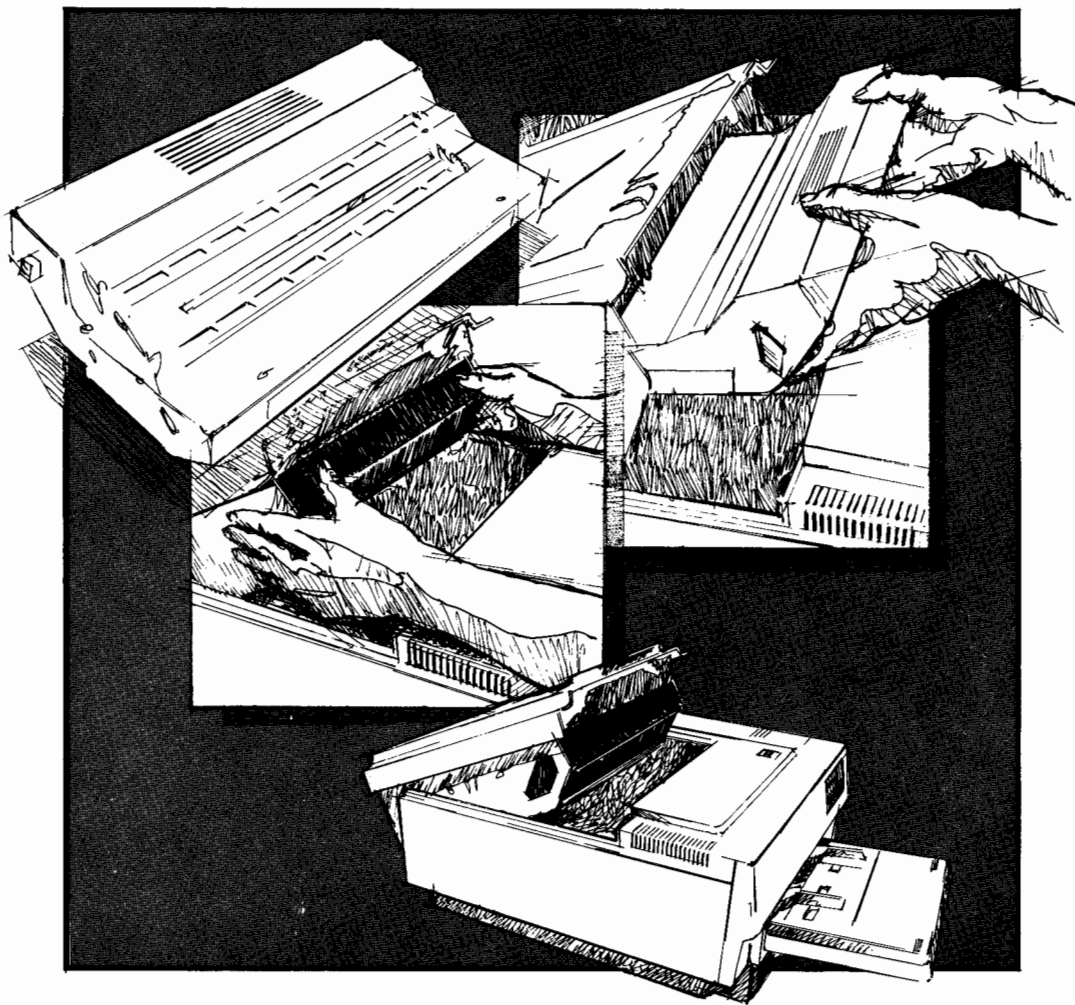


HEWLETT-PACKARD



**Getting Started
with LaserJet series II**

Getting Started with LaserJet series II



Manual Part No.
33440 - 90908

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Conventions

The following conventions are used throughout this manual:

- **Bold type** is used to highlight important information in the text.
- *Italic type* is used for titles that refer to other manuals or documents.
- **Shading** is used to set off all tasks and lessons.
- A white background in a message is used to designate a variable. Any part of a message that has a white background, such as the 03 in **COPIES=03 ***, is subject to change.
- Control panel keys such as  or  are placed in all tasks and lessons. Everywhere else, the keys are noted with uppercase letters (PRINT FONTS/TEST key and MENU key).



Note

Notes contain important information that is set off from the text.



Caution

Caution messages appear before procedures which, if not observed, could result in damage to equipment.



Warning

Warning messages indicate when a specific procedure or practice is not followed correctly, personal injury could occur.

Getting Started

GETTING STARTED is an introduction to the **LaserJet series II** printer and contains information on printer set-up and configuration. This manual will give you the instruction needed to get your printer up and running. *GETTING STARTED* contains the following three chapters:

- Chapter 1, *Introduction*, describes the **LaserJet series II** printer, includes information on the *LaserJet series II User's Manual* and *Technical Reference Manual* and informs you about Hewlett-Packard's customer support assistance. Use this introduction to become familiar with special printing features and to learn about the manuals and Hewlett-Packard's customer support network.
- Chapter 2, *Setting-Up LaserJet series II*, gives information on getting your printer ready to use. Use Chapter 2 for instructions on choosing a location for the printer, installing and connecting it, and testing its operation.
- Chapter 3, *Configuration* explains about serial and parallel interfaces, and describes the steps you need to take to configure your **LaserJet series II** printer from the control panel before you connect it to your computer. Configuration guides for many popular computers are included in the shaded section in the back of this chapter. Printing exercises to check your configuration are found in the configuration guides.

Follow the instructions in this manual before using your *LaserJet series II User's Manual* for printing applications.

Congratulations on the purchase of your new Hewlett-Packard **LaserJet series II** printer. With the **LaserJet series II** printer you can print documents with excellent print quality at eight pages per minute on many different paper sizes and types, including labels, overhead transparencies, and envelopes. The **LaserJet series II** printer prints quietly using a high-resolution dot matrix pattern (300 X 300 dots per inch) and occupies about as much desktop space as a typewriter.

The printer includes the ability to easily select fonts and to use sophisticated graphics programs. The **LaserJet series II** printer's control panel makes many configuration and printing selections easy and simple operator maintenance is all that is required to keep the **LaserJet series II** printing high-quality documents. The EP cartridge that contains the toner is completely disposable and easily replaced.

These are just a few of the **LaserJet series II** printer features. After using this booklet to set-up and configure your printer, you will learn more about printer features in the *User's Manual*. A brief description of the manuals used with the printer is included on the next page.

Related User Documentation



LaserJet series II User's Manual - The *User's Manual* explains the **LaserJet series II** operating and printing features. You are ready to use the *User's Manual* once your printer is set-up and configured using the information in this *Getting Started* manual. Information in this manual will teach you how to operate the printer using the front panel, how to print, how to select fonts to enhance your text, and how to maintain your printer to keep it in excellent working order. Appendices included with the manual will help you to install your software to work with **LaserJet series II** printer, give you a detailed account of the types of paper recommended for use with the printer, and reference the printing commands used throughout the manual.

LaserJet series II Technical Reference Manual - The *Technical Reference Manual* includes information on advanced graphics capabilities, gray shading, forms overlay, and detailed explanations of fonts and macros. The *Technical Reference Manual* is suitable for advanced users or programmers interested in learning more about the **LaserJet series II** printer's features. The *Technical Reference Manual* is not packaged with the printer, but can be purchased through Hewlett-Packard's Direct Marketing Division. To order a copy, call toll free 800-538-8787 (in California call 408-738-4133 collect) and ask for part number 33440-90905. The customer service operator can give you information on pricing.

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Introduction

Setting-up your printer involves the following steps:

- Using the unpacking checklist
- Choosing a location for the printer
- Installing parts necessary for printer operation
- Connecting the printer using the power cord
- Checking printer operation

This chapter includes all the tasks that you need to perform before configuring the printer to work with your computer.

Key Words

Configuration	Configuration is the process of changing certain printer settings to allow your computer to communicate properly with the printer.
EP Cartridge	The electrophotographic (EP) cartridge is a disposable cartridge that contains the toner used for printing.
Fuser Roller	The fuser roller in your printer is used to bond toner to the page.

Unpacking Checklist

- ☐ 1. **LaserJet series II** printer
- ☐ 2. Font Catalog
- ☐ 3. *Getting Started with LaserJet series II*
- ☐ 4. **LaserJet series II** User's Manual
- ☐ 5. Power cord
- ☐ 6. Paper tray
- ☐ 7. Fusing roller cleaning pad
- ☐ 8. EP cartridge

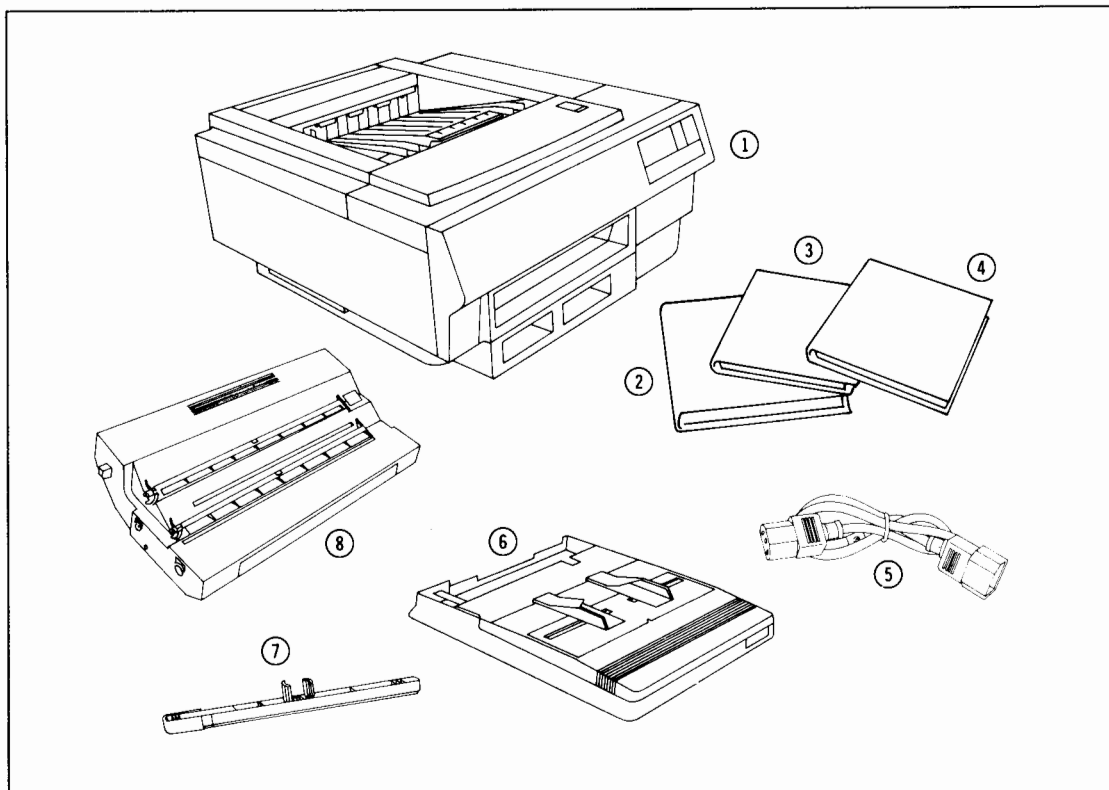
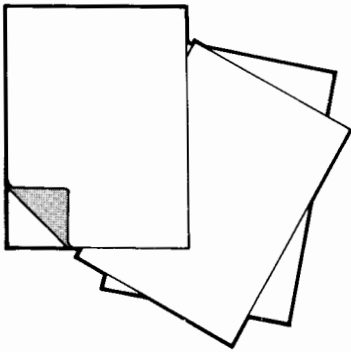


Figure 2-1. Unpacking the LaserJet series II.

In addition to the items shipped with your printer you will need an interface cable to connect your computer to the printer. If you need additional information on cables, see Appendix E in the *User's Manual*. Cables are also listed in the configuration guides included in Chapter 3 of this manual.

About Paper



Note

One of the most important things you can do to assure the best possible performance of your **LaserJet series II** printer is to select the right paper (or other print media).

The **HP LaserJet series II** printer is designed to work well with most types of paper. However, some variables in paper may significantly affect the print quality or the reliability of paper handling. Use the following guidelines when choosing paper to help ensure maximum performance from your printer.

- To obtain the clearest, sharpest images, paper manufactured for photocopying, such as **Canon NP** or **Xerox 4024**, should be used. Generally these types of papers provide good print quality and paper handling. Always test paper prior to purchase to ensure desirable performance.
- For some applications you may want to use cotton bond paper. Several cotton papers are manufactured especially for laser printing. HP has tested cotton content papers such as **Gilbert Neu-Tech** and **Neenah NP** and found the results satisfactory. Most other types of cotton bonds will work well in your **LaserJet series II** printer. However, always test paper prior to purchase to ensure desirable performance. Paper that is textured, such as cockle or woven finished paper, may exhibit degraded performance.

Hewlett-Packard neither warrants nor recommends the use of a particular paper. Paper properties are subject to change by paper manufacturers and Hewlett-Packard has no control over such changes. You are responsible for the quality and performance of paper used with the printer.

Special Papers

The **LaserJet series II** will print on certain labels and transparencies. The labels and transparencies HP has tested and found satisfactory are listed in Appendix D. **With any label stock the labels must completely cover the backing material, and the rear output tray must be used. When printing transparencies or envelopes, the rear output tray must also be used.**

See the paper specifications in Appendix D for more information on paper.

Printer Set-Up

After using the unpacking checklist, follow these instructions to set-up the printer. Printer set-up involves choosing a location, removing the packing spacers, installing the EP cartridge and fuser roller cleaning pad, loading the paper tray, and turning on the printer.

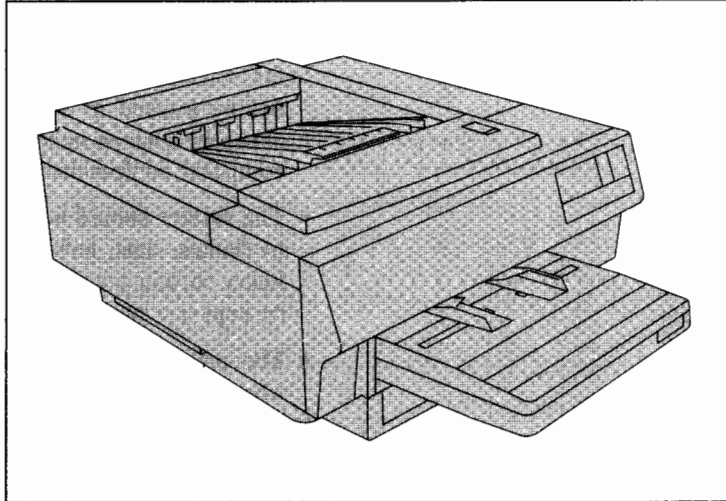


Figure 2-2. LaserJet series II.

Choosing a Printer Location

Before choosing a location for your **LaserJet series II** printer, consider the following requirements:

- The room selected should be well ventilated.
- Room temperature should be between 50 and 90.5 degrees Fahrenheit (10 - 32.5 degrees Celsius). Relative humidity should be between 20 and 80 percent.
- Do not set the printer near humidifiers, refrigerators, water faucets, heaters or similar equipment. The printer should not be located in areas where the temperature changes abruptly, such as near air conditioners or on top of other computer equipment.
- The printer should not be placed where it will be exposed to flames, dust, solvent chemicals or direct sunlight. (A heavy curtain may be used to protect the printer if it must be kept in a sunny location.)
- The printer should be placed on a sturdy, level surface where there is enough space for unimpeded operation. Make sure that the back of the printer is at least 9" (23 cm) from the wall.
- Use the power cord supplied with the printer, and plug it directly into an appropriate power outlet.

- The line voltage should not vary more than $\pm 10\%$ from the voltage marked on the printer nameplate (located on the left side of the printer), and a ground connection should be used. The supply frequency should be between 48 - 62 Hz.
- A voltage regulator or similar device should be installed if the power source is not stable.

The illustration shows the printer's dimensions and the space needed for set-up.

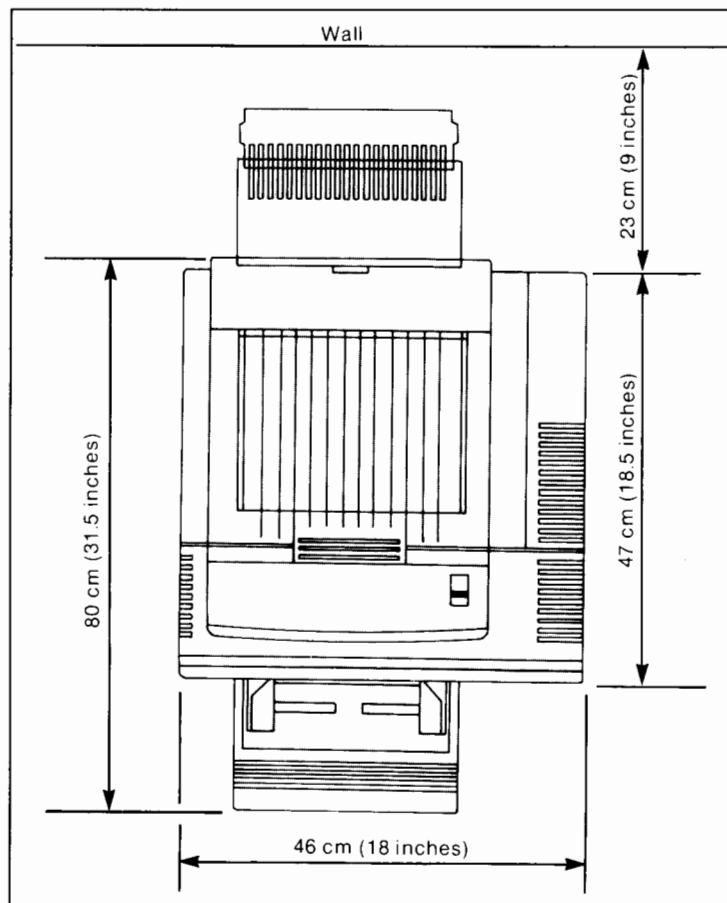


Figure 2-3. Choosing a Printer Location (top view).

Unpacking the Printer

Once you have checked everything in the unpacking list, set up your printer using these instructions:

1. Lift the packing material from around the printer and remove the printer from its sealed bag. Place it in the area you have selected.



Warning

Two people should lift the printer - it weighs 50 lbs. (23 kg.).

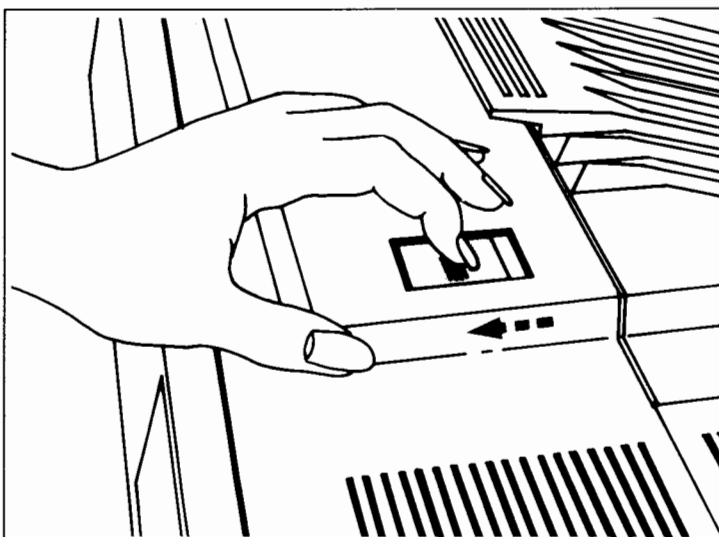
2. Check for damage to the printer that could have occurred during shipment.



Note

- a. If the printer appears damaged, notify your Hewlett-Packard Sales or Service Representative or authorized dealer right away.
 - b. Save the box and packing material in case you need to ship the printer in the future. Instructions for repacking the printer are included in Appendix E of the *User's Manual*.
-

3. Open the printer by pulling the release button on the top of the printer toward you and then pressing it down.



2

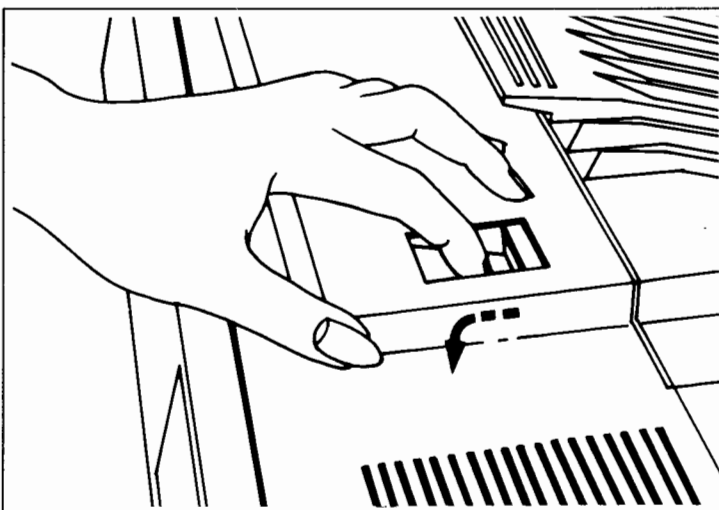
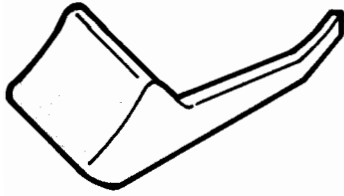


Figure 2-4. Opening the Printer.



4. Remove the packing spacers from under the fusing assembly on the left and right sides.

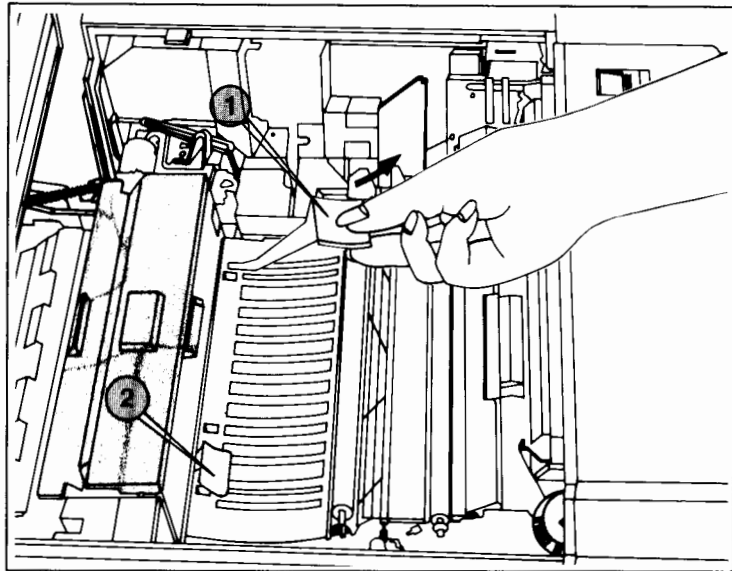


Figure 2-5. Removing the Packing Spacers.



Caution

Damage will occur if the packing spacers are not removed before turning on the printer.

Installing the EP Cartridge

Follow these instructions to install the EP Cartridge.

1. Remove the EP cartridge from its packaging.

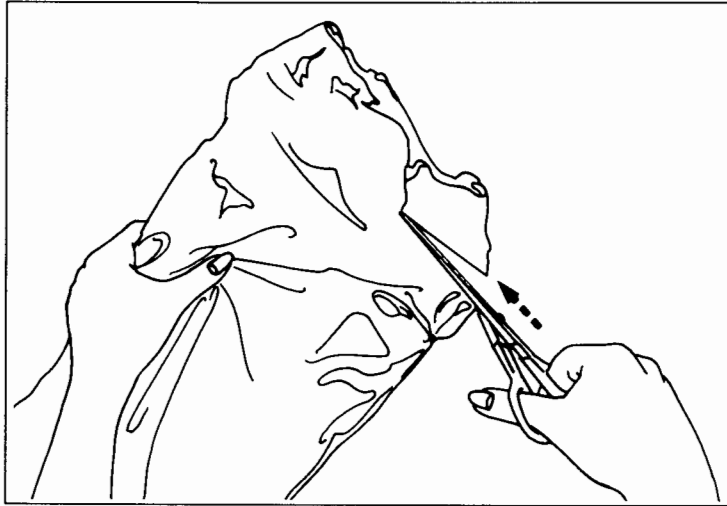


Figure 2-6. Unpacking the EP Cartridge

2. Hold the EP cartridge as shown below and slowly rock it 45 degrees back and forth (about five times) to distribute the toner evenly.

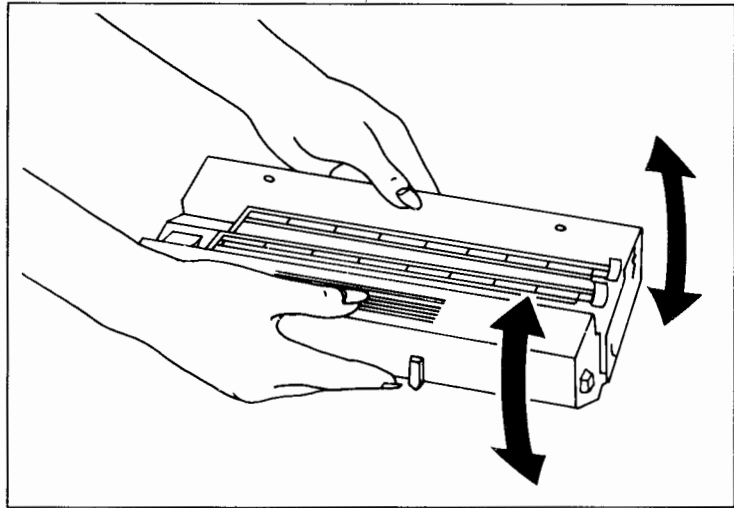
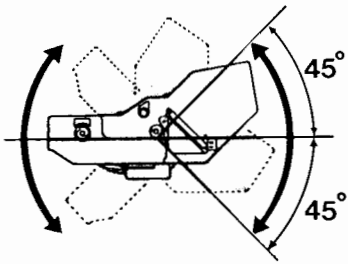
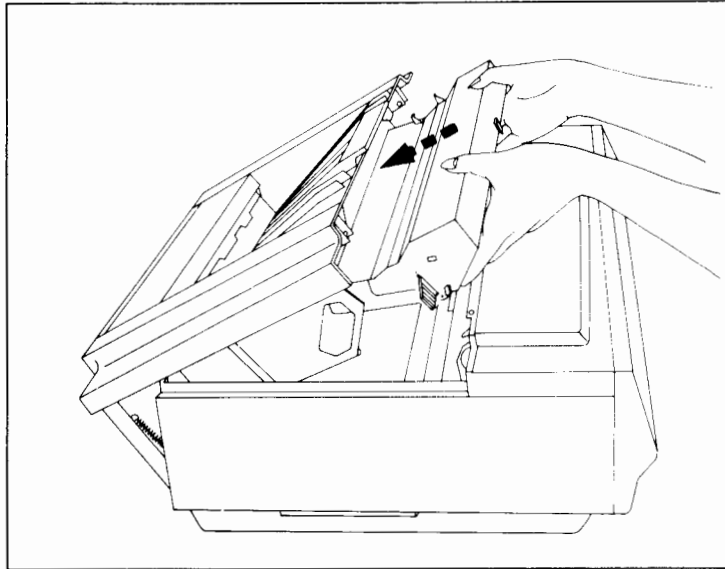


Figure 2-7. Distributing Toner.

3. Insert the EP cartridge all the way into the cartridge holder on the top of the printer as shown:



2

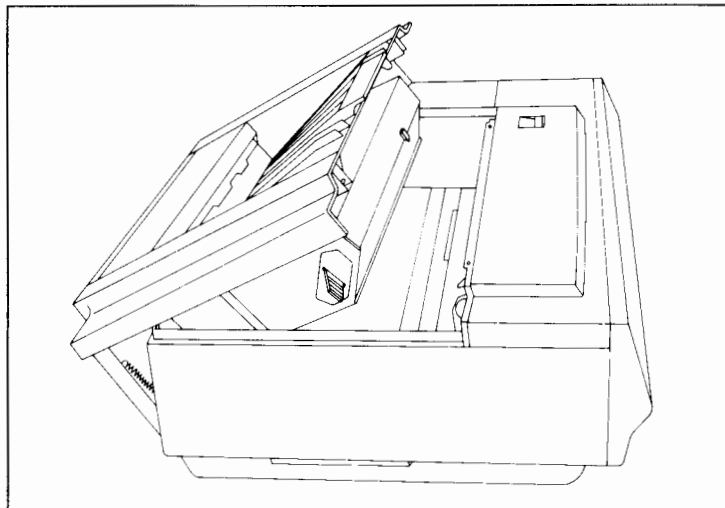


Figure 2-8. Inserting the EP Cartridge.

4. Flex the white tab on the EP cartridge until it breaks loose. Pull the tab all the way out to remove the attached sealing tape.



Note

If the sealing tape separates from the white tab, grasp the sealing tape and pull it completely out of the cartridge.

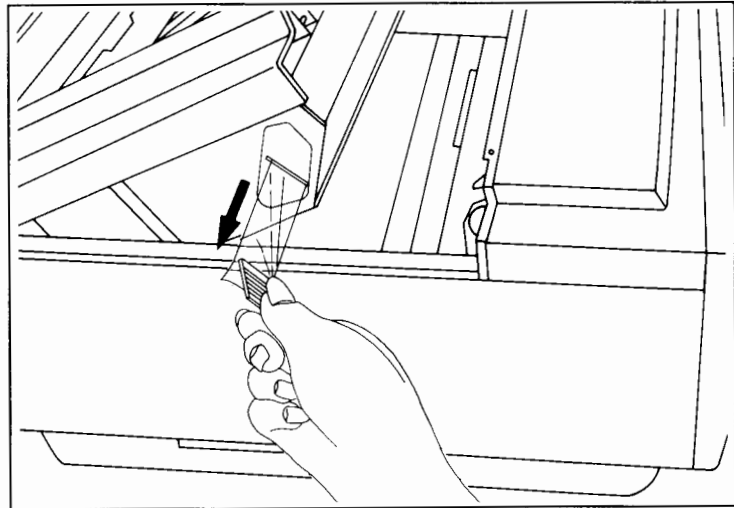
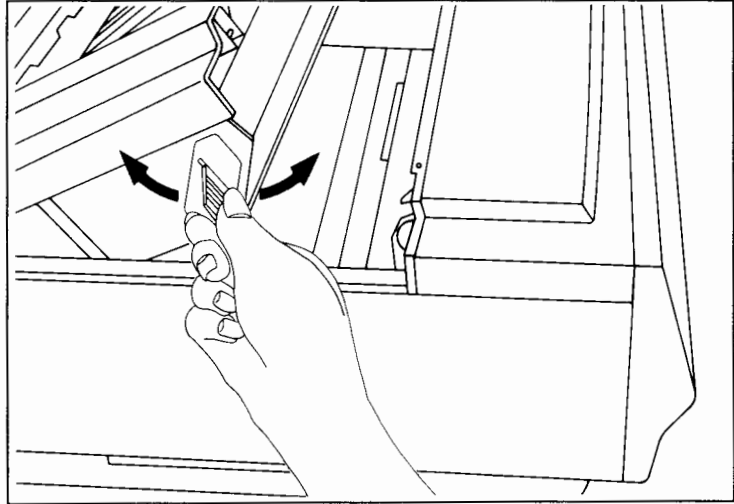
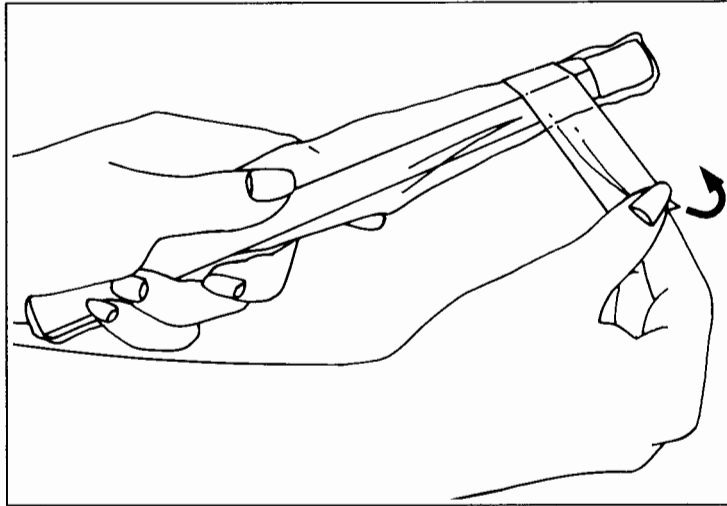


Figure 2-9. Removing the EP Cartridge Tab and Sealing Tape.

Installing the Fuser Roller Cleaning Pad

1. Remove the fuser roller cleaning pad from its packaging.



2

Figure 2-10. Unpacking the Fuser Roller Cleaning Pad.

2. Open the green fusing assembly cover to install the fuser roller cleaning pad.

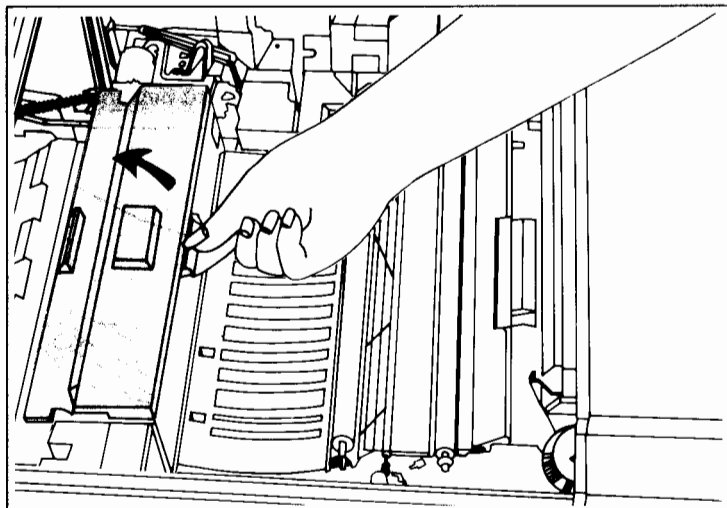


Figure 2-11. Opening the Fusing Assembly Cover.



Caution

The area around the fuser roller gets very hot after the printer is turned on.

3. If a fuser roller cleaning pad is already installed in the printer, remove and discard it.
4. Use the cloth end attached to the new cleaning pad to wipe back and forth one time across the roller to remove toner residue.

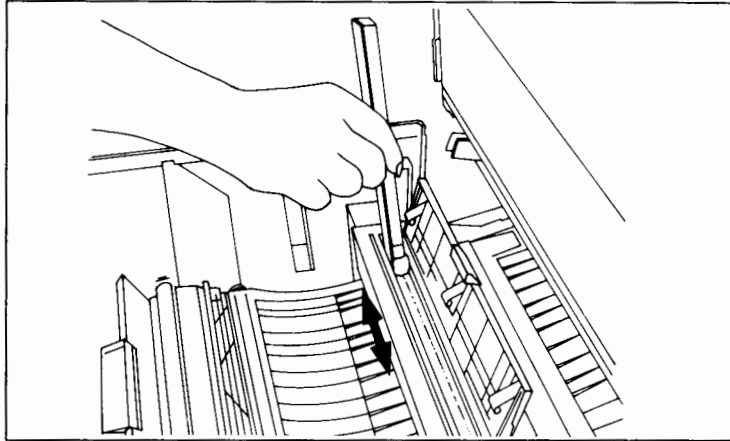


Figure 2-12. Cleaning the Fuser Roller.

5. Discard the cloth end of the pad.

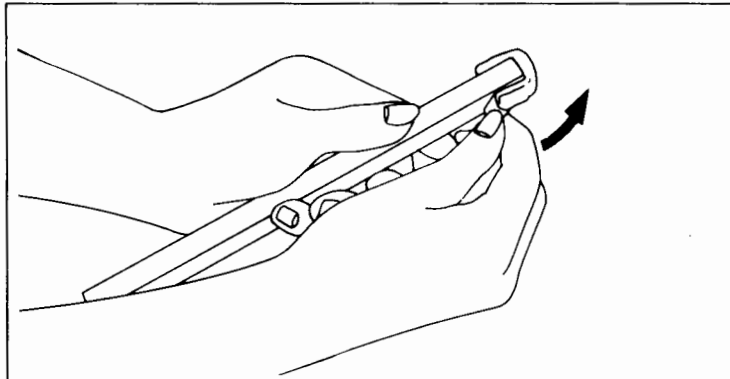
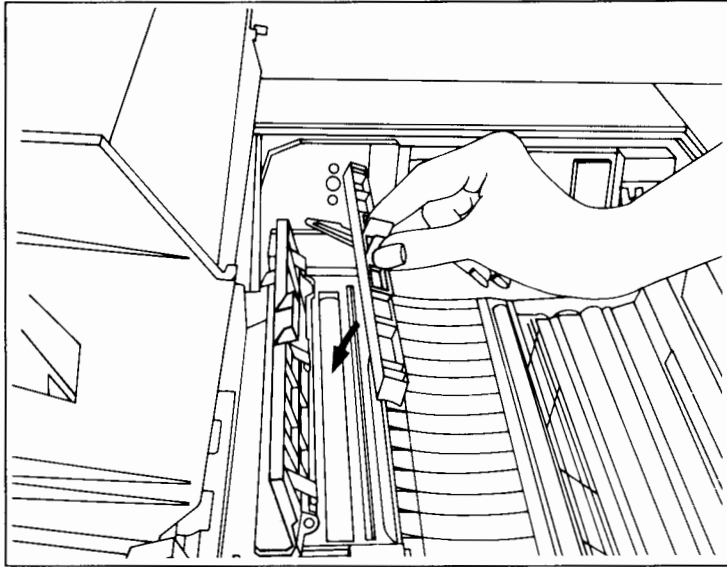


Figure 2-13. Discarding the Cloth End of the Cleaning Pad.

6. Insert the cleaning pad firmly into the groove in the top part of the fuser assembly.



2

Figure 2-14. Inserting the Fusing Roller Cleaning Pad.

7. Close the green fuser assembly cover. It should not close tightly.
8. Close the printer's top cover.

Turning On the Printer

Follow these instructions to connect your printer using the AC power cord:

1. Make sure that the printer is turned off. (Check the power switch at the back of the printer - "0" is the OFF position.)

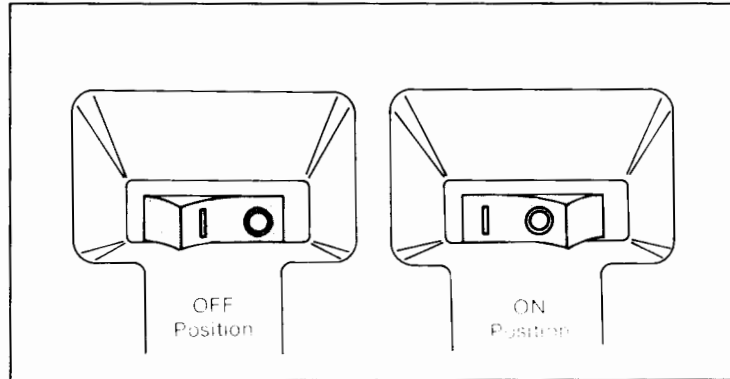


Figure 2-15. Printer Power Switch.

2. Plug the power cord into the power outlet at the back of the printer and then into an appropriate AC power outlet.

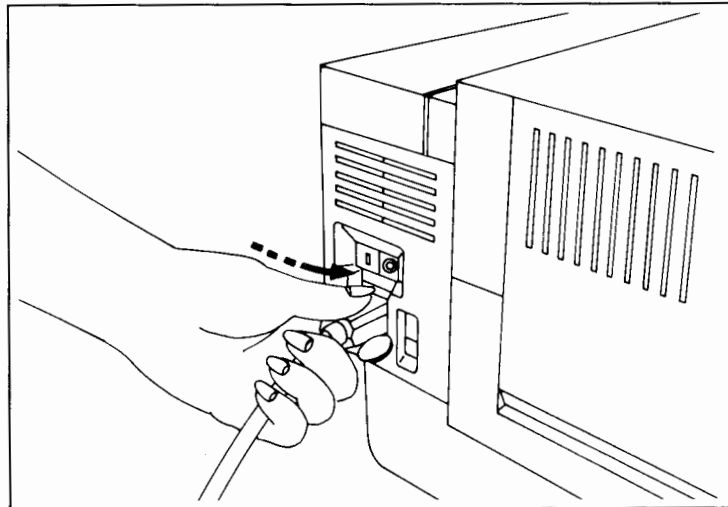


Figure 2-16. Connecting the Power Cord.

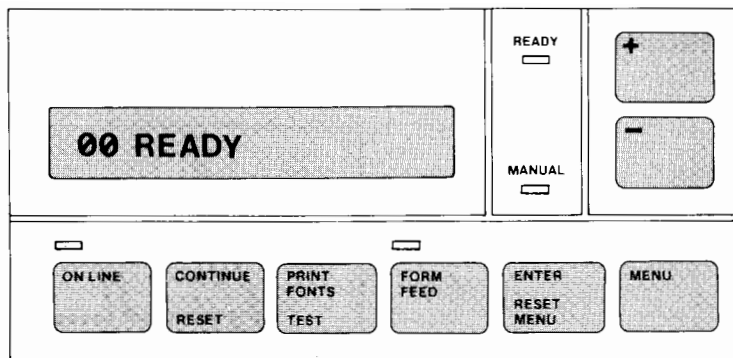


Figure 2-17. Control Panel.

3. Turn the printer ON by pressing the switch located on the printer's back panel.

- The display window will show 05 SELF TEST and then 02 WARMING UP.
- 11 PAPER OUT will show when the printer is warmed up.



Note

The printer's scanner motor takes a moment to come up to speed after the printer is turned on and every time it receives a job. This is the sound you hear at these times.

Also, about every 30 minutes the main motor rotates the fuser roller to make it last longer. This sound is a normal part of the printer operation.

If your printer does not turn on when you press the switch, skip to the "If You Need Help" section at the end of this chapter.

Loading Paper

1. To install the paper tray, remove the packing material taped to its front.

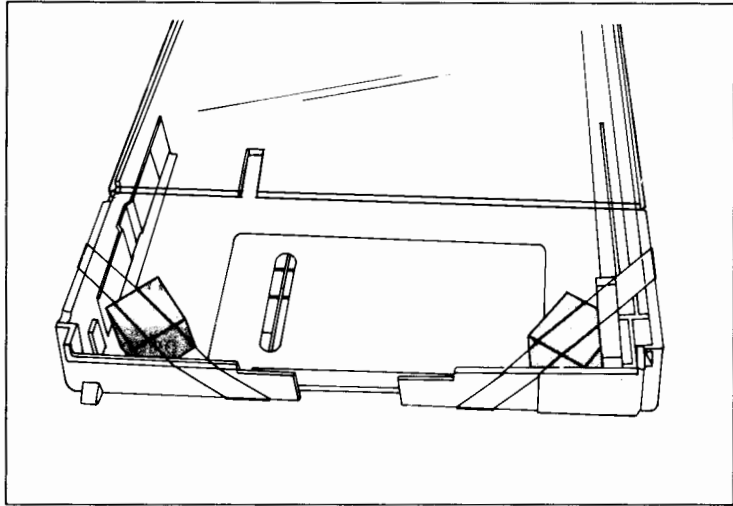


Figure 2-18. Removing Packing Material.

2. Remove the paper tray cover.

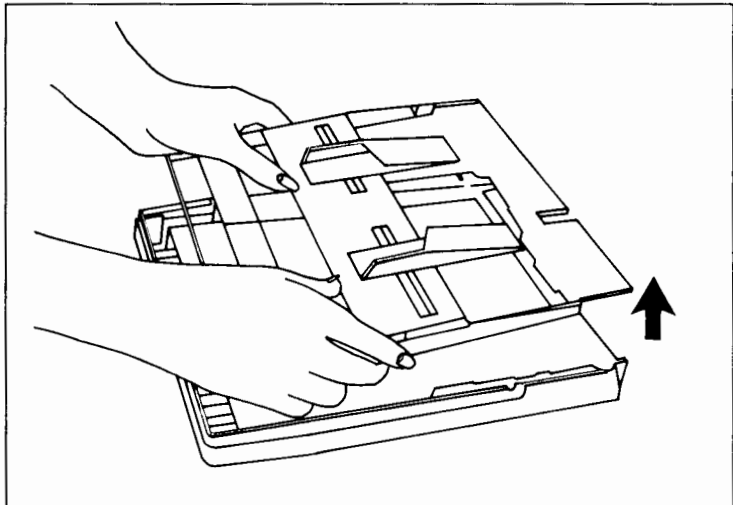
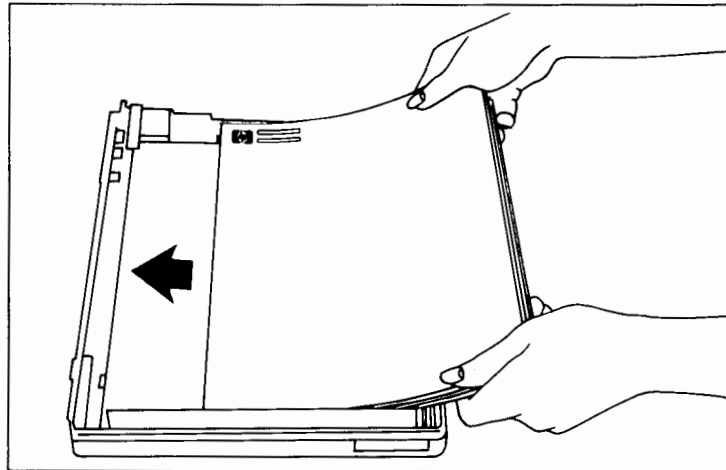


Figure 2-19. Removing the Paper Tray Cover.

3. Insert the paper, making sure the paper stack height does not exceed the paper height limit tabs on the tray.



2

Figure 2-20. Loading Paper.



Note

Over-filling the tray may cause paper jams. Do not overfill the tray – use the limit tabs as guides for how much paper to insert. The correct paper tray size must be used for the paper size you are using. Appendix E in the *User's Manual* gives paper tray part numbers and ordering information.

4. Replace the paper tray cover.

5. Insert the paper tray firmly into the front of the printer.

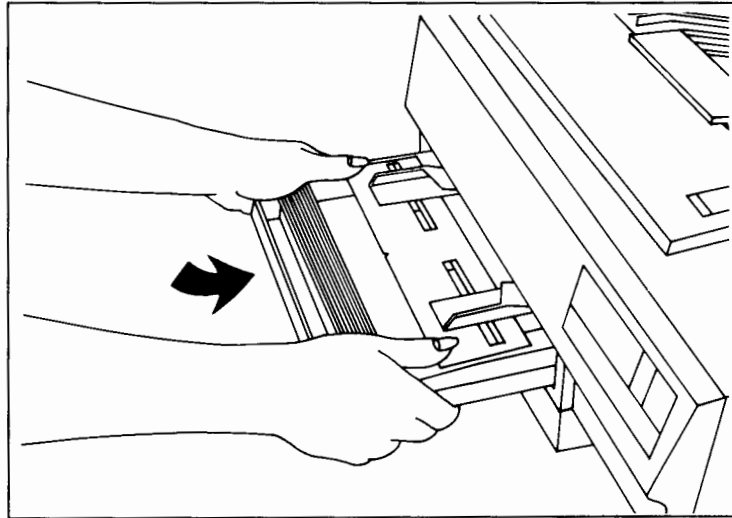


Figure 2-21. Inserting the Paper Tray.

The ready indicator light goes on, and the display window changes from **11 PAPER OUT** to **00 READY** when the paper tray is loaded and correctly inserted.

Testing Printer Operation

1. Press the  key after the printer is on-line. (The on-line indicator light will go out.)
2. Hold down the  key until the display shows **05 SELF TEST**. (This will take about 2 seconds. The printer will display **06 PRINTING TEST** during the printing part of the test. A printout similar to the one shown on the next page will print.)



Note

If you hold the PRINT FONTS/TEST key down too long (until **04 SELF TEST** is displayed) test printouts are continuously printed.

To stop the continuous test printouts, press the ON LINE key. The **04** portion of the message will flash and the printer will return on-line. (Up to four additional pages may print before the printer goes back on-line.)

3. Press the  key to return the printer on-line. (The on-line indicator will light up again.)

If you experienced difficulty, read through the next section, "If You Need Help," to try and correct the problem.

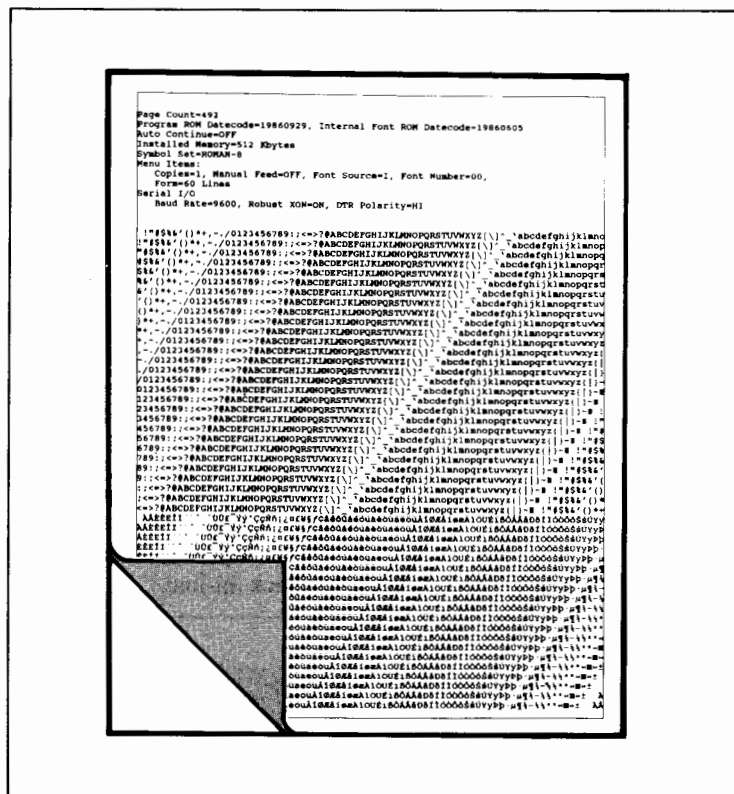


Figure 2-22. Test Printout.

If You Need Help

If your printer does not power on or print the test printout, go through this checklist:

- ☐ Is the AC power cord properly attached?
- ☐ Is the power switch in the ON position?
- ☐ Is the paper tray installed properly? Does it contain paper?
- ☐ Is the upper part of the printer firmly closed?
- ☐ Are there any error messages showing in the display window? If so, check Appendix B of the *User's Manual* for an explanation of the error.
- ☐ Were you off-line when attempted the printer self-test?

If you still have a problem after checking everything on this list, go to the **"In Case of Difficulty"** section of the *User's Manual* for additional instructions.

Review

Before moving on, review this list of questions:

- ☐ Have you checked off everything in the unpacking list to make sure that you have received all of the items?
- ☐ Have you met the requirements for choosing a place to keep the printer?
- ☐ Have you tested printer operation by printing a test print-out?

If you have done all of the above you are ready to begin configuring the printer to communicate with your computer using Chapter 3.

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Introduction

Configuring the printer and your computer involves the following steps:

- Selecting either a serial or parallel interface
- Using the control panel to configure the printer
- Connecting the interface cable
- Configuring your computer so that it can communicate with the printer
- Verifying communication between the printer and the computer

Printer configuration depends upon the type of computer you are using. This chapter gives you general information on interface cables, the interface connectors included with the printer, shows you how to use the configuration menu of the control panel, and provides configuration guides for many popular personal computers.

Key Words

Baud Rate	The baud rate is the data transfer rate between the computer and the printer. The computer and the printer must be configured at the same baud rate. This rate can be set from between 300 and 19,200 baud depending on the type of computer system used. The baud rate is set only if the serial interface is used.
Interface Cable	The interface cable is used to connect the computer and the printer. You can purchase either serial or parallel interface cables for most computers.
Interface Connector	The LaserJet series II printer comes with two interface connectors, serial and parallel, located on the lower part of the back panel. The cable that attaches your computer and printer is connected here.
Control Panel	The printer's control panel allows you to configure the printer and to select the choices or values for printing menu items.

Choosing Your Interface

The **LaserJet series II** printer will operate with a wide variety of computers. It is important to determine whether you will be using a parallel or serial interface and to use the appropriate configuration instructions.

When you purchased your **LaserJet series II** printer you should also have purchased a serial interface cable or a parallel interface cable. The **LaserJet series II** printer comes with interfaces for both of the above cables. Many computers, such as HP Vectra and the IBM PC also come with both serial and parallel connectors. Other computers, such as Apples, support only a serial interface.

Interface Connectors

The figure below shows the serial and parallel interface connectors. When configuring your computer and the printer, use the interface connector specified for your cable. For the parallel interface connect your cable using the clips on the printer's connector, and for the serial interface use the screws provided to attach your cable.



Note

Do not attach your cable at this time. Wait until the instructions in the configuration guide which pertain to your system describe the procedure for connecting your cable.

3

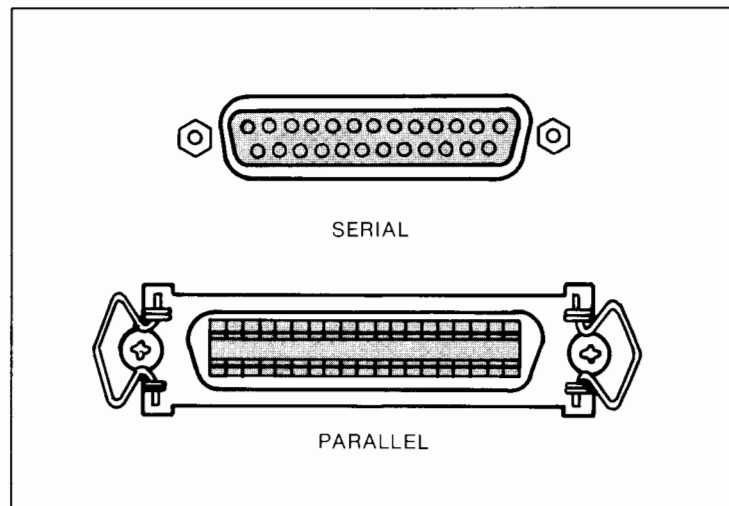


Figure 3-1. Serial and Parallel Connectors.

Configuration 3-3

Printer Configuration

Once you have determined whether you will be using a serial or parallel interface, you are ready to configure the printer from the control panel.

The control panel is explained in detail in Chapter 2 of the *LaserJet series II User's Manual*. The instructions here only explain the menu functions of the control panel and then walk you through the steps you need to do **before** using the configuration guides included at the end of this chapter.

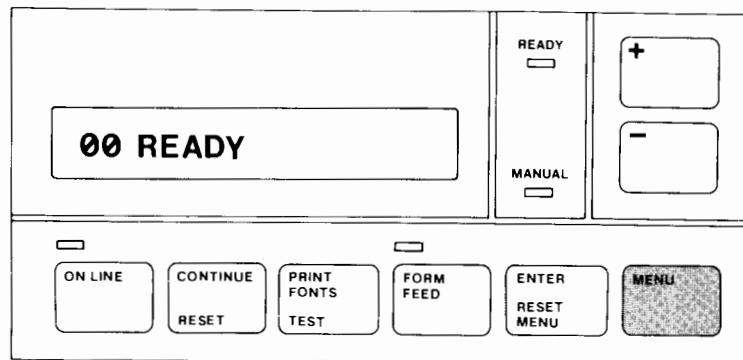
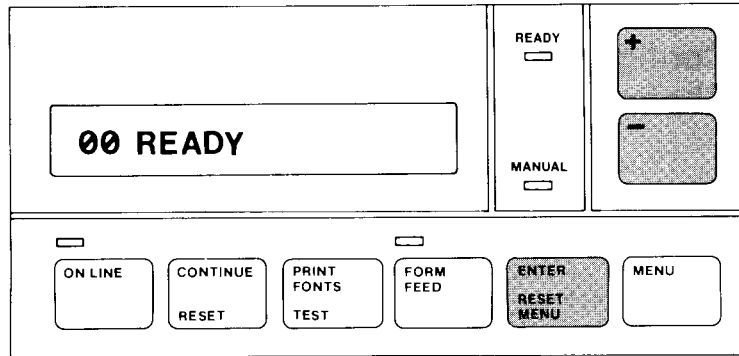


Figure 3-2. Control Panel.

Menu Key

The MENU key is used to enter the printing and configuration menus. Pressing the MENU key enters the printing menu that offers items that determine page printing characteristics. Holding the MENU key down for several seconds enters the configuration menu that offers items that are needed to configure the printer. The instructions in this section show you how to use the configuration menu.

The MENU key is used with the + and - keys and the ENTER key to configure the printer.



Plus and Minus Keys

These two keys take you through the possible values or choices for a configuration menu. For example, if the display window shows the **BAUD RATE = 9600** message, pressing the **+** key one time will change the message to **BAUD RATE=19200**. Pressing the **-** key one time will change the message back to **BAUD RATE = 9600**.

Holding down either of these keys will scan the choices for a menu item.

Enter Key

The **ENTER** key must be pressed once you have made your choice. Pressing this key tells the printer to save your selection. An ***** appears in the display to indicate the selection has been saved.

Configuration Menu Choices

This table shows control panel menu items used primarily during initial set-up and configuration of the printer and computer. Use this table for reference once you know how to use the configuration menu.

To reach this menu, you must hold down the MENU key for several seconds, until **SYM SET=ROMAN-8 *** appears.

The printer must be off-line to enter this menu.

Table 3-1. Printer Configuration Items.

Configuration Choices	Press	Printer Displays	Press	Printer Displays	Press	Press
Symbol Set	 Hold until... (about 5 seconds)	SYM SET=ROMAN-8*	 Or 	All Available Symbol Sets	 To Save a Selection (an * indicates selection is saved)	 To Exit Menu
Auto Continue		AUTO CONT=OFF*		[ON] or [OFF]		
Interface		I/O=SERIAL*		[SERIAL] or [PARALLEL]		Or 
For Serial Interface Only		BAUD RATE=9600*		[300] [600] [1200] [2400] [4800] [9600] [19200]		To Continue
		ROBUST XON=ON*		[ON] or [OFF]		
		DTR POLARITY=HI*		[HI] or [LO]		

Serial Interface Configuration

To configure a **LaserJet series II** printer to use a serial interface:

1. Turn the printer on.
2. Take the printer off-line by pressing the  key.
3. Hold down the  key several seconds until **SYM SET=ROMAN-8 *** is displayed. (If a different symbol set is displayed and you want to select Roman-8, press the  or  key until **SYM SET=ROMAN-8** is displayed. Press the  key to save the selection. An * will appear in the display.)
4. Press the  key to display **AUTO CONT=OFF ***.
5. Press the  key again until **I/O=SERIAL *** is displayed. (If **I/O=PARALLEL *** is displayed, press the  key to change the display to **I/O=SERIAL** and press the  key to save the selection. An * will appear in the display.)
6. Press the  key to show **BAUD RATE=9600 ***. (Press the  or  key if the baud rate needs to be changed from 9600 to match the computer's baud rate. Press the  key to save the selection. An * will appear in the display.)
7. Press the  key to show **ROBUST XON=ON ***. (If **ROBUST XON=OFF *** appears, use the  key to show **ROBUST XON=ON** and press the  key to save the selection. An * will appear in the display. Most computers run using the ON setting.)
8. Press the  key to show **DTR POLARITY=HI ***. (If **DTR POLARITY=LO *** appears, use the  key to show **DTR POLARITY=HI** and press the  key to save the selection. An * will appear in the display. Most computers run using the HI setting.)
9. Put the printer back on-line by pressing the  key.

Parallel Interface Configuration

To configure the **LaserJet series II** printer to use a parallel interface:

1. Turn the printer on.
2. Take the printer off-line by pressing the  key.
3. Hold down the  key several seconds until **Sym SET=ROMAN-8 *** is displayed.
4. Press the  key to display **AUTO CONT=OFF ***.
5. Press again to display **I/O= SERIAL ***. (If **I/O= PARALLEL *** appears, go to the last step.)
6. Press the  key to select **I/O= PARALLEL**.
7. Press the  key to save the selection. An * will appear in the display.
8. Put the printer back on-line by pressing the  key.

Configuration Guides

Once you have selected an interface using the control panel, use the configuration guide for your personal computer included in this section. The configuration guides in this chapter each provides all the information you need to connect the printer to your personal computer. Follow the instructions which pertain to your personal computer. If you do not find a guide for your computer, consult the generic configuration guide included at the end of this section.

Each of the configuration guides in this chapter contains a printing exercise to verify that your computer and the printer are communicating properly. If the printer will not print using this exercise, refer to the “In Case of Difficulty” information included in each guide.



Note

a. If you are configuring a computer other than one of those included in this section, contact your HP Sales Office or authorized dealer to see if there is a configuration guide available for your system.

b. If you wish to use a switchbox to connect multiple computers to a single **LaserJet series II** printer, Hewlett-Packard makes the following recommendations:

Electronic switchboxes are recommended because they do not cause damage to the printer's interface.

Mechanical switchboxes are not recommended. The mechanical switching action can cause voltage and current disturbance on the communication lines which may cause damage to the printer's interface. If you still wish to use a mechanical switchbox, please do the following to minimize the risk of damage to the printer:

1. Check with your switchbox vendor to ensure that the communication lines are protected from voltage and current transients.
2. Turn the printer OFF before rotating the switch or disconnecting system cables.

Configuring Your HP LaserJet series II Printer with the HP Vectra Personal Computer

Introduction

This instruction sheet will explain how to set up your HP Vectra Personal Computer to communicate with the HP LaserJet series II printer. Before you begin, check the following list under either "Typical Serial Configuration" or "Typical Parallel Configuration" to be sure you have all the necessary components.

Typical Serial Configuration

Computer system:	HP Vectra Personal Computer HP 24540A Serial/Parallel Interface or HP 24541A Dual RS-232C/422 Interface
Printer equipment:	HP LaserJet series II printer M-to F Special RS-232C Cable (HP 24542G) - (25 pin to 9 pin)

Typical Parallel Configuration

Computer system:	HP Vectra Personal Computer HP 24540A Serial/Parallel Interface
Printer equipment:	HP LaserJet series II printer M-to M Parallel (Centronics) Cable (HP 24542D) - (36 pin to 25 pin)

Connection Instructions - Serial Interface

Follow these steps to connect the HP LaserJet series II printer to your HP Vectra Personal Computer.

1. Turn off the computer system and the LaserJet series II printer.
2. Install the Serial/Parallel interface accessory card in your HP Vectra PC (refer to the manual *Setting Up Vectra* supplied with your computer).
3. Connect your HP LaserJet series II printer to the HP Vectra PC using the male-to-female special RS-232C cable. Connect the 9-pin female end of the cable to the 9-pin male connector on the serial/parallel interface card of your HP Vectra PC. Connect the 25-pin male end of the cable to the 25-pin female connector of the printer. We recommend the HP 24542G cable. Instructions for wiring your own cable are found on the last page of this Vectra guide.

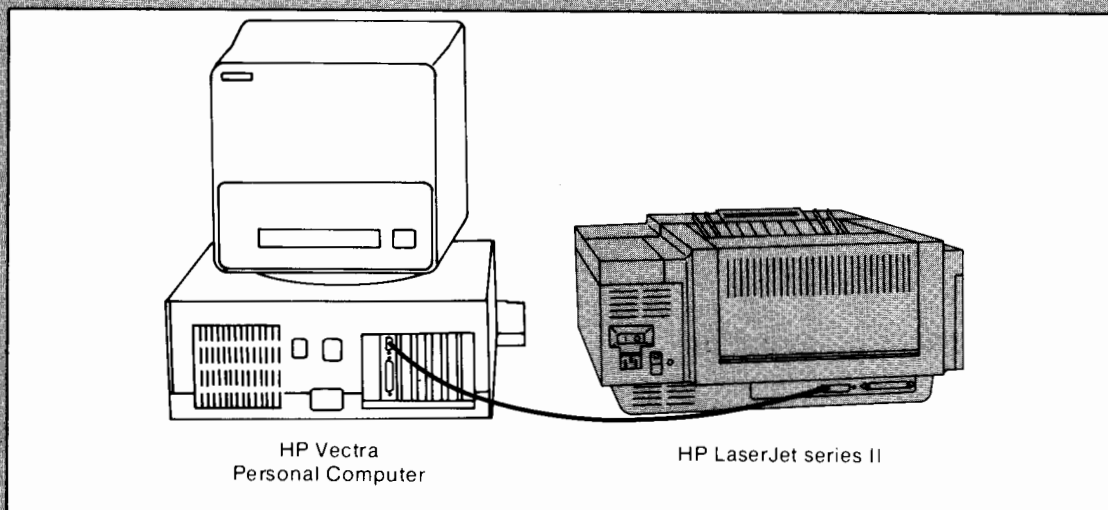


Figure 3-3. Serial Connection of the HP Vectra to the Printer

Follow these steps to enable your system to automatically configure itself to print on the LaserJet series II printer when you boot MS-DOS.

NOTE: The steps below assume you are using COM1. If you are using COM2 instead, replace COM1 with COM2 in the following steps.

1. Power up the printer and the computer and load a work copy of the MS-DOS disc.

NOTE: The disc write-protect should be off.

2. Select the MS-DOS commands and press ENTER.
3. Do you already have an AUTOEXEC.BAT file on your DOS disc? You can verify this by typing a DIR command at the DOS prompt and pressing the ENTER key. Look for this file on the list which is displayed.

If an AUTOEXEC.BAT file is not on your MS-DOS disc, proceed to step 4.

- If the AUTOEXEC.BAT file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 8. Type:

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

NOTE: Consult the manual, *Connecting Peripherals to Vectra*, for further information (Appendix B: AUTOEXEC File)

- To create an AUTOEXEC.BAT file, follow steps 4 through 8:

4. Type COPY CON:AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1:9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key. The system will respond with "1 File(s) copied".
8. Press the CTRL, ALT, and DEL keys simultaneously to reboot DOS (to reload the operating system).

NOTE: The command "MODE COM1:9600,N,8,1,P" sets the first serial port (COM1) for 9600 baud, 8 data bits, 1 stop bit and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).

Connection Instructions - Parallel Interface

Follow these steps to connect the **HP LaserJet series II** printer to your **HP Vectra Personal Computer**.

1. Make sure you have configured the printer for parallel interface use according to the directions at the beginning of this chapter.
2. Turn off the computer system and the **LaserJet series II** printer.
3. Install the Serial/Parallel interface accessory card in your HP Vectra PC (refer to the manual *Setting Up Vectra* supplied with the HP Vectra PC).
4. Connect your **HP LaserJet series II** printer to the HP Vectra PC using the male-to-male parallel cable. Connect the 25-pin parallel connector to the Serial/Parallel interface card of your HP Vectra PC. Connect the 36-pin male end of the cable to the parallel interface connector on the printer. We recommend the HP 24542D or 92219K cable, or wire your cable connectors as follows: Instructions for wiring your own cable are found on the last page of this Vectra guide.

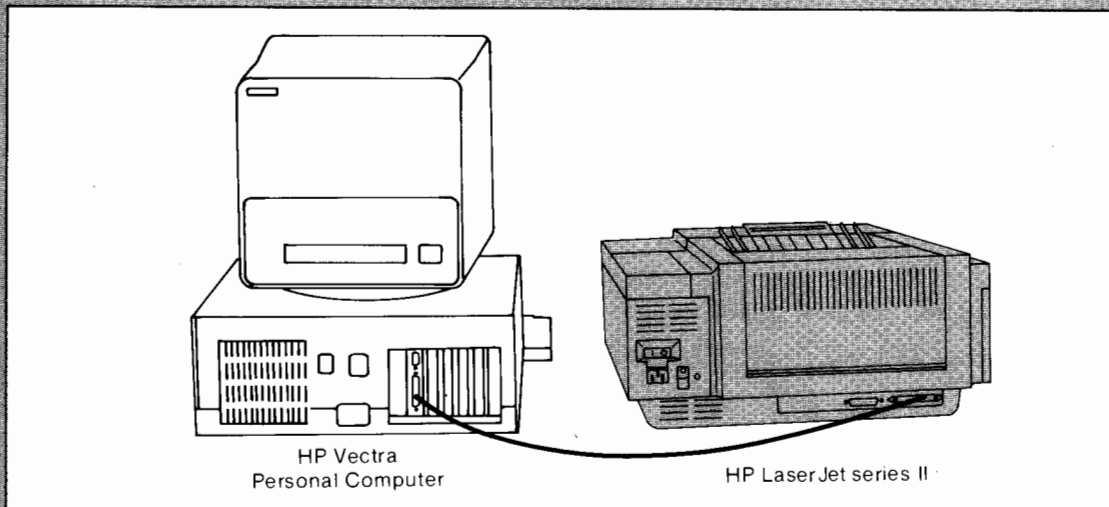


Figure 3-4. Parallel Connection of HP Vectra to the Printer

5. Power on your printer and computer and load a work copy of your HP Vectra DOS disc. The HP Vectra PC sends output to the parallel port (LPT1:) by default; therefore no further configuration is necessary.

Communication Verification - Using MS-DOS

To verify your configuration, power on the **HP LaserJet series II** printer and set on-line. Next, type in the following test program. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt **>**, type:

```
COPY CON: LJTEST      [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z    simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied"

Next, at the MS-DOS prompt **>**, type:

```
PRINT LJTEST      [RETURN]
```

The computer will prompt:

Name of list device [prn:]

Press:

RETURN to accept the PRN:designator.

The **HP LaserJet series II** printer will print:

LaserJet series II Communication OK!

If you have followed these steps carefully, your **HP Vectra** computer and the **HP LaserJet series II** printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the asynchronous communications adapter seated properly?
- ☐ Is the RS-232C interface cable seated properly? - **for serial interface**
- ☐ Is the Parallel Centronics cable seated properly? - **for parallel interface**
- ☐ Is the printer on-line?
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Is the printer working properly? (Check by running a test print.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel? -**for serial interface**
- ☐ Is the baud rate set the same for both the printer and the computer? - **for serial interface**
- ☐ Have you configured the printer for the Parallel interface using the Control Panel? -**for parallel interface**
- ☐ Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? -**for serial interface**

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for both serial and parallel cables. Please be advised however, that it is difficult to build a parallel cable and some communication loss may be experienced.

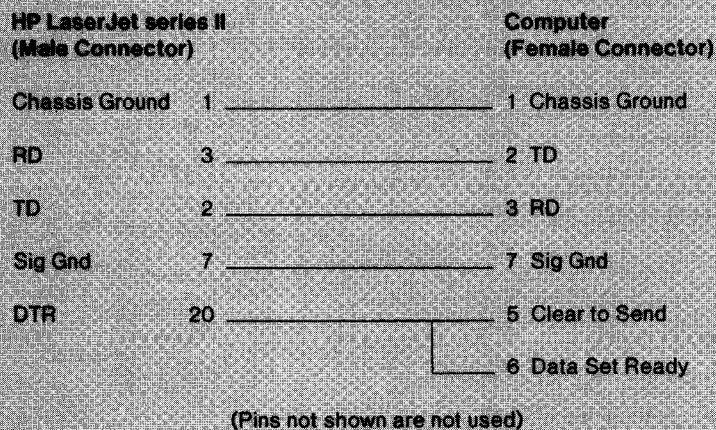


Figure 3-5. Pin Assignments for a Serial Cable



**HP Vectra PC
(25-Pin Male)**

**HP LaserJet
series II
(36-Pin Male)**

Pin 1	Strobe	Pin 1
Pin 2	Data 0	Pin 2
Pin 3	Data 1	Pin 3
Pin 4	Data 2	Pin 4
Pin 5	Data 3	Pin 5
Pin 6	Data 4	Pin 6
Pin 7	Data 5	Pin 7
Pin 8	Data 6	Pin 8
Pin 9	Data 7	Pin 9
Pin 10	ACK	Pin 10
Pin 11	BUSY	Pin 11
Pin 12	PE	Pin 12
Pin 13	SLCT IN	Pin 13
Pin 14	AUTO FO	Pin 14
Pin 15	ERRO A	Pin 32
Pin 16	INIT	Pin 31
Pin 17	SLCT	Pin 36
Pin 18	GND	Pin 19-30

Figure 3-6. Pin Assignments for a Parallel Cable

Configuring Your HP LaserJet series II Printer with the IBM PC/AT

Introduction

This configuration guide will explain how to set up your IBM Personal Computer AT to communicate with the **HP LaserJet series II** printer. It is divided into two sections: Serial Interface instructions and Parallel (centronics) Interface Instructions. Before you begin, check the following list to be sure you have all the necessary components.

Typical Serial Configuration

Computer system:	IBM PC/AT Serial communications interface
Printer equipment:	HP LaserJet series II printer M-to-F special RS-232C cable (HP 24542G)

Typical Parallel Configuration

Computer System:	IBM PC/AT Parallel communications interface
Printer Equipment:	HP LaserJet series II printer M-to-M parallel (Centronics) cable (HP 24542D)

Connection Instructions - Serial Interface

Follow these steps to connect your HP LaserJet series II printer to the IBM PC/AT.

1. Turn off the computer system and the LaserJet series II printer.
2. To install your interface, see your I/O accessory card documentation which provides graphics and complete installation instructions.
3. Connect your LaserJet series II printer to the IBM PC/AT using the male-to- female special RS-232C cable. Connect the 9-pin female end of the cable to the 9-pin male connector on the serial/parallel interface card of your IBM PC/AT. Connect the 25-pin male end of the cable to the 25-pin female connector of the printer.

We recommend the HP 24542G RS-232C cable. Instructions for wiring your own cable are found on the last page of this IBM PC/AT guide.

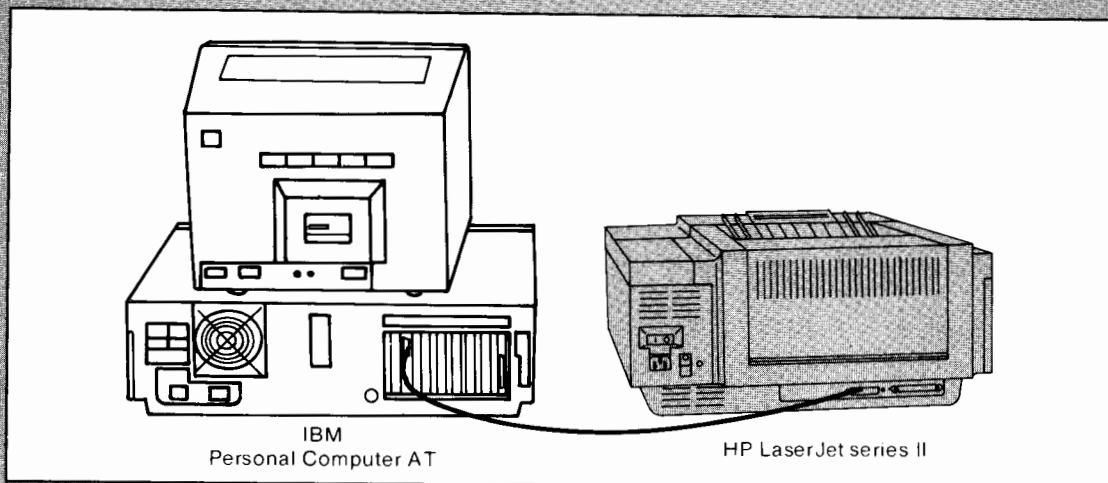


Figure 3-7. Serial Connection of IBM PC/AT to the Printer

Follow these steps to enable your system to automatically configure itself to print on the LaserJet series II printer when you boot MS-DOS.

NOTE: The steps below assume you are using COM1. If you are using COM2 instead, replace COM1 with COM2 in steps 3, 5 and 6.

1. Power up the printer and the computer and load a work copy of the MS-DOS disc.

NOTE: The disc write-protect should be off.

2. Select the MS-DOS commands and press ENTER. The MS-DOS prompt > will be displayed on the screen. (You may need to enter the current date and time before the prompt is displayed.)
3. Do you already have an AUTOEXEC.BAT file on your MS-DOS disc? You can verify this by typing a DIR command and pressing the ENTER key. Look for this file on the list which is displayed. (If not on your MS-DOS disc, proceed to step 4.) If the file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 8.

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

NOTE: Consult the IBM, DOS manual (in the "Batch Commands" section under AUTOEXEC.BAT).

4. Type COPY CON: AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1: 9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key. The system will respond with "1 File(s) copied"
8. Press the CTRL, ALT, and DEL keys simultaneously to reboot MS-DOS.

NOTE: The command "MODE COM1:9600,N,8,P" sets the first serial port (COM1) for 9600 baud, 8 data bit, one stop bit and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).

Connection Instructions - Parallel Interface

Follow these steps to connect your IBM PC/AT to the **LaserJet series II** printer.

1. Make sure you have configured the printer for parallel interface use according to the directions at the beginning of this chapter.
2. Turn off your computer system and the **LaserJet series II** printer.
3. Connect your **LaserJet series II** printer to the IBM PC/AT using the male to male parallel cable. Connect the 25-pin male end of the cable to the 25-pin Parallel interface card of your IBM PC/AT. Connect the 36-pin male end of the cable to the parallel connector on the printer. We recommend the HP 24542D or HP 92219K cable. Instructions for wiring your own cable are found on the last page of this IBM PC/AT guide.

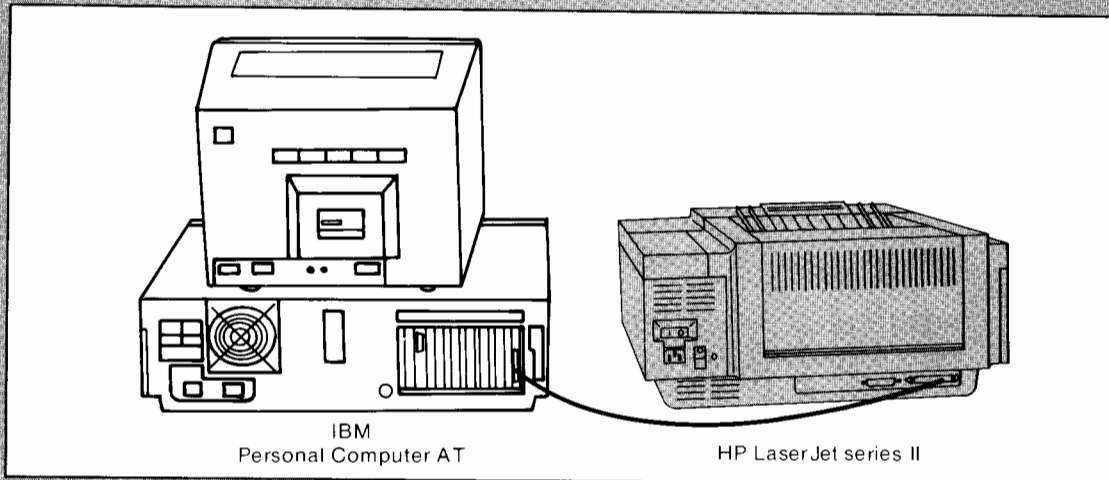


Figure 3-8. Parallel Connection of IBM PC/AT to the Printer

4. Power on your printer and the computer and load a work copy of your DOS disc. The IBM PC/AT sends output to the parallel port (LPT1) by default. Therefore, no further configuration is necessary.

Communication Verification - Using MS-DOS

To verify your configuration, power on the **HP LaserJet series II** printer and set on-line. Next, type in the following test program. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt **>**, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied"

Next, at the MS-DOS prompt **>**, type:

```
PRINT LJTEST          [RETURN]
```

The computer will prompt:

Name of list device [prn:]:

Press:

RETURN to accept the PRN:designator.

The **HP LaserJet series II** printer will print:

LaserJet series II Communication OK!

If you have followed these steps carefully, your **IBM PC/AT** and the **HP LaserJet series II** printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the asynchronous communications adapter seated properly?
- ☐ Is the RS-232C interface cable seated properly? - for serial interface
- ☐ Is the Parallel Centronics cable seated properly? - for parallel interface
- ☐ Is the printer on-line?
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Is the printer working properly? (Check by running a test print.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel? -for serial interface
- ☐ Is the baud rate set the same for both the printer and the computer? - for serial interface
- ☐ Have you configured the printer for the Parallel interface using the Control Panel? -for parallel interface
- ☐ Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? -for serial interface

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for both serial and parallel cables. Please be advised however, that it is difficult to build a parallel cable and some communication loss may be experienced.

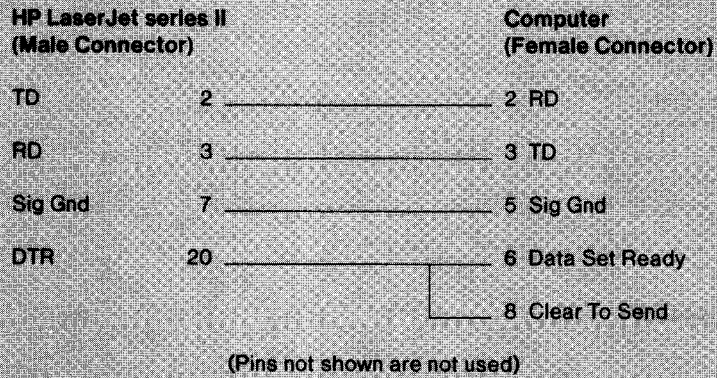


Figure 3-9. Pin Assignments for a Serial Cable

Signal Name	LaserJet series II Pin #	IBM Port Pin #
nSTROBE	1	1
DATA 1	2	2
DATA 2	3	3
DATA 3	4	4
DATA 4	5	5
DATA 5	6	6
DATA 6	7	7
DATA 7	8	8
DATA 8	9	9
nACKNLG	10	10
BUSY	11	11
CALL (PE)	12	12
SELECT	13	13
LOGIC GND	14	14
nFAULT	32	15
O VDC (GND)	19 THRU 30	18 THRU 25

Figure 3-10. Pin Assignments for a Parallel Cable

Configuring Your HP LaserJet series II Printer with the IBM PC or IBM PC/XT

Introduction

This configuration guide will explain how to set up your IBM Personal Computer or PC/XT to communicate with the HP LaserJet series II printer. It is divided into two sections: Serial Interface Instructions and Parallel (Centronics) Interface Instructions. Before you begin, check the following list to be sure you have all the necessary components.

Typical Serial Configuration

Computer system:	IBM Personal Computer or IBM PC/XT Serial communications interface
Printer equipment:	HP LaserJet series II printer M-to F special RS-232C cable (HP 17255D) - (25 pin to 25 pin)

Typical Parallel Configuration

Computer System:	IBM Personal Computer or IBM PC/XT Parallel communications interface
Printer Equipment:	HP LaserJet series II printer M-to-M parallel (Centronics) cable (HP 24542D) - (36 pin to 25 pin)

Connection Instructions - Serial Interface

Turn off the computer and the LaserJet series II printer.

Follow these steps to connect your IBM PC or IBM PC/XT to the LaserJet series II printer.

1. Turn off the computer system and your LaserJet series II printer.
2. To install your serial communications interface see your I/O accessory card documentation which provides graphics and complete installation instructions.
3. Connect your HP LaserJet series II to the computer using the male-to-female RS-232C cable. We recommend the HP 17255D or HP 92219J interface cables. Instructions for wiring your own cable are found on the last page of this IBM PC and PC/XT guide.

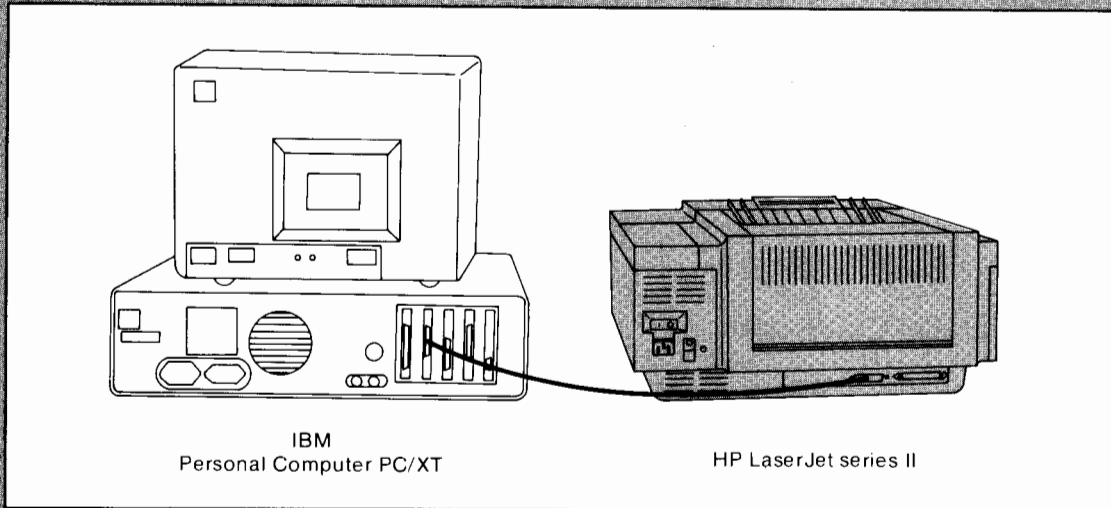


Figure 3-11. Serial Connection of IBM PC or IBM PC/XT to the Printer

Follow these steps to let your system automatically configure itself to print on the LaserJet series II printer when you boot MS-DOS.

NOTE: The steps below assume you are using the COM 1 with your printer. If you are using COM 2 instead, replace COM1 with COM2 in steps 3, 5 and 6.

1. Power up the printer and computer and load a back-up copy of the MS-DOS disc.

NOTE: The disc write-protect should be off.

2. The MS-DOS prompt > will be displayed on the screen. (You may need to enter the current date and time before the prompt is displayed.)
3. Do you already have an AUTOEXEC.BAT file on your MS-DOS disc? You can verify this by typing a DIR command and pressing the ENTER key. Look for this file on the list which is displayed.
 - a. If the AUTOEXEC.BAT file is not on your MS-DOS disc, proceed to step 4.
 - b. If the file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 9.

MODE COM1: 9600,N,8,1,P

MODE LPT1:=COM1

NOTE: Consult the IBM DOS manual (in the "Batch Commands" section under AUTOEXEC.BAT) if you need more information.

4. Type COPY CON:AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1: 9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key.
8. The system will respond with "1 File(s) copied".
9. Press the CTRL, ALT, and DEL keys simultaneously to reboot MS-DOS and execute the mode commands.

NOTE: The command "MODE COM1:9600,N,8,1,P" sets the first serial port (COM1) for 9600 baud, 8 data bits, 1 stop bit and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).



Connection Instructions - Parallel Interface

Follow these steps to connect your IBM PC or PC/XT Computer to the LaserJet series II printer.

1. Make sure you have configured the printer for parallel interface use according to the directions at the beginning of this chapter.
2. Turn off the computer and the LaserJet series II printer.
3. Connect your LaserJet series II printer to the IBM PC or PC/XT computer using the male-to-male parallel cable. Connect the 25-pin male end of the cable to the 25-pin Parallel interface card of your IBM PC or PC/XT computer. Connect the 36-pin male end of the cable to the parallel connector on the printer. We recommend the HP 24542D or HP 92219K cable. Instructions for wiring your own cable are found on the last page of this IBM PC, PC/XT guide.

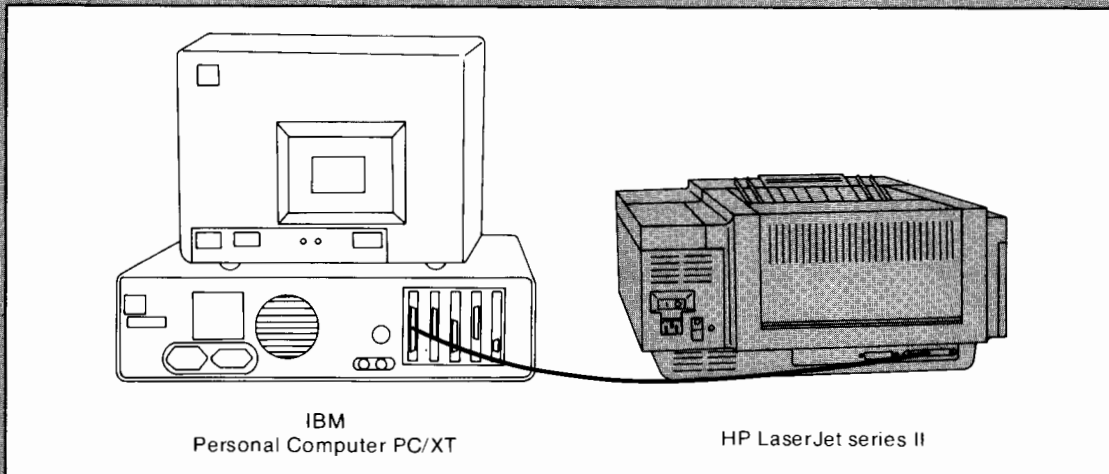


Figure 3-12. Parallel Connection of IBM PC or IBM PC/XT to the Printer

4. Power on your computer and load a work copy of your DOS disc. The IBM PC or PC/XT sends output to the parallel port by default. Therefore, no further configuration is necessary.

Communication Verification - Using MS-DOS

To verify your configuration, power on the **HP LaserJet series II** printer and set on-line. Next, type in the following test program. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt >, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied".

Next, at the MS-DOS prompt >, type:

```
PRINT LJTEST              [RETURN]
```

The computer will prompt:

Name of list device [prn:]:

Press:

RETURN to accept the PRN:designator.

The **HP LaserJet series II** printer will print:

LaserJet series II Communication OK!

If you have followed these steps carefully, your IBM PC or PC/XT Computer and the **HP LaserJet series II** printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the asynchronous communications adapter seated properly?
- ☐ Is the RS-232C interface cable seated properly? - for serial interface
- ☐ Is the Parallel Centronics cable seated properly? - for parallel interface
- ☐ Is the printer on-line?
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Is the printer working properly? (Check by running a test print.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel? -for serial interface
- ☐ Is the baud rate set the same for both the printer and the computer? - for serial interface
- ☐ Have you configured the printer for the Parallel interface using the Control Panel? -for parallel interface
- ☐ Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? -for serial interface

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for both serial and parallel cables. Please be advised however, that it is difficult to build a parallel cable and some communication loss may be experienced.

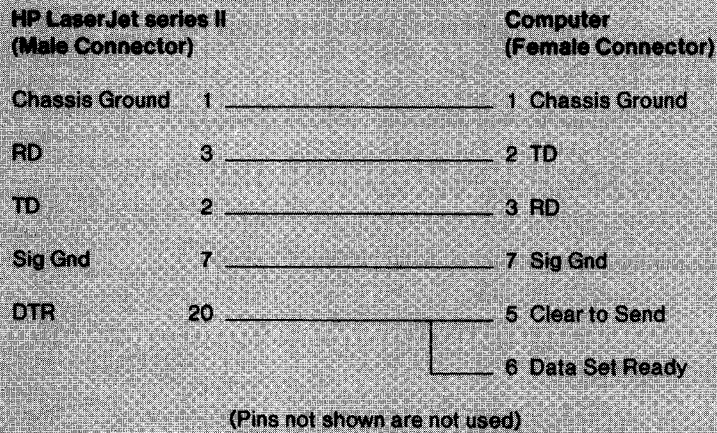


Figure 3-13. Pin Assignments for a Serial Cable



Signal Name	LaserJet series II Pin #	IBM Port Pin #
nSTROBE	1	1
DATA 1	2	2
DATA 2	3	3
DATA 3	4	4
DATA 4	5	5
DATA 5	6	6
DATA 6	7	7
DATA 7	8	8
DATA 8	9	9
nACKNLG	10	10
BUSY	11	11
CALL (PE)	12	12
SELECT	13	13
LOGIC GND	14	14
nFAULT	32	15
0 VDC (GND)	19 THRU 30	18 THRU 25

Figure 3-14. Pin Assignments for a Parallel Cable

Configuring Your HP LaserJet series II Printer with the HP 150 Touchscreen Personal Computer

Introduction

This configuration guide will explain how to set up your HP 150 Touchscreen Personal Computer to communicate with the HP LaserJet series II printer. It is divided into two sections: Serial Interface Instructions and Parallel (Centronics) Interface Instructions. Before you begin, check the "Typical Configuration" list of the appropriate section to ensure you have all the necessary components.

Typical Serial Configuration

Computer system:	HP 150 Touchscreen Personal Computer Serial communications interface
Printer equipment:	HP LaserJet series II printer M-to-M special RS-232C cable (part-number HP 13242G)

Typical Parallel Configuration

Computer System:	HP 150 Touchscreen Personal Computer HP 45643A Extended Input/Output accessory card
Printer Equipment:	HP LaserJet series II printer M-to-F Centronics (parallel) cable (36-pin to 25-pin) (HP 13242D)

*Check with your software supplier for specific hardware and memory requirements for your system.

Connection Instructions - Serial Interface

Power off both the computer and your LaserJet series II printer.

Connect your HP LaserJet series II printer to the HP 150 using the male-to-male special RS-232C cable connected from one of the DATACOMM ports of your HP 150 to the RS-232C interface connector on the printer.

NOTE: This configuration assumes the use of DATACOMM Port 2.

We recommend the HP 13242G or HP 92219H cables. Instructions for wiring your own cable are found on the last page of this HP 150 guide.

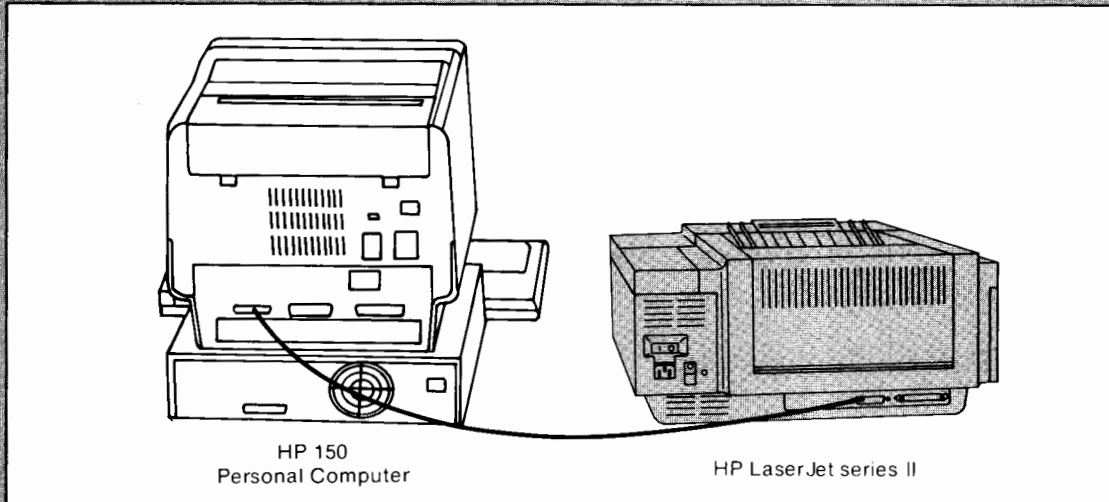


Figure 3-15. Serial Connection of HP 150 PC to the Printer

Once you have the RS-232C cable connected, the following steps will configure your HP 150 to print on the HP LaserJet series II printer.

1. Power up the LaserJet series II printer and the HP 150 Touchscreen Personal Computer.
2. Access the P.A.M. menu. (If you do not know how to access the P.A.M. menu, consult your HP 150 *Owner's Guide*.)
3. Once the P.A.M. menu is displayed, press **TERMINAL** on the display or function key f6 on the keyboard. A new set of function keys will be displayed at the bottom of the display. Make sure that there is an asterisk (*) by **REMOTE MODE** on the display; if not, press **REMOTE MODE** on the display and an asterisk (*) will appear.
4. Press the **USER/SYSTEM** key on the keyboard. A new set of function keys will be displayed at the bottom of the screen.
5. Press function key f1 (**DEVICE CONTROL**). The **DEVICE CONTROL** function keys will be displayed.
6. Press function key f3 ("**TO** **DEVICES**"). The "**TO** **DEVICES**" function keys will be displayed.
7. Ensure that the **SERIAL DEVICE** function key (f2) has an associated asterisk (*). If not, press function key f2 and an asterisk (*) will appear.
8. If your HP 150 has an internal printer, be sure that the **INTERNAL PRINTER** (function key f3) does not have an associated asterisk (*). If it does, press function key f3 to remove the asterisk.
9. Press the **USER/SYSTEM** key on the keyboard. A new set of function keys will be displayed at the bottom of the screen.
10. Press function key f8 (**CONFIG KEYS**) to display the configuration function keys.
11. Press function key f5 (**TERMINAL CONFIG**) to enter the Terminal Configuration Menu.
12. Ensure that the printer Code4 field is set to **Ext**. If it is not, select **Ext** by moving the cursor to the **PrinterCode4** field (using the **TAB** key) and pressing the **NEXT CHOICE** key (f2) until **Ext** appears in the **PrinterCode4** field. Press **SAVE CONFIG**(f1) to save the new configuration.

13. Press function key f8 and then f1 to display the GLOBAL CONFIGURATION menu.
14. Check to be sure that the REMOTE/SERIAL DEV field is set to PORT1/PORT2. If not, tab over to the field and press f2 (NEXT CHOICE) and PORT1/PORT2 will be displayed in the REMOTE/SERIAL DEV field.
15. Press SAVE CONFIG (f1) on the display on the keyboard.
16. Press CONFIG KEYS (f8) and then PORT2 CONFIG (f4) to display the FULL DUPLEX HARDWIRED Port 2 Menu.

NOTE: If you reach the FULL DUPLEX MODEM Menu instead, press f6 and then f2 to reach the FULL DUPLEX HARDWIRED Port 2 Menu.)

17. Set the FULL DUPLEX HARDWIRED Port 2 Menu to the values shown below. (Move from one field to the next using the TAB key and use the NEXT CHOICE key (f2) to change the field values to the ones shown below.)
18. Press SAVE CONFIG (f1). The menu will be cleared from the screen and a new set of function keys will be displayed at the bottom.
19. Access the P.A.M. menu by holding down the SHIFT key and then pressing the STOP key (on the HP 150 keyboard).
20. Press DEVICE CONFIG and the START APPLIC on the HP 150 display. The Main MS-DOS Configuration Menu will be displayed.
21. Set the PRN: INTERFACE field to Port 2 using the NEXT CHOICE key (f3).
22. Press the TAB key once and set the field under MODEL to LaserJet series II (or OTHER) using the NEXT CHOICE key (f3).
23. Press SAVE CONFIG (f4).
24. Press EXIT CONFIG (f8). This will display the P.A.M. Menu and you will be ready to print.

Connection Instructions - Parallel Interface

1. Make sure you have configured the printer for parallel interface usage according to the instructions at the beginning of this chapter.
2. Turn off the computer system and your **LaserJet series II** printer.
3. Remove the cover plate on the rear panel of your HP 150 from the accessory slot where you want to install the Extended I/O Accessory Card (HP 45643A). The accessory card may be installed in any available slot.
4. To install your interface, see your I/O Accessory Card documentation for thorough installation information and illustrations.
5. Connect your **LaserJet series II** printer to the computer using the male to male Centronics (parallel) cable connected from the parallel port of the Extended I/O Accessory Card on the HP 150 to the parallel interface connector on the printer. We recommend the HP 13242D cable. Instructions for wiring your own cable are found on the last page of this HP 150 guide.

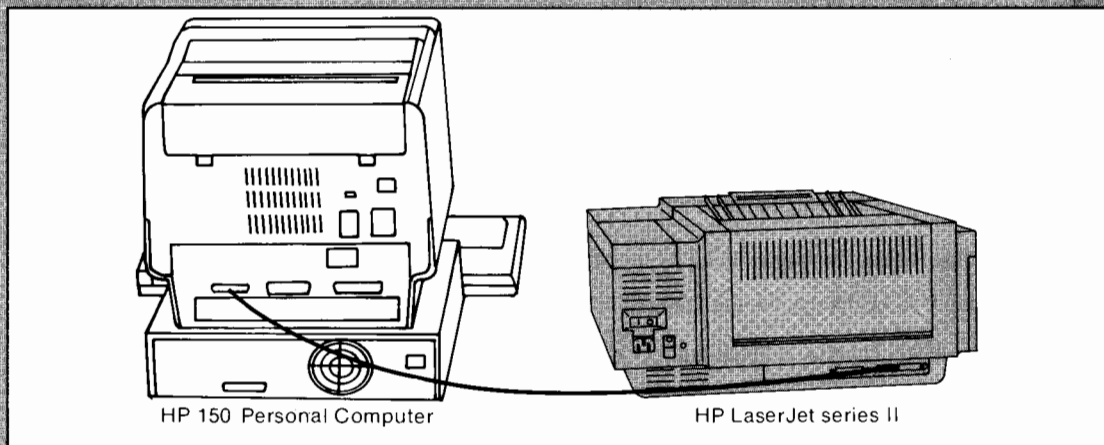


Figure 3-16. Parallel Connection of the HP 150 PC to the Printer

Once you have the parallel cable connected, the following steps will configure your HP 150 to print on the **LaserJet series II** printer:

1. If you are using an HP 150 with dual Floppy Disc Drives, place your working System Master disc in drive A and your Extended I/O disc in drive B.
2. If you are using an HP 150 with a Hard Disc Drive place your Extended I/O into drive B.
3. Turn ON the power to the **LaserJet series II** printer and the computer.
4. From the P.A.M. Menu, select **MS-DOS COMMANDS** and then **START APPLIC** (f1 key).

From the prompt >, type VER then press the RETURN key.

A message will now be displayed showing the version of the Operating System you are currently running. If the message says MS-DOS Version 2.01, follow the instructions in the next section, MS-DOS Configuration for Version 2.01.

If the message says MS-DOS Version 2.11, skip the next section and follow the instructions under MS-DOS Configuration for Version 2.11

MS-DOS Configuration for Version 2.01.

1. Type EXIT. Then press the RETURN key. This will return you to P.A.M.
2. From the P.A.M. Menu, select EXTEND I/O. Then START APPLIC. (f1 key).
3. Type A. Then press the RETURN key. This identifies the drive containing the working System Master as the target.
4. Press ADD PARALLEL (f3 key). This adds the parallel printer software to your working System Master. The Extended I/O Accessory can provide support for either a parallel printer or an HP-IL printer, but not both at the same time. If the HP-IL software is currently on your working System Master, adding the Parallel software will automatically remove the HP-IL.
5. Press EXIT (f8 key). You are done configuring your system and will be returned to P.A.M.
6. Perform a hard reset using the instructions below.

MS-DOS Configuration for Version 2.11 Operating System (Version B):

1. From the P.A.M. Menu, select DEVICE CONFIG, then Start Applic. (f1 key).
2. Press the PRN:Interface Field and set it to Parallel using the Previous Choice or Next Choice keys.
3. Press the PRN:Model Field and set LaserJet series II using the Previous Choice or Next Choice keys.
4. Press Save Config and then Exit Config.
5. Perform a hard reset as described below.

Perform a hard reset by holding down the SHIFT and CTRL keys and pressing the RESET key. This will reload the system, parallel printer software included. Your parallel LaserJet series II is now the PRN printer in your system regardless of what appears in Device Config. For any other printer on the system to function it will need to be configured as the system LST device. To properly configure the LST device, run the Device Config Program on your System Master as explained in your HP 150 PC Owner's Guide.

Communication Verification:

1. From the P.A.M. Menu select MS-DOS COMMANDS then START APPLIC. (f1 key).
2. Once the prompt > appears, type DIR>PRN and then press the RETURN key. This will cause the directory of the disc in drive A to be printed on your LaserJet series II printer.

To print, flush the printer buffer:

- a. Press the ON LINE key to take the printer off-line.
 - b. Press the FORM FEED key.
 - c. Press the ON LINE key again.
3. Type EXIT then press the RETURN key. This will return you to P.A.M.



In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the asynchronous communications adapter seated properly?
- ☐ Is the RS-232C interface cable seated properly? - for serial interface
- ☐ Is the Parallel Centronics cable seated properly? - for parallel interface
- ☐ Is the printer on-line?
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Is the printer working properly? (Check by running a test print.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel? -for serial interface
- ☐ Is the baud rate set the same for both the printer and the computer? - for serial interface
- ☐ Have you configured the printer for the Parallel interface using the Control Panel? -for parallel interface

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for both serial and parallel cables. Please be advised however, that it is difficult to build a parallel cable and some communication loss may be experienced.

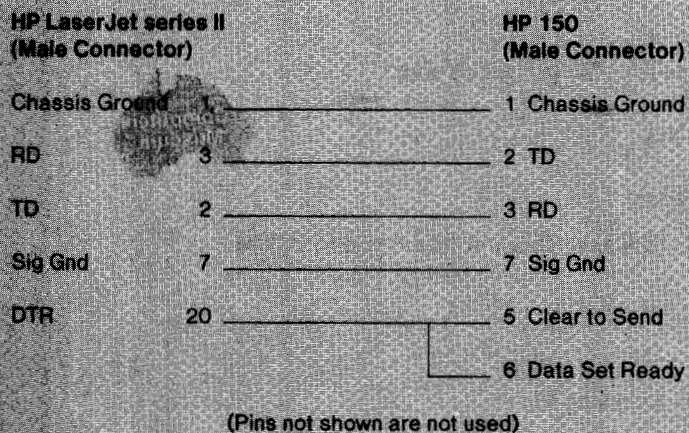
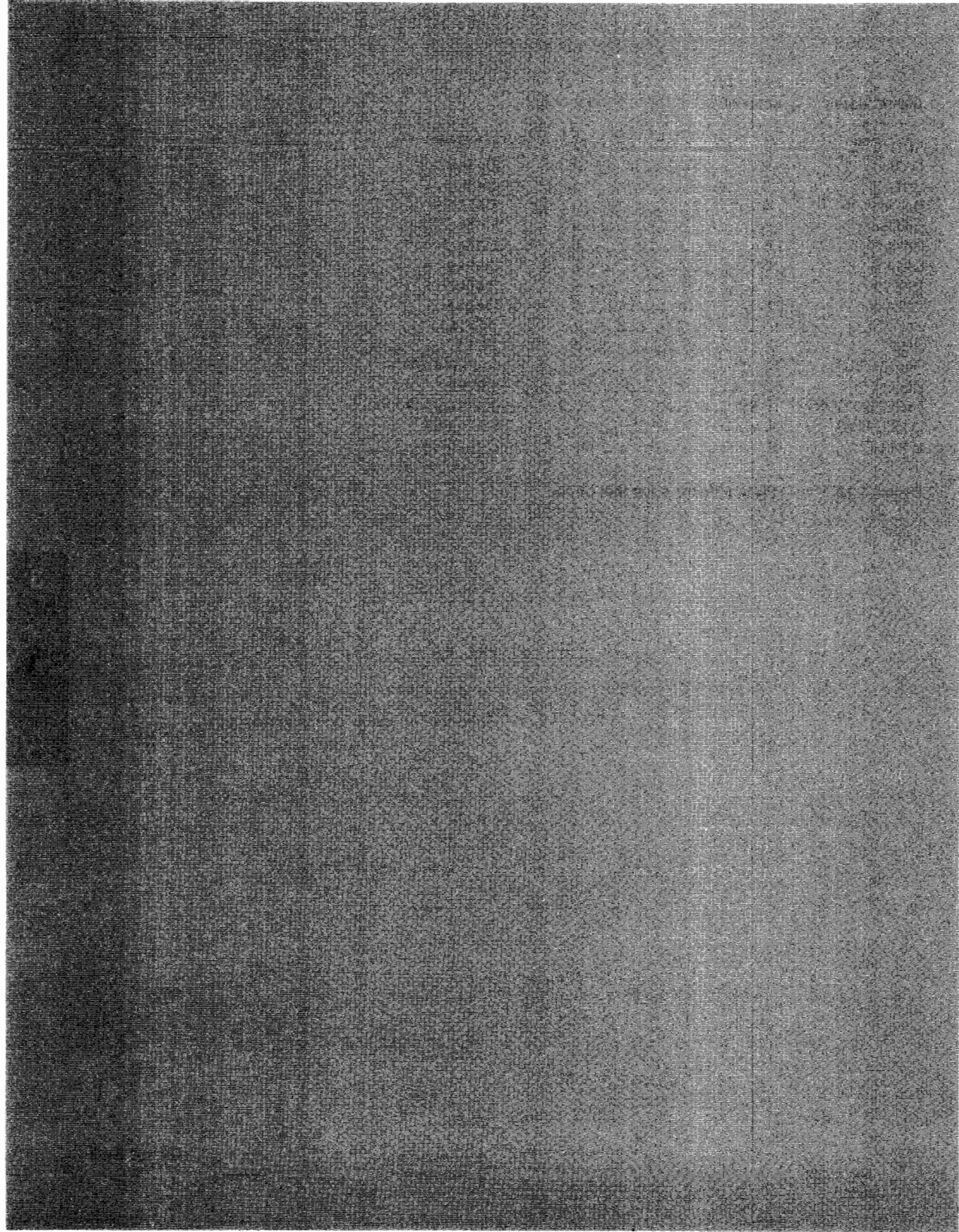


Figure 3-17. Pin Assignment for a Serial Cable

Signal Name	LaserJet series II	HP 150	
nSTROBE	1	13	STROBE
DATA 1	2	12	DATA 1
DATA 2	3	11	DATA 2
DATA 3	4	10	DATA 3
DATA 4	5	9	DATA 4
DATA 5	6	8	DATA 5
DATA 6	7	7	DATA 6
DATA 7	8	6	DATA 7
DATA 8	9	5	DATA 8
nACKNLG	10	4	ACKNLG
BUSY	11	3	BUSY
PAPER OUT	12	2	PAPER OUT
SELECT	13	1	SELECT
TWISTED GND	19-29	15-21	TWISTED GND
LOGIC GND	30	14	PRT-GND
nFAULT	32	24	ERROR

Figure 3-18. Pin Assignments for a Parallel Cable



Configuring Your HP LaserJet series II Printer with an Apple IIc Computer

Introduction

This instruction sheet will explain how to set up your Apple IIc Computer to communicate with the HP LaserJet series II printer. Before you begin, check the following list to be sure you have all the necessary components.

Typical Configuration

Computer system:	Apple IIc System Apple Super Serial Card (Apple A2B0044)
Printer equipment:	HP LaserJet series II printer Apple printer cable P/N A9C0308*

*When you order Apple P/N A9C0308, the cable you receive may be marked 590-0191-A. Don't let this concern you - the cable is correct!

Connection Instructions

Connect the round connector on the cable to the printer slot on Apple IIc keyboard and system unit, and the 25-pin connector into the LaserJet series II printer.

1. Turn off the computer system and the LaserJet series II printer.
2. Turn Apple IIc on.
3. Now power on LaserJet series II printer.
4. Load Pro-DOS into Apple IIc.
5. Go into Advanced Operations.
6. Select "Configure Serial Port."

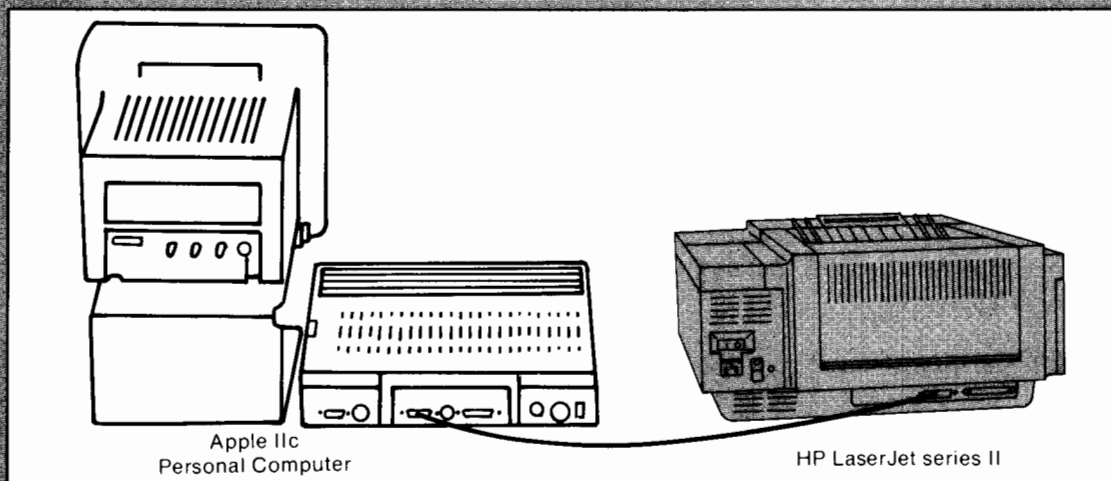


Figure 3-18. Serial Connection of an Apple IIc to the Printer

7. Now select "Edit Device List".
8. Select your device number (We selected #5).
9. Enter new device name as LaserJet series II. When it asks you if you know the PIN for your printer select "Yes."
10. Enter the new PIN # as 156/1124.
11. Set Port 1 to new printer name and PIN # 156/1124.
12. Save to disc.
13. If port 1 shows LaserJet series II (156/1124)*, Port 1 is properly configured for 9600 Baud, 8 data bits, no parity. You are also ready to exit system utilities.
14. To exit system utilities, press <Esc> twice, then select "Exit System Utilities" and press return. The computer will ask if you're sure you want to leave System Utilities. Select "yes" and press return. You are now in BASIC and ready to verify computer/printer communication.

Communication Verification

Follow these steps to make sure your computer and printer are communicating.

1. Power on the computer and then power on the HP LaserJet series II printer.
2. Set the printer ON LINE.
3. Type in the following Applesoft BASIC program.

This program simply verifies that the computer and the printer are communicating.

10 PR#1	
20 Print Chr\$(27); "E";	resets printer
30 Print "LASERJET SERIES II COMMUNICATION OK!"	
40 Print Chr\$(13);	carriage return
50 Print Chr\$(12);	form feed
60 PR#0	
70 End	

Finally, enter RUN on the computer to execute. The HP LaserJet series II printer will print "LaserJet series II Communication OK!"

If you have followed these steps carefully, your Apple IIc Computer and the HP LaserJet series II printer are communicating with each other.



In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the RS-232C interface cable seated properly?
- ☐ Is the RS-232C interface cable working properly on another system?
- ☐ Is the Apple Super Serial Card seated properly?
- ☐ Is the printer on-line?
- ☐ Is the printer working properly? (Run a self-test and test print.)
- ☐ Is the computer working properly? (Check by running an application you know works?)
- ☐ Is the baud rate set the same for both the printer and the computer?

Configuring Your HP LaserJet series II Printer with a Apple IIe Computer

Introduction

This configuration guide will explain how to set up your Apple IIe Computer to communicate with the LaserJet series II printer. Before you begin, check the following list to be sure you have all the necessary components.

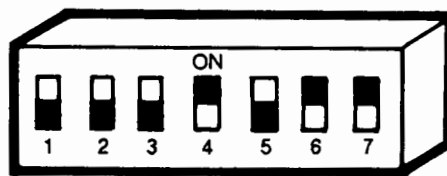
Typical Configuration

Computer system:	Apple IIe Computer Apple Super Serial Card (Apple A2B0044)
Printer equipment:	HP LaserJet series II printer Male-to-Male Standard RS-232C Cable (HP 17355M)

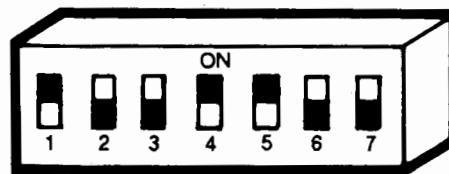
Connection Instructions

Follow these steps to install the Apple Super Serial Card in the Apple IIe system unit:

1. Turn off the LaserJet series II printer and the computer system.
2. Remove the cover from the system unit.
3. Prepare your Apple Super Serial Card for printer mode by correctly positioning the dip switches on SW1 and SW2 as follows (this will set the baud rate to 9600 and the data format to 1 stop bit):



SW1



SW2

Figure 3-20. Dip Switch Positions

Also position the jumper block such that the arrow is pointing to **TERMINAL**

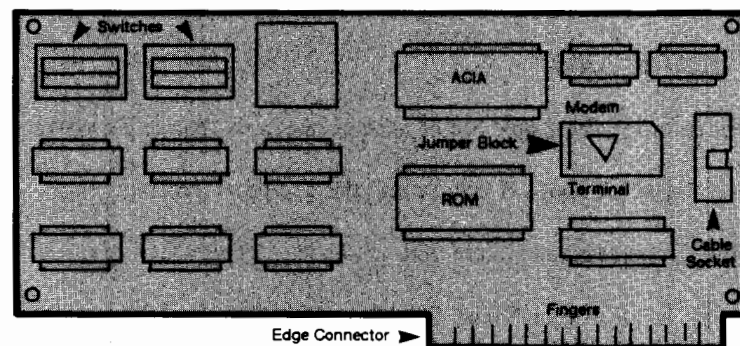


Figure 3-21 Jumper Block Positioning

NOTE: For explanation of switch settings and the jumper block, refer to the *Apple II Super Serial Card Installation and Operation Manual*.

4. Install the Apple Super Serial Card in card slot #2 of your Apple IIe Computer.
5. Replace the cover of the system unit.
6. Connect your LaserJet series II printer to the computer using the male-to-male standard RS-232C cable connected from the Apple Super Serial Card connector to the interface connector on the printer. We recommend the HP 17355M cable or wire your cable connectors as follows:

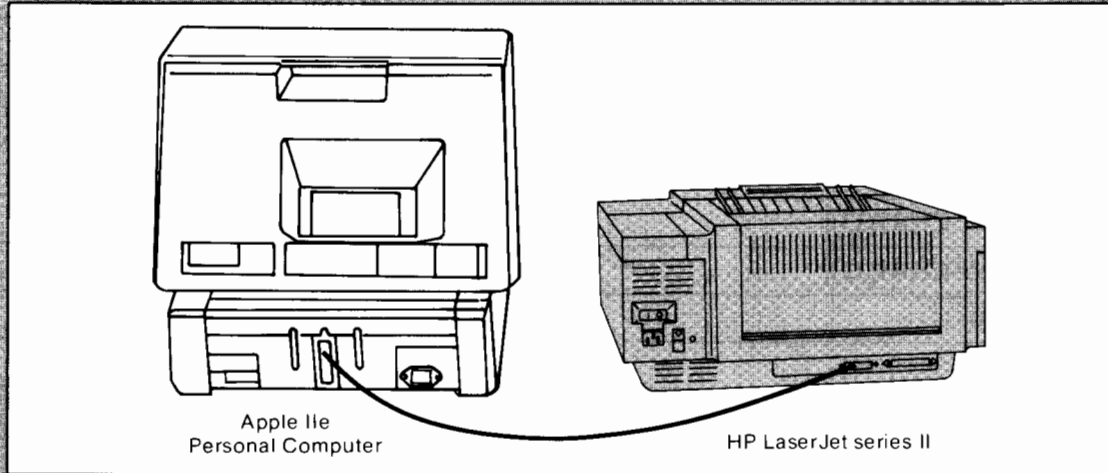


Figure 3-22. Serial Connection of the Apple IIe to the Printer

Communication Verification

To verify your configuration, perform the following steps:

1. Power on the computer and then power on the LaserJet series II printer.
2. Set the LaserJet series II printer on-line.
3. Next type in the following Applesoft BASIC program. This program simply verifies that the computer and the printer are communicating. (The "Cntl I" is performed by holding the "CNTL" key down and pressing the "I" simultaneously).

10 PR#2	
20 PRINT "cntl I1D";	sets apple ssc to "space" parity*
30 PRINT "cntl I7P";	sets data format to 7 bits,1 stop*
40 PRINT CHR\$(27);"E";	resets printer
50 PRINT "LASERJET SERIES II COMMUNICATION OK!"	
60 PRINT CHR\$(13);	carriage return
70 PRINT CHR\$(12);	form feed
80 PR#0	
90 END	

4. Finally, enter RUN on the computer and execute. The LaserJet series II printer will print "LASERJET SERIES II COMMUNICATION OK!"

If you have followed these steps carefully, your Apple IIe Computer and the LaserJet series II printer are communicating with each other.

*** NOTE:** The two print statements noted above reset the Apple Super Serial Card to 7 data bits, 1 stop bit and SPACE parity. You may want to configure your card at 7 data bits, 1 stop on SW2; however, the setting really only affects the stop bits. The parity set to SPACE parity is important as the default (no parity) actually sends a high (1) eighth bit causing printed output using the ROMAN-8 extended characters. The parity setting cannot be done by SW2 in printer mode. (Refer to the Apple II Super Serial Card Installation and Operating Manual). The consequences of configuring at 7 data bits, 1 stop bit and SPACE parity are that you will not have access to the ROMAN-8 extended characters. Also, graphics is not recommended.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the RS-232C interface cable seated properly?
- ☐ Is the RS-232C interface cable working properly on another system?
- ☐ Is the Apple Super Serial Card seated properly?
- ☐ Is the printer on-line?
- ☐ Is the printer working properly? (Check by running a test print.)
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Have you configured the printer for the Serial interface using the Operator Control Panel?
- ☐ Is the baud rate set the same for both the printer and the computer?

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for serial cables.

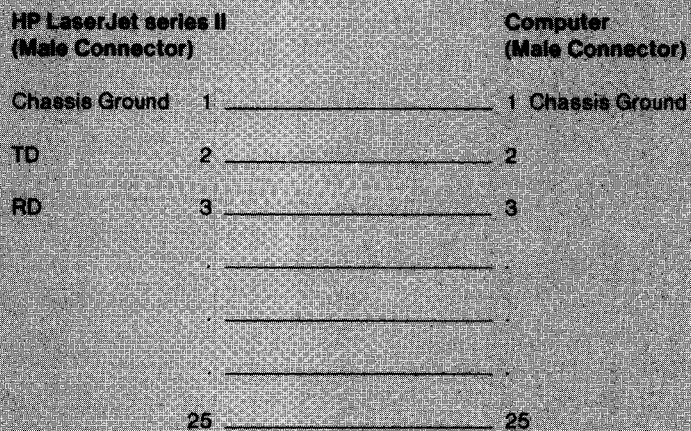
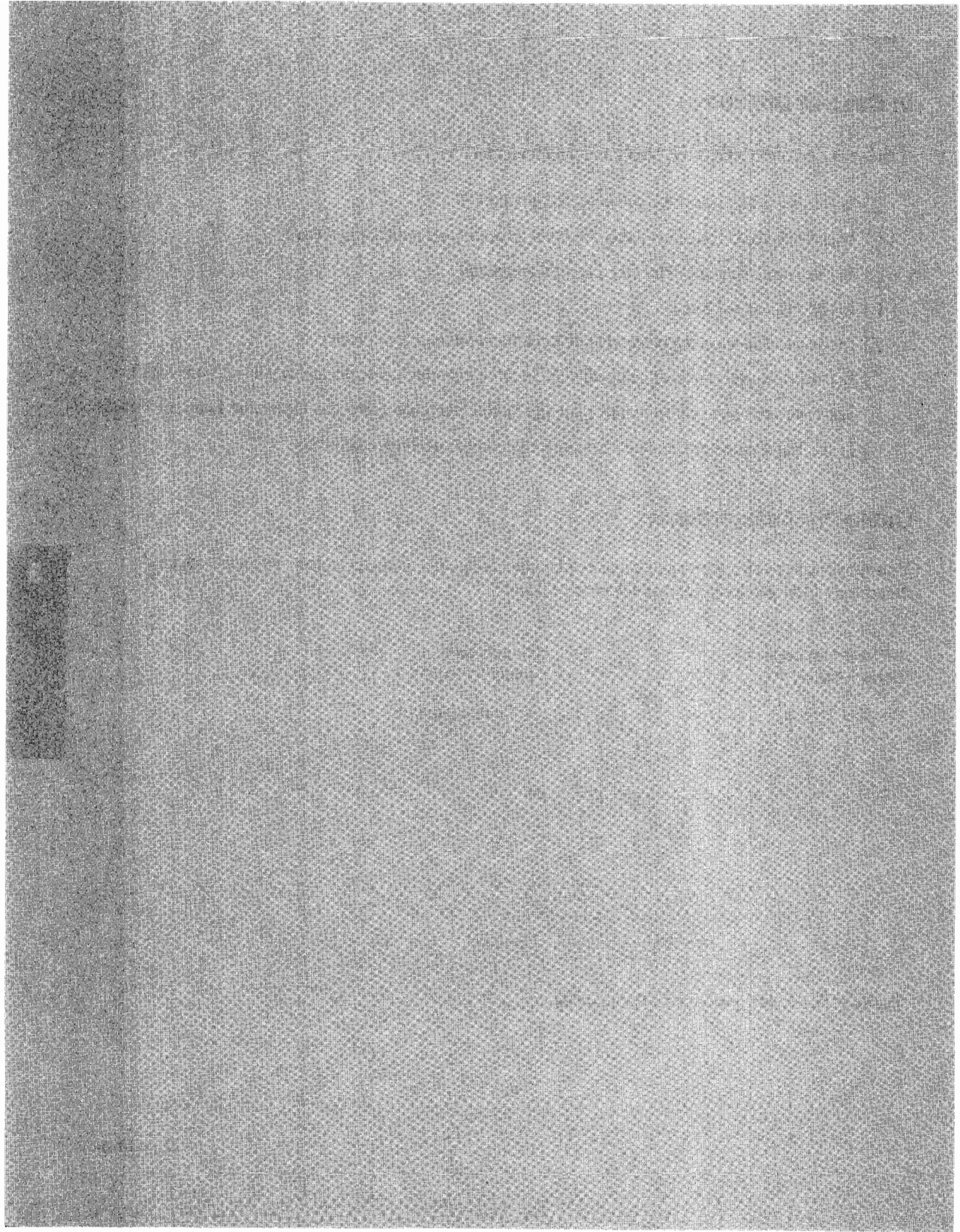


Figure 3-23. Pin Assignment for a Serial Cable



Configuring Your HP LaserJet series II Printer with an Apple /// Computer

Introduction

This configuration guide will explain how to set up your Apple /// Computer to communicate with the LaserJet series II printer. Before you begin, check the following list to be sure you have all the necessary components.

Typical Configuration

Computer system:	Apple /// System Serial communication interface
Printer equipment:	HP LaserJet series II printer Apple /// Modem Eliminator Cable (Apple A3M0019) Male-to-Male Standard RS-232C Cable

Connection Instructions

Follow these steps to install the LaserJet series II printer to the Apple /// computer.

1. Turn off the system unit and the LaserJet series II printer.
2. Connect your LaserJet series II printer to the Apple /// Computer using both the Apple Modem Eliminator Cable and the male-to-male RS-232C cable. Connect one end of the Apple Modem eliminator cable to the interface connector on the computer and the other end to one end of the RS-232C cable. The other end of the RS-232C cable should be connected to the RS-232 interface connector on the printer.

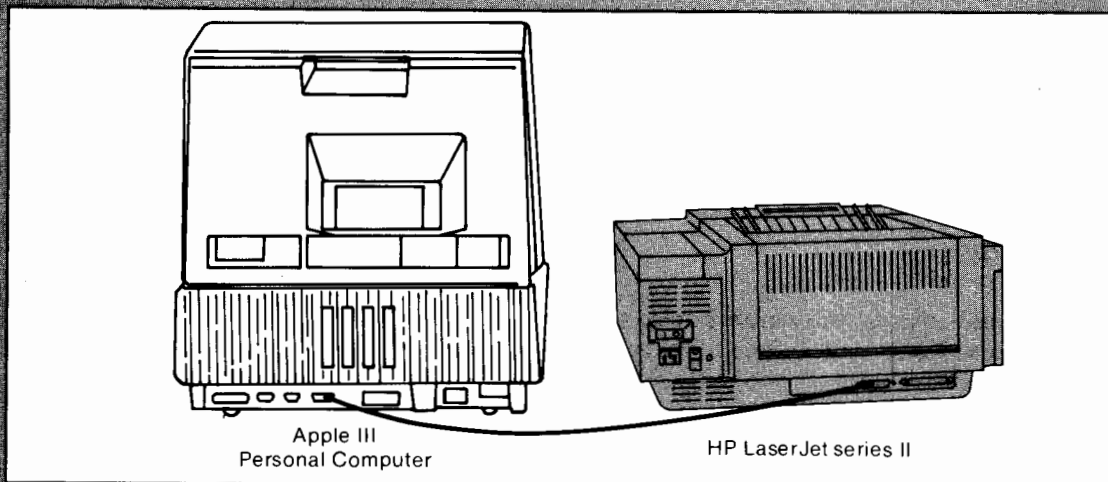


Figure 3-24. Serial Connection of an Apple /// to the Printer

Once you have the cable connections, the following steps will configure your Apple /// to print on the LaserJet series II printer.

1. Power on the LaserJet series II printer and your computer.
2. Using the Apple /// System Configuration Program, modify the RS-232C serial driver by setting the driver configuration block as follows (for more details, refer to the *Apple /// Standard Device Drivers Manual*):

Byte 0 1 2 3 4 5 6 7 8 9 A B

Value 0E 00 00 00 00 00 00 00 00 00 00 80

This sets the driver to 9600 baud, 8 data bits, no parity and hardware handshaking.

Communication Verification

To verify your configuration, power on the LaserJet series II and set on-line. Next, type in the following BASIC program. This program simply verifies that the computer and the printer are communicating.

10 OPEN #1, ".RS232"	opens the serial port
20 PRINT #1;CHR\$(27);"E";	this resets the printer
30 PRINT #1;"LASERJET SERIES II COMMUNICATION OK!"	
40 PRINT #1;CHR\$(13);	sends carriage return
50 PRINT #1;CHR\$(12);	sends form feed
60 CLOSE#1	closes the serial port
70 END	

Finally, enter **RUN** on the computer to execute. The LaserJet series II printer will print

"LaserJet series II Communication OK!"

Type **"SYSTEM"** and press return to exit BASIC.

If you have followed these steps carefully, your Apple /// Computer and the LaserJet series II printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the cabling seated properly?
- ☐ Is the printer on-line?
- ☐ Is printer working properly? (Check by running a test print.)
- ☐ Is the computer working properly? (Check by running an application you know works.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel?
- ☐ Is the baud rate set the same for both the printer and the computer?

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for serial cables.

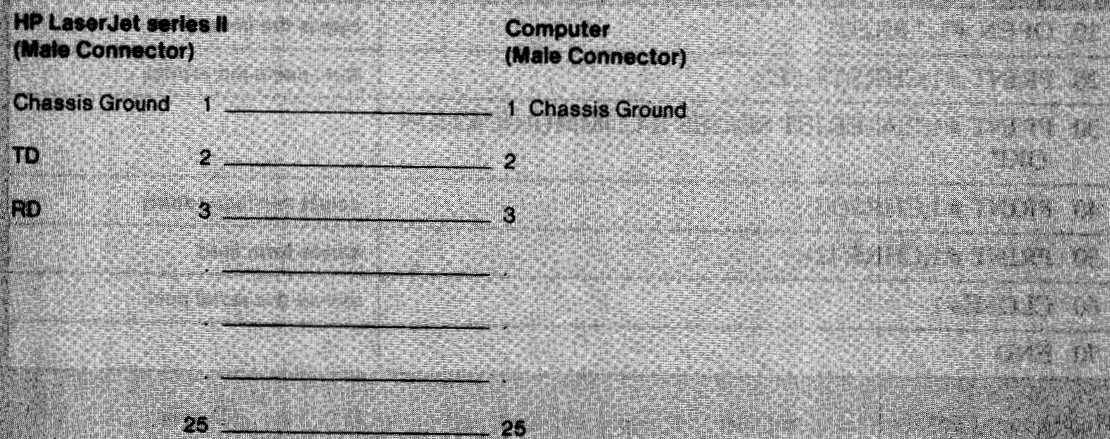


Figure 3-25. Pin Assignments for a Serial Cable

Configuring Your HP LaserJet series II Printer with a COMPAQ Portable Computer

Introduction

This instruction sheet will explain how to set up your COMPAQ Portable Computer to communicate with the LaserJet series II printer. Before you begin, check the following list to be sure you have all the necessary components.

Typical Serial Configuration

Computer system:	COMPAQ Portable Computer Serial Communication Interface
Printer equipment:	LaserJet series II printer M-to-F special RS-232C cable (HP 17255D)

Connection Instructions - Serial Interface

Follow these steps to connect the COMPAQ computer to the printer.

1. Turn off the LaserJet series II printer and your computer system.
2. To install your interface, see your I/O card documentation which provides graphics and complete installation instructions.
3. Connect your LaserJet series II printer to the computer using the male-to-female RS-232C cable. We recommend the HP 17255D or HP 92219J interface cables. Instructions for wiring your own cable are found on the last page of this COMPAQ Portable guide.

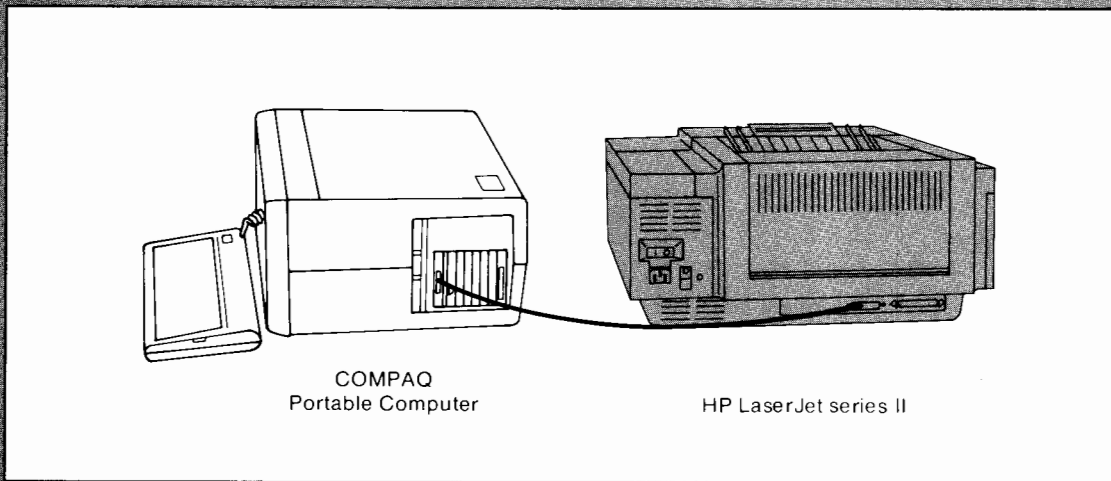


Figure 3-26. Serial Connection of the COMPAQ Portable to the Printer

Follow these steps to let your system automatically configure itself to print on the LaserJet series II printer when you boot up MS-DOS.

NOTE: The steps below assume you are using COM1. If you are using COM2 instead, replace COM1 with COM2 in steps 3, 5 and 6.

The disc write-protect should be off.

1. Power up the computer and the printer and load a work copy of the MS-DOS disc.
2. The MS-DOS prompt > will be displayed on the screen. (You may need to enter the current date and time before the prompt is displayed.)
3. Do you already have an AUTOEXEC.BAT file on your MS-DOS disc? You can verify this by typing a DIR command and pressing the ENTER key. Look for this file on the list which is displayed.

If the file is not on your MS-DOS disc, proceed to step 4.

If the file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 8.

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

NOTE: The command "MODE COM1:9600,N,8,1,P" sets the first serial port (COM1) for 9600 baud, 8 data bits, 1 stop bit and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).

Consult the COMPAQ DOS manual (in the "Batch Commands" section under AUTOEXEC.BAT) if you need more information.

4. Type COPY CON: AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1: 9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key.
8. The system will respond with "1 File(s) copied"
9. Press the CTRL, ALT and DEL keys simultaneously to reboot MS-DOS and to execute the two mode commands.



Communication Verification - Using MS-DOS

To verify your configuration, power on the LaserJet series II printer and set on-line. Next, type in the following test program. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt >, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied"

Next, at the MS-DOS prompt >, type:

```
PRINT LJTEST          [RETURN]
```

The computer will prompt:

```
Name of list device [prn:]:
```

Press:

```
RETURN to accept the PRN:designator.
```

The LaserJet series II printer will print:

```
LaserJet series II Communication OK!
```

If you have followed these steps carefully, your COMMPAQ Portable Computer and the LaserJet series II printer are communicating with each other.

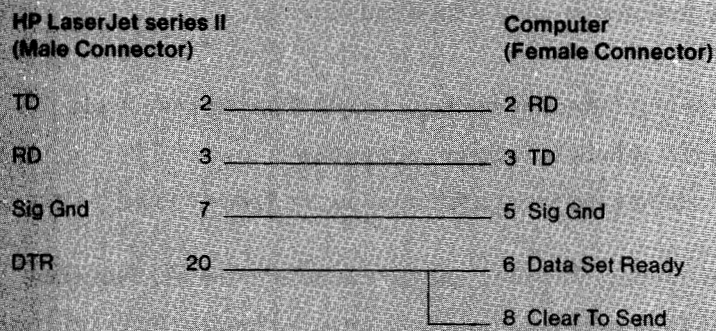
In Case of Difficulty

If there is no communication, check the following list:

- ☐ **Is the asynchronous communications adapter seated properly?**
- ☐ **Is the RS-232C interface cable seated properly? - for serial interface**
- ☐ **Is the printer on-line?**
- ☐ **Is the computer working properly? (Check by running an application you know works.)**
- ☐ **Is the printer working properly? (Check by running a test print.)**
- ☐ **Have you configured the printer for the Serial interface using the Control Panel? -for serial interface**
- ☐ **Is the baud rate set the same for both the printer and the computer? - for serial interface**
- ☐ **Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? -for serial interface**

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustration below we have provided a diagram of the pin assignments for a serial cable.



(Pins not shown are not used)

Figure 3-27. Pin Assignments for a Serial Cable

Configuring Your HP LaserJet series II Printer with a COMPAQ DeskPro Computer

Introduction

This instruction sheet will explain how to set up your COMPAQ DeskPro Computer to communicate with the LaserJet series II printer. It is divided into two sections: Serial (RS-232) Interface instructions and Parallel Centronics Interface Instructions. Before you begin, check the "typical configuration" list of the appropriate section to ensure you have all the necessary components.

Typical Serial Configuration

Computer system:	COMPAQ DeskPro Personal Computer Serial communication interface
Printer equipment:	HP LaserJet series II printer M-to-F special RS-232C cable (HP 17255D)

Typical Parallel Configuration

Computer System:	COMPAQ DeskPro computer with floppy/printer board P/N # 000045 Rev B Parallel communication interface
Printer Equipment:	HP LaserJet series II printer M-to-M Parallel (Centronics) cable (HP24542D)

Connection Instructions - Serial Interface

Turn off the LaserJet series II printer and your computer system.

Connect your LaserJet series II printer to the computer using the male-to-female RS-232C cable. We recommend the HP 17255D or 92219J interface cables. Instructions for wiring your own cable are found on the last page of this COMPAQ DeskPro guide.

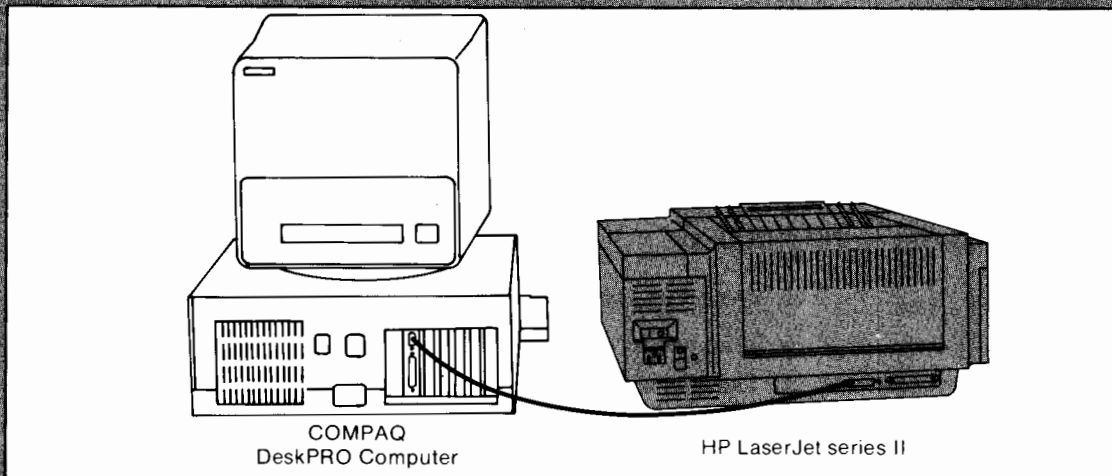


Figure 3-28. Serial Connection of COMPAQ DeskPro to the Printer

Follow these steps to enable your system to automatically configure itself to print on the LaserJet series II printer when you boot up MS-DOS.

NOTE: The steps below assume you are using COM1. If you are using COM2 instead, replace COM1 with COM2 in steps 3, 5 and 6.

The disc write-protect should be off your MS-DOS disc.

1. Power up the printer and the computer and load a backup copy of the MS-DOS disc.
2. The MS-DOS prompt > will be displayed on the screen. (You may need to enter the current date and time before the prompt is displayed.)

3. Do you already have an AUTOEXEC.BAT file on your MS-DOS disc? You can verify this by typing a DIR command and pressing the ENTER key. Look for this file on the list which is displayed.

If the file is not on your MS-DOS disc, proceed to step 4.

If the file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 9.

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

NOTE: The commands "MODE COM1:9600,N,8,1,P" sets the first serial port (COM1) for 9600 baud, 8 data bits, 1 stop and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).

Consult the COMPAQ DOS manual (in the "Batch Commands" section under AUTOEXEC.BAT) if you need more information.

4. Type COPY CON:AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1: 9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key.
8. The system will respond with "1 File(s) copied".
9. Press the CTRL, ALT and DEL keys simultaneously to reboot MS-DOS and to execute the two mode commands.

Connection Instructions - Parallel Interface

Follow these steps to connect your COMPAQ DeskPro Personal Computer to the LaserJet series II printer.

1. Make sure you have configured the printer for parallel interface use according to the directions at the beginning of this chapter.
2. Turn off the LaserJet series II printer and your computer system.
3. Connect your LaserJet series II printer to the COMPAQ DeskPro computer using the male to male Parallel cable. Connect the 25-pin male end of the cable to the 25-pin Parallel interface card of your COMPAQ DeskPro Computer. Connect the 36-pin male end of the cable to the parallel interface connector on the printer. We recommend the HP 24542D or HP 92219K cable. Instructions for wiring your own cable are found on the last page of this COMPAQ DeskPro guide.

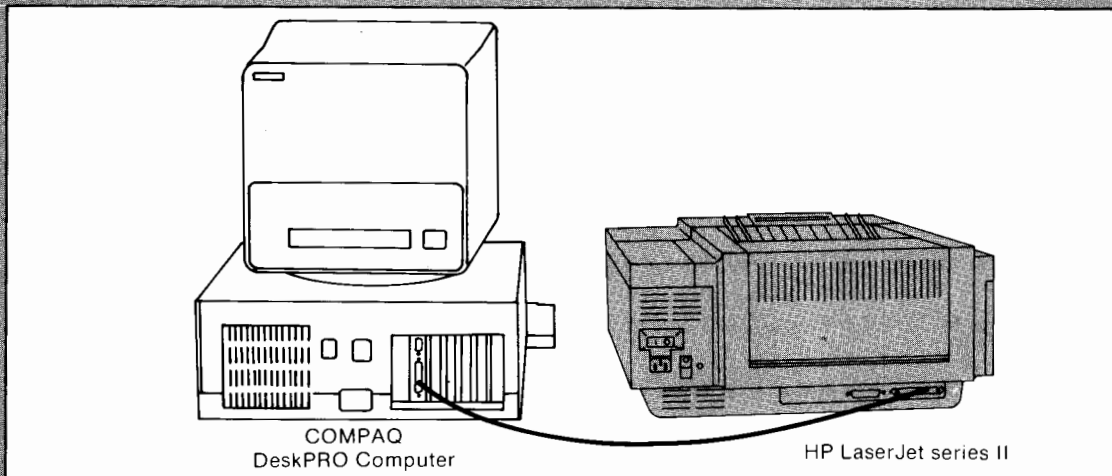


Figure 3-29. Parallel Connection of COMPAQ DeskPro to the Printer

4. Power on your LaserJet series II printer and the computer and load a work copy of your DOS disc. The COMPAQ DeskPro PC sends output to the parallel port by default. Therefore, no further configuration is necessary.

NOTE: The disc write-protect should be off.

Communication Verification - Using MS-DOS

To verify your configuration, power on the **LaserJet series II** printer and set on-line. Next, type in the following copy test program on your MS-DOS disc. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt >, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied"

Next, at the MS-DOS prompt >, type:

```
PRINT LJTEST              [RETURN]
```

The computer will prompt:

Name of list device [prn:]:

Press:

RETURN to accept the PRN:designator.



The **LaserJet series II** printer will print:

LaserJet series II Communication OK!

If you have followed these steps carefully, your **COMPAQ DeskPro** Computer and the **LaserJet series II** printer are communicating with each other.

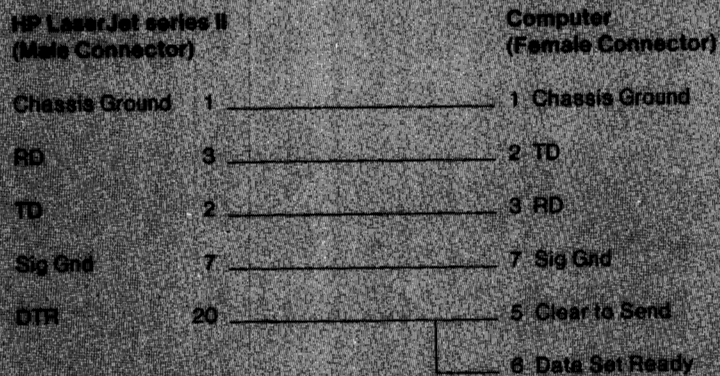
In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the asynchronous communications adapter seated properly?
- ☐ Is the Parallel Centronics cable seated properly? - for parallel interface
- ☐ Is the RS-232C interface cable seated properly? - for serial interface
- ☐ Is the printer on-line?
- ☐ Is the computer working properly? (Run an application you know works.)
- ☐ Is the printer working properly? (Run a test print.)
- ☐ Have you configured the printer for the Serial interface using the Control Panel? - for serial interface
- ☐ Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? - for serial interface
- ☐ Is the baud rate set the same for both the printer and the computer? - for serial interface
- ☐ Have you configured the printer for the Parallel interface using the Control Panel? - for parallel interface

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustrations below we have provided diagrams of the pin assignments for both serial and parallel cables. Please be advised however, that it is difficult to build a parallel cable and some communication loss may be experienced.



(Pins not shown are not used)

Figure 3-30. Pin Assignments for a Serial Cable

Signal Name	LaserJet series II Pin #	Port Pin #
nSTROBE	1 _____	1
DATA 1	2 _____	2
DATA 2	3 _____	3
DATA 3	4 _____	4
DATA 4	5 _____	5
DATA 5	6 _____	6
DATA 6	7 _____	7
DATA 7	8 _____	8
DATA 8	9 _____	9
nACKNLG	10 _____	10
BUSY	11 _____	11
CALL (PE)	12 _____	12
SELECT	13 _____	13
LOGIC GND	14 _____	14
nFAULT	32 _____	15
0 VDC (GND)	19 THRU 30 _____	18 THRU 25

Figure 3-31. Pin Assignments for a Parallel Cable

Configuring Your HP LaserJet series II printer with the A T & T PC 6300

Introduction

This instruction sheet will explain how to set up your A T & T PC 6300 to communicate with the LaserJet series II printer. Before you begin, check the following list to be sure you have all the necessary components.

Typical Serial Configuration

Computer system:	A T & T PC 6300
	Operating System: MS-DOS Version 2.11 Release 1.1
	Serial communications interface
Printer equipment:	HP LaserJet series II printer
	M-to F Special RS-232C Cable (HP 17255D)

Connection Instructions - Serial Interface

Turn off the LaserJet series II printer and your computer system.

Connect your LaserJet series II to the computer using the male-to-female RS-232C cable. We recommend the HP 17255D or 92219J interface cables. Instructions for wiring your own cable are found on the last page of this AT&T PC 6300 guide.

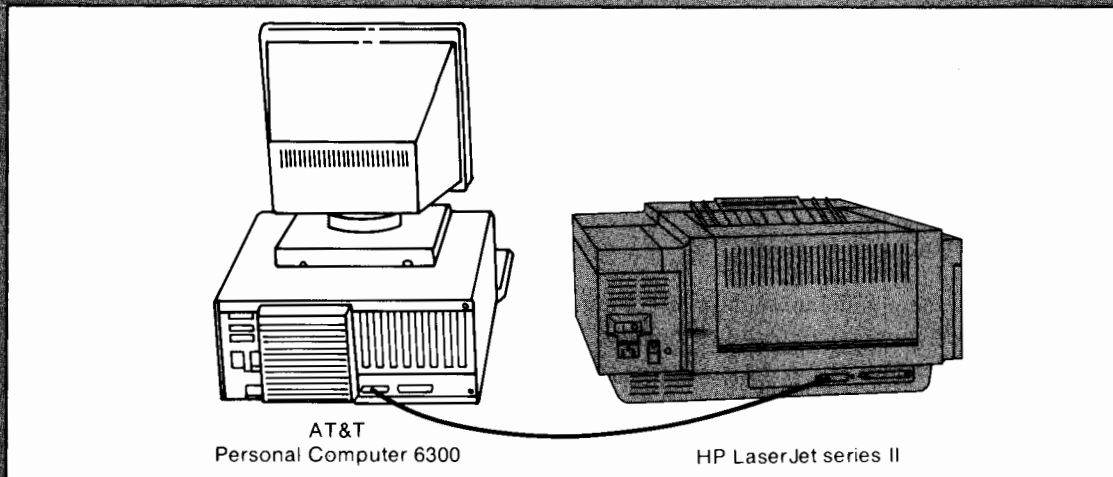


Figure 3-32. Serial Connection of the AT&T PC 6300 to the Printer

Follow these steps to enable your system to automatically configure itself to print on the LaserJet series II printer when you boot up MS-DOS Version 2.11 Release 1.1.

NOTE: The steps below assume you are using COM1. If you are using COM2 instead, replace COM1 with COM2 in steps 4, 6 and 7.

The disc write-protect should be removed from the MS-DOS disc.

1. Power up the LaserJet series II printer and your computer and load a work copy of the MS-DOS disc.
2. The MS-DOS prompt > will be displayed on the screen. (You may need to enter the current date and time before the prompt is displayed.)

3. Do you already have an AUTOEXEC.BAT file on your MS-DOS disc? You can verify this by typing a DIR command and pressing the ENTER key. Look for this file on the list which is displayed.

If not on your MS-DOS disc, proceed to step 4.

If the file exists, add the following two lines to the AUTOEXEC.BAT file on the MS-DOS disc and then proceed to step 9.

MODE COM1:9600,N,8,1,P

MODE LPT1:=COM1

NOTE: Consult the AT&T MS-DOS *User's Guide* (in the "Batch Processing Commands" section under AUTOEXEC.BAT)

4. Type COPY CON:AUTOEXEC.BAT and press the ENTER key.
5. Type MODE COM1:9600,N,8,1,P and press the ENTER key.
6. Type MODE LPT1:=COM1 and press the ENTER key.
7. Press the CTRL and Z keys simultaneously and then press the ENTER key.
8. The system will respond with "1 File(s) copied".
9. Press the CTRL, ALT, and DEL keys simultaneously to reboot MS-DOS and execute the two new mode commands.

NOTE: The command "MODE COM1:9600,N,8,1,P" sets the first serial port (COM1) for 9600 baud, 8 data bits, 1 stop bit and no parity.

The command "MODE LPT1:=COM1" re-routes the computer's output from the default first parallel port (LPT1) to the first serial port (COM1).

Communication Verification - Using MS-DOS

To verify your configuration, power on the LaserJet series II printer and set on-line. Next, type in the following test program. This program simply verifies that the computer and the printer are communicating.

At the MS-DOS prompt >, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied".

Next, at the MS-DOS prompt > type:

```
PRINT LJTEST              [RETURN]
```

The computer will prompt:

```
Name of list device [prn:]
```

Press:

```
RETURN to accept the PRN:designator.
```

The LaserJet series II printer will print:

```
LaserJet series II Communication OK!
```

If you have followed these steps carefully, your AT&T PC 6300 computer and the LaserJet series II printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ **Is the asynchronous communications adapter seated properly?**
- ☐ **Is the RS-232C interface cable seated properly? - for serial interface**
- ☐ **Is the printer on-line?**
- ☐ **Is the computer working properly? (Check by running an application you know works.)**
- ☐ **Is printer working properly? (Check by running a test print.)**
- ☐ **Have you configured the printer for the Serial interface using the Control Panel? -for serial interface**
- ☐ **Is the baud rate set the same for both the printer and the computer? - for serial interface**
- ☐ **Is there an AUTOEXEC.BAT file which contains commands to re-direct the output to a serial port? -for serial interface**

Cable Pin Assignments

You may wish to wire your own cable connector. In the illustration below we have provided a diagram of the pin assignments for a serial cable.

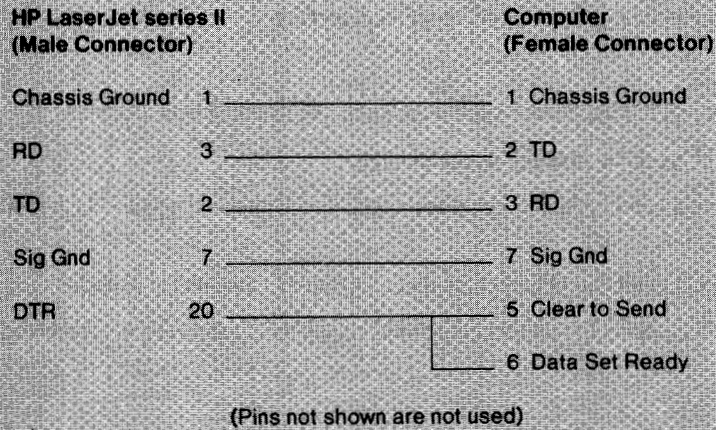


Figure 3-33. Pin Assignments for a Serial Cable

Generic Configuration Information for your HP LaserJet series II Printer

Introduction

The LaserJet series II printer can be connected to a wide variety of computers. The purpose of this guide is to explain the serial interface requirements of the LaserJet series II printer so that you can determine if your computer system will operate with the LaserJet series II printer.

Five factors are involved in configuring your computer and the LaserJet series II printer.

1. Serial Interface
2. Signal Protocol
3. Cabling
4. CPU Configuration
5. Testing



Serial Interface

The LaserJet series II printer can communicate through an RS-232C or an RS-422 serial interface. For most systems an RS-232C interface is recommended. If your system requires an RS-422 interface, you must use the pin assignments for RS-422 shown in Figure 3-35.

Signal Protocol

In serial configuration, how the printer and computer communicate is called signal protocol. For example, when the printer is out of paper or off-line, it uses signal protocol to tell the computer to stop sending data. The signal protocols supported by the **LaserJet series II** printer are X-ON/X-OFF and DTR. The **LaserJet series II** printer always sends both X-ON/X-OFF and DTR. The printer does not support Enquire/Acknowledge. If your computer only supports Enquire/Acknowledge protocol, it will not be able to communicate successfully with the **LaserJet series II** printer.

Cabling

The RS-232 interface connector on the **LaserJet series II** is a standard 25 pin female connector. This requires that the **LaserJet series II** end of the cable coming from the computer has a male connector.

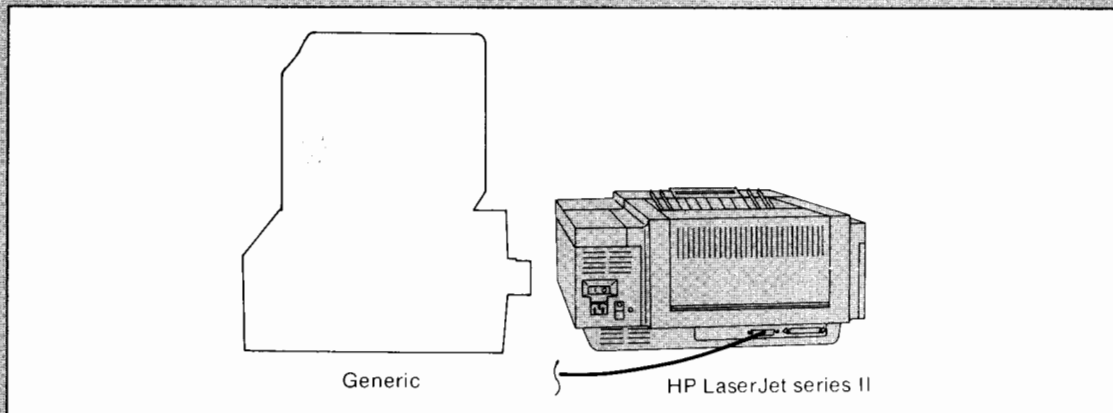


Figure 3-34 Serial Cable Connectors

Of the 25 pins in the connector, the **LaserJet series II** only utilizes the pin assignments listed on the next page in Figure 3-35. Obtain a compatible cable, taking into consideration the protocol to be used, and also the correct pin assignments for the **LaserJet series II** printer and the pin assignments needed for your computer's port.

Pin #	Description	RS-232C x-on/x-off	RS-232 DTR	RS-422
1	CG-Chassis Ground	x	x	x
2	TD-Transmit Data to the computer	x	x	x
3	RD-Receive Data from the computer	x	x	x
7	SG-Signal Ground	x	x	x
9	SDA-Send Data			x
10	SDB-Not Send Data			x
18	RDB-Not Received Data			x
20	DTR-Data Terminal Ready		x	x

Figure 3-35 Pin Assignments for a Serial Cable

NOTE: The pin defined as transmit data from the computer must go to receive data (Pin 3) on the LaserJet series II and the pin defined as receive data from the computer must go to transmit data (Pin 2) on the printer.

For example, if you were making a cable connection of an IBM PC or IBM PC compatible to the LaserJet series II printer, you would need to make sure that the wires were connected as shown below.

Signal Name	LaserJet series II Pin #	IBM Port Pin #
nSTROBE	1	1
DATA 1	2	2
DATA 2	3	3
DATA 3	4	4
DATA 4	5	5
DATA 5	6	6
DATA 6	7	7
DATA 7	8	8
DATA 8	9	9
nACKNLG	10	10
BUSY	11	11
CALL (PE)	12	12
SELECT	13	13
LOGIC GND	14	14
nFAULT	32	15
O VDC (GND)	19 THRU 30	16 THRU 25

Figure 3-36 Example of IBM compatible Pin Assignments

CPU Configuration

Once the correct cable is connected between the CPU and the printer, the computer's port must be configured for the **LaserJet series II** printer. The configuration should be set to the following parameters:

Start Bits	1
Data Bits	8
Stop Bits	1
Parity	None
Baud Rate	9600 or desired baud

1. Make sure you have configured the printer for serial interface use according to the directions at the beginning of this chapter.
2. Turn off your computer system and the **LaserJet series II** printer.
3. To install your interface in your computer, see your I/O accessory card documentation which provides graphics and complete installation instructions.
4. Connect your **HP LaserJet series II** printer to the computer using the appropriate cable.
5. Turn on the computer and the **LaserJet series II** printer.
6. Configure your computer, matching the LaserJet configuration requirements given in the table above.
7. Run a print verification test, using the instructions on the following pages.

Communication Verification

Included here are two ways, one using MS-DOS and the other using BASIC, to verify that the computer and the LaserJet series II printer are communicating. This first one assumes that you have a work copy of MS-DOS. Begin by powering on the LaserJet series II printer and setting it on-line. Next, type in the following test program.

At the MS-DOS prompt >, type:

```
COPY CON: LJTEST          [RETURN]
LaserJet series II Communication OK! [RETURN] (The prompt will not show up.)
```

Then press:

```
CTRL and Z simultaneously [RETURN] (The prompt will not show up.)
```

The system will respond with "1 File(s) copied"

Next, at the MS-DOS prompt >, type:

```
PRINT LJTEST              [RETURN]
```

The computer will prompt:

Name of list device [prn:]:

Press:

RETURN to accept the PRN:designator.

The HP LaserJet series II printer will print:

LaserJet series II Communication OK!

If you have followed these steps carefully, your computer and the HP LaserJet series II printer are communicating with each other.

Another way to verify that the LaserJet series II printer and the computer are successfully communicating is by running the following BASIC program:

10 LPRINT CHR\$(27);"E";	Resets printer
20 LPRINT "LaserJet Communication Okay!"	
30 LPRINT CHR\$(13);	Carriage return
40 LPRINT CHR\$(12);	Form Feed
50 END	

Type **RUN** on the computer to execute. The **LaserJet series II** will print:

"LaserJet Communication Okay!"

If you have followed these steps carefully and the printer printed the message above, your computer and HP LaserJet series II printer are communicating with each other.

In Case of Difficulty

If there is no communication, check the following list:

- ☐ Is the printer ON-LINE?
- ☐ Has the proper cabling been selected? (Check the pin assignments for the LaserJet series II printer and the computer).
- ☐ Is the RS-232C interface cable seated properly?
- ☐ Is the CPU working properly? (Check by running an application you know works.)
- ☐ Is printer working properly? (Check by running a test print.)
- ☐ Is the baud rate set the same for both the printer and the computer?
- ☐ Is the computer's port working properly? (Check by running another peripheral connected to the port).

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