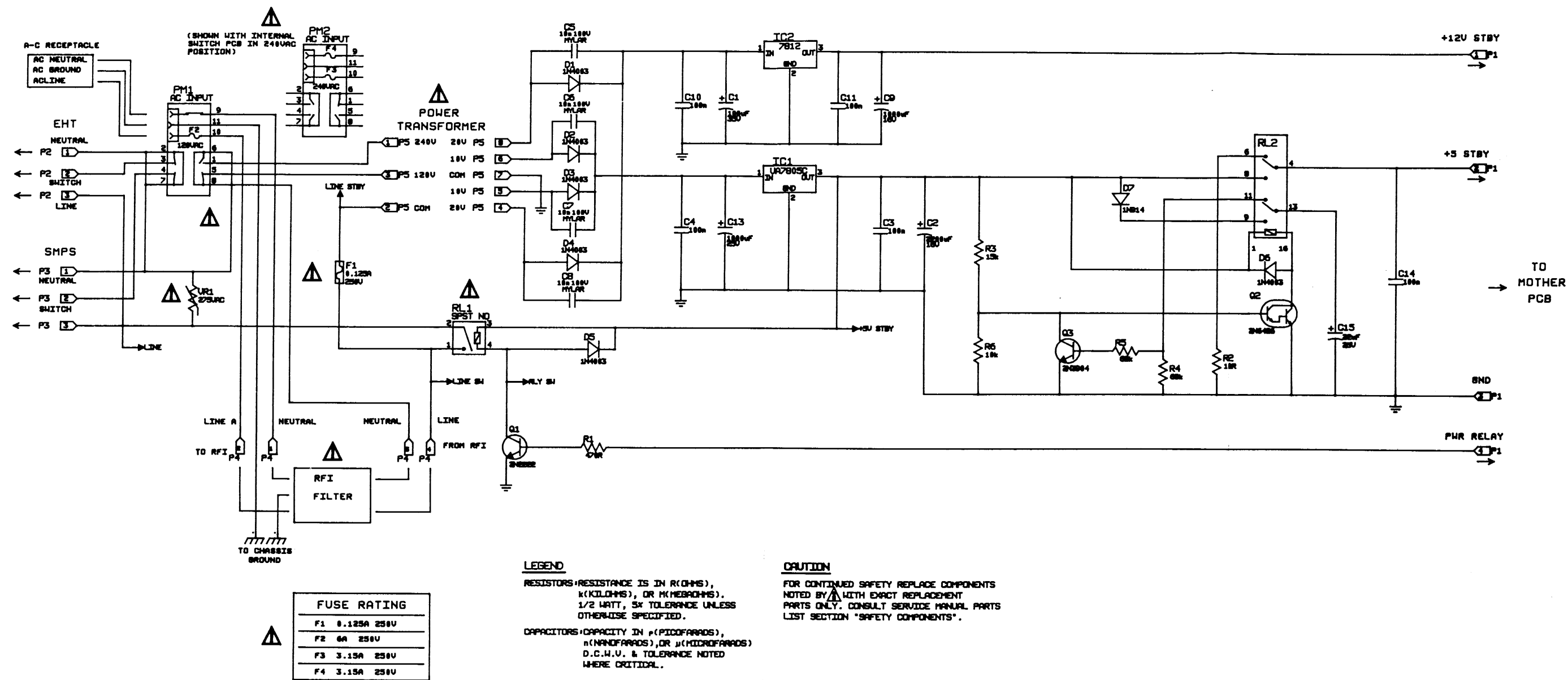







FIGURE 8-3.
Power Entry Module Schematic

8.4 PARTS LIST

Item Ref.	Part No.	Description
Integrated Circuits		
IC1	14-002032-01P	MC7805CT, +5 VDC, fixed linear regulator
IC2	14-002018-01P	MC7812CT, +12 VDC, fixed linear regulator
Transistors & Diodes		
Q1	14-000880-01P	2N2222 A, NPN, 30V, 0.8A, 1/2W
Q2	14-000990-01P	2N6426, NPN
Q3	14-000881-06P	2N3904, NPN, 40V, 0.2A, 0.35W
D1-D6	14-000525-53P	1N4003, rectifier, 1A, 200V,T
D7	14-000513-01P	1N914, 0.075A, 75V
Capacitors		
C1	44-410105-05P	100 μ F, 35V
C2	44-422203-08P	2200 μ F, 16V
C3,C4,C10,C11		
C14	89-000032-03P	100 nF, 50V
C5-C8	88-171031-12P	10 nF, 100V, mylar
C9	44-410203-08P	1000 μ F, 16V
C13	44-410204-09P	1000 μ F, 25V
C15	84-422004-01P	22 μ F, 25V
Resistors		
R1	80-147005-11P	470R, 1/2W, 5%, metal film
R2	80-110095-11P	10R, 1/2W, 5%, metal film
R3	80-115025-11P	15K, 1/2W, 5%, metal film
R4,R5	80-168025-11P	68K, 1/2W, 5%, metal film
R6	80-110025-11P	10K, 1/2W, 5%, metal film
Miscellaneous		
 F1	27-000005-45P	1/8A, 250V, slow blow fuse SAFETY COMPONENT
 F2	27-000005-47P	6.0A, slow blow fuse SAFETY COMPONENT
 F3,F4	27-000045-05P	ET-4A, 3.15A, 250V, fuse SAFETY COMPONENT
 PM1	34-001058-01P	AC Input module SAFETY COMPONENT
RL1	25-000104-01P	5 VDC, SPST relay
RL2	25-000106-02P	C93406, DPDT relay, MT2, 4.5V coil
 VR1	42-000127-01P	V275LA20A, metal oxide varistor, 275 VAC SAFETY COMPONENT

8.5 SPECIFICATIONS

Power Requirements:

Voltage	
120V mode	90 to 132 VAC
240V mode	180 to 264 VAC

Frequency	50 to 60 Hz nominal
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Input Fuse (slow blow) Rating:

@ 120V mode	6A
@ 240V mode	4A

Connector P1 Signal Levels:

Pin 4 analog input power relay relay turn on voltage	4.5 to 5.5 VDC
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Pin 3 ground	
Pin 2 +5V standby voltage	4.75 to 5.25 VDC

Pin 1 +12V standby voltage	11.4 to 12.6 VDC
ripple at 300 Ma	5 mV