

# SECTION 14

## POWER ENTRY MODULE

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## SECTION 14

## POWER ENTRY MODULE

**NOTE:** Projectors manufactured after January, 1992 may include newer-version Power Entry modules. New features and details are NOT described in this section. For assistance, contact your dealer or Vidikron for assistance.

## 14.1 TECHNICAL DESCRIPTION

## 14.1.1 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.

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.

## 14.2 SERVICING AND ALIGNMENT

## 14.2.1 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 14-1 (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 14-1.

## 14.2.2 Alignment

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

## 14.3 COMPONENT LAYOUT AND SCHEMATICS

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

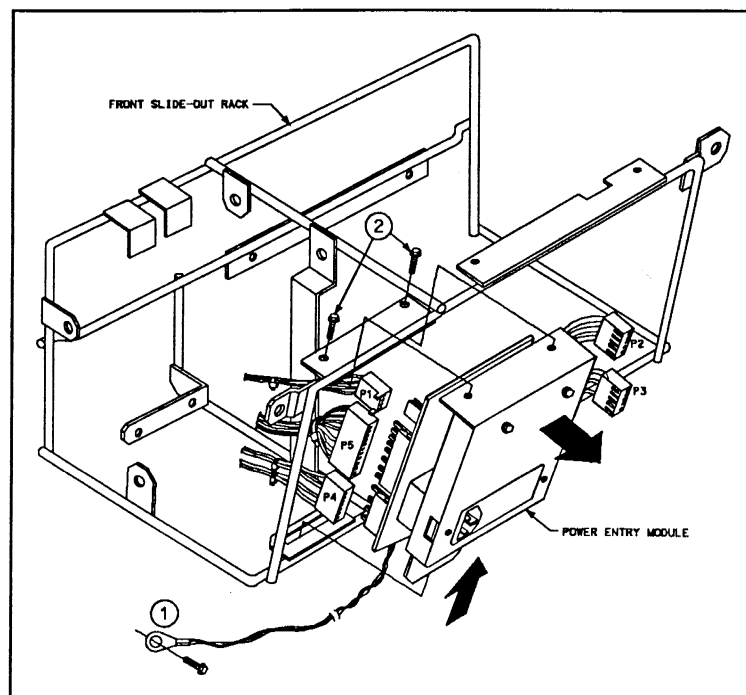
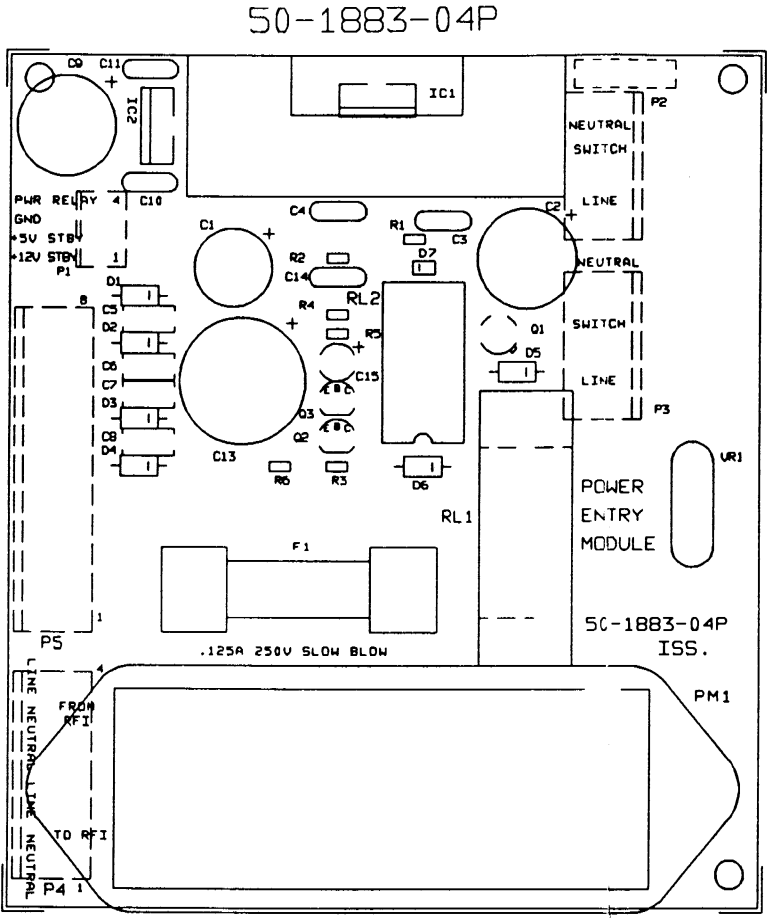
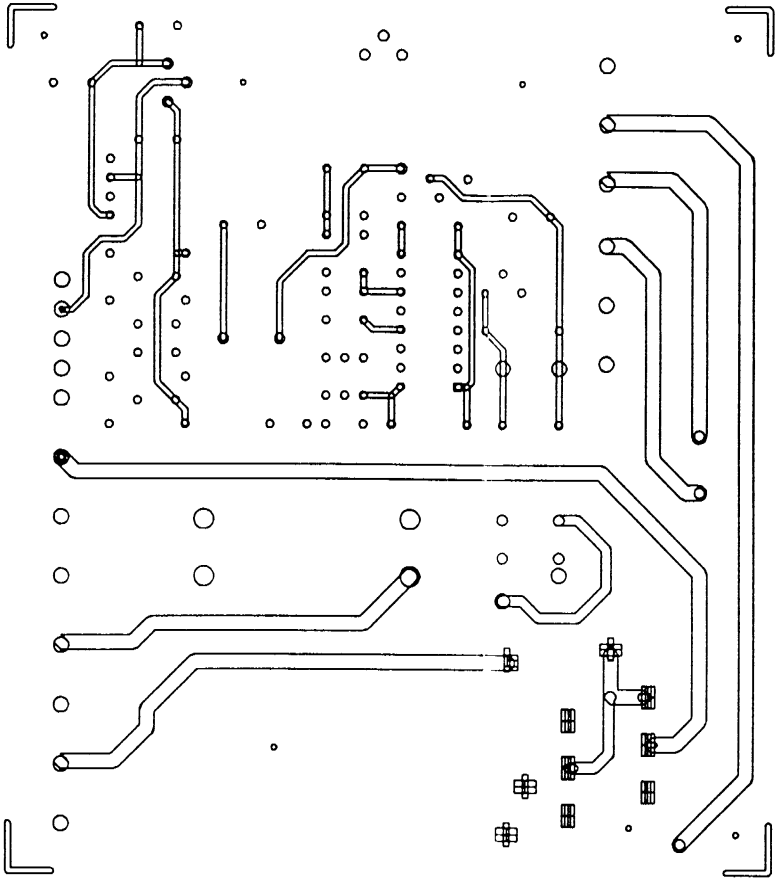


FIGURE 14-1. Power Entry Module Removal

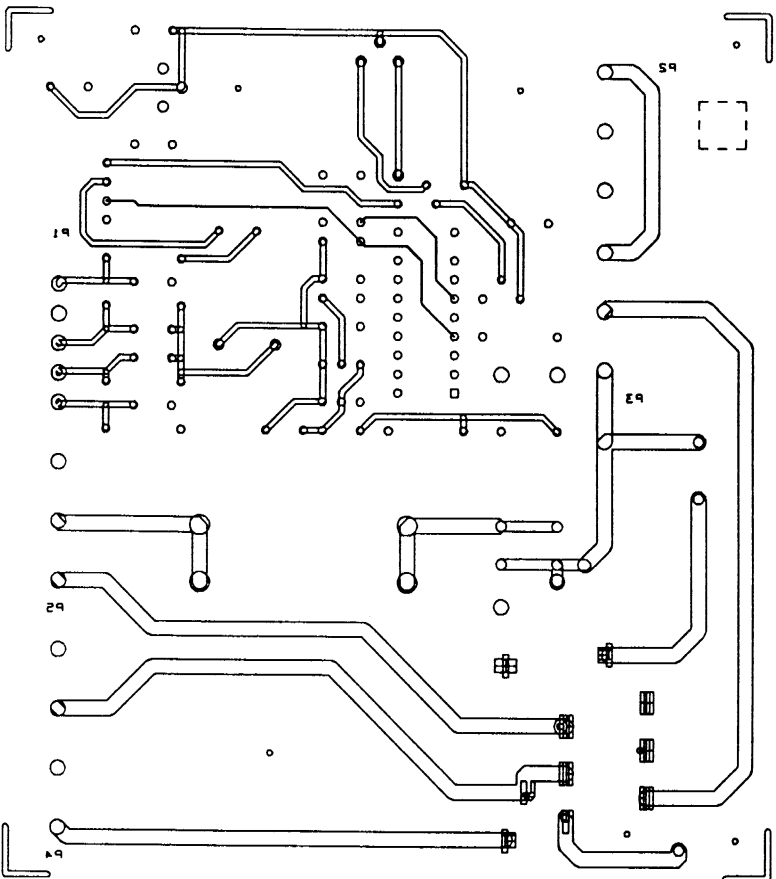
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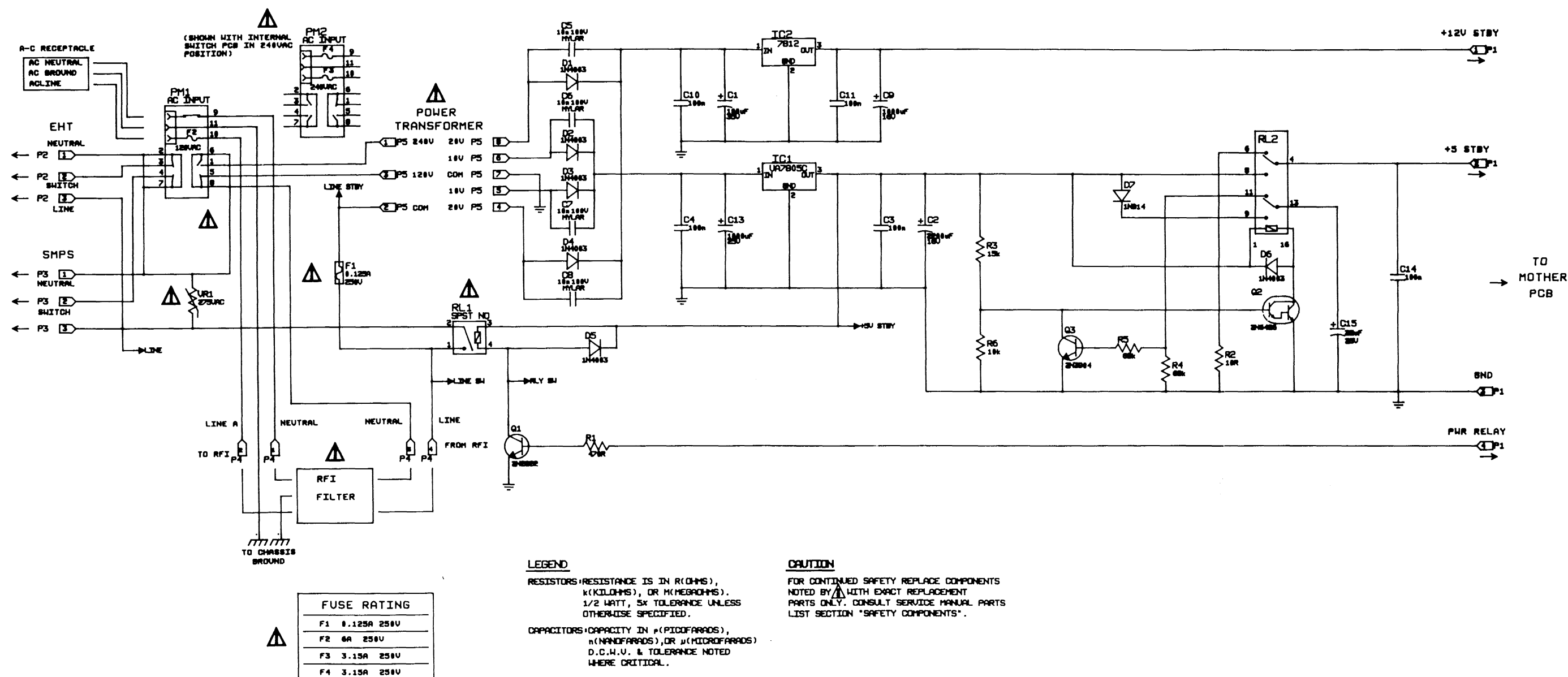
Component Layout



Solder Side  
(Viewed from Component Side)



Component Side



**FIGURE 14-3. Power Entry Module Schematic**  
00-260102-01P

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## 14.4 PARTS LIST

⚠ - CRITICAL SAFETY COMPONENT  
(REPLACE WITH IDENTICAL PART)

Item Ref.	Part No.	Description
<b>Integrated Circuits</b>		
IC1	IC-14-002032-01P	MC7805CT, +5 VDC, fixed linear regulator
IC2	IC-14-002018-01P	MC7812CT, +12 VDC, fixed linear regulator
<b>Transistors &amp; Diodes</b>		
Q1	TR-14-000880-01P	2N2222 A, NPN, 30V, 0.8A, 1/2W
Q2	TR-14-000990-01P	2N6426, NPN
Q3	TR-14-000881-06P	2N3904, NPN, 40V, 0.2A, 0.35W
D1-D6	D-14-000525-53P	1N4003, rectifier, 1A, 200V
D7	D-14-000513-01P	1N914, diode, 0.075A, 75V
<b>Capacitors</b>		
C1	C-84-410105-04P	100 $\mu$ F, 35V, electrolytic
C2	C-44-422203-08P	2200 $\mu$ F, 16V, electrolytic
C3,C4,C10,C11,C14	C-89-000032-03P	100 nF, 50V, 20%, ceramic, multi layer
C5-C8	C-88-171031-12P	10 nF, 100V box type, mylar
C9	C-44-410203-08P	1000 $\mu$ F, 16V, electrolytic
C13	C-44-410204-09P	1000 $\mu$ F, 25V, electrolytic
C15	C-84-422004-01P	22 $\mu$ F, 25V, electrolytic
<b>Resistors</b>		
R1	R-80-147005-11P	470R, 1/2W, 5%, metal film
R2	R-80-110095-11P	10R, 1/2W, 5%, metal film
R3	R-80-115025-11P	15K, 1/2W, 5%, metal film
R4,R5	R-80-168025-11P	68K, 1/2W, 5%, metal film
R6	R-80-110025-11P	10K, 1/2W, 5%, metal film
<b>Miscellaneous</b>		
⚠ F1	F-27-000005-45P	1/8A, 250V, slow blow fuse
⚠ F2	F-27-000005-47P	6.0A, slow blow fuse
⚠ F3,F4	F-27-000045-05P	ET-4A, 3.15A, 250V, fuse
⚠ PM1	A-34-001058-01P	power entry module
RL1	RL-25-000112-01P	relay, SPST, 5VDC
RL2	RL-25-000106-02P	C93406, DPDT relay, MT2, 4.5V coil
⚠ VR1	VR-42-000127-01P	V275LA20A, metal oxide varistor

**14.5 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

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