

Honeywell



LEVEL 6

HARDWARE

**PRU9103-9106,
9108, AND 9109
LINE PRINTER
INSTALLATION
PROCEDURE**

This document and the information contained herein are confidential to and the property of Honeywell Information Systems Inc. and are made available only to Honeywell employees for the sole purpose of maintaining Honeywell's products. This document, any copy thereof and the information contained herein shall be maintained in strictest confidence; shall not be copied in whole or in part except as authorized by the employee's manager; and shall not be disclosed or distributed (a) to persons who are not Honeywell employees, or (b) to Honeywell employees for whom such information is not necessary in connection with their assigned responsibilities. Upon request, or when the employee in possession of this document no longer has need for the document for the authorized Honeywell purpose, this document and any copies thereof shall be returned to the employee's manager. There shall be no exceptions to the terms and conditions set forth herein except as authorized in writing by the responsible Honeywell Vice President.

This document and the information contained herein are confidential to and the property of Honeywell Information Systems Inc. and are made available only to Honeywell employees for the sole purpose of maintaining Honeywell's products. This document, any copy thereof and the information contained herein shall be maintained in strictest confidence; shall not be copied in whole or in part except as authorized by the employee's manager; and shall not be disclosed or distributed (a) to persons who are not Honeywell employees, or (b) to Honeywell employees for whom such information is not necessary in connection with their assigned responsibilities. Upon request, or when the employee in possession of this document no longer has need for the document for the authorized Honeywell purpose, this document and any copies thereof shall be returned to the employee's manager. There shall be no exceptions to the terms and conditions set forth herein except as authorized in writing by the responsible Honeywell Vice President.

PRU9103-PRU9106, PRU9108, and PRU9109
LINE PRINTER INSTALLATION PROCEDURE
(Interim)

Document No. 71010688-100 Order No. FX82, Rev. 0

RECORD OF REVISIONS

REVISION	DATE	AUTHORITY	AFFECTED PAGES
-100	Apr. 1978	BLCD87474	

Hardware Publications, M&TO, Billerica, MA 01821

Printed in the United States of America

All rights reserved

0688/FX82

CONTENTS

Section		Page
I	INTRODUCTION	1-1
	1.1 Scope and Purpose	1-1
	1.2 General Description	1-1
II	INSTALLATION	2-1
	2.1 Hardware Considerations	2-1
	2.2 Installation Considerations	2-3
	2.3 Unpacking Instructions	2-3
	2.4 Installation Instructions	2-7
	2.4.1 Preliminary Printer Installation Instructions	2-7
	2.4.2 PRU9103/PRU9104 (DC) Logic Ground Feature	2-8
	2.4.3 PRU9105, PRU9106, PRU9108, and PRU9109 (DC) Logic Ground Features	2-11
	2.5 Restoring ac Power	2-11
	2.6 Line Printer Operational/Test/Verification Procedural References	2-12

ILLUSTRATIONS

Figure		Page
2-1	Typical Line Printer	2-2
2-2	Typical Line Printer Illustrated Parts Breakdown	2-5
2-3	Line Printer	2-6
2-4	PRU9103/PRU9104 Line Printer Regulator Card	2-10
2-5	Line Printer - Regulator Card Location	2-10
2-6	PRU9105, PRU9106, PRU9108, and PRU9109 Line Printer Regulator Cards	

TABLES

Table		Page
2-1	Line Printer Functional Characteristics	2-3

INTRODUCTION

1.1 SCOPE AND PURPOSE

The purpose of the line printer installation procedure is to supplement the Model 3X, 4X, and 5X System Installation Manual (Order No. CB68) with the necessary steps to install a line printer into a Level 6 system. The line printer procedure also provides the instructions and appropriate reference material to power-up the line printer and to verify satisfactory printer operation in a Level 6 system.

NOTE

The Model 3X, 4X, and 5X System Installation Manual contains the system configuration rules, and the procedures to install a Multiple Device Controller (MDC) board, printer adapter, etc.; it should be readily available for reference as needed.

1.2 GENERAL DESCRIPTION

The procedures in Section 2 are organized into six subsections for user convenience. Subsection 2.1 briefly describes the line printer, and printer and system hardware considerations, subsection 2.2 provides the installation considerations; subsection 2.3 provides the step-by-step instructions on how to unpack a line printer; subsection 2.4 provides step-by-step instructions on how to install a line printer; and subsections 2.5

and 2.6 provide the procedures to restore the ac power to a printer, and the applicable reference material to test and verify satisfactory printer and system operation.

II INSTALLATION

2.1 HARDWARE CONSIDERATIONS

Figure 2-1 is a typical line printer capable of generating high-quality printed forms at a medium to high speeds of 240 and 990 lines per minute (lpm), respectively. The line printers have 64- and 96-ASCII character code capabilities that are printable in 136 columns with vertical line spacing of 6 or 8 lines per inch (see Table 2-1). Up to four printers and their associated printer Device-Pac (PRM9101) can interface with a Level 6 system by means of an MDC board (MDC9101). A 50-foot interface cable is provided with each printer and attaches to the respective Device-Pac on the MDC board.

NOTE

The procedures in this subsection assume that all the physical and electrical connections internal to a printer are complete prior to its shipment to a customer installation.

A printer may also be connected to a Magnetic Tape Controller (MTC) board in a tape unit configuration as described in the Model 3X, 4X, and 5X System Installation Manual. Prior to installing a printer, ensure that the correct printer, with its associated installation material, are received as specified in the shipping invoice. Upon completing an installation, the responsible personnel must ensure that all ac power is restored to the system (see subsection 2.5), and that the necessary system

and verification routines are run to verify satisfactory system and printer operation (see subsection 2.6).



Figure 2-1 Typical Line Printer

HONEYWELL CONFIDENTIAL & PROPRIETARY

Table 2-1 Line Printer Functional Characteristics

PRINTER TYPE	SPEED (lpm)	NUMBER OF ASCII CHARACTERS	
		UPPER/LOWER CASE	STANDARD
PRU9103	240	96	-
PRU9104	300	-	64
PRU9105	440	96	-
PRU9106	600	-	64
PRU9108	660	96	-
PRU9109	990	-	64

2.2 INSTALLATION CONSIDERATIONS

The following installation considerations are recommended for best overall printer performance and accessibility.

1. Ensure that selected area is well ventiated to provide adequate air circulation.
2. Ensure that printer is not positioned more than 40 feet from CPU cabinet to allow for sufficient cable slack in CPU and printer cabinets.
3. Allow a 3- or 4-foot space at rear of printer to open printer cover and to stack printed paper or forms.
4. Allow an additional 3 feet around each of the remaining three sides of printer for accessibility by maintenance and operating personnel.

2.3 UNPACKING INSTRUCTIONS

Using the appropriate transport device, position the printer in the desired location and unpack it as follows:

WARNING

To avoid bodily injury, all physical movement of the printer must be with a forklift truck/transport device.

1. Remove the two straps securing cardboard carton onto printer.

2. Remove carton by lifting it over top of printer.
3. Remove strap around top to bottom center of printer and remove bubble-pack material. (This strap is used to secure the printer cover only.)
4. Remove the four bolts securing printer onto pallet and, with appropriate lifting device, remove printer from pallet. Store pallet for future use.

NOTE

Reference Figures 2-2 and 2-3.

5. Open printer cover (item 1) from front of printer by lifting it up and towards rear of printer.
6. Remove plastic bubble packing material from operator's control panel (item 12). If necessary, adjust control panel to fit squarely into a slot provided in cover and secure it in place. Adjustment is made by loosening two phillips-head screws at bottom of bracket securing control panel to printer frame.
7. For PRU9103/9104 line printer only, remove plastic wedge (key) to free hammer modules as follows:
 - a. Pull drum gate latch (item 13) forward and swing open drum gate (item 11) to gain access to plastic wedge at hammer bank. This wedge is clearly marked with a red tag.
 - b. Remove plastic wedge and store it for future use.

NOTE

In some cases the hammer bank faceplate may have to be removed to gain access to the wedge.

- c. Visually inspect printer for any obvious defects. If any defects are found, notify the Honeywell representative immediately.

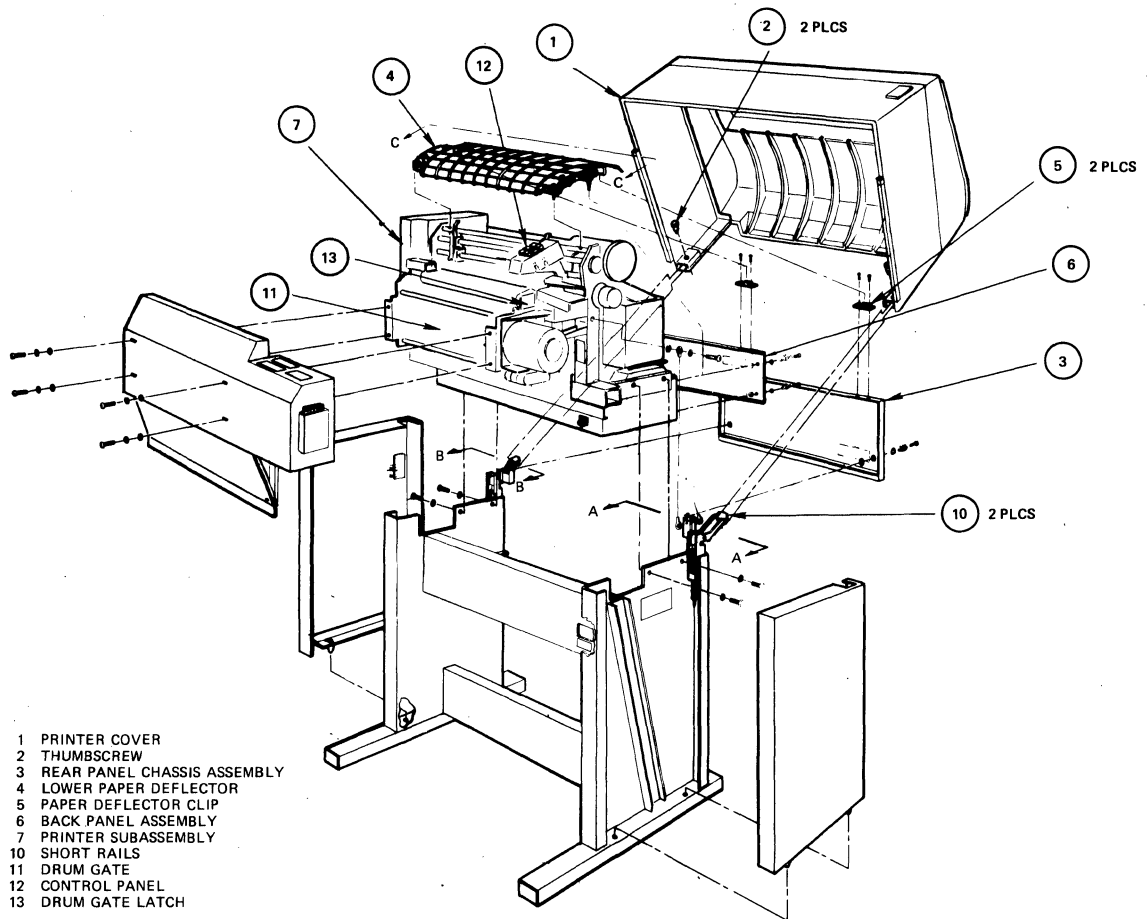


Figure 2-2 Typical Line Printer Illustrated Parts Breakdown

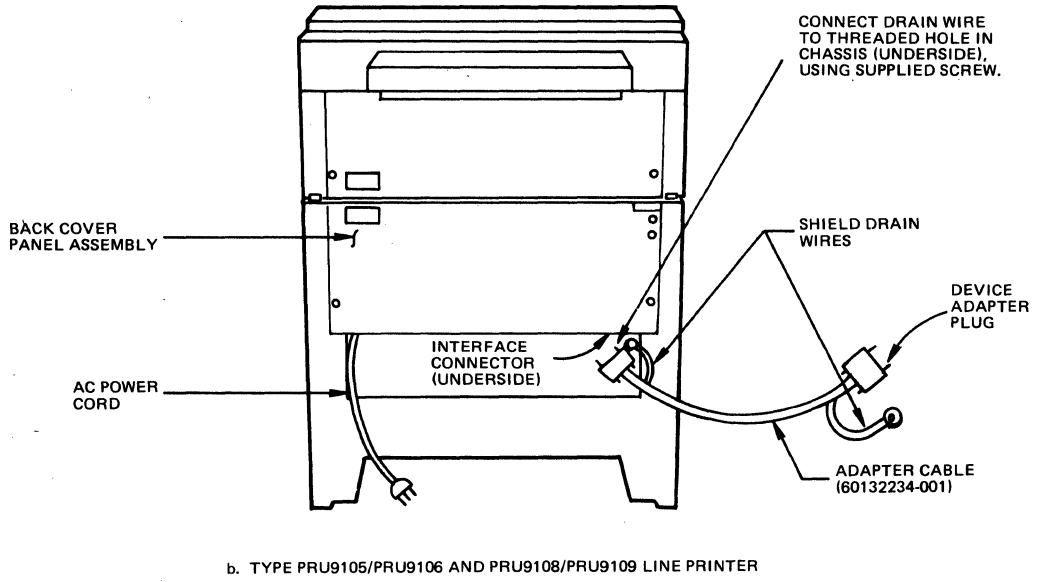
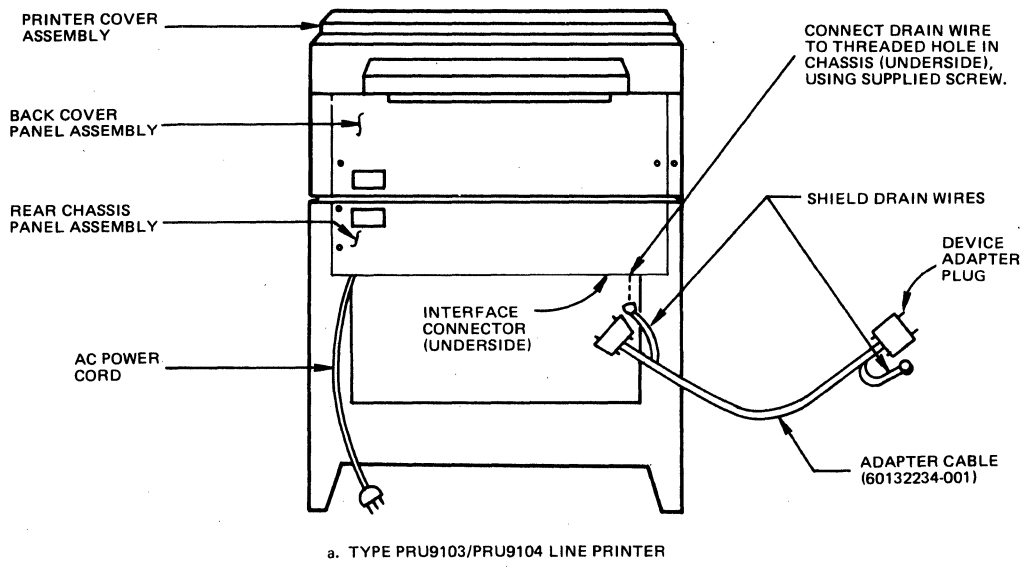


Figure 2-3 Line Printer (Rear View)

2.4 INSTALLATION INSTRUCTIONS

Ensure that the system is powered off, the ac cord to all system components are disconnected from the ac source, and the line printer is placed in its assigned physical position within the system configuration.

WARNING

To avoid bodily injury, the ac power cord to all system components must be disconnected from the ac source.

When adding a line printer to an existing system, the printer shipment includes a device adapter cable (60132234-001), a Device-Pac and, if needed, an MDC board. To install the Device-Pac and MDC board refer to the Model 3X, 4X, and 5X System Installation Manual for the applicable procedures. When the printer comes as part of a system, the printer Device-Pac, and MDC board are installed in the CPU cabinet with the cable also installed and rolled-up inside the CPU cabinet.

2.4.1 Preliminary Printer Installation Instructions

To prepare the line printer for installation, perform the following procedure.

WARNING

To avoid bodily injury, the ac power cord to all system components must be disconnected from the system components.

1. Locate device adapter cable either in its shipping carton or rolled-up in back of CPU cabinet. Install it into proper receptacle at the rear of the respective printer as shown in Figure 2-3.
2. Fasten shield drain wire from connector to threaded hole adjacent to receptacle on printer chassis.
3. Ensure that cable and shield drain wire are properly connected to printer Device-Pac in CPU cabinet (see Model 3X, 4X, and 5X System Installation Manual).

CAUTION

To ensure proper equipment operation and to avoid equipment damage, verify that the printer (dc) logic ground is connected to the ac safety ground as described in subsection 2.4.2 for the PRU9103/PRU9104 line printers, and subsection 2.4.3 for the PRU9105/PRU9106 and PRU9108/PRU9109 line printers.

2.4.2 PRU9103/PRU0104 (DC) Logic Ground Feature

WARNING

To avoid bodily injury, the ac power cord to all system components must be disconnected from the ac source.

The 9103/9104 printers use a single regulator card (see Figure 2-4) that requires grounding of its internal (dc) logic ground with its internal ac ground for proper printer operation in a Level 6 system environment. This feature is enabled on the regulator card with a jumper wire placed across card terminals E16 and E18; the feature is disabled when this jumper is removed. The regular card can be obtained with the feature installed via vendor part number 238030-001, or without the feature via vendor part number 238030-002. The following procedure provides the steps to determine whether the feature is enabled (card 001) or not (card 002); the steps to install a jumper wire to enable the feature on the card are also included.

NOTE

Reference Figures 2-2 and 2-3a unless noted otherwise.

1. Remove back cover panel assembly (item 6) and rear panel chassis assembly (item 3) to expose regulator card.
2. Inspect regulator card to determine its type and verify that feature is installed (i.e., a jumper wire exists across terminals E16 and E18).
3. If feature is installed, proceed to subsection 2.5 (ac power restoration); otherwise, perform steps 4 through 22 to install feature.
4. Open cover assembly (item 1) and tilt it all the way back to rear of printer.
5. Remove thumbscrew (item 2) from each side of printer cover.
6. From rear of printer, remove cover and temporarily store it for safe keeping.
7. At rear of printer, loosen the two large captive screws on rear chassis panel assembly (item 3).
8. Disengage rear chassis panel assembly from lower paper deflector (item 4) by unsnapping paper deflector clip (item 5) on left- and right-hand sides of lower paper deflector. Temporarily store rear chassis panel assembly.

9. Remove lower paper deflector assembly (item 4) by lifting it straight up and off printer.
10. Remove back panel assembly (item 6) by loosening four catch screws one-half turn.
11. From rear of printer, lift rear printer subassembly (item 7) in Figure 2-5 and tilt it towards front of printer.
12. Remove fiber regulator card cover (item 8) in Figure 2-5 by loosening the four captive screws and lifting card cover off and placing it aside.
13. The 238030-002 regulator card (item 9 in Figure 2-4) is exposed directly below regulator card cover.
14. Locate terminals E16 and E18 and install push-on contact type jumper wire supplied with printer shipment.
15. Reinstall fiber regulator card cover (item 8 in Figure 2-5) and tighten the four captive screws.
16. From front of printer, tilt printer subassembly (item 7 shown in Figure 2-5) towards rear of printer and position it over fiber regulator card.
17. Replace back cover panel assembly (item 6) and tighten the four catch screws.
18. Install lower deflector assembly (line 4) by inserting two legs on front of deflector into drilled holes on left- and right-hand sides of printer; lower it into rear of printer.
19. Secure rear chassis panel assembly (item 3) by tightening large captive screws on left- and right-hand sides of panel.
20. Connect lower paper deflector (item 4) to rear chassis panel assembly by engaging paper deflector clip (item 5) on left- and right hand sides of panel.
21. From rear of printer, install printer cover (item 1) by sliding it over short rails (item 10) on left- and right-hand sides of printer.
22. To secure printer cover, install and hand tighten the two thumbscrews (item 3) on left- and right-hand short rails.
23. Close printer cover, and restore ac power to printer as described in Section 2.5.

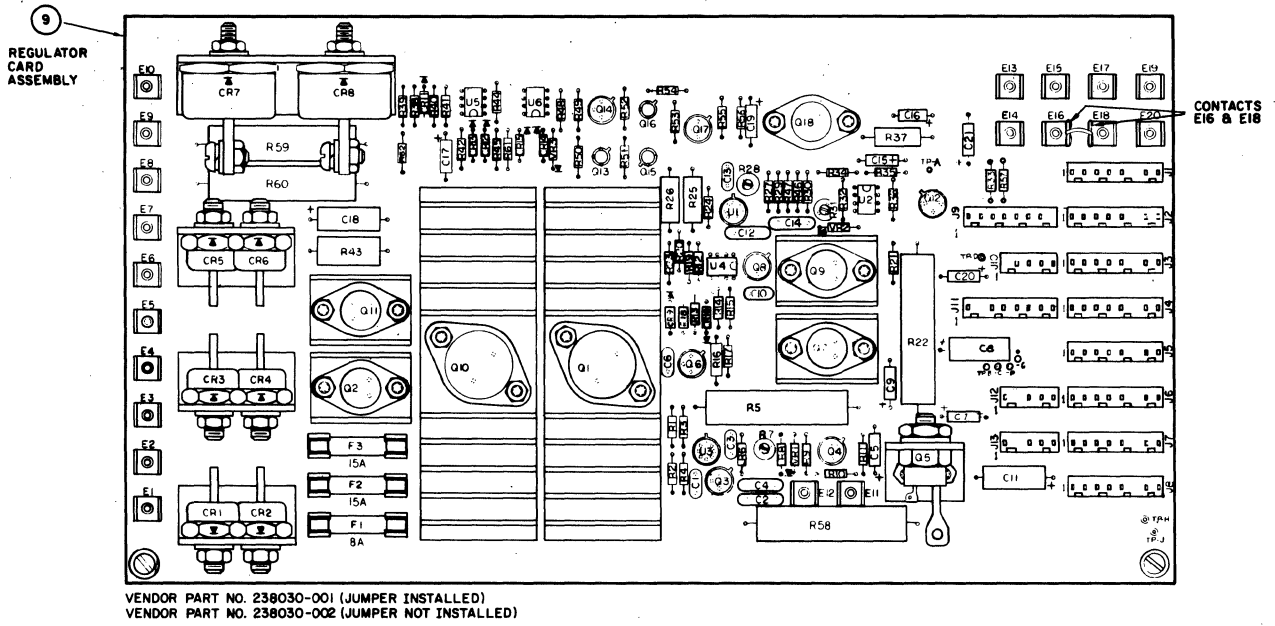


Figure 2-4 PRU9103/PRU9104 Line Printer Regulator Card

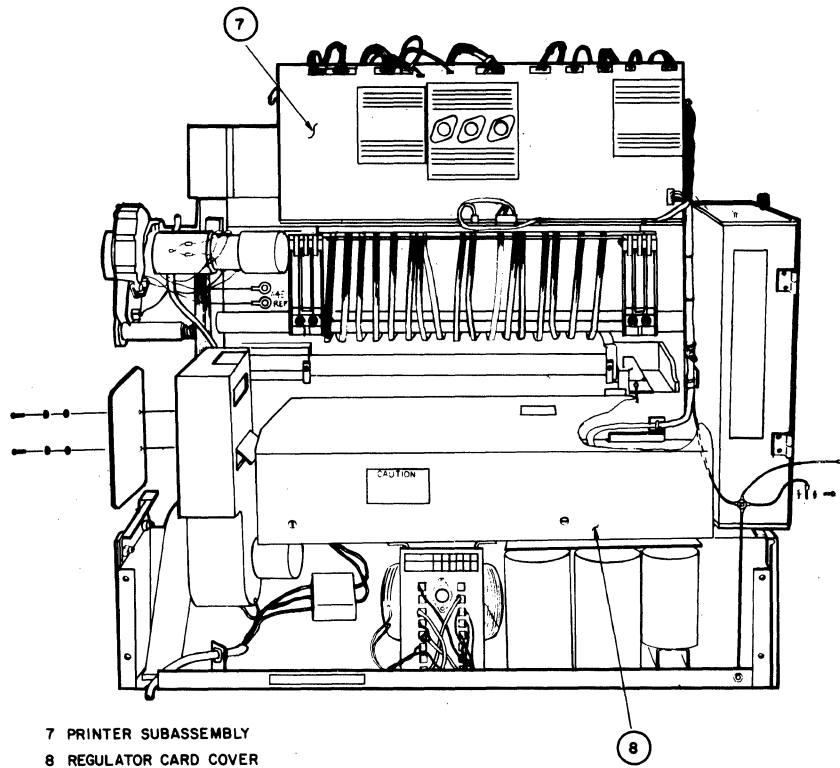


Figure 2-5 Line Printer - Regulator Card Location

2.4.3 PRU9105, PRU9106, PRU9108, and PRU9109
(DC) Logic Ground Features

WARNING

To avoid bodily injury, the ac power to all system components must be disconnected from the ac source.

The PRU9105, PRU9106, PRU9108, and PRU9109 line printers use a single regulator card (vendor part number 237580-001) that requires grounding of its internal (dc) logic ground with its internal ac ground for proper operation in a Level 6 system environment. This feature is enabled on the regulator card with a jumper wire placed across the card terminals E04 and E05 (see Figures 2-3b and 2-6) and must be enabled on the card as described in the following manner:

1. At rear of printer, loosen the four catch screws on lower back cover panel assembly a half turn and remove panel to expose regulator card. Temporarily store panel.
2. Locate card terminals E04 and E05 (see Figure 2-6) and install pushon contact type jumper wire supplied with printer shipment.
3. Replace back cover panel assembly and secure it in place by tightening the four catch screws/
4. Restore ac power to printer as described in subsection 2.5.

2.5 RESTORING AC POWER

Ensure that all system component power on switches are in the OFF position, and reconnect each system component to the ac source as follows:

WARNING

To avoid bodily injury, ensure that all system component power on switches are in their OFF position.

1. Locate printer ac power cord (see Figure 2-3) and, if possible, plug it into Power Distribution Unit (PDU) cabinet. This places printer under control of system control panel on/off switch. Otherwise, plug printer power cord into any convenient 110-Vac outlet.
2. Reconnect ac power cord from all system components into their respective ac source.

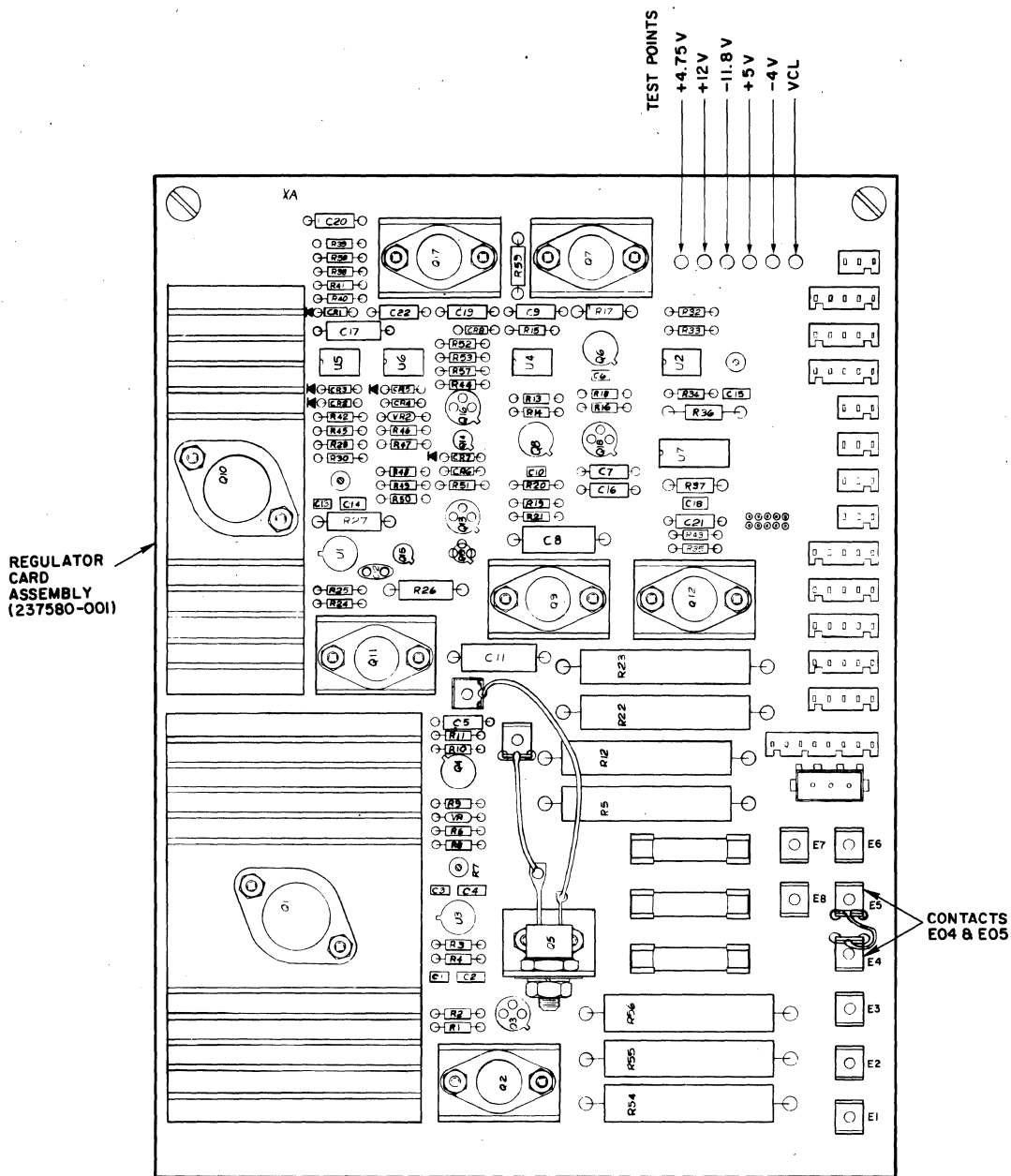


Figure 2-6 PRU9105, PRU9106, PRU9108, and PRU9109
Line Printer Regulator Cards

3. Close access doors on all system components, power up system, and run applicable diagnostics to verify satisfactory printer and system operation.

2.6 LINE PRINTER OPERATIONAL/TEST/VERIVICATION PROCEDURAL REFERENCES

The line printer operational procedures are contained in the Series 60 Level System and Peripherals Operation manual (Order No. AT04). The test and verification procedures for the line printers are in the Level 6 Model 3X, 4X, and 5X Test & Verification Operator's Guide (Order No. AW94).

PLEASE FOLD AND TAPE –
NOTE: U. S. Postal Service will not deliver stapled forms

M&TO HARDWARE PUBLICATIONS
USER COMMENTS FORM

DOCUMENT TITLE: _____

PART NO.: _____

ORDER NO.: _____

ERRORS:

HOW DO YOU USE THIS DOCUMENT?

THEORY _____

MAINTENANCE _____

TROUBLESHOOTING _____

OTHER: _____

DOES THIS MANUAL SATISFY YOUR REQUIREMENTS?

YES NO

IF NOT, PLEASE EXPLAIN _____

FROM: NAME _____ DATE _____

TITLE _____

COMPANY _____

ADDRESS _____

FIRST CLASS
Permit No. 39531
Waltham, Ma.



Business Reply Mail

NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES



POSTAGE WILL BE PAID BY

HONEYWELL INFORMATION SYSTEMS INC.
200 SMITH STREET
WALTHAM, MA. 02154

MAIL STATION 872A
HARDWARE PUBLICATIONS, BILLERICA

Honeywell



O

O

O

Honeywell

Honeywell Information Systems

In the U.S.A.: 200 Smith Street, MS 486, Waltham, Massachusetts 02154
In Canada: 2025 Sheppard Avenue East, Willowdale, Ontario M2J 1W5
In Mexico: Avenida Nuevo Leon 250, Mexico 11, D.F.

FX82, Rev. 0