

InfoPrint 60 Advanced Function Printer



# User's Guide



InfoPrint 60 Advanced Function Printer



# User's Guide

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**First Edition (September 1996)**

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Machine: InfoPrint 60  
Warranty Period\*: 90 days  
Contact your place of purchase for warranty service information.

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  - Secure all programs, data, and funds contained in a Machine.
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(Auszug aus dem EMVG vom 9.Nov.92, Para.3, Abs.4)

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VCCI

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## Safety Notices

Two levels of safety notices are in this book:

**CAUTION** identifies a situation that is potentially hazardous to people.

**Attention** identifies a situation that may damage a program, device, system, or data.

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## Safety Precautions

### Electrical Safety

This printer is inspected and listed by recognized national testing laboratories, such as Underwriters Laboratories, Inc. (UL) in the U.S.A. and Canadian Standards Association (CSA) in Canada. Listing of a product by a national testing laboratory indicates that the product is designed and manufactured in accordance with national requirements intended to minimize safety hazards. IBM equipment meets a very high standard of safety in design and manufacture. Remember, however, that this product operates under conditions of high electrical potentials and heat generation, both of which are functionally necessary.

Because the paper and toner used in the printer can burn, you should take normal precautions to prevent fire. These precautions include commonsense measures, such as keeping potentially combustible materials (for example, curtains and chemicals) away from the printer, providing adequate ventilation and cooling, and having trained personnel available and assigned to the printer.

### Laser Safety

This printer complies with the performance standards set by the U.S. Food and Drug Administration for a Class I Laser Product. This means that the printer belongs to a class of laser products that does not produce hazardous laser radiation. This classification was accomplished by providing the necessary protective housing and scanning safeguards to ensure that laser radiation is inaccessible or within Class I limits.

There are various tool-operated machine covers that should be moved, removed, or replaced only by trained service personnel. There are no operator controls or adjustments associated with the laser.

No operator maintenance is required to keep the product in compliance as a Class I Laser Product. No adjustments that affect laser operation of power are accessible to the operator.

This printer is a Class I Laser Product that contains an enclosed Class IIIb laser.



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## Preface

The following machine types and model types are covered in this publication.

Machine Number	Machine Type	Model Number
3160	3160	Model 001
InfoPrint 60	3160	Model 002

The *IBM InfoPrint 60: User's Guide* explains how to operate and maintain the IBM InfoPrint 60.

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## Audience

The *IBM InfoPrint 60: User's Guide* is for users and key operators of the IBM InfoPrint 60. Both users and key operators should have a basic understanding of computer equipment and computer operations.

A *user* is someone who sends print jobs to the printer and performs basic functions related to printing and picking up those print jobs.

A *key operator* is someone designated to handle more complex printer functions. The key operator helps keep the printer in optimal working order, installs supplies, and changes printer settings as needed.

A *customer engineer* (service representative) may refer to this guide, but the guide is directed to users and key operators.

A *system administrator* is the person at a computer installation who designs, controls, and manages the use of the computer system.

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## Organization and Contents of this Guide

This guide is designed to provide all basic information needed to operate, customize, and maintain the printer.

Chapter 1: "*Introducing the Printer*" gives a general description of the printer features and functions. Illustrations are used to identify key parts of the printer.

Chapter 2: "*Using the Operator Panel*" describes how to use the operator panel keys, display, and indicators to control printer functions and set printer configurations.

Chapter 3: "*Initializing the Printer*" describes how to set up and change the key operator password and beepers, and how to read machine information.

Chapter 4: "*Customizing the Printer*" describes how to set up the printer so that it suits your printing environment. It also explains how to set up the printer attachment.

Chapter 5: "*Printing and Paper Handling*" explains how to load paper (including user-defined forms) and run the printer. It includes information about using the printer trays and stackers.

Chapter 6: *“Maintaining the Printer”* describes how to keep the printer in good working condition. This section describes how to replace consumable parts (other than paper), a responsibility of key operators.

Chapter 7: *“Handling Operation Problems”* describes how to identify and solve minor problems that occur during operations.

Abbreviations: This list defines the acronyms and abbreviations used in this guide.

Glossary: The glossary contains an alphabetical list of terms and definitions used in this guide.

Index: The index consists of an alphabetical list of specific terms with referenced page numbers.

---

## Conventions Used in This Guide

The following typeface conventions are used in this guide:

Names of keys and indicators on the operator panel are bold; for example, “Press the **Enter** key”, and “the **Attention** indicator is lit.”

Messages on the operator panel are all uppercase; for example, “The PRESS ENTER TO PRINT message is displayed.”

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## Related Publications

The following InfoPrint 60 publications are also available:

*IBM 3130 and 3160 Advanced Function Printer: Safety Information*, S544-3978

*IBM InfoPrint 60; 3160 Advanced Function Printer: Introduction and Planning Guide*, G544-5242

*IBM InfoPrint 60; 3130, 3160, and 3935 Advanced Function Printers: Attachment Configuration Handbook*, S544-3977

The following publications contain information that relates to the IBM InfoPrint 60:

*IBM IPDS Handbook for Printers That Use the Advanced Function Common Control Unit*, G544-3895

*Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*, G544-3915

*Advanced Function Presentation: Printer Information*, G544-3290. This book contains an extensive list of publications related to Advanced Function Printing.

*Guide to Advanced Function Presentation*, G544-3876

Contact your IBM marketing representative for information concerning the InfoPrint 60, its manuals, or its associated licensed programs.

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## Chapter 1. Introducing the Printer

This chapter introduces some of the features and functions of the printer and provides information about:

- The printer
- Options
- Part names and their functions
  - External view
  - Internal view
- Relocation

---

### About the Printer

The printer provides the following standard features:

- 60 printed impressions-per-minute of letter-size, A4-size, or B5-size paper
- An operator panel, including a display and keys for user input
- A wide range of paper sizes available
- Simplex (single-sided) or duplex (double-sided) printing
- Three input trays (2 x 500-sheet, 1 x 2 000-sheet capacity)
- Two output stackers with job-offset feature (1 x 500-sheet capacity, 1 x 1 500-sheet capacity)
- Advanced Function Printing (AFP)
- All-points addressability (APA)
- Resolution of 600 pels (dots-per-inch)
- Power PC-based Controller (604 Power PC)
- Single-byte and double-byte outline font support
- 64MB of RAM storage
- 1GB hard drive

---

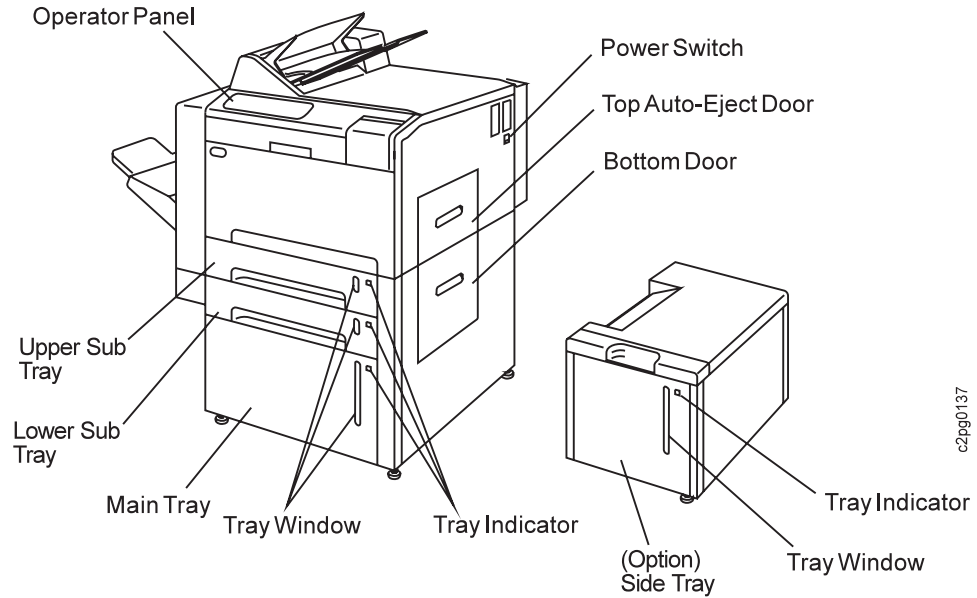
### Options

- 2 000-sheet side tray (supports A4-size and letter-size paper only)
- 32MB and 64MB additional memory (total of 128MB memory maximum)
- 3 000-sheet side stacker with convenience stapler (in place of 1 500-sheet side stacker)

# Part Names and their Functions

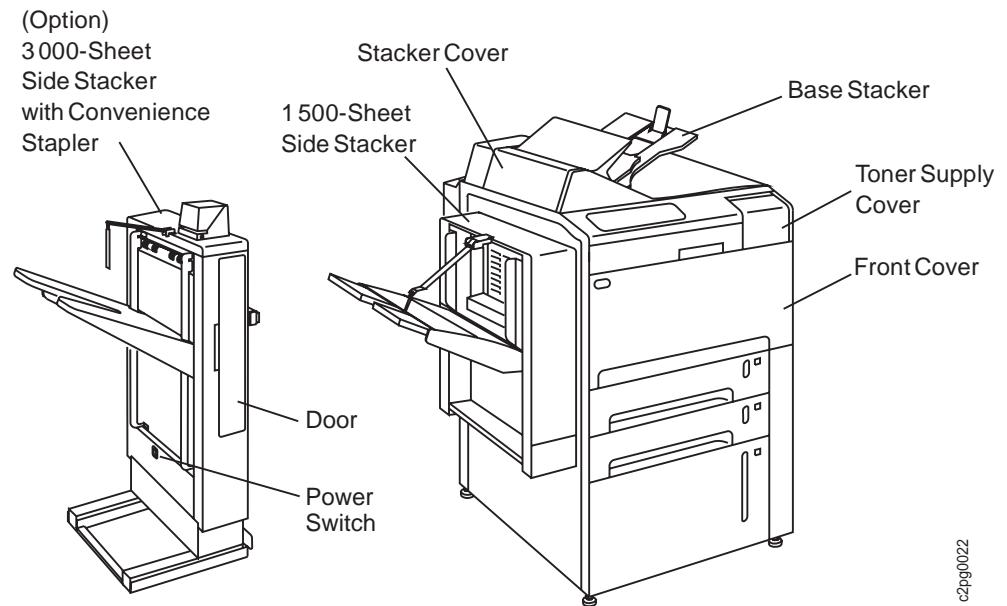
## External View of the Printer

The printer shown includes the optional side tray.



c2pg0137

The printer shown has the 1 500-sheet side stacker attached. Shown next to the printer is the optional 3 000-sheet side stacker with convenience stapler. This stacker goes in place of the 1 500-sheet side stacker.



c2pg0022

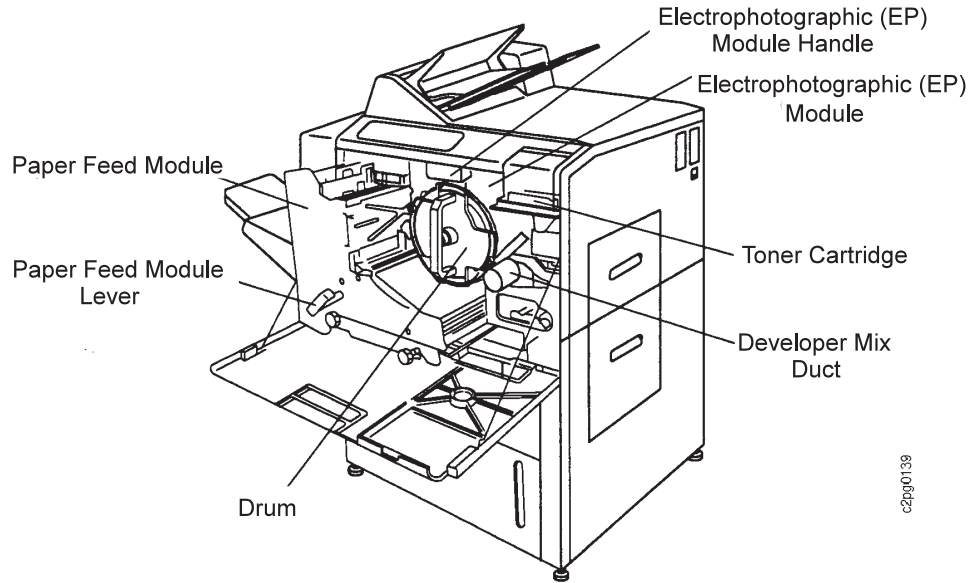
## Functions-External View

The following information lists each part labeled on the previous figures:

Item	Function
Front cover	Open to add supplies, change assemblies, clear paper jams, or clean the inside of the printer.
Top auto-eject door	Open to clear paper jams. Paper is automatically ejected through this door.
Bottom door	Open to clear paper jams.
Toner supply cover	Open to replace the toner cartridge.
Main tray	This tray holds up to 2 000 sheets of paper.
Lower sub tray	This tray holds up to 500 sheets of paper.
Upper sub tray	This tray holds up to 500 sheets of paper.
Side tray (option)	This tray holds up to 2 000 sheets of letter-size or A4-size paper.
Operator panel	This panel contains the indicator lights, input keys, and LCD.
Base stacker	This stacker collects the printed paper. It holds up to 500 sheets of paper.
Stacker cover	Open to clear paper jams.
1 500-sheet side stacker	This stacker collects the printed paper. It holds up to 1 500 sheets of paper.
3 000-sheet side stacker with convenience stapler (option)	This stacker collects the printer paper. It holds up to 3 000 sheets of paper and contains a stapler. (This stacker goes in place of the 1 500-sheet side stacker.)
Printer power switch	Press to power on and power off the printer.
Stacker power switch	Press to power on and power off the side stacker.
Door	Open to clear paper jams from the side stacker.
Tray indicator	Indicates which tray is in use.
Tray window	This window shows the paper level in each tray.

## Internal View of the Printer

The printer is shown with the front cover open and the paper feed module partially withdrawn. To access a module or unit, use the indicated blue handles or levers. Access these areas to clear paper jams, replace supplies, and clean the printer.



## Functions-Internal View

The following information lists each part and function labeled on the previous figure:

Item	Function
Electrophotographic (EP) module handle	Release the paper feed module lever and two lock levers, then pull the EP module handle forward to access the EP module components.
Electrophotographic (EP) module	Consists of the drum, cleaner unit, developer unit, and the toner cartridge.
Toner cartridge	Insert the toner cartridge into the slot to replace toner.
Developer mix duct	Mount the developer mix bottle onto the developer mix duct to replace the developer mix.
Drum	Part of the EP module. Consists of the drum and a photoconductor installed on the drum.
Paper feed module lever	Turn to the RELEASE position, then pull forward to access the paper feed module components.
Paper feed module	Consists of the transfer belt unit and fuser assembly.

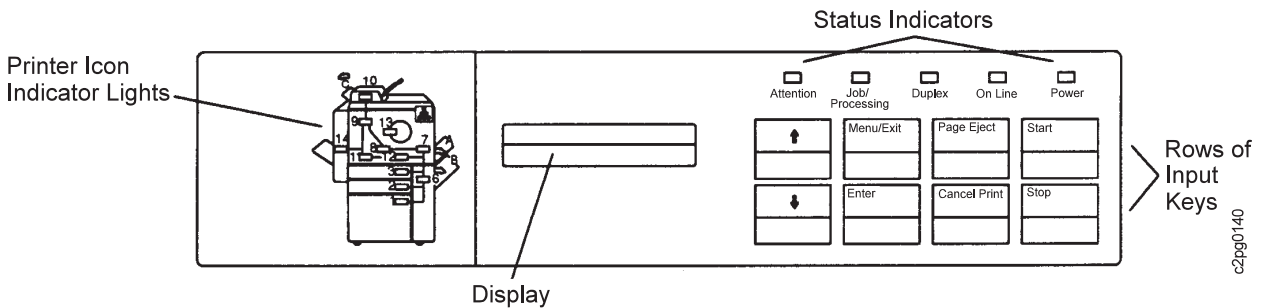
## Relocation

Whenever the printer is to be moved to another location, order a relocation kit. The customer engineer disconnects and reconnects the printer. The customer is responsible for ordering the relocation kit from an IBM Marketing representative.

## Chapter 2. Using the Operator Panel

This chapter describes the operator panel and consists of the following topics:

- Input keys
- Display
- Menu trees
- The keyboard
- Status indicator lights
- Printer icon indicator lights

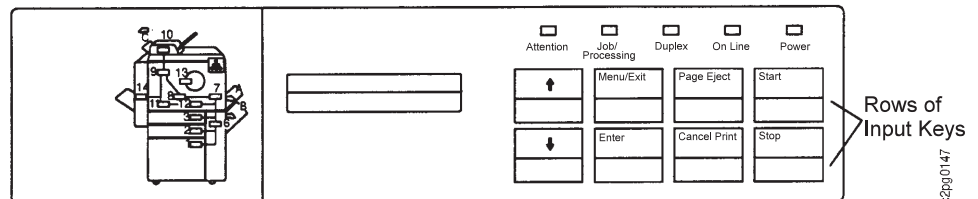


### Input Keys

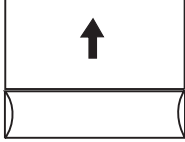
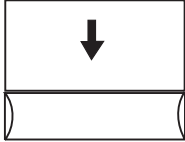
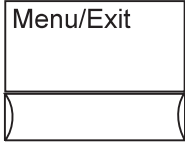

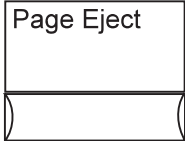
Input keys are located on the right side of the operator panel. The input keys allow you to:

- Change the state of the printer to READY or NOT READY (**Start** or **Stop** keys)
- Change between status mode and menu mode (**Menu/Exit** key)
- Navigate and select items in the menu (**Scroll Up/Scroll Down** keys and **Enter** key)
- Cancel a print job (**Cancel Print** key)

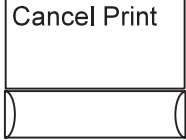
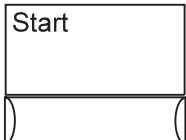
**Note:** The **Page Eject** key is not active on this printer.




Following are descriptions of the input keys:

 <p style="text-align: right; font-size: small;">c2pgg0102</p>	<p><b>Scroll Up</b></p> <p>Use this key to scroll up through the menu-mode items. You can also use the <b>Scroll Up</b> key to access and scroll through informational messages, aborts, and program checks. Each time you press the key, the previous menu item or message displays.</p> <p>The <b>Scroll Up</b> key operates in a circular scroll fashion; when the top item on a list appears, the menu rolls over to the last item, and scrolling continues.</p> <p>If you press the <b>Scroll Up</b> key when there is no information to scroll through or access, the key press is ignored.</p>
 <p style="text-align: right; font-size: small;">c2pgg0103</p>	<p><b>Scroll Down</b></p> <p>Use this key to scroll down through the menu-mode items. You can also use the <b>Scroll Down</b> key to access and scroll through status and information messages. Each time you press the key, the next menu item or message displays.</p> <p>The <b>Scroll Down</b> key operates in a circular scroll fashion; when the bottom item on a list has been displayed, the menu rolls over to the top item, and scrolling continues.</p> <p>If you press the <b>Scroll Down</b> key when there is no information to scroll through or access, the key press is ignored.</p>
 <p style="text-align: right; font-size: small;">c2pgg0104</p>	<p><b>Menu/Exit</b></p> <p>Use this key to switch between status mode and menu mode while using the operator panel.</p>
 <p style="text-align: right; font-size: small;">c2pgg0105</p>	<p><b>Enter</b></p> <p>While in menu mode, use the <b>Enter</b> key to:</p> <ul style="list-style-type: none"> <li>• Select a choice on a menu</li> <li>• Initiate an action</li> <li>• Accept a character or operation for keyboard input</li> </ul> <p>While in keyboard input mode, use the <b>Enter</b> key to select a character, proceed after an error is posted, or select the keyboard edit operations. See “The Keyboard” on page 2-7 for more information about using the <b>Enter</b> key in keyboard input mode.</p> <p>While in status mode, press the <b>Enter</b> key to clear messages.</p>
 <p style="text-align: right; font-size: small;">c2pgg0106</p>	<p><b>Page Eject</b></p> <p>Not active on this printer.</p>

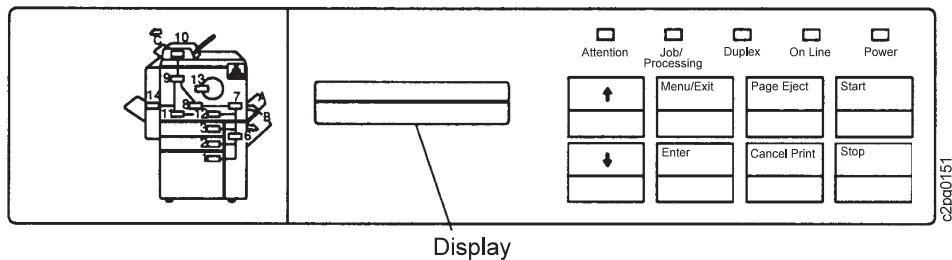


 <p>Diagram of the Cancel Print key. The key is rectangular with a horizontal line near the top. The text "Cancel Print" is printed above the line. To the right of the key is the vertical text "c2pg0107".</p>	<p><b>Cancel Print</b></p> <p>This key is active only when the printer is receiving or processing a print job and the printer is in the NOT READY state.</p> <p>You can put the printer in the NOT READY state by pressing the <b>Stop key</b>.</p> <p>If you press the <b>Cancel Print</b> key when there is nothing to cancel, the printer executes the cancellation procedure anyway. Press the <b>Enter</b> key on the message CONFIRM CANCEL. CANCEL COMPLETE appears; no print jobs are affected.</p> <p>If you press the <b>Cancel Print</b> key when the printer is running, the PRESS STOP FIRST message is issued telling you to stop the printer. Press the <b>Stop key</b>. Wait for the NOT READY message to appear on the display. Press the <b>Cancel Print</b> key. The PRESS ENTER TO CONFIRM CANCEL message appears. Press the <b>Enter</b> key to confirm cancel. The CANCEL COMPLETE message will be displayed. After the job is canceled at the printer, the job is deleted from the print queue. This key also cancels internal print jobs (those originated at the printer).</p> <p>A CANCEL COMPLETE message indicates that the print job has been canceled. To avoid canceling the print job after pressing the <b>Cancel Print</b> key, scroll to IGNORE CANCEL, and press the <b>Enter</b> key. The printer continues as though the <b>Cancel Print</b> key had not been pressed.</p> <p><b>Note:</b> To avoid canceling another person's print job, verify that it is your print job that is printing. After you press the <b>Stop key</b>, wait until pages are ejected into the stacker. Check those pages. If your print job <i>has not</i> finished printing, proceed to cancel the print job.</p> <p>If your print job <i>has</i> finished printing, do not cancel the print job. This will cancel the next print job sent to the printer.</p>
 <p>Diagram of the Start key. The key is rectangular with a horizontal line near the top. The text "Start" is printed above the line. To the right of the key is the vertical text "c2pg0108".</p>	<p><b>Start</b></p> <p>Press the <b>Start</b> key to initiate a request for the printer to change to a READY state. Printing can proceed only when the printer is READY.</p> <p>The <b>Start</b> key is inactive when the printer is READY.</p>

 <p style="text-align: right; font-size: small;">c2pg0109</p>	<p><b>Stop</b></p> <p>Press the <b>Stop</b> key to initiate a request for the printer to change to a NOT READY state.</p> <p>If you press the <b>Stop</b> key while the printer is printing, the printer continues to process the current print job unless it is an internal print (help page, printer configuration, print samples). When processing is completed, the printer stops.</p> <p>Pressing the <b>Stop</b> key stops the printer; the printer remains stopped until the <b>Start</b> key is pressed. At that time, the printer processes any waiting print jobs.</p> <p>The <b>Stop</b> key is inactive when the printer is in a NOT READY state.</p>
--	---

## Display

The display consists of two lines of 16 character positions. The display provides printer status, a menu of available functions, and intervention conditions.



You can display text in one of the following operator-selectable languages: ENGLISH, ESPAÑOL, FRANCAIS, DEUTSCH, PORTUGUÊS, ITALIAN, JAPANESE KATAKANA, NEDERLANDS. The operator panel keys and indicators are labeled in English.

## Status Mode

Status mode is the normal operating mode. In status mode, the display contains messages that provide the following types of information:

- Status of the printer, which indicates the current condition of the printer
- Notification that replaceable supplies are low or need to be replaced
- Intervention messages when the printer encounters difficulty
- Confirmation of requested actions

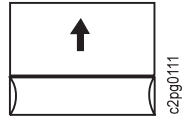
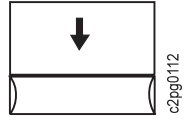
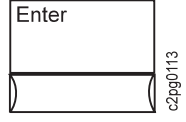
While in status mode the READY or NOT READY message appears on the operator panel or the printer is printing (if a job has been sent to the printer). If the NOT READY message appears, press the **Start** key to make the printer READY.

See Table 7-1 on page 7-19 for a list of messages and their meanings.

## Menu Mode

In menu mode, the display shows menus and submenus from which you can select printer settings and enter choices. Change to menu mode when you want to perform actions such as shutdown and restart, enter a password to access password-protected menu items, run print samples, or configure the printer and its attachments. To enter or exit menu mode, press the **Menu/Exit** key on the operator panel. You are in menu mode when the HELP menu appears on the operator panel.

When you enter menu mode, the **Scroll Up** and **Scroll Down** keys become navigation keys and the **Enter** key becomes a selection key.

	<p>Use this key to scroll up through the menu or submenu items selected. When you scroll, the items wrap so that you can access all items by continually scrolling.</p>
	<p>Use this key to scroll down through the menu or submenu items selected. When you scroll, the items wrap so that you can access all items by continually scrolling.</p>
	<p>Use the Enter key to:</p> <ul style="list-style-type: none"> <li>• Select a main menu item and access its submenu.</li> <li>• Select a submenu item and access its submenu.</li> </ul>

## Accessing Password Required Menu Items

Access to some menu items is restricted to either the key operator or the customer engineer. Only when the printer is programmed with a password will the following messages appear on the display ENTER KEY OP PASSWORD or ENTER CE PASSWORD. If you are a user not assigned to key operator duties, you cannot access that menu item. All SERVICE menu items are available only to the customer engineer.

If you see a request for a password and you are a user without a password, do the following:

1. Press the **Enter** key to clear the message.
2. Press the **Scroll Up** or **Scroll Down** key until <CANCEL> appears, and press the **Enter** key. Either return to the main menu item or press the **Menu/Exit** key to exit menu mode.

A user who is not assigned key operator duties can access submenu items only under the following MAIN MENU items:

- HELP
- TRAYS/STACKERS
- SYSTEM SHUTDOWN

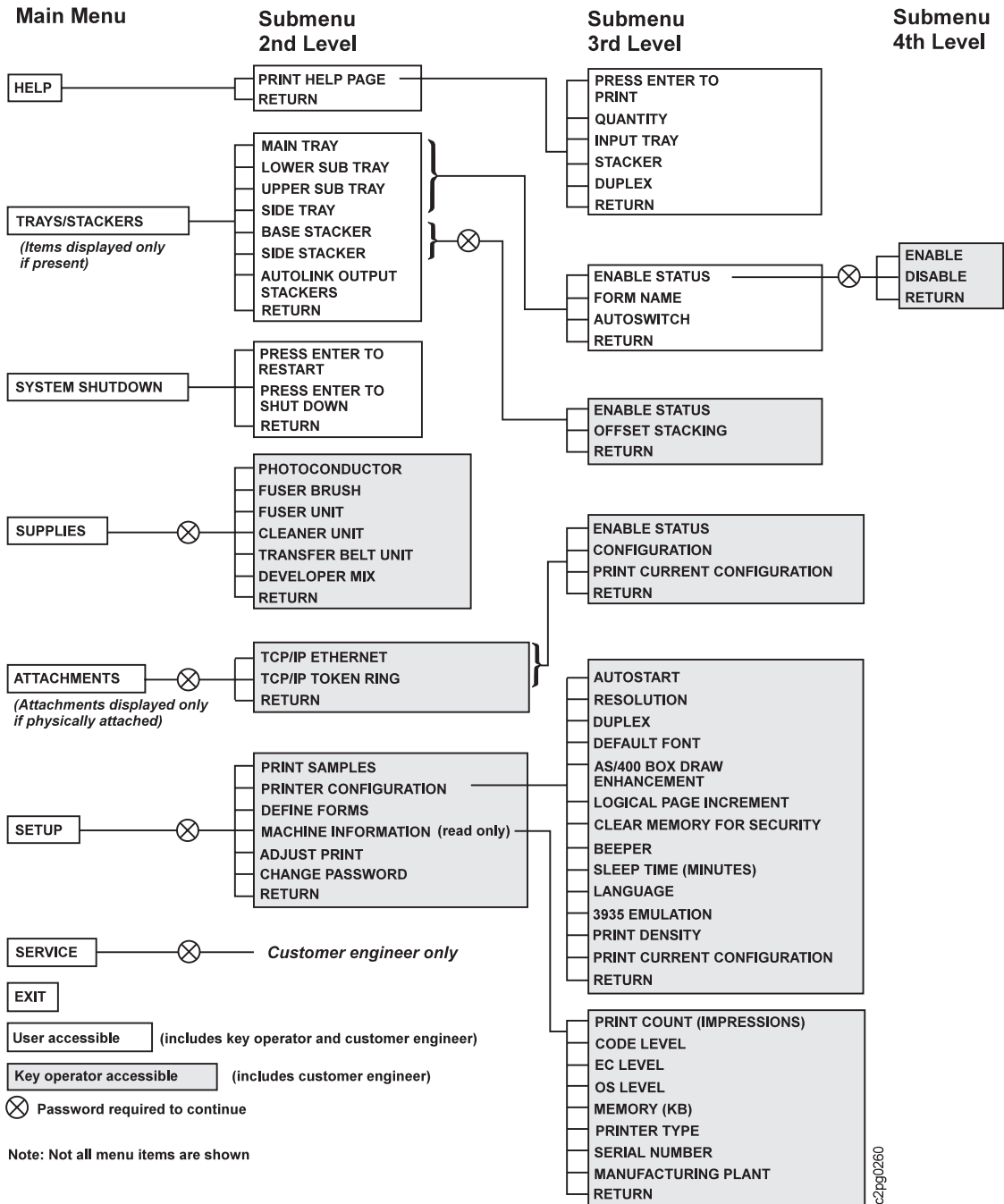
Key operators can practice entering a password by completing the tutorial in Chapter 3, (see "Tutorial: Entering a Key Operator Password" on page 3-2).

# Menu Tree

When you enter menu mode, you access items arranged in menus. The following menu tree shows the basic menu choices. Not all menu items are shown here.

From each MAIN MENU item, you can select second-level submenu items. From the second-level submenu, you can select third-level submenu items, and so on.

## InfoPrint 60 Menu Tree



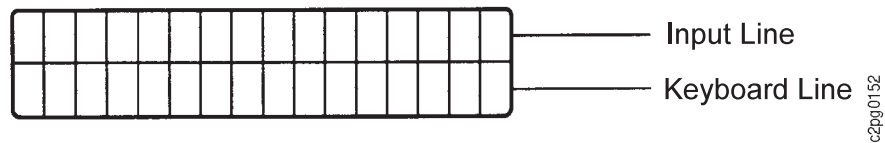
## The Keyboard

You can use the keyboard to enter information under some submenu items. Only those characters that are appropriate for a particular submenu are available to you. Not all items are available under each submenu. Possible items are:

- Letters of the alphabet
- Numbers
- Symbols
- Editing operations

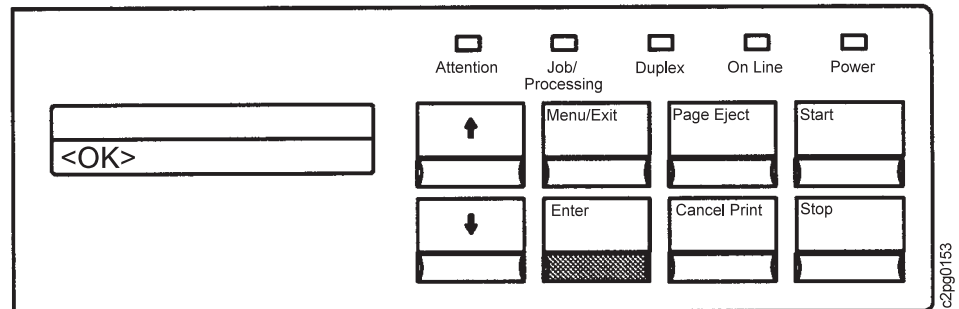
## Keyboard - Parts of the Display

When you are using the keyboard, the bottom line of the display contains keyboard choices. The top line contains your input. Characters selected from the keyboard line are displayed on the input line.



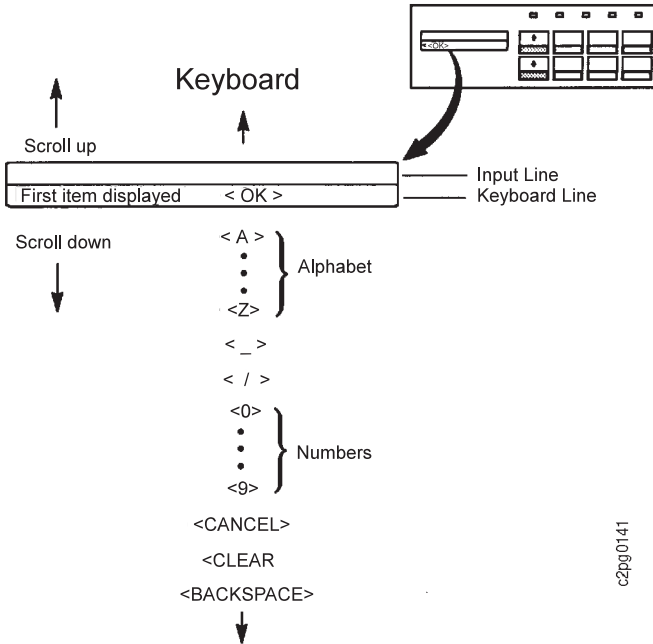
## Accessing the Keyboard

The keyboard appears whenever you press the **Enter** key on a submenu item that requires unique input. The keyboard characters and editing operations appear between < and > symbols on the keyboard line of the display. Only one keyboard character or editing operation appears at a time. The starting choice on the keyboard is always <OK>.



## Keyboard Order

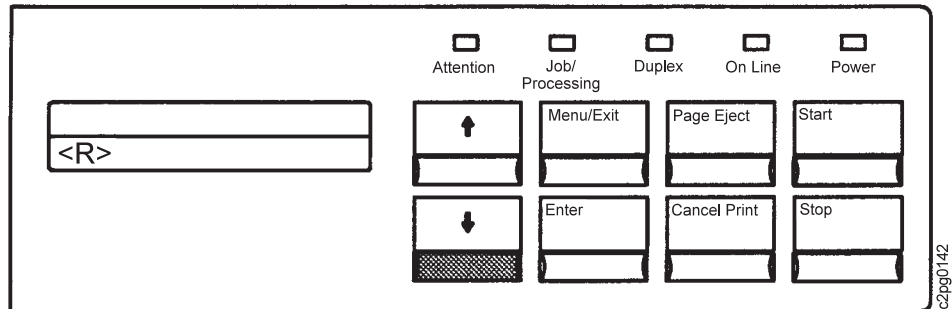
Only those characters needed for the specific submenu items you select are displayed. The following figure shows all possible characters and operations in the order they appear in the keyboard. Not all characters appear in the keyboard for each submenu item. You can access all characters that do appear by using either the **Scroll Up** or **Scroll Down** key.



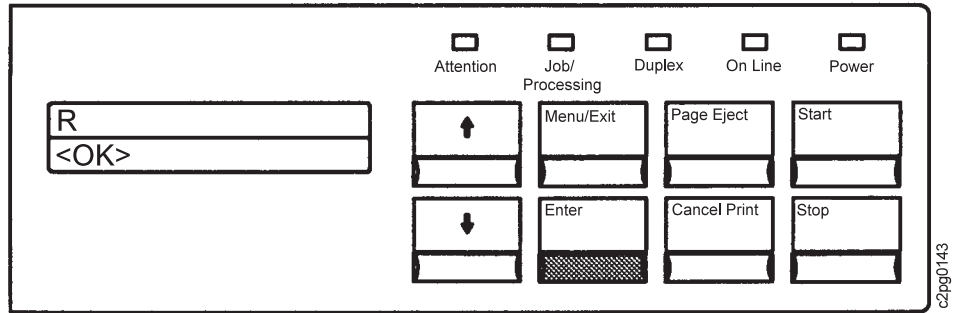
## Using the Keyboard

Because you can see only one keyboard character at a time, scroll through the characters one by one until you see the character you want to select.

For example, press the **Scroll Down** key until the letter <R> appears on the keyboard line.



Press the **Enter** key to select the letter <R>. The letter R moves from the keyboard line to the input line.



**Selecting and Saving Your Keyboard Entry:** After you finish selecting all the keyboard characters for your entry, press **Enter** to select <OK>. The entry is selected and saved, and the display returns to the submenu item from which the entry was made.

**Editing Keyboard Entries:** If you want to change one of your keyboard character selections, use one of the following:

Item	Description
<BACKSPACE>	Discards the previous character and displays <BACKSPACE> on the keyboard line.
<CLEAR>	Deletes all characters from the input line.
<CANCEL>	Discards any changes to the previous entry and returns to the submenu item.

**Canceling your Keyboard Entry:** If you want to cancel your entry before you have saved it, select <CANCEL> on the keyboard. Do this by scrolling up or down to the <CANCEL> keyboard entry. Press the **Enter** key.

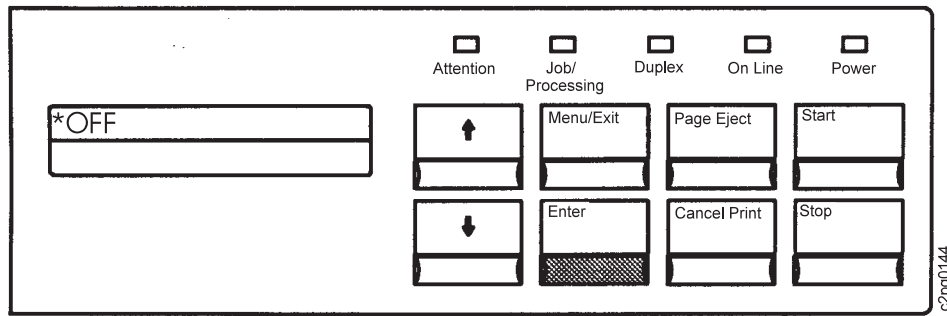
**Selection Indicator:** There are different selections available under each menu item. For example:

```

SETUP
  PRINTER CONFIGURATION
    BEEPER
      ERROR
        KEYS
          ON
          *OFF
          RETURN
  
```

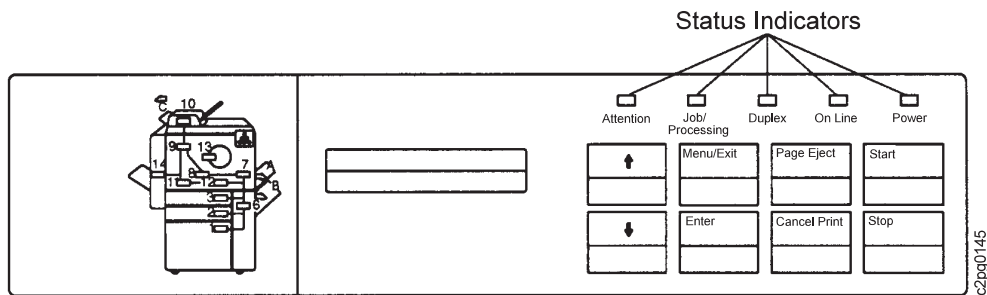
Under the KEYS beeper and the ERROR beeper there are three choices. The choices are ON, OFF, or RETURN. The current selection will have an asterisk (\*) preceding it. If you change the selection to ON or OFF, that selection now has an asterisk (\*) in front of it. If you choose RETURN without changing a selection, the current selection remains active and you return to the previous menu.

Pressing the **Enter** key selects the item you want and displays an asterisk (\*) in front of it. The following example shows OFF selected.



## Status Indicator Lights

Status indicator lights signal the activity of the printer. After the printer is powered on the status indicator lights provide the following information:



## Attention

The **Attention** indicator light indicates when a condition exists that requires your attention. The **Attention** indicator light has three different conditions:

Item	Description
Blinking	A new condition exists that requires attention. The message on the display shows the condition. Perform the recovery action listed in Table 7-1 on page 7-19 or press the <b>Enter</b> key to clear the message. The blinking light goes out when the condition is corrected.
On (but not blinking)	One or more unresolved conditions exist but none require immediate attention. To view any unresolved condition, press the <b>Scroll Down</b> key while in status mode see "Status Mode" on page 2-4. You can scroll down to see messages, such as DEVELOPER MIX:CHANGE SOON. In some cases, you can delay performing the recovery action for the unresolved condition (for example, messages indicating that a supply needs to be changed soon).
Off	There are no conditions that require attention.



## Job/Processing

When the **Job/Processing** indicator light is lit, the printer is processing, receiving, or printing data from the host. When the indicator light is off, no data is being processed.

## Duplex

The **Duplex** indicator light is lit when the printer is in duplex mode.

## On Line

The **On Line** indicator light is lit when the printer communication attachment is installed and enabled. The indicator light is off when the communication attachment is not enabled and the printer is off line.

## Power

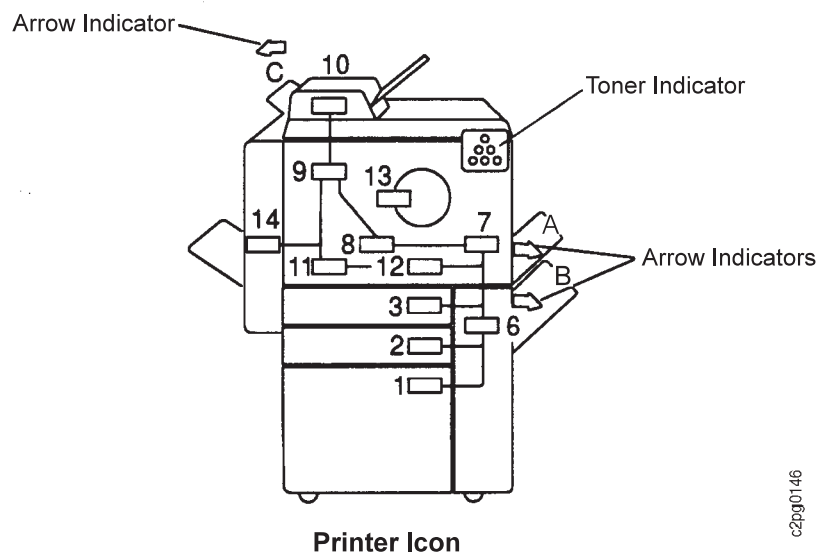
The **Power** indicator light shows whether the printer power is on or off. The **Power** indicator light blinks during the power-on procedure until the display reads **0090**, then the **Power** indicator light goes solid. The printer **Power** indicator light remains lit until the printer is powered off.

---

## Printer Icon Indicator Lights

The operator panel contains a printer icon closely matching your printer. The printer icon contains indicators that show:

- The location of a paper jam
- The door or cover to be opened when a paper jam occurs
- A toner low condition



Each light on the printer icon identifies an area in the paper path except for the toner indicator. When a paper jam occurs, the printer stops printing and the lights on the printer icon show where the paper jam is located. There may be more than

one indicator light on at a time. See “Clearing a Paper Jam” on page 7-2 for instructions on clearing paper jams.

The toner indicator lights when the toner supply is low. See “Replacing the Toner Cartridge” on page 6-4 for instructions on adding toner.

During the power-on process the power light will blink. When the power-on process is complete, the power light stays lit continuously. If no other conditions exist, the indicator lights will go off when the power-on process is complete.

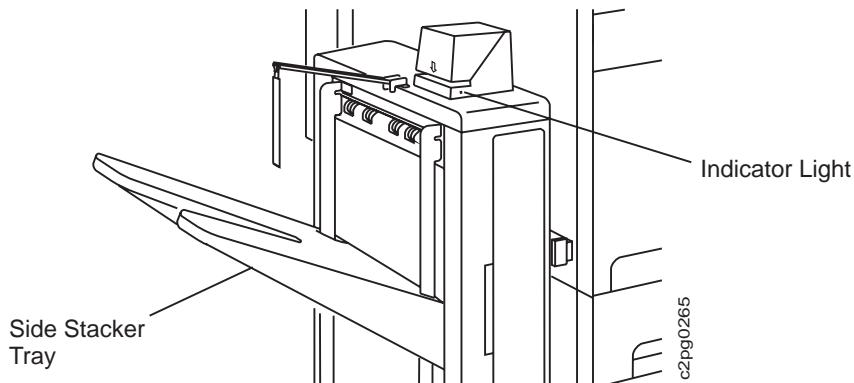
After the intervention resolution completes some indicator lights go off immediately. The indicator lights for the EP and paper feed modules *will not* go off immediately. Press the **Start** key or send a job to the printer to verify that all jams are cleared. If the indicator lights remain lit, recheck the areas for paper jams and press the **Start** key again. Call for service if the problem continues.

---

### 3 000-Sheet Side Stacker Indicator Light (option)

The indicator light is located on the stapler, which is located on top of the 3 000-sheet side stacker. This indicator light, while illuminated, may indicate any of the following:

- The stapler is low or out of staples, see “Loading Staples in the Convenience Stapler (option)” on page 6-19.
- The side stacker tray is moving; wait until the side stacker tray stops moving to use the stapler.



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## Chapter 3. Initializing the Printer

This chapter covers initial settings of select menu items that, once set, may not need to be changed.

This chapter provides instructions for:

- Setting the initial key operator password
- Changing the key operator password
- Tutorial: Entering a key operator password
- Beeper
- Machine information

---

### Setting the Initial Key Operator Password

The key operator uses a password to access the printer configurations. Using a password prevents unauthorized users from accessing menu items, such as ATTACHMENTS or SUPPLIES.

If no initial password is set in the printer, any user can access all menu items.

To set the initial key operator password, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu, and press the **Enter** key.
3. Scroll to the CHANGE PASSWORD submenu, and press the **Enter** key.
4. Press the **Enter** key on KEY OPERATOR. ENTER NEW PASSWORD appears.
5. Press the **Enter** key to access the keyboard.
6. Enter the new password using the keyboard. (Refer to "Tutorial: Entering a Key Operator Password" on page 3-2 for detailed instructions.) Press the **Enter** key on the entire password entry.
7. REENTER PASSWORD appears. Press the **Enter** key to access the keyboard.
8. Reenter the new password to verify it. If reentered correctly, the password is added and PASSWORD CHANGE SUCCESSFUL will be displayed.
9. Press the **Menu/Exit** key twice to exit menu mode.

---

### Changing the Key Operator Password

Either the key operator or the customer engineer can change the key operator password. You must first enter the current password before you can change it.

To change the key operator password, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu, and press the **Enter** key.
3. ENTER KEY OP PASSWORD appears.
4. Press the **Enter** key to access the keyboard.

5. Enter the current key operator password. (Refer to “Tutorial: Entering a Key Operator Password” on page 3-2 for detailed instructions.)
6. Scroll to the CHANGE PASSWORD submenu, and press the **Enter** key.
7. Press the **Enter** key on KEY OPERATOR. ENTER NEW PASSWORD appears.
8. Press the **Enter** key to access the keyboard.
9. Use the keyboard to change the password. Press the **Enter** key on the entire password entry.
10. REENTER PASSWORD appears. Press the **Enter** key to access the keyboard.
11. Reenter the new password to verify it. If reentered correctly, the password changes and PASSWORD CHANGE SUCCESSFUL will be displayed.
12. Press the **Menu/Exit** key twice to exit menu mode.

---

## Tutorial: Entering a Key Operator Password

The following tutorial is a practical exercise for key operators. It provides practice in directing you through the menus and using the keyboard.

### Skills Covered

In this tutorial you practice how to:

- Enter and exit menu mode
- Navigate within the menu
- Make menu selections
- Use the keyboard
- Enter a key operator password

### Prerequisites

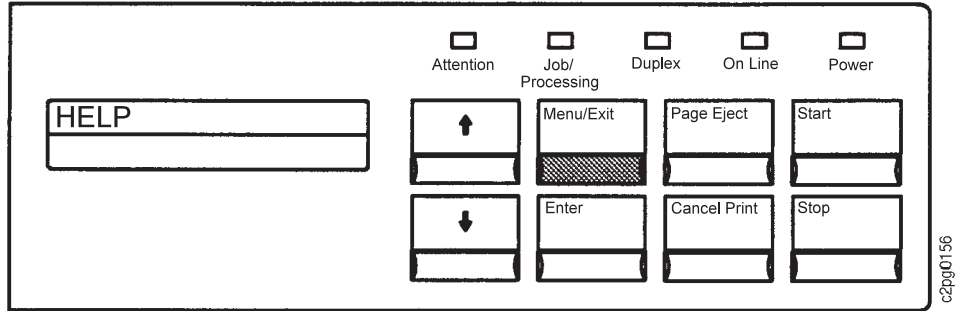
This tutorial guides you through the process of entering an *incorrect* and then a correct key operator password. For the steps in this tutorial to accurately reflect what you will see displayed on the operator panel, the following conditions must be met:

- You have key operator authorization.
- You know the key operator password.

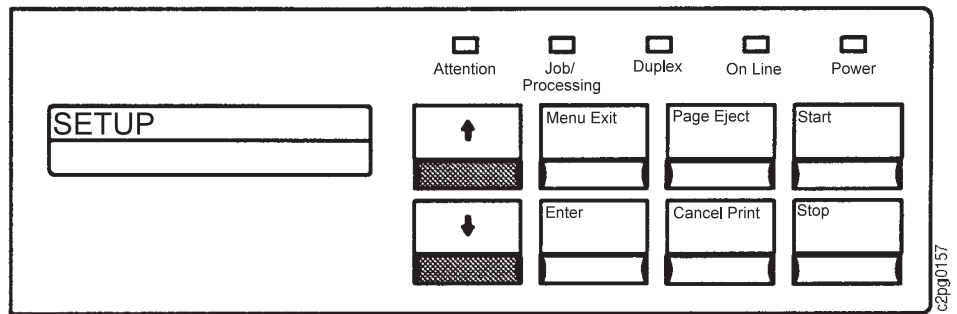
### Instructions

The steps that follow instruct you to enter the password A1. This is *not* your correct password; enter it as a learning exercise. After entering the incorrect password, you will be instructed how to clear it. Then you will be prompted to enter your correct password. Use the **Scroll Up** or **Scroll Down** keys to display each character.

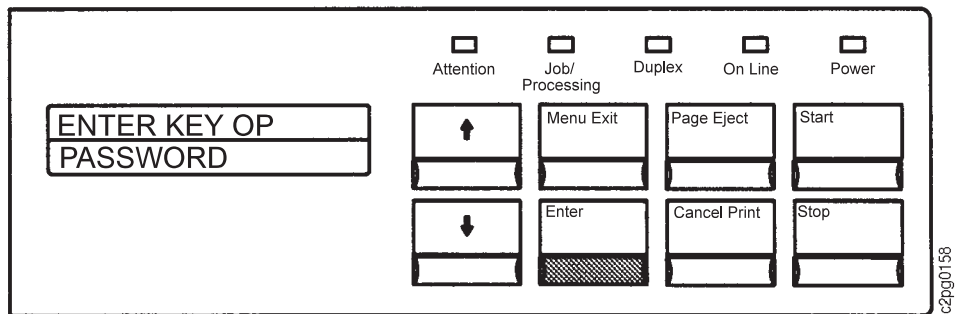
1. Press the **Menu/Exit** key to enter menu mode. HELP appears.



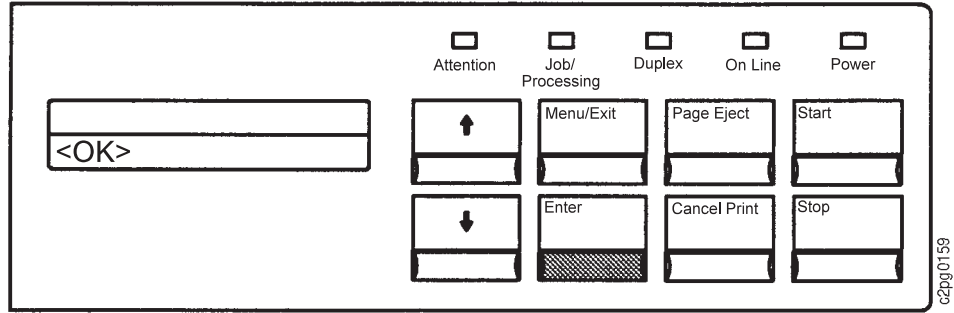
2. Press either scroll key and scroll until SETUP appears.



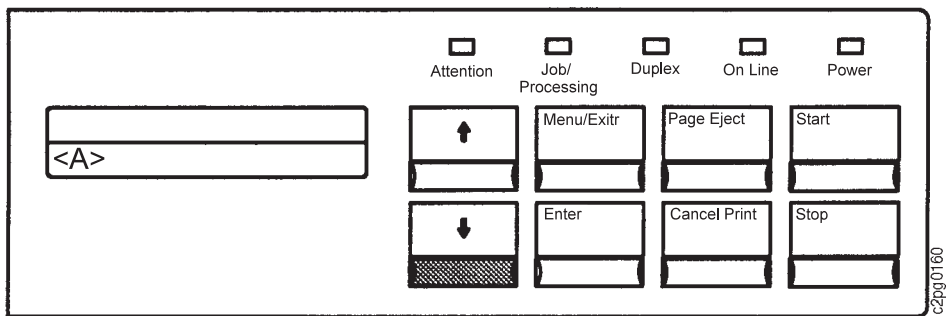
3. Press the **Enter** key to select SETUP. Access to SETUP menu items requires key operator authorization. A message appears asking you to enter the key operator password.



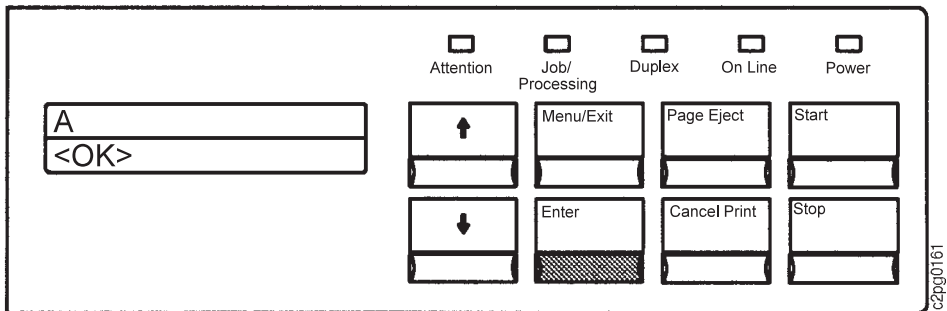
4. Press the **Enter** key again. The first item (in the keyboard) <OK> appears on the keyboard line.



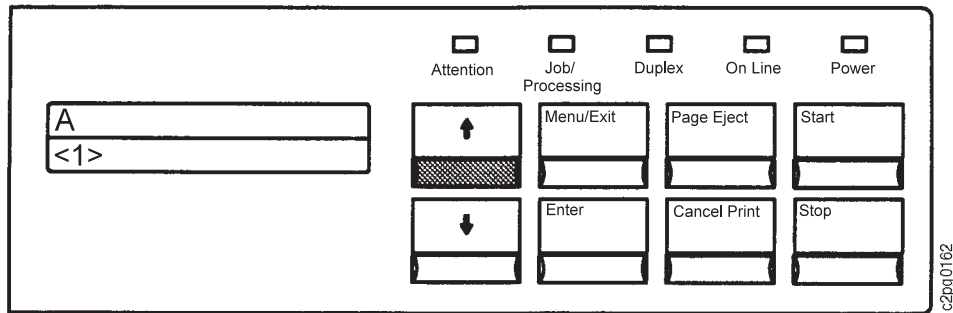
5. Press the **Scroll Down** key to scroll to the letter A.



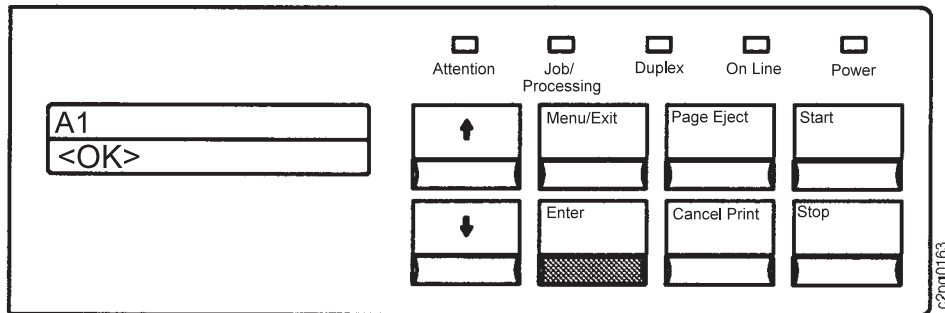
6. Press the **Enter** key to select the letter A. The selected character appears on the input line. The keyboard line returns to the first item <OK>.



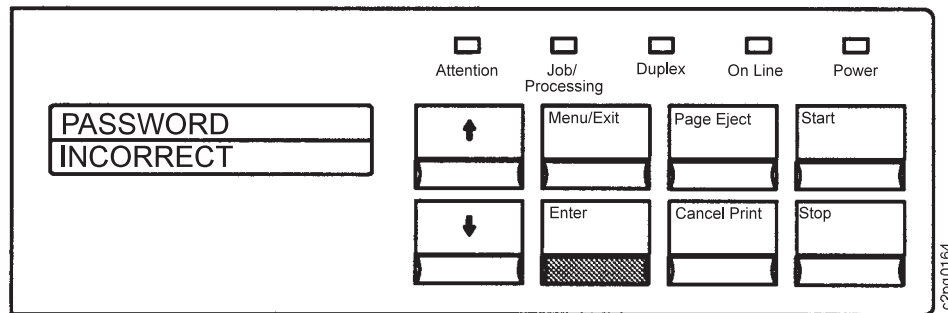
7. Press the **Scroll Up** key several times to scroll to the number 1.



8. Press the **Enter** key to select the number 1. The keyboard line returns to <OK>.

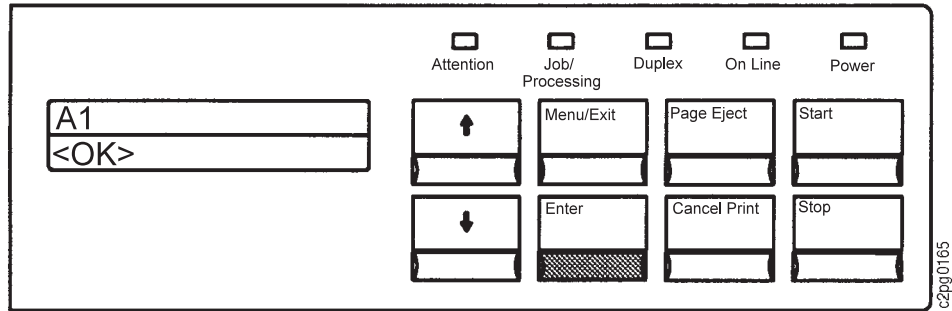


9. Press the **Enter** key again to select the entire entry (by selecting <OK>). Because you did not enter your correct password, the PASSWORD INCORRECT message appears.

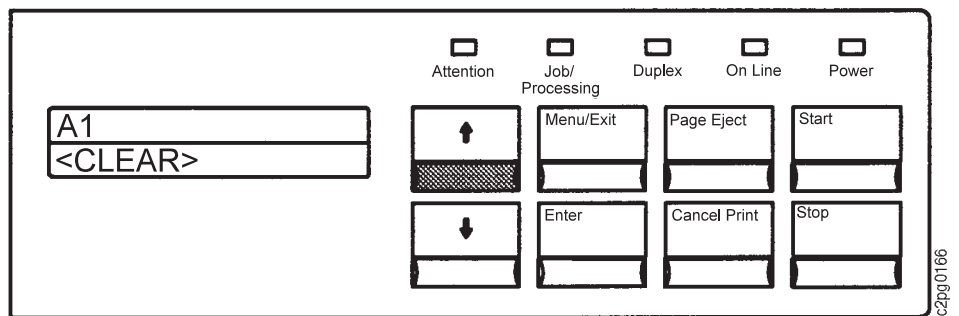


Steps 10-14 instruct you to clear the PASSWORD INCORRECT message.

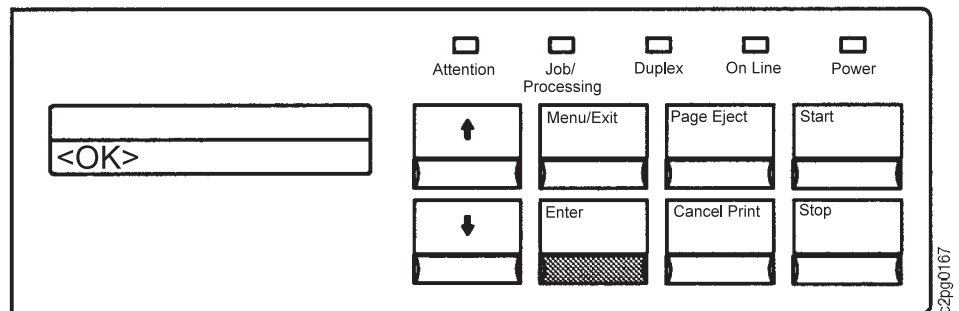
10. Press the **Enter** key to return to the keyboard and the previously-entered password.



11. Press the **Scroll Up** key to scroll to <CLEAR>.



12. Press the **Enter** key to clear (erase) the incorrect password.

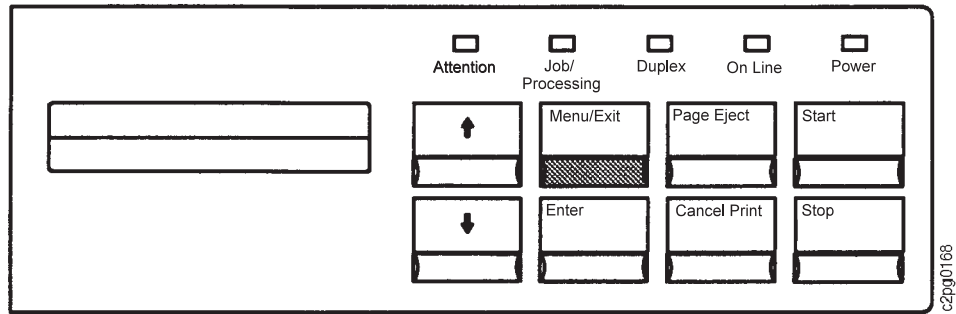


13. Enter your own password using the same procedure you have used in this tutorial.

After you have successfully entered your password, PRINT SAMPLES (the first submenu item under SETUP) will be displayed.

14. Press the **Menu/Exit** key to exit menu mode.





## Beeper

The printer has two beepers that you can configure. The first is the Error Beeper which sounds when a condition requiring intervention occurs. The second is the Keys Beeper which sounds when an input key is pressed. You can configure both beepers from the SETUP main menu item and the PRINTER CONFIGURATION submenu item.

Error Beeper	Options
TIMED	The beeper sounds for three minutes or until a key is pressed. This is the default.
CONTINUOUS	The beeper sounds until the intervention is cleared or any key is pressed.
OFF	The beeper does not sound.

Keys Beeper	Options
ON	The beeper sounds when a key is pressed (except when the keyboard appears). This is the default.
OFF	The beeper does not sound when a key is pressed.

If you press a key when that key is not accessible, (for example, the printer is printing) the key press is ignored. However, if the Keys Beeper is configured ON, a beep sounds every time you press an input key.

## Machine Information

Information regarding your specific printer is available for viewing only (read only). This information is a password-required menu item.

## Machine Information Items

The machine information includes the following:

Item	Description
Print count (impressions)	The total number of prints (impressions) run on this printer to the present date
Code level	The level of IBM microcode loaded in the printer
EC level	Engineering change level (for customer engineers)
OS level	Operating system level (for customer engineers)
Memory (KB)	Number of kilobytes of memory installed on the control unit system board
Printer type	InfoPrint 60
Serial number	Unique number assigned by IBM to each printer
Manufacturing plant	Number that designates the manufacturing plant at which the printer was made

## Viewing Machine Information

To view machine information, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
3. Scroll to MACHINE INFORMATION, and press the **Enter** key.
4. Scroll to an item you wish to view, and press the **Enter** key. The read-only information appears. You cannot change this information.
5. Press the **Enter** key to return to the submenu item. View the information for another item by repeating the previous step.
6. Press the **Menu/Exit** key to exit menu mode.

---

## Chapter 4. Customizing the Printer

This chapter gives you step-by-step instructions for customizing your printer to match your particular printing environment and requirements.

You can use the operator panel to change the printer settings and therefore customize the way the printer operates. Changing the settings is called configuring.

This chapter provides instructions for:

- Configuring the trays
- Configuring the stackers
- Configuring the printer
- Running internal test prints
- Configuring attachments
- Adjusting the print
- Using the default font
- Defining form names

---

### Configuring the Trays

Both key operators and users can configure certain items relating to the trays. The user can do the following:

- Change the form size and form name loaded in each tray
- Select an autoswitch tray

The key operator also can do the following:

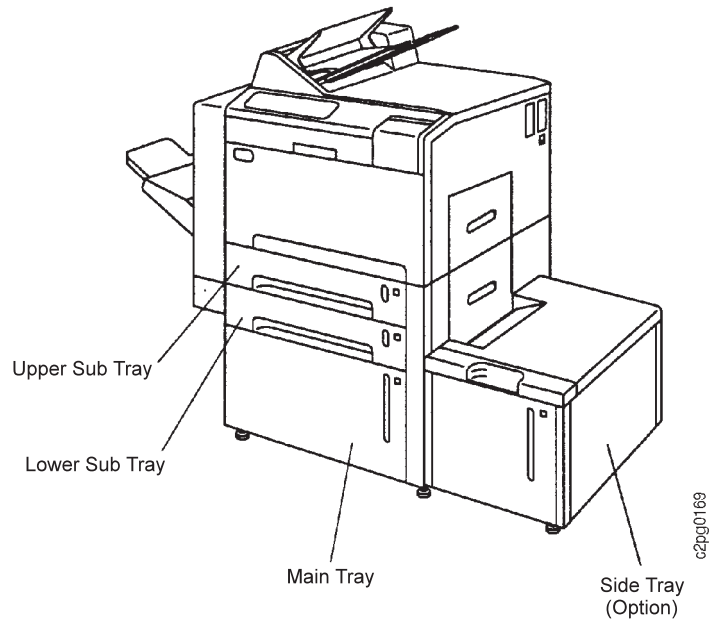
- Enable and disable trays

**Note:** Always adjust the size guides in the tray for the correct paper size before configuring that tray. Refer to “Loading Paper” on page 5-9.

### Tray Names

The following artwork shows a model with all possible trays. Your printer may not have the optional side tray installed.

**Note:** Paper input receptacles are referred to as *trays*. Paper output receptacles are referred to as *stackers*.



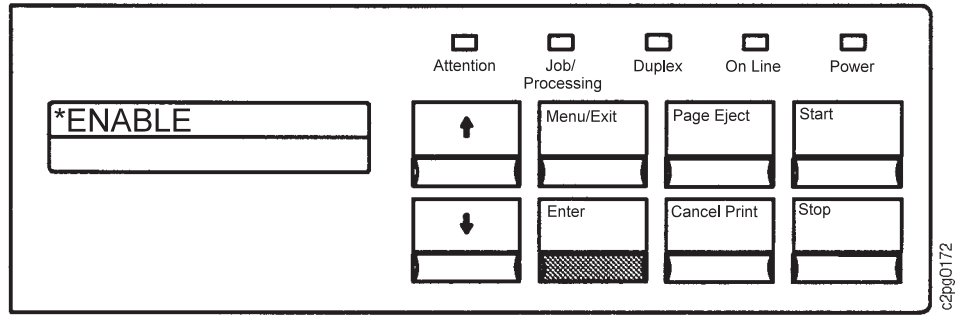
## Enabling or Disabling a Tray

The key operator can enable or disable any of the trays. If a tray is enabled, the printer can use it. If a tray is disabled, it cannot be used.

You may want to disable a tray if it is having problems (for example, frequent paper jams caused by out-of-specification paper).

To enable or disable a tray, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs, and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
4. Scroll to the tray you wish to enable or disable, and press the **Enter** key to make the selection.
5. Press the **Enter** key on ENABLE STATUS. Enter the key operator password, if prompted.
6. Scroll to ENABLE, and press the **Enter** key to enable the tray. Scroll to DISABLE, and press the **Enter** key to disable the tray.



**Note:** When you disable a tray that is designated as another tray's autoswitch tray, this information message appears: AUTOSWITCH NO LONGER VALID. Press the **Enter** key to clear this message. See "Selecting an Autoswitch Tray" on page 4-4.

7. Press the **Menu/Exit** key to exit menu mode.

## Changing a Form Name Assigned to a Tray

Forms are the printing media (paper, forms, and transparencies) used in the printer. If there are user-defined forms for specific customer needs (such as preprinted paper), several user-defined forms may use the same form size. Each defined form must have a unique form name.

If you changed the form loaded in a tray, change (or verify) the form name assigned to that tray. If the printer detects a form change the CHECK FORM NAME IN MENU message will be displayed on the operator panel.

You can assign only one form name to a tray at any one time. The side tray handles only letter and A4-size paper. All other trays handle letter, legal, ledger, A3, A4, B4, and B5-size paper.

**Important:** Always adjust the input tray for the form size *before* configuring that tray. Only those form names that match the form size of the current adjusted tray are available for configuration and will be detected by the printer.

To clear the message and change the form name assigned to the tray, do the following:

1. Press the **Enter** key to clear the message.
2. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
3. Press the **Menu/Exit** key to enter menu mode.
4. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
5. Scroll to the tray for which you have changed the loaded form, and press the **Enter** key to make the selection.
6. Scroll to FORM NAME, and press the **Enter** key.
7. Scroll to the desired form name, and press the **Enter** key.
8. The display returns to the submenu FORM NAME.

9. Press the **Menu/Exit** key to exit menu mode.

**Notes:**

1. When the READY SLEEPING message appears and the paper size is going to be changed, press the **Stop** key, and then press the **Start** key. This ensures the host identifies the correct paper size (because the printer was in a sleep state).
2. When loading a new form into a tray, if only one form name is defined for the form size you loaded in the tray, the printer automatically chooses that form name. If several defined form names use the same size as the one you loaded, the message CHECK FORM NAME IN MENU will be displayed. Verify or change the form name assigned to the tray.
3. Once a form name is selected, an asterisk (\*) appears in the display before the selection.

## Selecting an Autoswitch Tray

You can select a tray that will automatically feed paper when the originally-selected tray becomes empty. When an autoswitch tray is assigned to the original tray, you can reload that original tray after it is empty and not interrupt printing. An autoswitch tray is used only when the original tray becomes empty; it is an alternate tray.

To select an autoswitch tray, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
4. Scroll to the original input tray for which you want to assign another tray as the autoswitch tray, and press the **Enter** key to make the selection.  
**Note:** To designate an autoswitch tray, *first select the original tray.*
5. Scroll to AUTOSWITCH, and press the **Enter** key.
6. Scroll to the tray name that you want to designate as the autoswitch tray, and press the **Enter** key. It becomes the autoswitch tray for the tray selected in Step 4.

For example, the following steps allow you to select the side tray as the autoswitch (alternate) tray for the main tray:

**Original tray: Main tray**

**Autoswitch tray: Side tray**

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
4. Scroll to MAIN TRAY, and press the **Enter** key.
5. Scroll to AUTOSWITCH, and press the **Enter** key.

6. Scroll to SIDE TRAY, and press the **Enter** key.

**Notes:**

1. If you change the form name designated to a tray that already has an autoswitch tray selected and the form name is different, then the FORM MISMATCH FOR AUTOSWITCH message appears. Press the **Enter** key to clear this message. Change the form in the autoswitch tray to match the form name designated in the original tray.
2. The autoswitch tray must have the same form name as the original tray. If you choose an autoswitch tray loaded with a different form name, the WRONG FORM IN AUTOSWITCH TRAY message appears. Change the form name for that autoswitch tray to match the original tray, or choose a different autoswitch tray.
3. If you choose an autoswitch tray that is disabled, the AUTOSWITCH TRAY NOT ENABLED message appears. Enable the autoswitch tray or choose a different autoswitch tray. If another one is not chosen, there is no autoswitch tray.
4. If someone changes the form name designated to an autoswitch tray, that tray no longer acts as an autoswitch tray.
5. If no autoswitch tray is selected, printing stops when the original tray is empty.

## Tray Selection Defaults

If the key operator has not configured the trays, the following order of priority is the default. All trays may not be present on your printer.

Priority	Simplex/Duplex
1	Main tray
2	Side tray (option)
3	Upper sub tray
4	Lower sub tray

If the selected tray is not available because it is out of paper or was assigned the incorrect form size, the printer stops printing and a message appears on the operator panel display. See Table 7-1 on page 7-19 for a list of messages and their meanings.

## Print Services Facility (PSF) Tray/Stacker Names

The tray names used by the printer are descriptive to make it easier to identify their location on the printer. However, the PSF program assigns numbers to trays and stackers. When users send print jobs from their workstations to the printer, they may be selecting input and output trays labeled with PSF numbers.

See the following table to determine the correspondence between the PSF input/output bin numbers and the printer tray/stacker names. Remember that the side tray and the 3 000-sheet side stacker are options.

**Note:** Select base stacker for all label printing.

PSF Number	Tray/Stacker Name	Capacity (No. of Sheets)
Trays (Input)		
1	Main tray	2 000
2	Lower sub tray	500
3	Upper sub tray	500
4	Side tray (option)	2 000
Stackers (Output)		
1	Base stacker	500
3	Side stacker	1 500
3	Side stacker	3 000 (option)

---

## Configuring the Stackers

Only the key operator can configure the stackers. The following tasks comprise stacker configuration:

- Enabling and disabling stackers
- Enabling and disabling the offset stacking function
- Setting the autolink function to YES or NO

**Note:** Paper input receptacles are referred to as *trays*. Paper output receptacles are referred to as *stackers*.

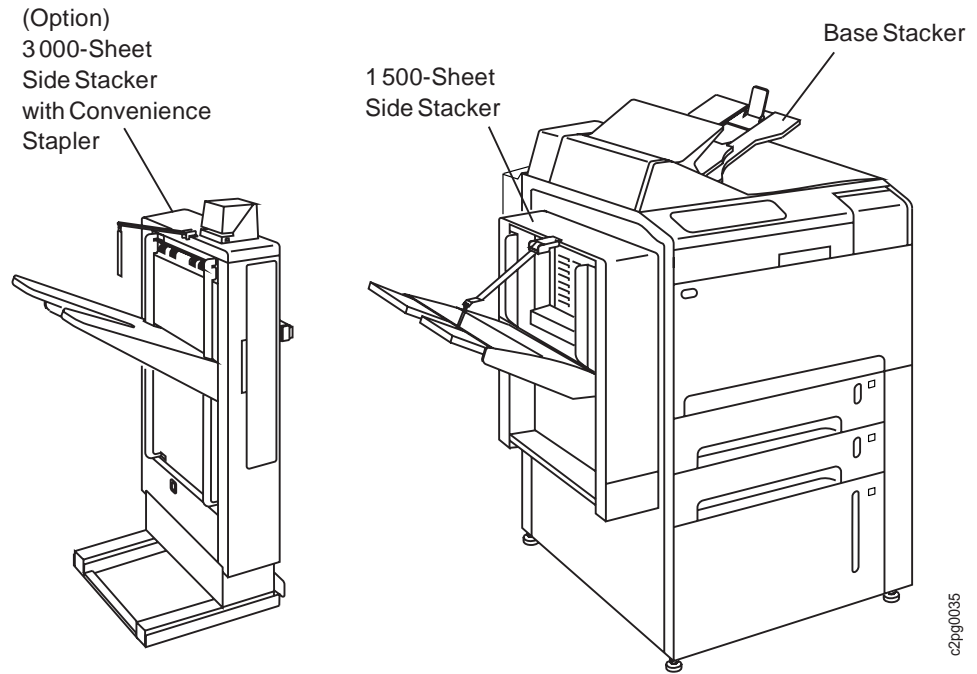
## Stacker Names

The printer has two standard stackers. The base stacker holds up to 500 sheets and the 1 500-sheet side stacker holds up to 1 500 sheets of paper.

If the 3 000-sheet side stacker (option) is installed (in place of the 1 500-sheet side stacker), the side stacker holds up to 3 000 sheets of paper.

All three stackers hold printed paper front-side face-down, and provide a job-offset feature.





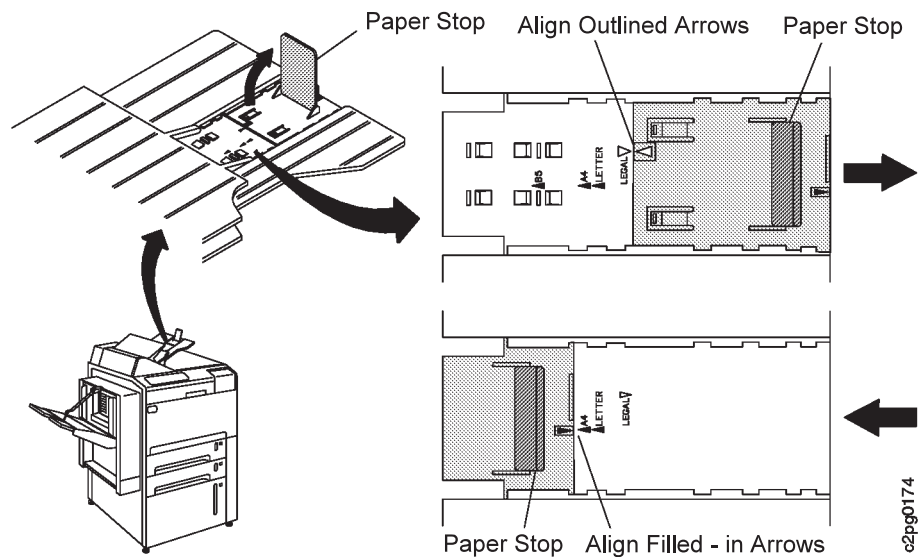
When both stackers are full, the printer stops printing and the operator panel displays a message asking you to clear one of the stackers. See Table 7-1 on page 7-19 for a list of messages and their meanings.

## Adjusting the Stackers

### Adjusting the Base Stacker

To adjust the base stacker for the appropriate paper size do the following:

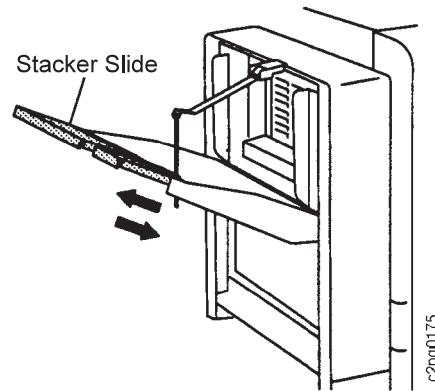
- For B5, A4, and letter paper sizes, lift up on the paper stop and slide it in until it clicks into place. The filled-in arrows must line up.
- For B4, A3, legal, and ledger paper sizes, lift up on the paper stop and slide it out until it clicks into place and the outlined arrows match.



## Adjusting the 1 500-Sheet Side Stacker

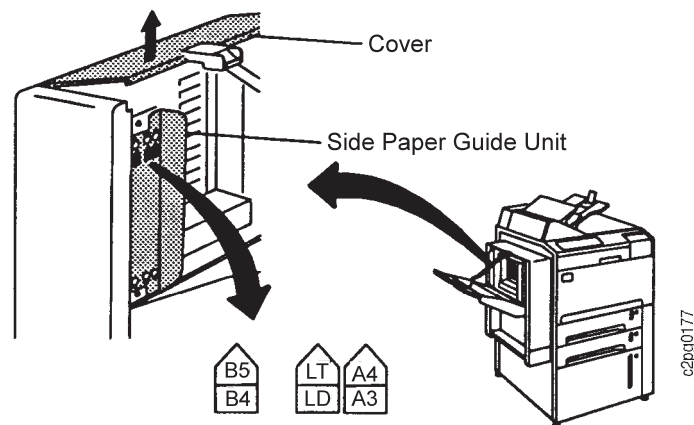
Refer to the figure below each instruction as you adjust the side stacker for the appropriate paper size.

1. For B5, A4, and letter paper sizes, push in the stacker slide until it clicks into place. For B4, A3, legal, and ledger paper sizes, pull out the stacker slide until it clicks into place.

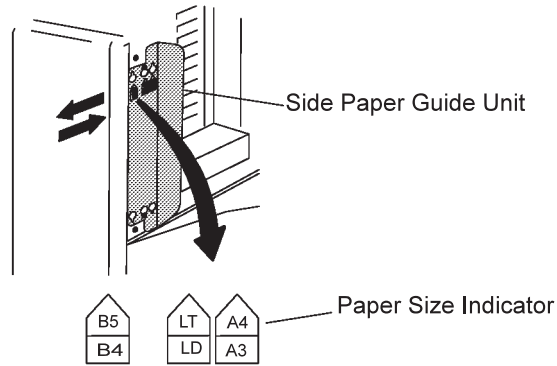


2. If necessary, adjust the side paper guide unit at the top left of the stacker so that it matches the selected paper size. Raise the cover to more easily access the side paper guide unit.

**Note:** If legal-size paper is used, a legal-size paper guide is available. Request it through your customer engineer (CE).



3. Adjust the side paper guide unit by doing the following:
  - a. Loosen the large screw that is above the paper size indicator.
  - b. Loosen the large screw that is at the bottom of the side paper guide unit.
  - c. Move the side paper guide unit up slightly and remove it by positioning the holes over the loosened screws.
  - d. Reposition the side paper guide unit on the other paper size indicator, and slide it down to secure it.



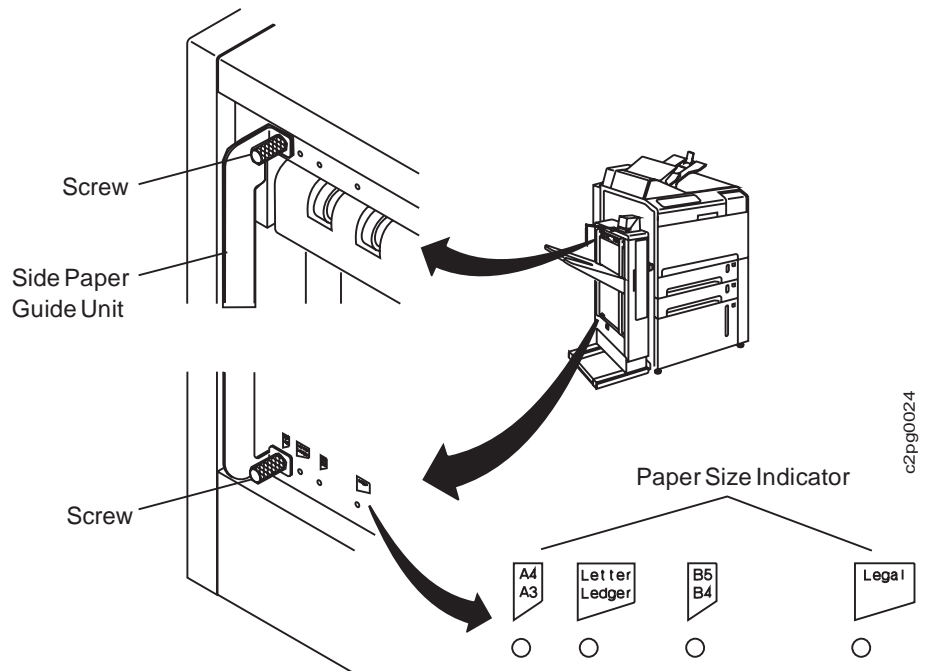
4. Tighten both screws to lock the side paper guide unit in place.
5. Lower the cover.

### Adjusting the 3 000-Sheet Side Stacker (option)

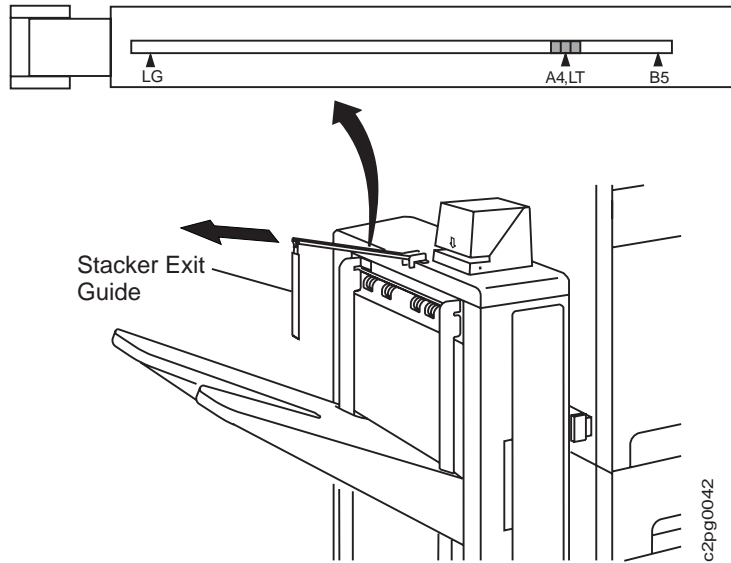
Refer to the paper size indicator located on the lower left side of the stacker to determine the appropriate paper size.

Adjust the side paper guide unit by doing the following:

1. Loosen and remove the large screws located at the top-left and bottom-left side of the stacker.



2. Slide the entire side paper guide unit to the right or left, selecting the appropriate paper size.
3. Insert and tighten both screws to lock the side paper guide unit in place. Start by partially threading one screw, insert and tighten the other screw, then go back and tighten the first screw.
4. Gently pull the stacker exit guide out (away from the printer), selecting the appropriate paper size.



## Enabling or Disabling a Stacker

The key operator can enable or disable either stacker. If a stacker is enabled, the printer can use it. If a stacker is disabled, the printer cannot use it.

**Note:** The side stacker must be disabled when printing labels.

You may want to disable a stacker if it is having problems (for example, frequent paper jams caused by out-of-specification paper).

To enable or disable a stacker do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
4. Scroll to the stacker you want to enable or disable, and press the **Enter** key. Enter the key operator password, if prompted.
5. Press the **Enter** key on ENABLE STATUS.
6. Scroll to ENABLE, and press the **Enter** key to enable the stacker. Scroll to DISABLE, and press the **Enter** key to disable the stacker.
7. Press the **Menu/Exit** key to exit menu mode.

## Stacker Selection Defaults

If the print job does not instruct the printer which stacker to use, the following priority applies.

Priority	Stacker
1	Side stacker
2	Base stacker

If the selected stacker is not available because it is full, the printer stops printing and the STACKER FULL BASE STACKER or STACKER FULL SIDE STACKER message appears on the operator panel. Remove the output from the stacker.

## Offset Stacking

You can configure both stackers so that the offset stacking function is enabled or disabled.

When a stacker has the offset stacking function turned on, the printed pages are offset to separate print jobs.

To enable or disable the offset stacking function, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
4. Scroll to the stacker you want to enable or disable offset stacking, and press the **Enter** key. Enter the key operator password, if prompted.
5. Scroll to OFFSET STACKING, and press the **Enter** key.
6. Scroll to ENABLE, and press the **Enter** key to enable offset stacking. Scroll to DISABLE, and press the **Enter** key to disable offset stacking.
7. Press the **Menu/Exit** key to exit menu mode.

## Autolink Output Stackers

The key operator can autolink the output stackers. When the stackers are autolinked, the printer automatically switches to the other stacker after the first stacker becomes full. The printer continues printing until both stackers are full. You can set autolinking to YES or NO.

The printer selects the order in which the stackers are filled, starting with the side stacker (if installed and enabled). Any stacker that is installed and enabled is used in autolinking. If a stacker is disabled or is not installed, it is not used.

The following table shows the order in which the printer fills the enabled and installed stackers.

Autolink Order	Stacker
1	Side stacker
2	Base stacker

### Selecting Autolinking

To select autolinking, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.

4. Scroll to AUTOLINK OUTPUT STACKERS, and press the **Enter** key. Enter the key operator password, if prompted.
5. Scroll to YES, and press the **Enter** key to select autolinking. Scroll to NO, and press the **Enter** key to deselect autolinking.
6. Press the **Menu/Exit** key to exit menu mode.
7. Empty both stackers before pressing **Start** to continue printing.

**Note:** When using autolinked stackers, be sure to completely empty both stackers before starting or continuing a print job. If a print job is being continued, the pages that are printed after autolinking has been selected will be sent to the first stacker in the autolink order.

### Clearing Autolinked Stackers

When the stackers are autolinked, stacker-specific STACKER FULL messages are displayed as each stacker becomes full. However, the printer stops printing only after both enabled stackers become full. When both stackers are full and the printer stops printing, you can clear the autolinked stackers.

**Note:** Both stackers must be enabled (see “Enabling or Disabling a Stacker” on page 4-10) and autolinked (see “Autolink Output Stackers” on page 4-11) in order for the printer to indicate that both stackers are full.

To clear the autolinked stackers, do the following:

1. Completely empty both stackers. The STACKER FULL messages will clear.
2. Press the **Start** key to continue printing.

**Note:** To ensure job integrity, do not press the **Start** key until both stackers are completely empty. Although the printer does not stack printed output in full stackers, it stacks printed output in partially-full stackers.

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## Configuring the Printer

A key operator selects several choices regarding how the printer functions. Establishing the setup that best suits a particular printing environment involves configuring the printer.

Changes a key operator makes to some printer configuration items take effect only after a printer restart. You are prompted to restart the printer after making such changes. You can restart the printer immediately upon seeing the message or wait until later to do so.

The following table describes items that a key operator can configure. To access these items, select the SETUP main menu item followed by the PRINTER CONFIGURATION submenu item.

Item	Value	Description
AUTOSTART	YES or NO	<p>Indicates whether the printer performs an autostart each time it is powered on.</p> <p>If autostart is set to YES, the printer automatically enables the attachment that was enabled at the time of the last shutdown or restart: the printer then makes itself READY.</p> <p>If autostart is set to NO, the printer does not enable the attachment and will only run internal prints.</p>
RESOLUTION	600 PEL	Resolution is the sharpness of the image.
DUPLEX	ENABLE or DISABLE	Indicates whether two-sided printing is enabled or disabled.
DEFAULT FONT	See "Using the Default Font" on page 4-24.	Indicates which default font is used when no font is designated by the host. Unless you specify otherwise, the default font is Courier Roman Medium 12 pitch (10 point) using code page 500, version 1.
AS/400 BOX DRAW ENHANCEMENT	ON or OFF	Indicates support of the OfficeVision function that allows you to draw boxes with the cursor, and print them as drawn. When ON, the InfoPrint 60 replaces code page 259 with code page 1091 to make the lines continuous when drawn with OfficeVision. When OFF, code page 259 is not replaced and lines drawn with OfficeVision contain breaks.
LOGICAL PAGE INCREMENT	0 PELS to +20 PELS	Indicates the number of pels by which to expand the logical page when the printable page is larger than the logical page (or printed sheet).
CLEAR MEMORY FOR SECURITY	YES or NO	Allows setting of whether residual print data is to be cleared from memory. Clearing memory can result in a delay of up to five minutes before a print job starts. Select YES if a high level of security is required.

Item	Value	Description
BEEPER	ERROR BEEPER  TIMED, CONTINUOUS, or OFF  KEYS BEEPER ON or OFF	Indicates the type of beeper. You can set beeper to sound when the InfoPrint 60 detects intervention is needed or when input keys are pressed. <ul style="list-style-type: none"> <li>You can set the Error beeper to any of the following: <ul style="list-style-type: none"> <li>CONTINUOUS (Beep until any operator panel key is pressed)</li> <li>TIMED (Beep for three minutes, or until a key is pressed, and then stop)</li> <li>OFF (Never beep at all)</li> </ul> </li> <li>You can set the Keys beeper to ON or OFF.</li> </ul>
SLEEP TIME (MINUTES)	1-999 MINUTES or 0 (never sleeps)	Indicates the number of minutes of printer inactivity (no print jobs received, no operator actions) before the fuser turns off. Values 1-999 indicate that the printer goes into a sleep state after the selected number of minutes. A value of 0 indicates that the printer never goes into the sleep state; the fuser remains on.
LANGUAGE	ENGLISH, ESPAÑOL, FRANCAIS, DEUTSCH, PORTUGUÊS, ITALIAN, JAPANESE KATAKANA, NEDERLANDS	Indicates the language used to display operator panel text for general users and key operators.
3935 EMULATION	ON or OFF	This function is used for AS/400 installations.  When turned on, the printer communicates with the host. When turned off, the printer responds as an InfoPrint 60 printer. This emulation is required if the host system does not support the InfoPrint 60.  <b>Note:</b> The InfoPrint 60 will not emulate 3935 function.
PRINT DENSITY	LIGHT, MEDIUM, or DARK	Indicates the degree of print darkness on a printed page. You can choose a lighter print density to add detail to a fine line or darker print density to enhance graphics or images. The recommended setting is MEDIUM. The darker selection uses more toner.



Item	Value	Description
PRINT CURRENT CONFIGURATION	See "Printing the Current Printer Configuration Items" on page 4-17.	Indicates the printer configuration items and their current settings.

## Setting Configuration Items

To configure the printer, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to PRINTER CONFIGURATION, and press the **Enter** key.
5. Scroll to the submenu item you want to configure, and press the **Enter** key.
6. Scroll to the desired value, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
7. If PRESS ENTER TO RESTART NOW appears, press the **Enter** key to restart the printer, or scroll to RETURN and press the **Enter** key to delay the restart. The new setting does not take effect until the printer is restarted.

## Adjusting Print Density

The key operator can adjust the density of the print by changing the PRINT DENSITY setting. This allows you to make the print slightly lighter or darker. The default setting is MEDIUM. Once you change the setting, it stays in effect for all print jobs until you change the setting again.

To change the print density, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to PRINTER CONFIGURATION, and press the **Enter** key.
5. Scroll to PRINT DENSITY, and press the **Enter** key.
6. Scroll to LIGHT, MEDIUM, or DARK. Press the **Enter** key.
7. Press the **Menu/Exit** key to exit menu mode.
8. Press the **Start** key to make the printer READY and to continue printing.

---

## Running Internal Test Prints

Internal test prints consist of information that originates at the printer. The following menu items are internal test prints:

- PRINT HELP PAGE
- PRINTER CONFIGURATION
- PRINT SAMPLES

## Enabling/Disabling an Attachment

An enabled attachment attempts to establish communication with the host. When the current attachment is enabled, the printer is online. When the current attachment is disabled, the printer is OFFLINE and cannot receive data from the host.

Before running internal test prints the printer must be NOT READY and OFFLINE. If the printer is READY or is running, press the **Stop** key to make the printer NOT READY. The key operator must disable the attachment to take the printer OFFLINE. The printer is OFFLINE (disabled) when the **On Line** indicator on the operator panel *is not* lit.

**Note:** To enable or disable an attachment, that attachment must be installed. See “Installing an Attachment” on page 4-19.

To disable an attachment, do the following:

1. Press the **Stop** key (if the printer is READY) to stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the ATTACHMENTS menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to the attachment you are using (for example, TCP/IP Ethernet), and press the **Enter** key.
5. Scroll to ENABLE STATUS, and press the **Enter** key.
6. Scroll to DISABLE to take the printer OFFLINE. Scroll to ENABLE to put the printer online.
7. Press the **Enter** key to make your selection. The DISABLING... or ENABLING... message appears on the display.
8. Press the **Menu/Exit** key to exit menu mode.
9. If you have completed running internal test prints, press the **Start** key to make the printer READY and to continue printing.

### Notes:

1. If the printer is READY and enabled and an attempt is made to run internal test prints, the FUNCTION UNAVAIL STOP PRINTER message appears. The printer must be NOT READY and disabled to run internal test prints.
2. If the printer is READY and disabled and an attempt is made to run internal test prints, the FUNCTION UNAVAIL STOP PRINTER message appears. The printer must be NOT READY and disabled to run internal test prints.

3. If the printer is NOT READY and enabled and an attempt is made to run internal test prints, the FUNCTION UNAVAILABLE message will be displayed. The printer must be NOT READY and disabled to run internal test prints.
4. When AUTOSTART is selected (in the SETUP menu), the previous attachment is enabled and the printer is made READY whenever the printer is powered on or restarted.

## Printing the Help Page

You can print the help page and keep it near the printer for quick reference. It contains:

- A menu tree (a picture of the operator panel menus)
- A labeled picture of the printer
- Instructions on basic printer tasks

**Note:** The printer must be NOT READY and OFFLINE (disabled) to print the help page. See “Enabling/Disabling an Attachment” on page 4-16.

To print the help page, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. The HELP message appears on the display. Press the **Enter** key.
4. The PRINT HELP PAGE message appears on the display.
5. Press the **Enter** key. The PRESS ENTER TO PRINT message appears.
6. Press the **Enter** key again. The PRINTING... message will be displayed and the help page prints.
7. Press the **Menu/Exit** key to exit menu mode.
8. Enable the printer attachment. See “Enabling/Disabling an Attachment” on page 4-16.

**Note:** If you want to change the defaults for quantity, tray, stacker, and duplex, scroll to these items and change the settings. Refer to “Running Print Samples” on page 4-18 for step-by-step instructions.

## Printing the Current Printer Configuration Items

You can print a page that lists the printer configuration items and their current settings.

**Note:** The printer must be NOT READY and OFFLINE (disabled) to print the current printer configuration. See “Enabling/Disabling an Attachment” on page 4-16.

To print the printer configuration, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.

4. Scroll to PRINTER CONFIGURATION, and press the **Enter** key.
5. Scroll to PRINT CURRENT CONFIGURATION, and press the **Enter** key.
6. If you want to specify the number of copies, scroll to QUANTITY, and press the **Enter** key. Use the keyboard to indicate the number of copies.
7. If you want to specify the input tray desired, scroll to INPUT TRAY, and press the **Enter** key. Scroll to the desired tray, and press the **Enter** key to make the selection.
8. If you want to specify the stacker desired, scroll to STACKER, and press the **Enter** key. Scroll to the desired stacker, and press the **Enter** key to make the selection.
9. If you want to specify duplex or simplex, scroll to DUPLEX, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key.
10. Scroll to PRESS ENTER TO PRINT, and press the **Enter** key. The PRINTING... message will be displayed and the printer configuration prints.
11. Press the **Menu/Exit** key to exit menu mode.
12. Enable the printer attachment. See “Enabling/Disabling an Attachment” on page 4-16.

## Running Print Samples

You can run print samples to test print quality. Print samples are pages of text, or all white or solid black areas. The printer generates these pages, not the data stream.

You may choose ALL SAMPLES, which prints a copy of all print samples (PRIMARY, BAR CODE, ALL WHITE, LETTER, and ALL BLACK) or you may choose only a single type of print sample.

Choosing ALL BLACK prints four copies of the all black print sample.

### Notes:

1. Run the ALL BLACK print samples in simplex mode only.
2. The printer must be NOT READY and OFFLINE (disabled) to run print samples. See “Enabling/Disabling an Attachment” on page 4-16.
3. Do not run ALL BLACK more than two times. Run a different print sample before running ALL BLACK again.

To print the samples, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Press the **Enter** key on PRINT SAMPLES.
5. Scroll to the type of print samples you want to print, and press the **Enter** key to make the selection.

6. If you want to specify the number of copies, scroll to QUANTITY, and press the **Enter** key. Use the keyboard to indicate the number of copies. (ALL BLACK always prints four copies - run in simplex mode only.)
7. If you want to specify the input tray, scroll to INPUT TRAY, and press the **Enter** key. Scroll to the desired tray, and press the **Enter** key. Press the **Enter** key again to return to the submenu.
8. If you want to specify the stacker, scroll to STACKER, and press the **Enter** key. Scroll to the desired stacker, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
9. If you want to specify duplex or simplex, scroll to DUPLEX, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
10. Scroll to PRESS ENTER TO PRINT, and press the **Enter** key to start printing the samples.
11. Press the **Menu/Exit** key to exit menu mode.
12. Enable the printer attachment when you are finished running print samples. See “Enabling/Disabling an Attachment” on page 4-16.

---

## Configuring Attachments

The customer engineer configures communications and cable attachments at the time of printer installation. However, you may wish to change the attachment being used or the current attachment configuration. Change this configuration *only* when asked to do so by your system administrator. Only a key operator can change the attachment configuration.

**Note:** Changing the attachment configuration may make your printer inoperable. Consult the *IBM InfoPrint 60; 3130, 3160, and 3935 Advanced Function Printers: Attachment Configuration Handbook* for information on how to configure attachments and to set up your system.

The InfoPrint 60 printer supports the following attachments:

- TCP/IP Ethernet
- TCP/IP Token Ring

Each attachment has configuration items specific to that attachment.

## Installing an Attachment

The system administrator physically installs an attachment (cable or communications). However, you indicate to the printer that the attachment has been physically installed.

**Notes:**

1. Perform the following procedure each time a different attachment is installed.
2. Additional hardware may be required to change the attachments. Work with an IBM customer engineer and marketing representative to determine the requirements. Some changes require a feature code.

To install an attachment, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the ATTACHMENTS menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to the attachment you want to configure, and press the **Enter** key to make the selection.
5. Scroll to CONFIGURATION, and press the **Enter** key.
6. Scroll to INSTALL STATUS, and press the **Enter** key.
7. Scroll to INSTALLED, and press the **Enter** key.
8. Press the **Menu/Exit** key to exit menu mode.
9. Press the **Start** key to make the printer READY and continue printing.

## Setting Configuration Parameters

To configure an attachment, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the ATTACHMENTS menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to the attachment you want to configure, and press the **Enter** key to make the selection.
5. Scroll to CONFIGURATION, and press the **Enter** key.
6. For each parameter, select from the choices or use the keyboard to enter the desired value.

## Printing the Attachment Configuration

You can print a page that lists the attachment configuration items and their current settings.

**Note:** The printer must be NOT READY and OFFLINE (disabled) to print the attachment configuration. See “Enabling/Disabling an Attachment” on page 4-16.

To print the attachment configuration, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the ATTACHMENTS menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to the attachment for the configuration you want to print. Press the **Enter** key.
5. Scroll to CONFIGURATION, and press the **Enter** key.
6. If you want to specify the number of copies, scroll to QUANTITY, and press the **Enter** key. Use the keyboard to specify the number of copies.

7. If you want to specify the input tray, scroll to INPUT TRAY, and press the **Enter** key. Scroll to the desired tray, and press the **Enter** key. Press the **Enter** key again to return to the submenu.
8. If you want to specify the stacker, scroll to STACKER, and press the **Enter** key. Scroll to the desired stacker, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
9. If you want to specify that the information be printed in duplex, scroll to DUPLEX, and press the **Enter** key. Scroll to YES, and press the **Enter** key. Press the **Enter** key again to return to the submenu.
10. Scroll, if necessary, to PRESS ENTER TO PRINT, and press the **Enter** key to start printing the current configuration.
11. Press the **Start** key to make the printer READY and continue printing.

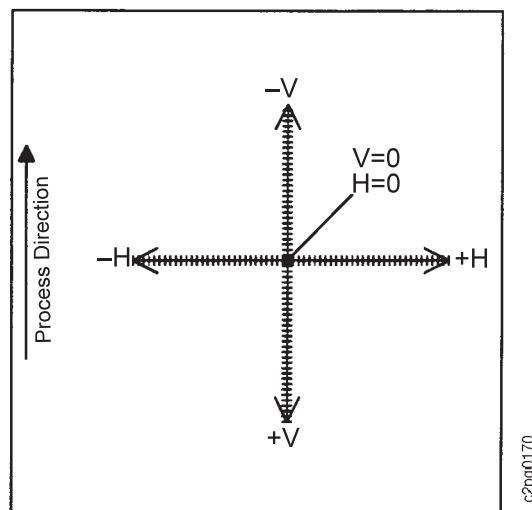
---

## Adjusting the Print

You can move text on the printed page to accommodate various line lengths and page lengths. This is *Registration*; the accurate positioning of an entity relative to a reference. For example, when you process preprinted forms, the registration is good if the new image printed by the printer aligns correctly with the preprinted image. Print that extends beyond box edges and text that overlaps other text are examples of poor registration.

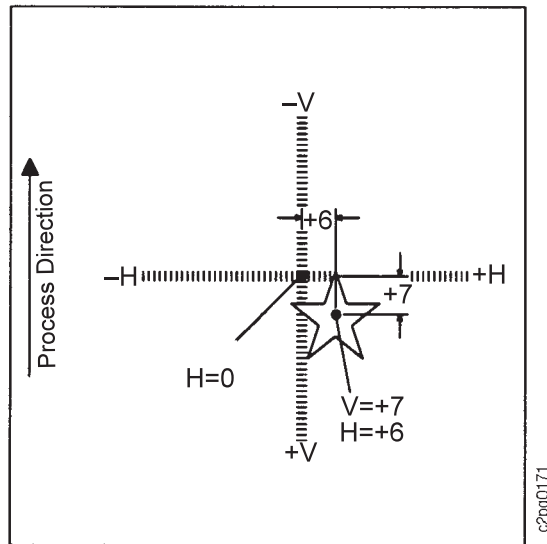
An image or text is registered to the edges of the paper. Some preprinted forms may not align with the factory-set default registration. Adjust the print to align the printer registration to the form. All selections required for this are in the ADJUST PRINT submenu of the SETUP main menu. Key operator authorization is required.

The figure below illustrates the factory default point of origin (vertical=0, horizontal=0) and the range of possible adjustments (shown much larger than actual size). The maximum adjustment in any direction from this position is 999 pels (approximately 4 inches or 105 millimeters).



Imagine that your sample page shows that the text is printing too high and too far to the left in relation to the preprinted form. To correct this situation, increase the

vertical and horizontal positions (to move the point of origin down and to the right). The figure below shows the result of changing the vertical position to +7 and the horizontal position to +6.



## Determining If You Need to Adjust Print

Before making any adjustments, determine if you need to adjust the print. That is, run a print test to see if you need to change the point of origin on a page by adding to, or subtracting from, the vertical and horizontal starting positions.

**Note:** This procedure assumes a defined form is loaded in the printer, the form is assigned to the tray in TRAYS/STACKERS, and a job is waiting to be run. The test pages printed consists of the next pages in the printer data stream. If no job is waiting, no pages print.

To run a test print to determine if the print needs to be adjusted, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to ADJUST PRINT, and press the **Enter** key.
5. Scroll to the form you want to adjust, and press the **Enter** key.
6. Scroll to the side you want to adjust, and press the **Enter** key.
7. If you want to specify the number of pages desired for the print test, scroll to NUMBER OF PAGES, and press the **Enter** key. Use the keyboard to specify the number of copies.
8. If you want to specify the stacker, scroll to STACKER, and press the **Enter** key. Scroll to the desired stacker, and press **Enter** to make the selection. Press the **Enter** key again to return to the submenu.



9. Run a print test of the current setting. Have a job waiting to run a print test. To start the print test, scroll to PRESS ENTER TO PRINT, and press the **Enter** key.
10. Look at the pages just printed to determine if adjustments are necessary. If needed, determine how far to adjust the print position.
11. Press the **Menu/Exit** key to exit menu mode.
12. Press the **Start** key to make the printer READY and continue printing.

## How to Adjust the Print

The following procedure assumes that a defined form is loaded in the printer and that a job is waiting to be run.

### Notes:

1. If you have just run a print test as instructed above, start at Step 7 of the following instructions.
2. If you are printing a duplex job, each side may have unique horizontal and vertical adjustment amounts.

To adjust the print, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to ADJUST PRINT, and press the **Enter** key.
5. Scroll to the form you want to adjust, and press the **Enter** key.
6. Scroll to the side you want to adjust, and press the **Enter** key.
7. To make a horizontal adjustment, scroll to HORIZONTAL (PELS), and press the **Enter** key. The keyboard appears. The keyboard displays the value entered when this form was last adjusted, or the factory-set default value of 0 if this form has never been adjusted.

8. Use the keyboard to clear the current value. Enter the new value. Press the **Enter** key when <OK> appears. The range is -999 to 999.

**Note:** When you increase the horizontal value by 1, you move the origin right 1 pel. When you decrease the horizontal value by 1, you move the origin left 1 pel. 10 pels is equivalent to about 1 millimeter.

9. To make a vertical adjustment, scroll to VERTICAL (PELS), and press the **Enter** key. The keyboard appears. The keyboard displays the value entered when this form was last adjusted, or the factory set default value of 0 if this form has never been adjusted.

10. Use the keyboard to clear the current value. Enter the new value. Press the **Enter** key when <OK> appears. The range is -999 to 999.

**Note:** When you increase the vertical value by 1, you move the origin down 1 pel. When you decrease the vertical value by 1, you move the origin up 1 pel. 10 pels equals about 1 millimeter.

11. If you want to specify the number of pages desired for the print test, scroll to NUMBER OF PAGES, and press the **Enter** key. Use the keyboard to indicate the number of copies.
12. If you want to specify the stacker, scroll to STACKER, and press the **Enter** key. Scroll to the desired stacker, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
13. Run a print test of the new setting. Have a job waiting to run a print test. To start the print test, scroll to PRESS ENTER TO PRINT, and press the **Enter** key.
 

**Note:** The adjusted test pages printed consist of the next pages in the printer data stream. If no job is waiting, no pages print.
14. If the registration is still not correct, repeat Steps 7-13 until you are satisfied with the registration.
15. If the registration is satisfactory, scroll to RETURN, and press the **Enter** key. The printer stores the horizontal and vertical adjustment values.
 

**Note:** When you adjust the print position for a user-defined form, the InfoPrint 60 printer automatically stores the new point of origin as part of the current definition of the form.
16. Press the **Menu/Exit** key to exit menu mode.
17. Press the **Start** key to make the printer READY and continue printing.

---

## Using the Default Font

If a print job does not specify a font, the printer uses a default font. This font is defined by the following:

Code Page	Determines the identification of character set elements.
Font Typeface	Sets the font typeface (font family).
Font Style	Sets the style (medium, italics, bold).
Font Size	Sets the number of characters per inch (or point size, for proportional fonts).

The default font for the InfoPrint 60 is Courier Roman Medium, 12 pitch (10 point), using code page 500, version 1.

## Code Pages

Key operators can change the default font by selecting from the code pages in the following list.

Code Page	Description
037	US, Canada, Netherlands, Portuguese
038	US English ASCII
260	Canadian French

Code Page	Description
273	Austrian/German
274	Belgian
277	Danish/Norwegian
278	Finnish/Swedish
280	Italian
281	Japanese
284	Spanish
285	UK English
286	Austrian/German (Alternate)
287	Danish/Norwegian (Alternate)
288	Finnish/Swedish (Alternate)
290	Japanese/Katakana
297	French
420	Arabic
423	Greek
424	Hebrew
500	Belgian Swiss/International
870	Latin 2 Multilingual
871	Icelandic
875	Greek
880	Cyrillic
892	OCR - A
893	OCR - B
905	Turkish
1026	Turkish

## Setting the Default Font

Always choose the code page before selecting the default font. The font typeface, style, and size are based on the selected code page.

To set the default font, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to PRINTER CONFIGURATION, and press the **Enter** key.
5. Scroll to DEFAULT FONT, and press the **Enter** key.
6. Scroll to CODE PAGE, and press the **Enter** key.

7. Scroll to the desired code page number, and press the **Enter** key to make the selection.
8. Scroll to FONT TYPEFACE, and press the **Enter** key.
9. Scroll to the desired typeface, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
10. Scroll to FONT STYLE, and press the **Enter** key.
11. Scroll to the desired style, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
12. Scroll to FONT SIZE (CPI), and press the **Enter** key.
13. Scroll to the desired size, and press the **Enter** key to make the selection.
14. Press the **Menu/Exit** key to exit menu mode.
15. Press the **Start** key to make the printer READY and to continue printing.

---

## Defining Form Names

Every type of printing media such as paper, preprinted forms, or transparencies must be defined to the printer in the DEFINE FORMS menu. Each paper type (size, color, weight) has a unique form name. Some form names were included at the time of manufacture. Key operators can define new form names to meet specific user needs. For example, users might have several preprinted forms, each with a unique form name. The paper size may be the same on each preprinted form, but the preprinted text and graphics may be different.

Before you can load a form in the printer, first define that form. The definition of the form consists of:

- Form name
- Form size
- Duplex (two-sided)
- Paper orientation: edge sensitivity and side sensitivity (for an explanation see "Positioning Preprinted and Prepunched Paper" on page 5-16).

When you select DEFINE FORMS in the SETUP menu, you can view, add, modify, or delete forms.

**Note:** Only the forms that are defined in DEFINE FORMS appear in the lists of available forms to be loaded into each tray (in the TRAYS/ STACKERS menu). For example, you define a form with the form name INVOICE and the form size 8.5 x 11 IN (LETTER). INVOICE appears in the list of forms that can be loaded for any tray adjusted for a letter-size form. If you delete the form INVOICE, it will not appear in the lists of forms for any tray.

## Creating a New Form Name

Add a new form name any time you plan to load a form that has not been defined for the printer.

To add a new form name, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.

2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to DEFINE FORMS, and press the **Enter** key.
5. Press the **Enter** key on ADD FORM NAME. The keyboard appears.
6. Use the keyboard to enter the new name (up to 16 characters). You can choose any unique descriptive or numeric name. Press the **Enter** key on <OK> when you finish entering the form name.
7. An ADDING FORM message will display momentarily, then the ADD FORM NAME message returns to the display.
8. Scroll to VIEW/MODIFY FORM, and press the **Enter** key. A list of all currently-defined forms appears.
9. Scroll to the form name just added, and press the **Enter** key.
10. Press the **Enter** key on FORM SIZE.  
**Note:** The default for each new form parameter is indicated by an asterisk (\*).
11. Scroll to the form size desired, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
12. Scroll to DUPLEX, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key to make the selection. Selecting YES defines the form as two-sided (can be printed on both sides). Selecting NO defines it as simplex (can be printed on one side only). Press the **Enter** key again to return to the submenu.
13. Scroll to PAPER ORIENTATION, and press the **Enter** key.
14. Press the **Enter** key on EDGE SENSITIVITY. Scroll to YES or NO, and press the **Enter** key to make your selection. If the form is a prepunched form, you may wish to set EDGE SENSITIVITY to YES. When EDGE SENSITIVITY is set to YES, the printer rotates the image 180° before printing it on the page. Press the **Enter** key again to return to the submenu.  
**Note:** For duplex jobs only, with DUPLEX set to YES (Step 12) scroll to SIDE SENSITIVITY, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key to make your selection. If the form is a preprinted form, you may wish to set SIDE SENSITIVITY to YES. When SIDE SENSITIVITY is set to YES on simplex jobs, the printer prints a blank side-two for each page. Therefore, these simplex print jobs run at half speed.
15. Press the **Enter** key to return to the submenu.
16. Press the **Menu/Exit** key to exit menu mode.
17. Press the **Start** key to make the printer READY and continue printing.

## Modifying a Form Name

The current settings for each item are indicated by an asterisk (\*).

**Note:** Standard forms are already defined when the printer comes from the factory, and cannot be changed.

To modify a form name, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to DEFINE FORMS, and press the **Enter** key.
5. Scroll to VIEW/MODIFY FORM, and press the **Enter** key. A list of all currently defined forms appears.
6. Scroll to the form name you wish to modify, and press the **Enter** key.
7. Press the **Enter** key on FORM SIZE.
8. Scroll to the form size desired, and press the **Enter** key to make the selection. Press the **Enter** key again to return to the submenu.
9. Scroll to DUPLEX, and press the **Enter** key. Scroll to YES or NO and press **Enter** to make the selection. Selecting YES defines the form as two-sided (can be printed on both sides). Selecting NO defines it as simplex (can be printed on one side only). Press the **Enter** key again to return to the submenu.
10. Scroll to PAPER ORIENTATION, and press the **Enter** key.
11. Scroll to EDGE SENSITIVITY, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key. If the form is a prepunched form, you may wish to set EDGE SENSITIVITY to YES. When EDGE SENSITIVITY is set to YES, the printer rotates the image 180° before printing it on the page. Press the **Enter** key again to return to the submenu.  
**Note:** For duplex jobs only, with DUPLEX set to YES (Step 9) scroll to SIDE SENSITIVITY, and press the **Enter** key. Scroll to YES or NO, and press the **Enter** key. If the form is a preprinted form, you may wish to set SIDE SENSITIVITY to YES. When SIDE SENSITIVITY is set to YES on simplex jobs, the printer prints a blank side two for each page. Therefore, these simplex print jobs run at half speed.
12. Press the **Enter** key to return to the submenu.
13. Press the **Menu/Exit** key to exit menu mode.
14. Press the **Start** key to make the printer READY and continue printing.

## Deleting a Form Name

You may wish to delete a form that is no longer being used. Deleting a form removes it from the FORM NAME lists under the TRAYS/STACKERS menu.

To delete a form, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to DEFINE FORMS, and press the **Enter** key.
5. Scroll to DELETE FORM, and press the **Enter** key.

6. Scroll to the form name you wish to delete, and press the **Enter** key. PRESS ENTER TO DELETE appears.
7. Press the **Enter** key to delete the selected form.  
**Note:** To avoid deleting the form when PRESS ENTER TO DELETE appears, scroll to RETURN, and press the **Enter** key.
8. Press the **Menu/Exit** key to exit menu mode.
9. Press the **Start** key to make the printer READY and continue printing.

## Checking the Current Definition of a Form Name

To view the current definition of a particular form name, do the following:

1. Press the **Stop** key (if printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to DEFINE FORMS, and press the **Enter** key.
5. Scroll to VIEW/MODIFY FORM, and press the **Enter** key. A list of all currently-defined forms appears.
6. Scroll to the form name you wish to view, and press the **Enter** key.
7. Press the **Enter** key on FORM SIZE. The current selection will be displayed with an asterisk (\*) next to it. Press the **Enter** key again to return to the submenu.
8. Scroll to DUPLEX, and press the **Enter** key. The current selection will be displayed with an asterisk (\*) next to it. YES defines the form as duplex (can be printed on both sides). NO defines it as simplex (can be printed on one side only). Press the **Enter** key again to return to the submenu.
9. Scroll to PAPER ORIENTATION, and press the **Enter** key.
10. Scroll to EDGE SENSITIVITY, and press the **Enter** key. The current selection appears with an asterisk (\*) next to it. When EDGE SENSITIVITY is set to YES, the printer rotates the image 180° before printing it on the page. Press the **Enter** key again to return to the submenu.  
**Note:** For duplex jobs only, scroll to SIDE SENSITIVITY, and press the **Enter** key. The current selection appears with an asterisk (\*) next to it. When SIDE SENSITIVITY is set to YES on simplex jobs, the printer prints a blank side two for each page. Therefore, these simplex print jobs run at half speed.
11. Press the **Enter** key to return to the submenu.
12. Press the **Menu/Exit** key to exit menu mode.
13. Press the **Start** key to make the printer READY and continue printing.





---

## Chapter 5. Printing and Paper Handling

This chapter describes the paper handling and printing function of the printer.

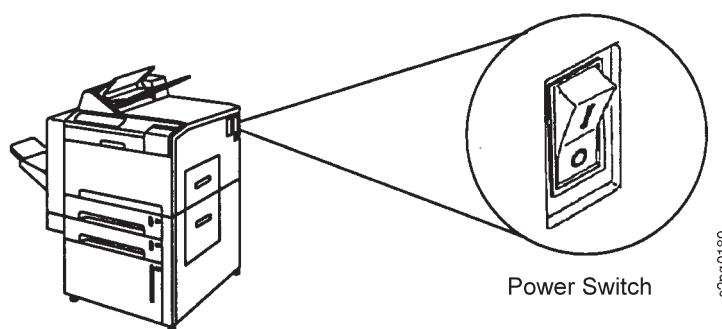
Instructions are included for the following operations:

- Powering on and off the printer
- Powering on and off the 3 000-sheet side stacker (option)
- Shutting down and restarting the printer
- Reading status messages
- Starting print jobs
- Interrupting printing
- Canceling print jobs
- Selecting paper
- Loading paper
- Loading labels
- Positioning preprinted and prepunched paper

---

### Powering On and Off the Printer

Turn the printer on (power on) and off (power off) using the power switch on the right side of the printer. The symbols on the switch display the characters (O) for off and (I) for on.



### Powering On

Press the power switch (I) to power on the printer. When the printer is powered on, it goes through a power-on sequence that takes approximately 5 minutes. During the power-on sequence, the printer runs a series of internal tests.

While the printer is running hardware diagnostics, numbers between **200** and **299** appear on the operator panel. A delay of several minutes occurs after **299** appears. Then the printer processes its internal computer programs, with 4-digit numbers

appearing on the display. The **Power** indicator light blinks until the display reads **0090**, then the **Power** indicator light goes solid.

When the power-on sequence has finished, one of the following messages appears (unless there is a printer error):

READY	If the autostart feature has been selected in the printer configuration.
NOT READY	If the autostart feature has not been selected in the printer configuration.

## Powering Off

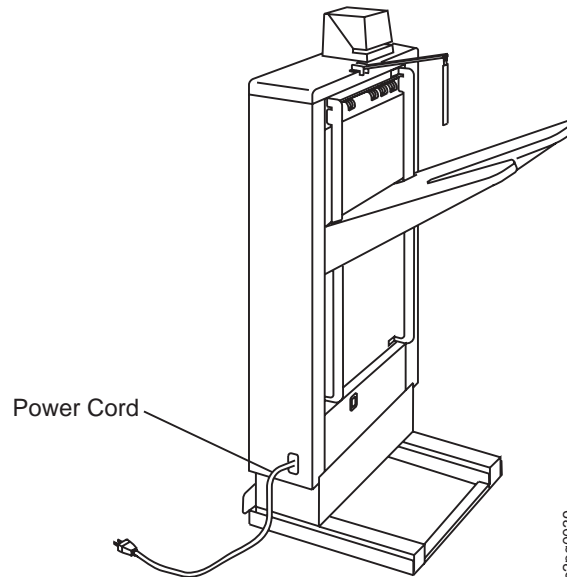
**Attention: Failure to shut down the printer before powering off may damage the internal software.**

Before you power off the printer, always shut it down. Shutdown the printer from the SYSTEM SHUTDOWN menu. Do not power off the printer until the message SHUTDOWN DONE-POWER OFF appears. See “Shutting Down and Restarting the Printer” on page 5-3.

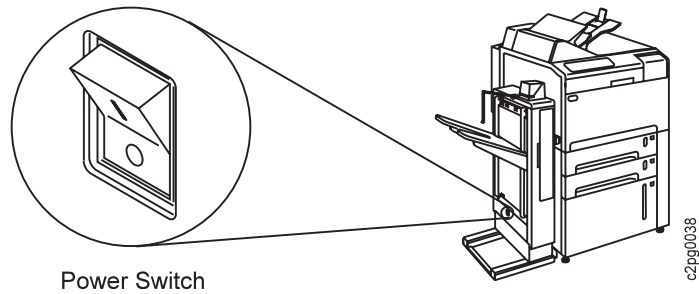
---

## Plugging In and Powering On the 3 000-Sheet Side Stacker (option)

The side stacker has a power cord. The power cord must be plugged-in for the side stacker to run. The power cord location is shown in the following drawing.



Ensure the side stacker is plugged in, and power on the stacker. The symbols on the switch display the characters (O) for off and (I) for on. See drawing below for location.



---

## Shutting Down and Restarting the Printer

Conditions emerge that require a shutdown or restart of the printer. For example, the printer does not accept a command, printer attachments have changed, or you want to power off the printer. Both users and key operators can shutdown or restart the printer.

### Shutdown

A shutdown closes all active functions, disables communication attachments, and stops all programs. A power off and power on is required to start the printer again.

**Attention: Failure to shut down the printer before powering off may damage the internal software.**

To shutdown and power off the printer, do the following:

1. Press the **Stop** key to make the printer NOT READY (you may need to press the **Stop** key twice).
2. Press the **Menu/Exit** key to enter menu mode. HELP appears.
3. Scroll to SYSTEM SHUTDOWN, and press the **Enter** key. PRESS ENTER TO RESTART appears.
4. Scroll to PRESS ENTER TO SHUTDOWN, and press the **Enter** key to begin the shutdown.
5. The SHUTTING DOWN PLEASE WAIT... message will be displayed.
6. Wait for the SHUTDOWN DONE-POWER OFF message to be displayed before you power off the printer.
7. Press the power switch (on the right side of the printer) to the off (O) position to power off the printer.

### Restart

A restart is used, for example, when attachments or configurations have changed or you changed the font style. A restart processes all new information that has changed.

To restart, instead of powering off the printer, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode. HELP appears.

3. Scroll to SYSTEM SHUTDOWN, and press the **Enter** key.
4. PRESS ENTER TO RESTART appears. Press the **Enter** key to begin the restart.
5. Wait for the restart procedure to finish. If NOT READY appears, press the **Start** key to make the printer READY, so any pending jobs in the print queue begin printing.

**Note:** If the **On Line** indicator light on the operator panel is not lit, the printer attachment may need to be enabled. Contact the key operator to enable the attachment.

---

## Reading Status Messages

The following messages appear on the operator panel. These messages do not indicate errors. They simply give information about the current printer status. Recommended user actions follow each explanation.

Message	User Action
READY	The printer is ready to receive information from a host or network if an attachment is online. No user action is required.
NOT READY	The printer is in a stopped mode and cannot print information from a host or network. Press the <b>Start</b> key to make the printer READY. The printer starts to print if a print job is in the print queue and the attachment is online.
RECEIVING	The printer is receiving information from a host or network.
PRINTING	The printer is printing.
WARMING UP	The printer is warming up. The printer begins printing in 1 to 5 minutes if the printer is READY, the attachment is enabled (see "Enabling/Disabling an Attachment" on page 4-16), and if print jobs are in the print queue.
SLEEPING	The printer is in sleeping mode, which means the fuser has turned off due to inactivity. The fuser warms up when the printer receives a print job or if the printer is in the NOT READY state when the <b>Start</b> key is pressed. See "Configuring the Printer" on page 4-12.
TRACING	The printer is ready to print or is printing. The control unit is tracing an application or attachment. The tracing operation may slow down throughput and should be turned off when it is not needed. Contact the key operator or customer engineer if you think the tracing function was left on in error.
NO HOST CONNECT	The host computer has not established connection to the printer. Contact your system administrator or network administrator.
HOST APP OFF	The host has not started a necessary application. Contact your system administrator.

To scroll to see other messages (if present), press the **Scroll Down** key to display the messages.

## Clearing Status Messages

Status messages appear as needed while the printer is printing. To clear a status message, press the **Enter** key.

For information on handling messages that require action, refer to Table 7-1 on page 7-19.

---

## Starting Print Jobs

To start print jobs, do the following:

1. Clear any existing error conditions by pressing the **Enter** key after performing the recovery action (listed in Table 7-1 on page 7-19).
2. Press the **Start** key. Any pending jobs in the print queue begin printing.

---

## Interrupting Printing

You can temporarily stop printing at any time, to load paper, perform a cleaning procedure, and so forth.

If you run internal test prints the printer must be NOT READY and OFFLINE. See “Running Internal Test Prints” on page 4-16.

**Note:** Interrupting the printing of an internal print (help page, printer configuration, print samples) ends the job. The display returns to the previous submenu item.

To interrupt printing, do the following:

1. Press the **Stop** key. The printer finishes printing the current page.
2. Perform the necessary intervention.
3. Press the **Start** key to continue printing. The printer recovers the interrupted job.

---

## Canceling Print Jobs

You can cancel a print job that was sent to the printer once that print job has started printing. To cancel a print job, do the following:

1. Press the **Stop** key to stop the printer.
2. Check the stacker after all sheets have been ejected.  
**Attention: If the print job has finished printing, do not cancel printing or the next print job will be canceled.**
3. If the print job has started but has not yet finished printing, press the **Cancel Print** key.
4. Press the **Enter** key on CONFIRM CANCEL. The print job will be canceled. If you do not want to cancel, press the **Scroll Down** key to display IGNORE CANCEL, and press the **Enter** key. The print job will not be canceled.
5. Press the **Start** key to continue printing.

---

## Selecting Paper

Printing on paper that does not comply with the paper specifications may result in paper jams and print quality degradation. The InfoPrint 60 uses standard white paper, pastel-colored paper, prepunched or drilled paper, preprinted paper, cardstock, security paper, and some labels. It supports the following standard paper sizes:

- A4 (210 x 297 mm)
- Letter (8.5 x 11 in.)
- Legal (8.5 x 14 in.)
- B4 (257 x 364 mm)
- Ledger (11 x 17 in.)
- A3 (297 x 420 mm)
- B5 (182 x 257 mm)

Xerographic paper is required to satisfy various electrical, heat, and mechanical characteristics. IBM recommends that only high-quality xerographic paper be used and that all materials be tested in your InfoPrint 60 before purchasing large quantities.

Refer to the *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*, for additional specifications on paper, labels, and pretesting.

## Paper Parameters

The following table summarizes recommendations that can help you and your paper supplier choose paper for your InfoPrint 60.

Paper Parameter	Recommendation
Paper grade	No. 1 or No. 4 Xerographic
Fiber composition	Preferred: 100% chemical wood pulp Acceptable: Recycled or with cotton content
Color	White or pastel colors
Ash content	18% maximum
Filler	Kaolin or china clay (aluminosilicate) or calcium carbonate Titanium dioxide or magnesium silicate may be added to improve brightness
Grain direction	Parallel to the long dimension (grain long)
Cutting method	Rotary precision cut (Lennox, Will, or equivalent)
Cutting tolerances	Length and Width: $\pm 0.787$ mm ( $\pm 0.031$ in.) Squareness: All corners $90^\circ \pm 0^\circ 6'$
Basis-weight range	Preferred: 75g/m <sup>2</sup> (20-lb bond) Acceptable: 64 - 160g/m <sup>2</sup> (17 - 42 lb bond) and 110 lb index paper (200g/m <sup>2</sup> )
Caliper	20 - 24 lbs (75 - 90g/m <sup>2</sup> ): 3.5 - 5.0 mils (90 - 127 $\mu$ m) 17 - 19 lbs (64 - 72g/m <sup>2</sup> ): 3.2 - 4.0 mils (81 - 102 $\mu$ m)

Paper Parameter	Recommendation
Smoothness (Sheffield)	100-200 Sheffield units 75 - 90 g/m <sup>2</sup> (20 - 24 lbs)
Porosity (Gurley)	10 sec/100 ml minimum
Coefficient of static friction	0.35 - 0.62
Surface sizing	Starch-do not use synthetic surface sizing
Internal sizing	Acid rosin or synthetic (alkylketene dimer or alkyl-succinic anhydride)
Stiffness (Tabor)	Machine direction: 1.7 minimum Cross direction: 0.8 minimum
Moisture content	3.4 - 5.5%
Surface resistivity	5x10 <sup>9</sup> to 1x10 <sup>12</sup> ohms

## Label Parameters

The InfoPrint 60 also prints in simplex mode on some paper-faced, self-sticking, adhesive-backed labels. Using labels may cause more problems than printing on xerographic paper. Therefore, high quality-control is required to use labels for xerography. IBM recommends that you test a sample of labels in your InfoPrint 60 before purchasing large quantities to ensure reliable performance. Remember, all labels must be sent to the base stacker.

Use the following parameters when purchasing labels:

Label Parameter	Recommendation
Total basis weight	280 g/m <sup>2</sup> maximum
Caliper	254 microns (0.010 in.) maximum
Face stock smoothness	100-200 Sheffield units

## Prepunched Paper

Prepunched paper should be flat and without deformation. Discard paper with ragged or damaged hole edges. Do not allow chad (the paper bits that result from punching) or paper dust to adhere to the paper.

Supplies with prepunched holes must conform to the following specifications:

- Maximum of four holes
- Maximum hole diameter of 10 mm (0.39 in.)
- Holes may not be located in or protrude into the area marked by the diagonal lines in the following figures; otherwise, the holes will be detected by the paper sensor, or the strength of the paper will decrease.

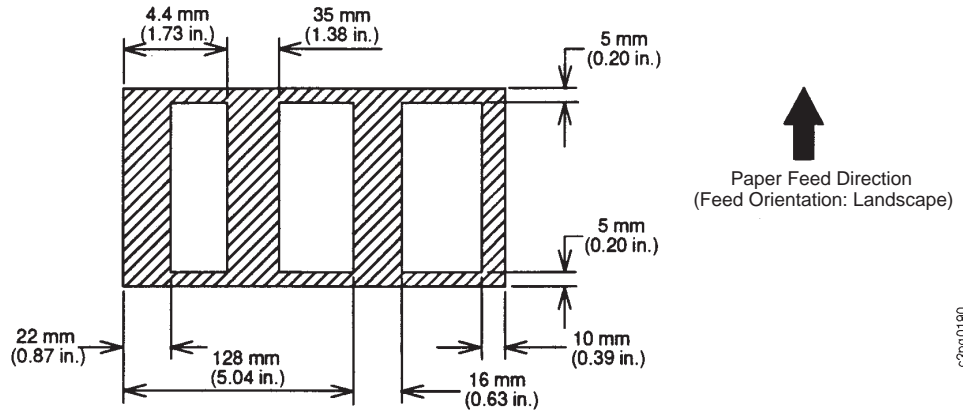


Figure 5-1. Prepunched Paper Clearances - A4, B5, and Letter Size

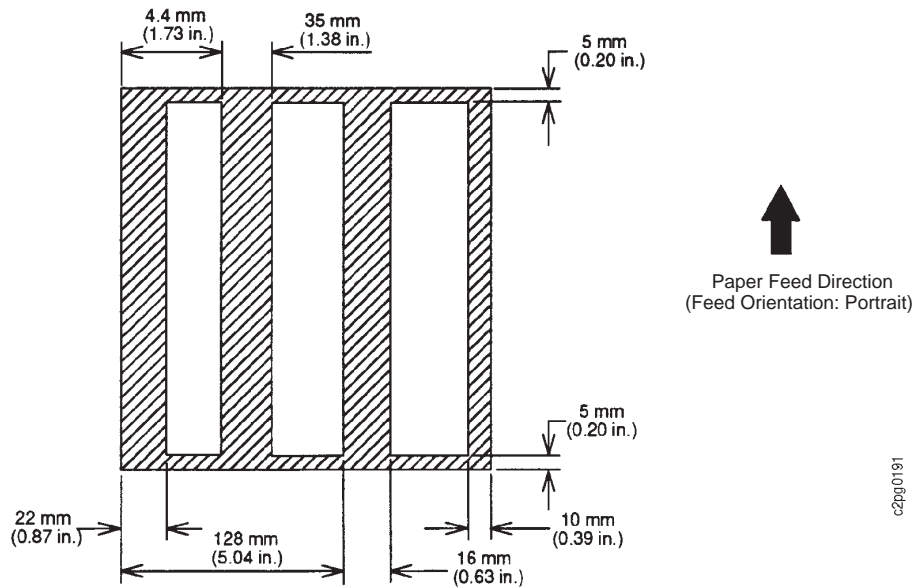


Figure 5-2. Prepunched Paper Clearances - A3, B4, and Ledger Size

## Preprinted Paper

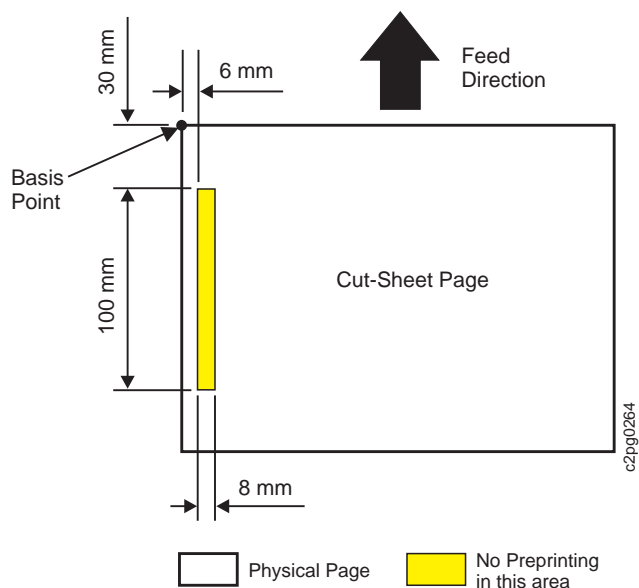
Preprinted paper is paper that has ink applied before the printer prints on it. Ink used in the preprinting should be non-volatile and contain drying or resin oils. Ink must not transfer when fusing temperatures are 200°C (392°F) and pressures are 450kPa (65 lbs/in.<sup>2</sup>) for several seconds.

IBM recommends using the following inks:

Ink Recommendations
Cured by ultraviolet
Cured by heat (Tinplate ink)
Dried by oxidative polymerization



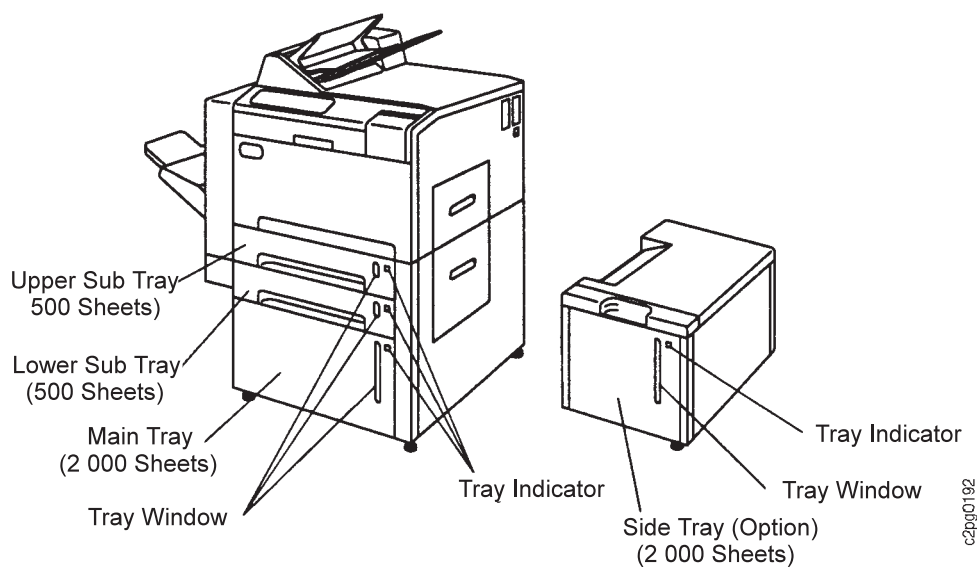
The shaded area in the following figure should not contain printing. Printing in this area can cause false double-sheet feeds.



## Loading Paper

An OUT OF PAPER message appears whenever a tray is empty. The message names the empty tray.

The printer can have up to four trays installed, including the optional side tray. Each tray has a tray window that shows the paper level, and a tray indicator that shows which tray is in use. The following figure names each available tray, and provides sheet capacity.



Follow these guidelines to prevent paper jams and stacking problems:

- Do not use paper that is creased, folded, or damaged.

- Rewrap partially used reams to maintain moisture content.
- Load only one size and type of paper into a tray.
- Do not add small amounts of paper on top of paper already in the tray. Do not overfill the tray. Do not load paper above the red line.
- Do not open a tray when the indicator light is on, indicating the tray is in use.

**Note:** Only one tray at a time can be opened.

Refer to the *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers* for instructions about:

- Opening reams
- Fanning paper
- Determining curl

Several sizes of paper can be used in your printer, provided they meet certain guidelines. For best results, use only xerographic paper.

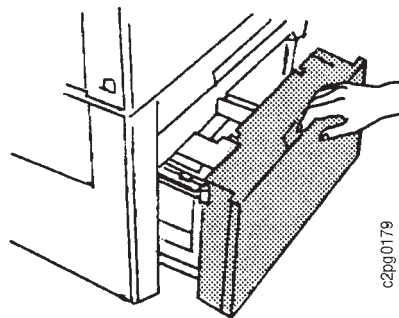
When a tray is out of paper or disabled, the printer stops printing and a message appears in the operator panel display. See Table 7-1 on page 7-19 for a list of messages and their meanings.

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## Loading Paper Into the Main Tray

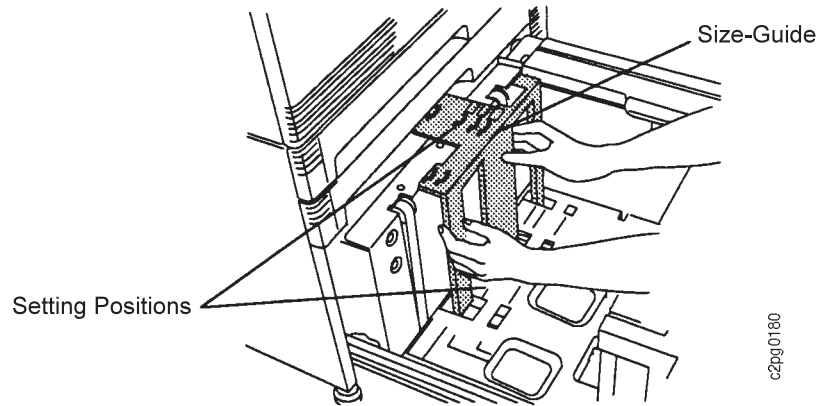
Follow the steps below to load paper into the main tray.

1. Open the main tray.



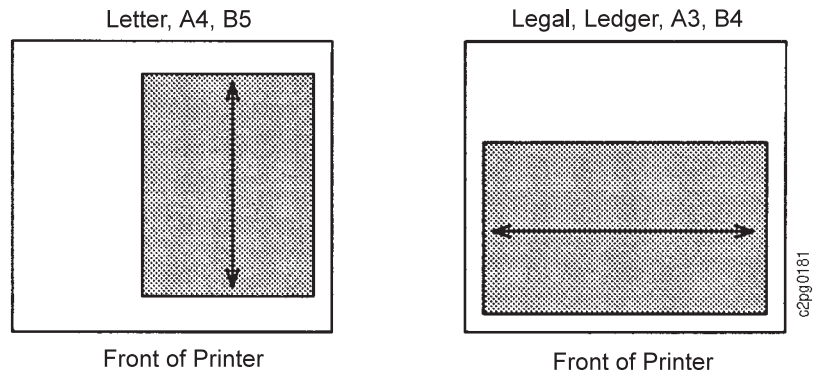
2. Adjust the size-guide according to the paper size.

Use the setting positions marked on the top of the size-guide and on the bottom of the tray. Lift and position the size-guide. Be sure that both the top and bottom of the size-guide are positioned correctly.

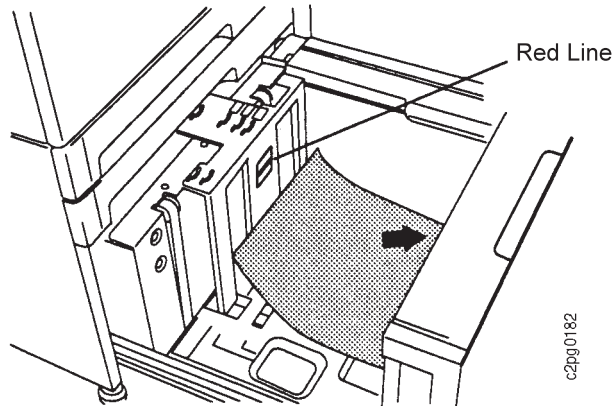


3. Position the paper in the tray.

When loading paper, position each paper size as shown in the following drawings:

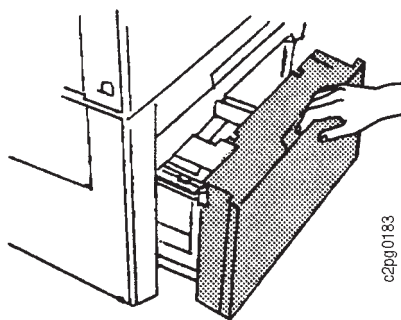


The corner of the paper must be flush against the corner of the tray, marked with an ⇒.



**Attention: Do not stack paper above the red line.**

4. Close the main tray by pushing it back into the cabinet.



5. If you have changed the paper being loaded (different size or different form name), and the CHECK FORM NAME IN MENU message appears, press the **Enter** key to clear the message, then perform Steps 6 through 10. Otherwise, go to Step 11.
6. Press the **Menu/Exit** key to enter menu mode.
7. Scroll to TRAYS/STACKERS, and press the **Enter** key.
8. Press the **Enter** key on MAIN TRAY.
9. Press the **Enter** key on FORM NAME.
10. Scroll to the form name that you loaded in the tray, and press the **Enter** key.

**Note:** Only those forms that were defined in the Define Forms procedure are listed as available for loading. If you are loading a new form name, define it first using the DEFINE FORMS menu item (key operator authorization required). See "Defining Form Names" on page 4-26 for directions on defining forms.

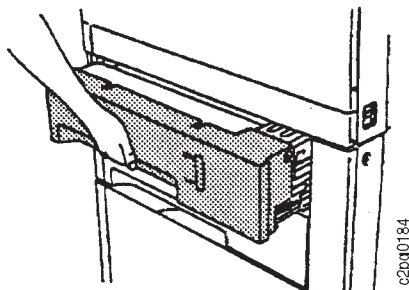
11. If desired, designate an autoswitch (alternate) tray for the main tray. See "Selecting an Autoswitch Tray" on page 4-4 for directions on selecting an autoswitch tray.

---

## Loading Paper Into the Upper Sub Tray or Lower Sub Tray

To load paper into the upper sub tray or lower sub tray, do the following:

1. Open the tray.



**Note:** If you are reloading paper without changing the size, skip to "Large Size-Guide" on page 5-13. To reset the tray for a different paper size, continue to Step 2.

2. Adjust the size-guides according to the paper size being used.

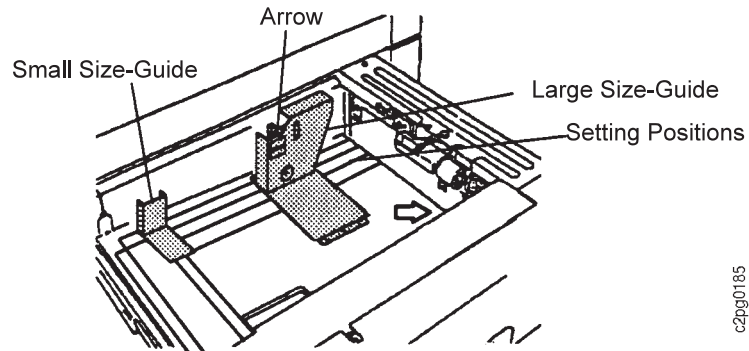
## Small Size-Guide

Squeeze the vertical sides on the size-guide, lift up and slide the size-guide forward or backward to the proper setting. Squeeze the sides again, and press down firmly until both sides lock into the bottom of the tray at the desired setting.

**Note:** The small size-guide adjusts for A3 and ledger paper-sizes only.

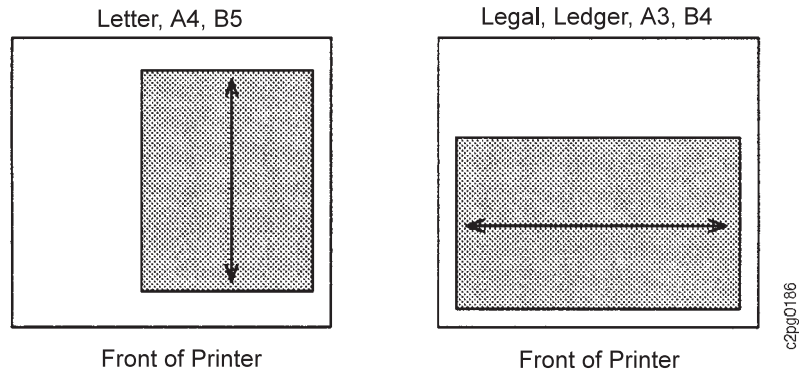
## Large Size-Guide

The setting positions for the paper size are marked on the bottom of the tray. Move the handle in the direction of the arrow (to the right). Hold the handle down and slide the size-guide forward or backward to the proper setting. Release the handle and lock the size-guide into place.

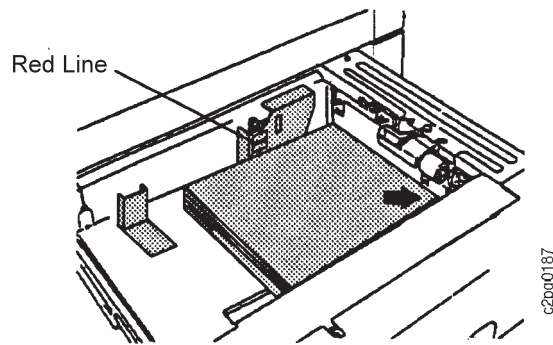


1. Position the paper in the tray.

When loading paper, position each paper size as shown in the following drawings.



**Note:** Place the paper so the corner is flush against the front right corner of the tray. Do not stack paper above the red line.



2. Push the tray into the cabinet.
3. If you changed the paper being loaded (different size, color, or form name), and the CHECK FORM NAME IN MENU message appears, press the **Enter** key to clear the message, then perform Steps 4 through 8. Otherwise, go to Step 9.
4. Press the **Menu/Exit** key to enter menu mode.
5. Scroll to TRAYS/STACKERS, and press the **Enter** key.
6. Scroll to the name of the tray in which you have changed the paper, and press the **Enter** key.
7. Press the **Enter** key on FORM NAME.
8. Scroll to the form name for the paper you loaded in the tray, and press the **Enter** key.

**Note:** Only those forms that were defined are listed as available for loading. If you are loading a new type of form, define it first using the DEFINE FORMS menu item (key operator authorization required). See "Defining Form Names" on page 4-26 for directions on defining forms.

9. If desired, designate an autoswitch (alternate) tray for the tray you selected in Step 6. See "Selecting an Autoswitch Tray" on page 4-4 for directions on selecting an autoswitch tray.

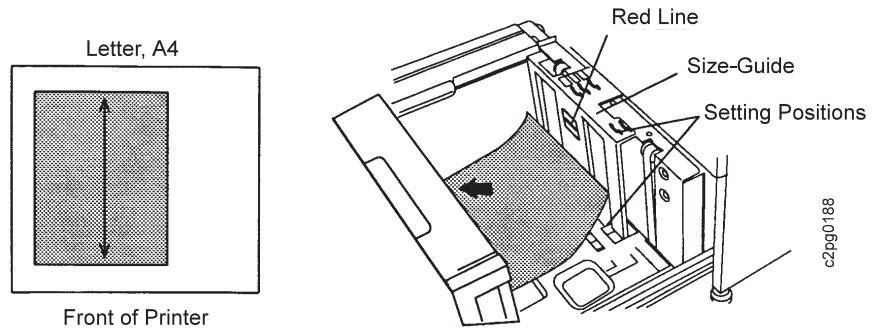
---

## Loading Paper Into the Side Tray (option)

To load paper into the optional side tray, do the following:

1. Open the side tray.
2. Adjust the size-guide according to the paper size being used (letter or A4 paper-sizes only).

Use the setting positions marked on the top of the size-guide and on the bottom of the tray. Lift and position the size-guide accordingly. Be sure that both the top and bottom of the guide are positioned correctly.



3. Load the paper so the corner is flush against the front left corner of the tray. Do not stack paper above the red line.
4. Close the side tray.
5. If you changed the paper being loaded (different size or different form name), and the CHECK FORM NAME IN MENU message appears, press the **Enter** key to clear the message, then perform Steps 6 through 10. If not, go to Step 11.
6. Press the **Menu/Exit** key to enter menu mode.
7. Scroll to TRAYS/STACKERS, and press the **Enter** key.
8. Scroll to SIDE TRAY, and press the **Enter** key.
9. Press the **Enter** key on FORM NAME.
10. Scroll to the form name for the paper you loaded in the tray, and press the **Enter** key.
 

**Note:** Only those forms that were defined are listed as available for loading. If you are loading a new type of form, define it first using the DEFINE FORMS menu item (key operator authorization required). See “Defining Form Names” on page 4-26 for directions.
11. If desired, designate an autoswitch (alternate) tray for the side tray. See “Selecting an Autoswitch Tray” on page 4-4 for directions on selecting an autoswitch tray.

---

## Loading Labels

### Attention:

- **Disable the side stacker when printing on labels.**
- **Set AUTOLINK OUTPUT STACKERS to NO.**
- **Do not use the optional side tray for labels.**
- **Remember to remove unused label stock and reset printer parameters after label application is complete.**

To load and print on labels do the following:

1. Load labels face down in the upper sub tray, lower sub tray, or main tray.
2. When defining the form name for a label, set DUPLEX to NO; SIDE SENSITIVITY will no longer be active.

3. Press the **Menu/Exit** key to enter menu mode.
4. Scroll to the TRAYS/STACKERS menu, and press the **Enter** key.
5. Scroll to SIDE STACKER, and press the **Enter** key. Enter the key operator password, if prompted.
6. Press the **Enter** key on ENABLE STATUS.
7. Scroll to DISABLE, and press the **Enter** key to disable the stacker.
8. Return to the TRAYS/STACKERS menu, and press the **Enter** key.
9. Scroll to AUTOLINK OUTPUT STACKERS, and press the **Enter** key. Enter the key operator password, if prompted.
10. Scroll to NO, and press the **Enter** key to deselect autolinking.
11. Press the **Menu/Exit** key to exit menu mode.

---

## Positioning Preprinted and Prepunched Paper

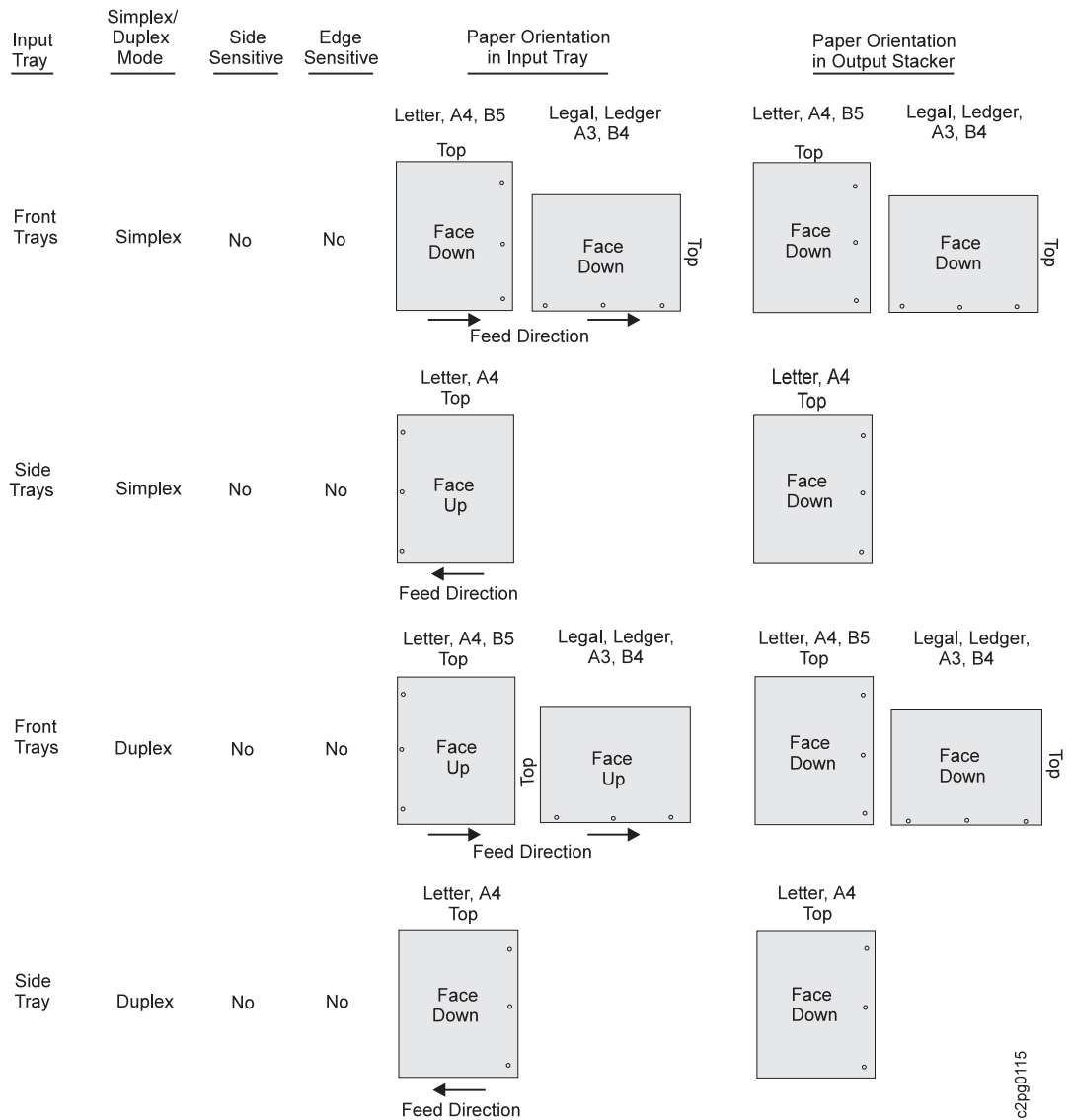
When loading preprinted or prepunched paper, position the paper correctly in the tray and adjust printer settings for edge sensitivity and side sensitivity. See “Defining Form Names” on page 4-26.

Edge sensitivity describes which edge of the paper you load in a tray as the leading edge. Edge sensitivity rotates an image 180° for simplex jobs (all paper sizes) and for duplex jobs (Legal, Ledger, A3, and B4).

Side sensitivity defines on which side of the paper to print (whether the paper faces up or faces down when loaded in a tray). Selecting SIDE SENSITIVITY results in simplex jobs traveling through the duplex paper path. This allows the intermixing of simplex and duplex jobs to be run from the same input tray, such that the same paper orientation is achieved in the output stacker.

## Preprinted Paper (Prepunched or Nonpunched)

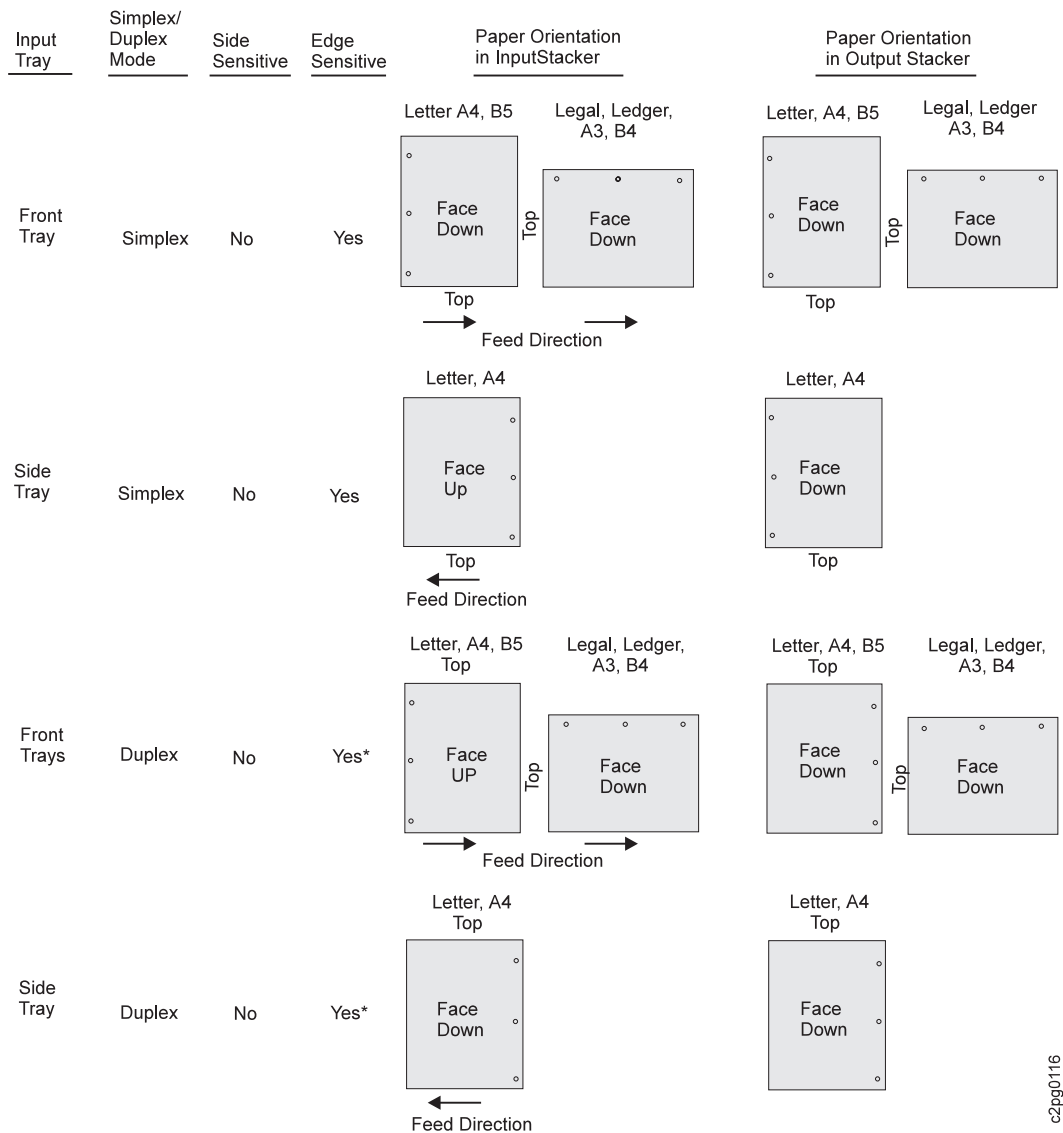




c2pg0115

**Note:** For normal duplex printing of Legal, Ledger, A3, and B4, the first image (applied to side 2) is positioned with the top of the image facing to the right, and the second image (applied to side 1) is positioned with the top of the image facing left. Letter, A4, and B5 prints the top of the image towards the rear of the printer.

## Prepunched (Not Preprinted)

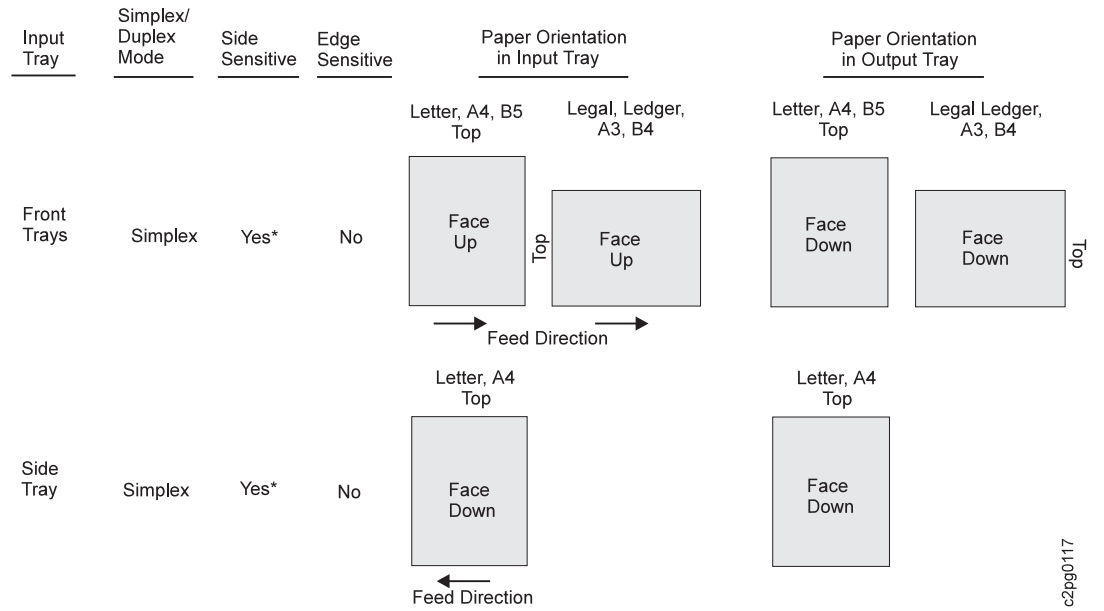


c2pg0116

**\*Notes:**

1. For normal duplex printing of Legal, Ledger, A3, and B4, the first image (applied to side 2) is positioned with the top of the image facing to the right, and the second image (applied to side 1) is positioned with the top of the image facing left. Letter, A4, and B5 prints the top of the image towards the rear of the printer.
2. When Edge Sensitive is selected, the image is rotated 180° from the normal image placement for all paper sizes in simplex, and Legal, Ledger, A3, and B4 in duplex.

## Preprinted (Prepunched or Nonpunched)



c2bg0117

**\*Notes:**

1. First pass (side 2 is blank), then second pass (side 1) prints.
2. Side 2 always prints first in duplex mode. SIDE SENSITIVE=YES treats a simplex sheet like a duplex sheet.



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## Chapter 6. Maintaining the Printer

This chapter contains information on maintaining the printer for best performance. The key operator is responsible for some routine care and maintenance. Instructions include the following:

- When to add or replace the following supplies:
  - Toner
  - Developer mix
  - Photoconductor
  - Transfer belt unit
  - Fuser cleaner brush
  - Fuser unit
  - Cleaner unit
  - Staples
- Cleaning the printer

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### Supplies

The key operator is responsible for replacing supplies. This chapter includes step-by-step instructions and corresponding figures.

The key operator usually orders supplies. To order supplies for the InfoPrint 60 in the United States, use any of the following methods:

- Contact a Lexmark International, Inc. authorized dealer.
- Call Lexmark Telemarketing at 1-800-438-2468 from 8 a.m. to 8 p.m. Eastern Standard Time.
- Write Lexmark Telemarketing at:
  - Lexmark Telemarketing
  - 1221 Alverser Drive
  - Midlothian, Virginia 23113

In other countries, contact your point of purchase for information about where to order supplies.

### When to Replace Supplies

Replace supplies when:

- The operator panel message indicates that replacement is needed.
- You are directed to replace a supply to correct a print quality problem. See “Print Quality Problems” on page 7-16.

The following table helps you anticipate when to replace supplies. The supply yields shown are approximate average yields and are based on an average printer utilization of 85% with a print coverage of 4%.

The printer performs nonprinting cycles to prepare the printer for operation. These nonprinting cycles shorten the life of some components. Operating the printer at a lower utilization or at higher percent print coverages reduces the life of a supply. Many factors (for example, the number of prints per month, number of pages per job, print coverage per page, paper type and size, and environmental conditions) affect the life of a supply. Special applications (for example, adhesive labels, extensive graphics, bar codes, some landscape applications, and preprinted forms) also reduce supply life.

Supply	Ranges	Part Number
Toner cartridge	50 000 impressions (at 4% coverage)	1402680 (package of 6 cartridges)
Developer mix bottle	1 million impressions	1402681 (1 bottle/box)
Transfer belt unit	1 million impressions	1402684
Fuser unit (2) Fuser cleaner brushes	1 million impressions 350 000 impressions each	1402821
Cleaner unit	300 000-500 000 images	1402683
Staples	5 000 per cartridge	1402820 (4 cartridges/box)

**Notes:**

1. The approximate average yields are not a warranty or guarantee of minimum life and are provided to assist in initial supply planning. Actual usage should be used in establishing the supply life for your applications.
2. Printer applications can vary yield.
3. Supply warranties are only for defects in materials and workmanship at the time of shipment or installation. Warranties are not for print-count life or normal wear and tear, nor for any print-count minimum. Contact your place of purchase for warranty return instructions.
4. You can recycle, dispose of, or incinerate waste material under conditions which meet federal, state, and local environmental regulations. Because regulations may vary from one locale to another, check with the agency that governs waste disposal for correct procedures in your area.

**General Guidelines for Supplies**

- The print count affects replacement of the developer mix, fuser unit, fuser cleaner brush, cleaner unit, and transfer belt unit.
- The type of print job affects replacement of the cleaner unit.
- The printer must be NOT READY (stopped), but powered on when changing all supplies, except the toner. You may add toner while the printer is printing.
- The procedure for changing a supply includes indicating YES when prompted by the message IS CHANGE COMPLETED?, except for changing toner.
- A warning message notifies you that a supply is low (except for toner). If you miss seeing this message, you can scroll to see it. See “Display Messages for Supplies” on page 6-3. The operator panel toner indicator lights up when the toner is low. See “Replacing the Toner Cartridge” on page 6-4.

- When replacing supplies other than paper, touch only blue parts of the printer. The blue color indicates that portion of the part that is not hot and is safe to touch.

## Storing Paper and Supplies

Store paper and supplies that you intend to use soon near the printer, both for convenience and to condition them.

Otherwise, store paper and supplies:

- In their original wrappers away from heat or dampness
- On a flat surface such as a shelf, but not on the floor
- In a closable cabinet for protection and monitoring

Store paper and special-application materials in an area where the temperature and humidity are similar to the environment where you will use them. Do not exceed the following requirements:

- Temperature  $-10^{\circ}\text{C}$  to  $40^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  to  $104^{\circ}\text{F}$ )
- Relative humidity 5% to 80%

Avoid areas with extreme heat or humidity. Extended exposure to extremes can permanently damage the materials.

To condition InfoPrint 60 supplies, store them in the same environment as the printer for at least 24 hours before you use them.

For additional information on supplies storage and conditioning, refer to the *Advanced Function Printer: Cut-Sheet Paper Reference for Use with IBM Electrophotographic Printers*.

## Display Messages for Supplies

When the life of a consumable is exceeded, a warning message indicates that the consumable is low or near the end of its life, and IBM recommends that you replace it. The following occur:

- The printer stops printing and becomes NOT READY.
- The error beeper sounds (if configured to sound).
- A message appears on the operator panel requesting that you replace the consumable soon. For example, the DEVELOPER MIX: REPLACE SOON message appears. For toner only, the **Toner** indicator lights up.
- The printer continues printing after you press the **Enter** key to clear the message. Press the **Start** key to make the printer READY.
- A warning message appears.

Although a warning message appears to notify you that supplies are low, you may not see these messages. Another user may clear these messages without notifying the key operator.

To view outstanding messages regarding supplies, do the following while the printer is in status mode:

1. Press the **Scroll Down** key on the operator panel to display the first message.
2. Continue pressing the **Scroll Down** key until all messages have been displayed.


A final notification message indicates that you must replace the consumable before printing can continue. The following occurs:

- The printer stops printing and becomes NOT READY.
- The error beeper sounds (if configured to sound).
- The **Attention** light flashes.
- A message appears on the operator panel requesting that you replace the consumable now. For example, the DEVELOPER MIX: CHANGE NOW message appears.
- Printing cannot resume until you replace the consumable and indicate (using the operator panel) that the change is complete. This chapter contains separate instructions for changing each supply.


**Note:** Adding toner does not require that you indicate to the printer (using the operator panel) that the change is complete; all other supplies do.

---

## Replacing the Toner Cartridge

Replace the toner cartridge when the **Toner** indicator  on the operator panel is lit. An OUT OF TONER-ADD TONER NOW message appears when the toner cartridge is empty.

You can replace the toner cartridge at any time during printer operation. The printer can remain online and continue printing during the replacement process.

Although the printer can continue to print after the **Toner** indicator  is lit, replace the toner cartridge before the toner reservoir becomes empty.

When the toner cartridge is empty, the OUT OF TONER-ADD TONER NOW message appears, and the printer stops printing.

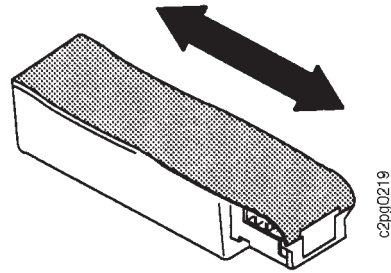
### Notes:

1. Do not remove the toner cartridge unless the toner indicator light is lit.
2. If you get toner on your clothes, wipe it off with a dry cloth or brush. Wash the clothing in cold water. Hot water sets toner into the fabric.

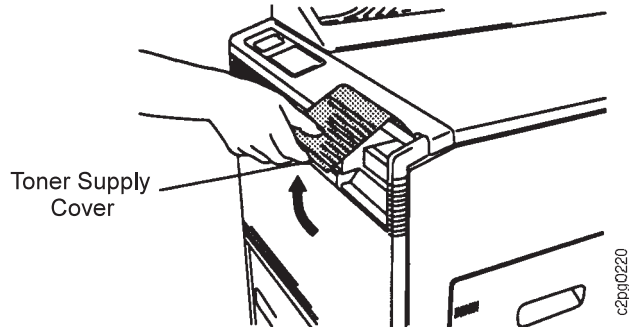
To replace the toner cartridge, do the following:

1. Remove the new toner cartridge and cardboard from the box and save the box for later use.
2. Gently shake the new toner cartridge several times to level out the surface of the toner in the toner cartridge.

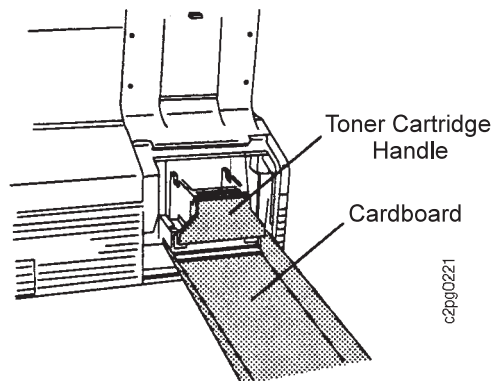




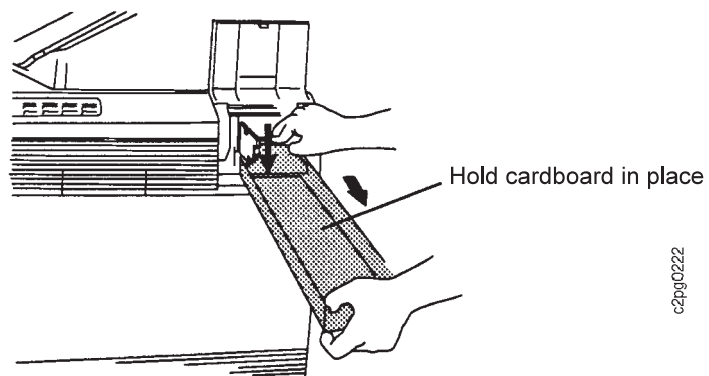
3. Open the toner supply cover.



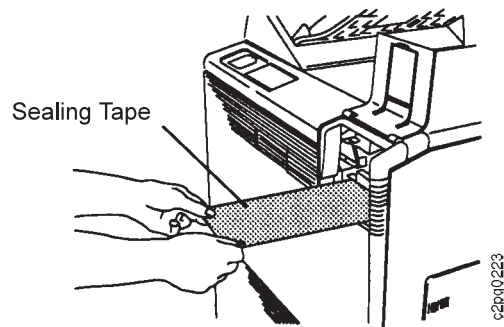
4. Put the cardboard under the toner cartridge handle to collect any toner that might spill.



5. Push down on the toner cartridge handle and remove the toner cartridge by pulling it forward, with the cardboard underneath. Place the used toner cartridge and cardboard in the empty plastic bag.



- Slide the new toner cartridge into the toner cartridge slot until it stops. Remove the sealing tape (adhesive backed tape that holds the toner in the toner cartridge) by pulling and rolling up inwards to prevent the toner on the sealing tape from scattering.



Place the sealing tape in the plastic bag with the used toner cartridge and cardboard. Seal and dispose of the bag.

- Close the toner supply cover. Press the **Start** key if the printer is NOT READY.

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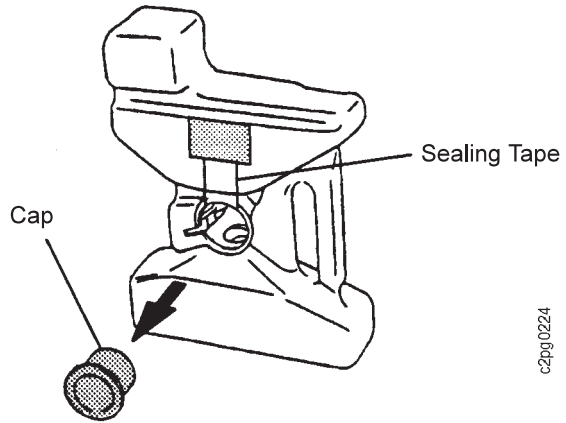
## Replacing the Developer Mix

Replace the developer mix when DEVELOPER MIX: REPLACE SOON or DEVELOPER MIX: REPLACE NOW message appears on the operator panel. To replace the developer mix, do the following:

- Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
- Press the **Menu/Exit** key to enter menu mode.
- Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
- Scroll to DEVELOPER MIX, and press the **Enter** key.
- The CHANGE NOW message appears. (The PLEASE WAIT... message may occur first.)

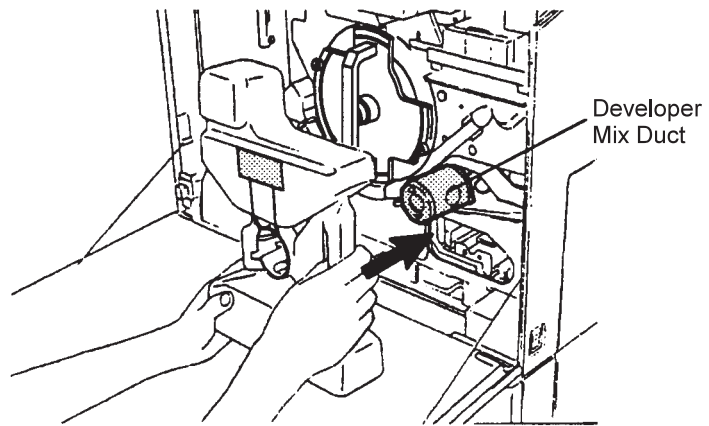
**Note:** If you selected SUPPLIES by mistake and do not wish to begin a replacement procedure, scroll to CANCEL CHANGE, and press the **Enter** key.

- Remove the developer mix bottle from the box.
- Open the front cover.
- Pull the cap straight out to remove it from the center of the bottle. Do not remove the sealing tape until instructed.



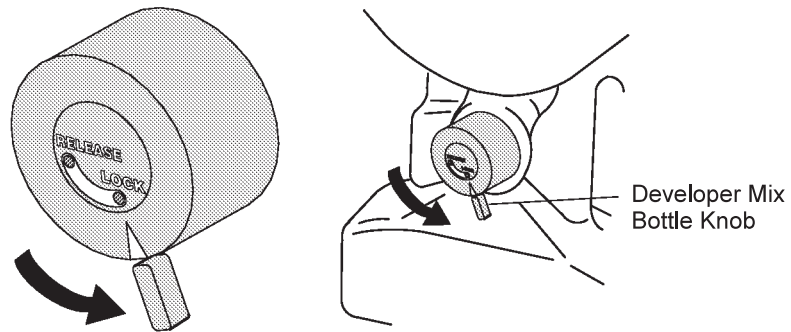
c2pg0224

9. Slide the developer mix bottle onto the developer mix duct.



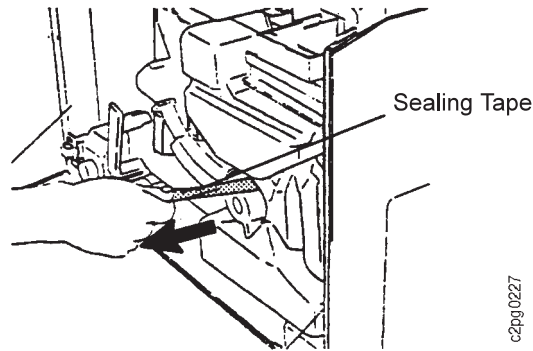
c2pg0225

10. Lock the developer mix bottle in place. Turn the developer mix bottle knob counterclockwise to the LOCK position.



c2pg0226

11. Pull the sealing tape straight out to remove it from the bottle.

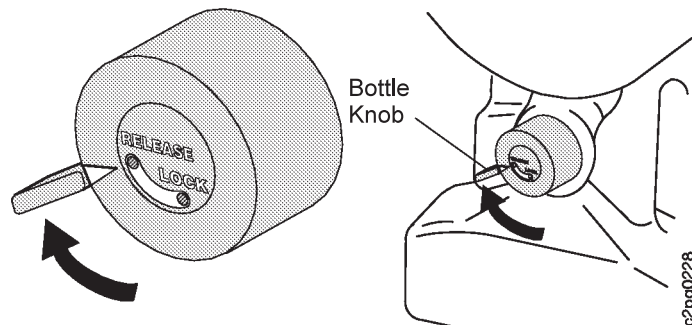


12. Close the front cover. The PRESS ENTER TO START CHANGE message appears.
13. Press the **Enter** key to start the developer mix replacement process. The DEVELOPER MIX CHANGING... message appears.

**Note:** If the ADJUST BOTTLE message appears, open the front cover, wiggle the developer mix bottle, and close the front cover. Press the **Enter** key to start the developer mix replacement process. If the ADJUST BOTTLE message remains, call for service.

**Attention:** Do not open the front cover until the REMOVE BOTTLE message appears. Opening the front cover too soon disrupts the replacement procedure.

14. Wait for the REMOVE BOTTLE message to appear (approximately four minutes).
15. Open the front cover. Turn the bottle knob clockwise to the RELEASE position, then remove the bottle.



16. Replace the developer mix bottle cap to the center of the bottle by pushing the cap straight in.
17. Clean any spilled developer mix from the printer.
18. Close the front cover.

**Note:** If the developer mix bottle is not removed, a message appears instructing you to remove the developer mix bottle before the printer can resume printing. Remove the bottle, close the front cover, and press the **Start** key to clear the message.

19. When the IS CHANGE COMPLETED? message appears, press the **Enter** key.
20. Press the **Enter** key again to select YES to notify the printer that the replacement is finished. This resets the supply counter.

21. Press the **Menu/Exit** key to exit menu mode.
22. Press the **Start** key to continue printing.
23. Dispose of the developer mix bottle.

## Advancing the Photoconductor

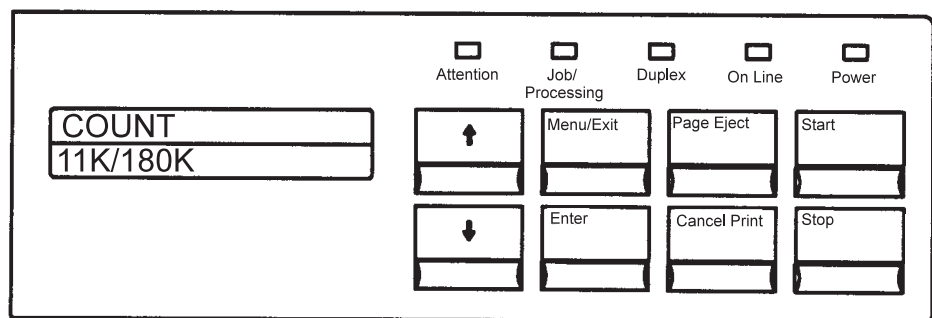
The photoconductor (OPC) normally advances automatically. However, if a print quality problem develops that is caused by the OPC, the key operator can advance the OPC once between automatic advances, or once after the OPC has been advanced by the customer engineer (CE).

To determine if the OPC is the cause of a print quality problem, do the following before advancing the OPC:

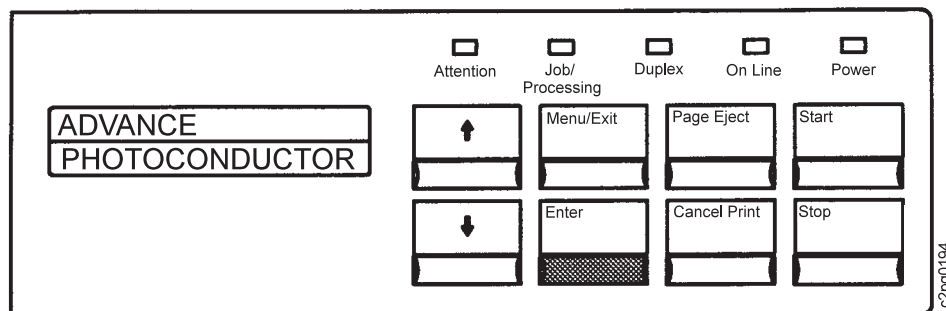
Run the ALL BLACK (4) print samples (simplex mode only), see "All Black Print Samples" on page 7-16. If the print quality problem appears in the same location on every other print, advance the photoconductor.

To advance the photoconductor, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to PHOTOCOnductor, and press the **Enter** key.
5. The input line displays the submenu COUNT. The keyboard line displays 11K which is the usage value. That value indicates how many drum revolutions are currently on the OPC panel. The keyboard line also displays 180K which is the suggested replacement value of the OPC panel. These values are used as examples only.



6. Scroll to ADVANCE PHOTOCOnductor, and press the **Enter** key.



- The PLEASE WAIT message appears. The OPC advances and the supply counter resets. (Scroll to RETURN, and press the **Enter** key if the OPC is not advanced at this time.)

**Note:** If the EXCEEDS ALLOWED PC ADVANCES message appears, the OPC has already been advanced. See “Print Quality Problems” on page 7-16. If you have already checked the print quality section, call for service.

- Press the **Menu/Exit** key to exit menu mode.
- Press the **Start** key to continue printing.

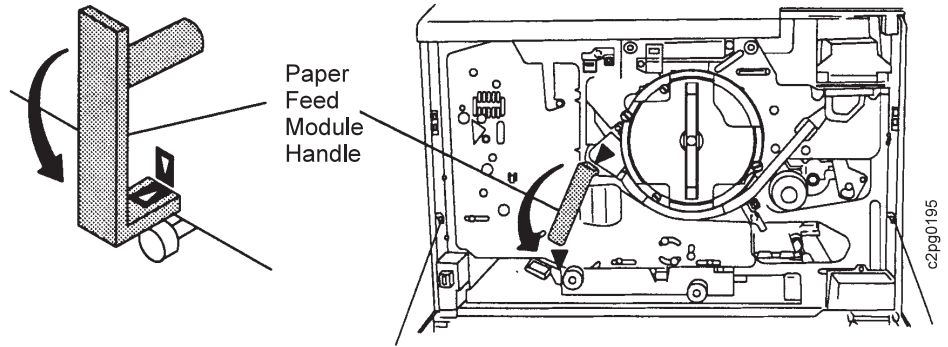
## Replacing the Transfer Belt Unit

Replace the transfer belt unit when the TRANSFER BELT: REPLACE SOON or TRANSFER BELT: REPLACE NOW message appears on the operator panel. To replace the transfer belt unit, do the following:

- Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
- Press the **Menu/Exit** key to enter menu mode.
- Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
- Scroll to TRANSFER BELT UNIT, and press the **Enter** key.
- The CHANGE NOW message appears. (The PLEASE WAIT... message may occur first.)

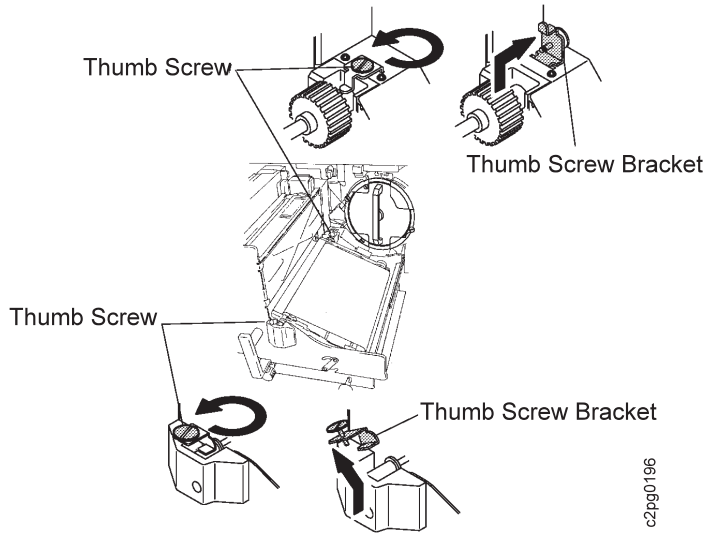
**Note:** If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE, and press the **Enter** key.

- Open the front cover.
- Open the paper feed module by turning the paper feed module handle counterclockwise to the RELEASE position, then pull forward.



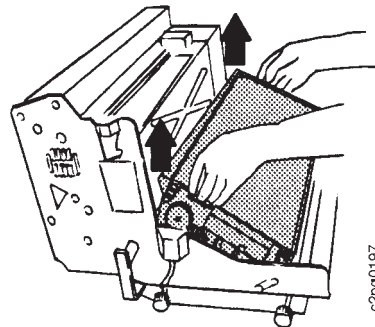
- Loosen the two thumb screws from each side of the transfer belt unit.

Turn the thumb screws counterclockwise to loosen them, then rotate the thumb screw brackets up and away from the transfer belt unit.

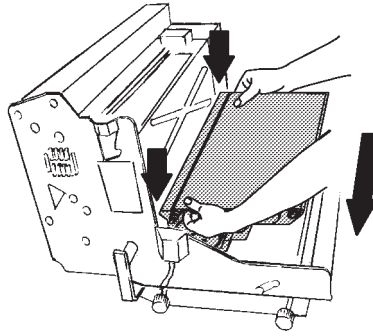


- Remove the transfer belt unit; lift the top end of the unit first, then lift the entire unit out.

**Attention: Keep the transfer belt unit level to avoid spilling toner.**

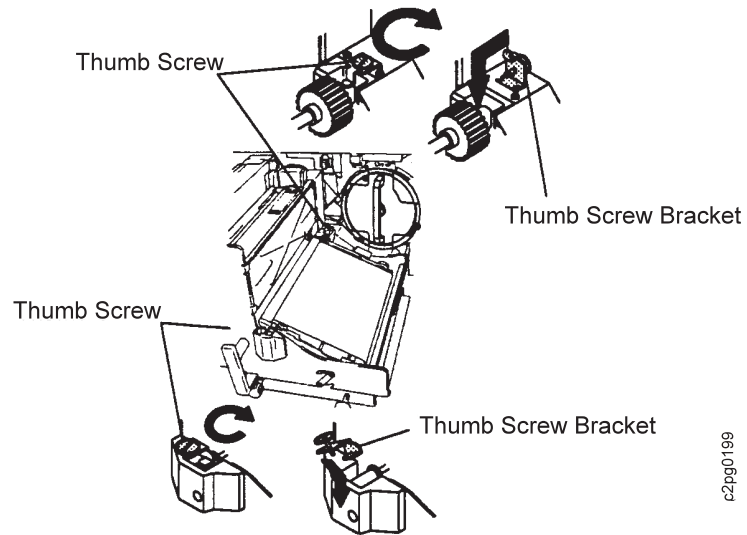


- Install the new transfer belt unit; position the top end of the unit into the paper feed module first. Slide the transfer belt unit toward the front.



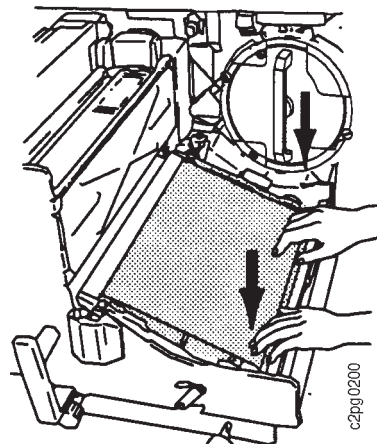
c2pg0198

11. Position the two thumb screw brackets in place on each side of the transfer belt unit. Tighten the thumb screws.



c2pg0199

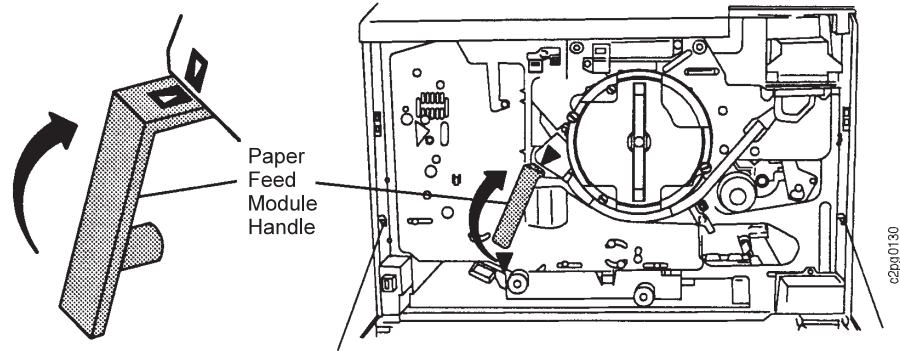
12. Gently push down the lower end of the transfer belt unit.



c2pg0200

13. Push in the paper feed module. Turn the paper feed module handle clockwise to the LOCK position.





14. Close the front cover.
15. When the IS CHANGE COMPLETED? message appears, press the **Enter** key.
16. Press the **Enter** key again to select YES to notify the printer that the replacement is finished. This resets the supply counter.
 

**Note:** If you did not complete this entire procedure (because you did not need to change the supply, for example) scroll to NO, and press the **Enter** key.
17. Press the **Menu/Exit** key to exit menu mode.
18. Press the **Start** key to continue printing.
19. Dispose of the used transfer belt unit.

---

## Replacing the Fuser Cleaner Brush

### CAUTION:

<24> High temperature. Allow parts in this area to cool at least 30 minutes before handling.

Replace the fuser cleaner brush when the REPLACE FUSER CLEANER BRUSH message appears.

**Note:** Replace the fuser cleaner brush twice before replacing the fuser unit. See "Replacing the Fuser Unit" on page 6-15.

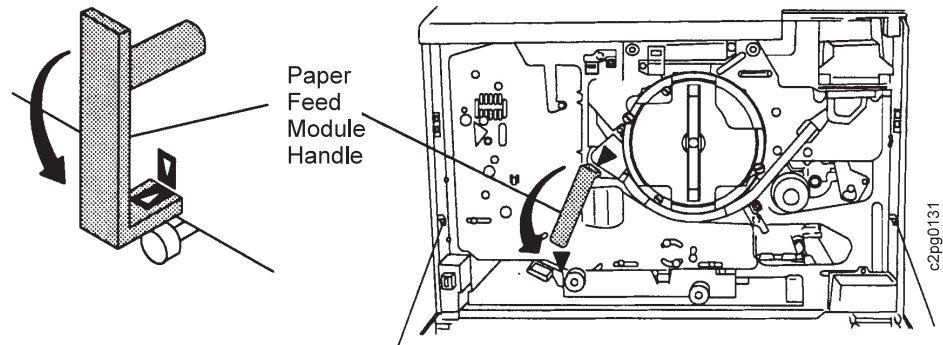
To replace the fuser cleaner brush, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to FUSER BRUSH, and press the **Enter** key.
5. The CHANGE NOW message appears. (The PLEASE WAIT... message may occur first.)

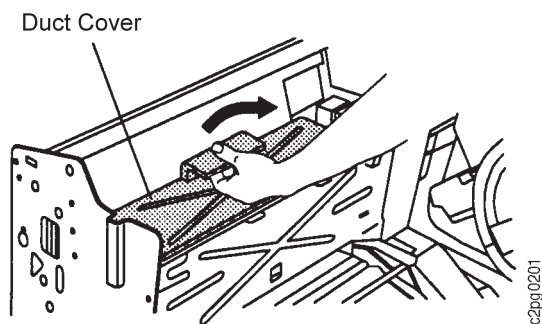
**Note:** If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE, and press the **Enter** key.

6. Open the front cover.

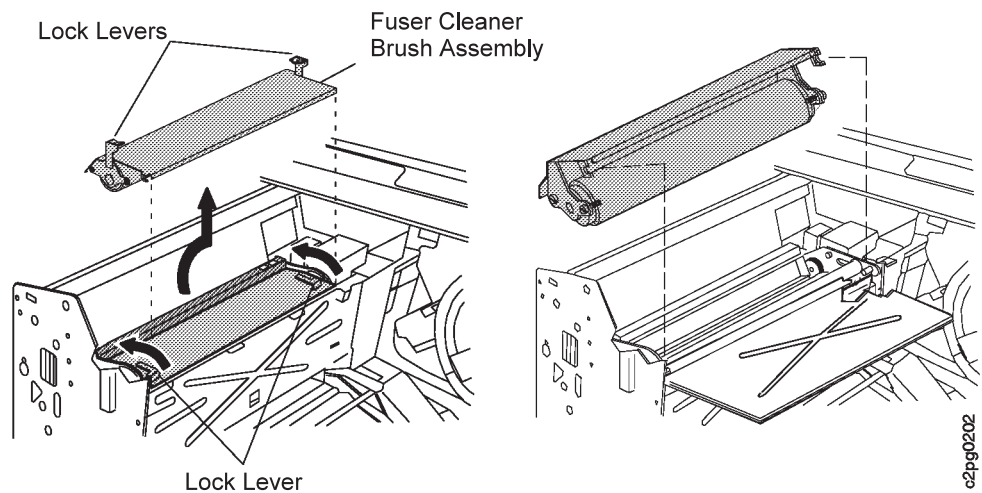
7. Open the paper feed module. Turn the paper feed module handle counterclockwise to the RELEASE position, then pull the handle forward.



8. Open the duct cover; lift the handle up and rotate the duct cover out.



9. Move both lock levers in the direction of the arrows and lift them to remove the fuser cleaner brush assembly.



10. Install the new fuser cleaner brush. Hold onto the two lock levers and rotate the end of the fuser cleaner brush (with the hooks) down and around the pins in the machine. Move both lock levers into locking position.
11. Close the duct cover by holding the handle and rotating the duct cover in. Latch the duct cover in place.

12. Push the paper feed module in, then turn the paper feed module handle clockwise to the LOCK position.
13. Close the front cover.
14. When the IS CHANGE COMPLETED? message appears, press the **Enter** key.
15. Press the **Enter** key again to select YES to notify the printer that the replacement is finished. This resets the supply counter.
 

**Note:** If you did not complete this entire procedure (because you did not have the supply, for example) scroll to NO, and press the **Enter** key.
16. Press the **Menu/Exit** key to exit menu mode.
17. Press the **Start** key to continue printing.
18. Dispose of the used fuser cleaner brush.

---

## Replacing the Fuser Unit

### CAUTION:

<24> **High temperature. Allow parts in this area to cool at least 30 minutes before handling.**

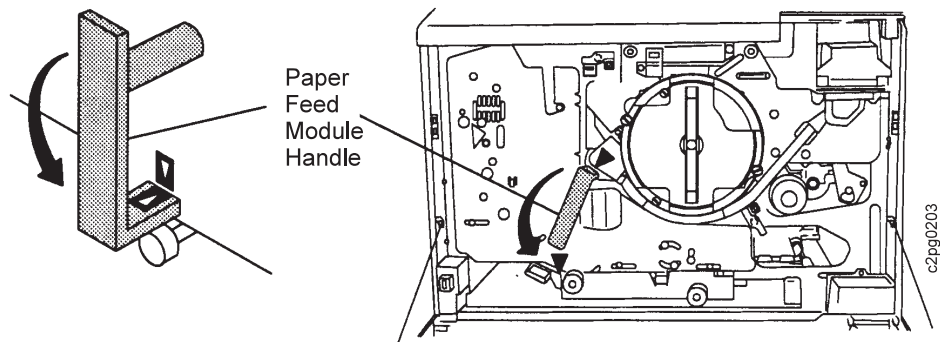
Replace the fuser unit when the FUSER UNIT: REPLACE SOON or FUSER UNIT: REPLACE NOW message appears.

To replace the fuser unit, do the following:

1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to FUSER UNIT, and press the **Enter** key.
5. The CHANGE NOW message appears. (The PLEASE WAIT... message may occur first.)

**Note:** If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE, and press the **Enter** key.

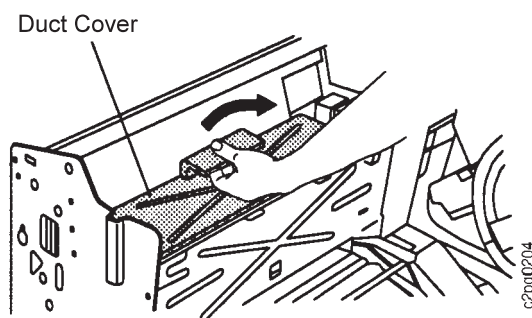
6. Open the front cover.
7. Open the paper feed module. Turn the paper feed module handle counterclockwise to the RELEASE position, then pull the handle forward.



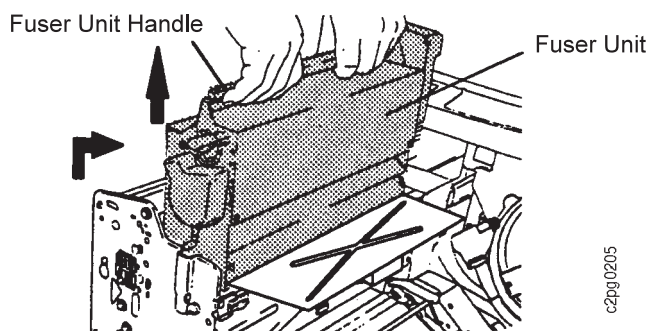
8. Open the duct cover; lift the handle up and rotate the duct cover out.

**CAUTION:**

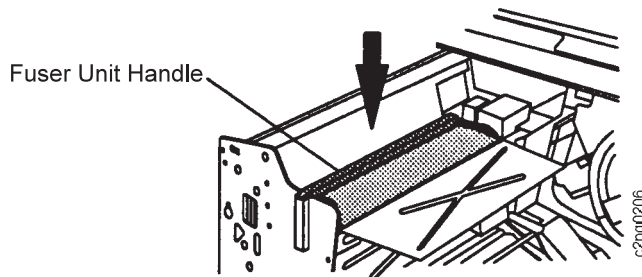
<28> The fuser unit is hot. Remove jewelry before removing the fuser unit. Touch only the blue handle while handling the fuser unit. The fuser unit takes 30 minutes to cool.



9. Remove the fuser unit; rotate the fuser unit handle up. Lift out the fuser unit.



10. Install the new fuser unit. Rotate the handle downward into the latched position to secure the fuser unit. Be sure that the fuser unit handle is pushed all the way down.
11. Push the paper feed module in, then turn the paper feed module handle clockwise to the LOCK position.



12. Close the front cover.
13. When the IS CHANGE COMPLETED? message appears, press the **Enter** key.
14. Press the **Enter** key again to select YES to notify the printer that the replacement is finished. This resets the supply counter.

**Note:** If you did not complete this entire procedure (because you did not have the supply, for example) scroll to NO, and press the **Enter** key.

15. Press the **Menu/Exit** key to exit menu mode.
16. Press the **Start** key to continue printing.
17. Dispose of the used fuser unit.

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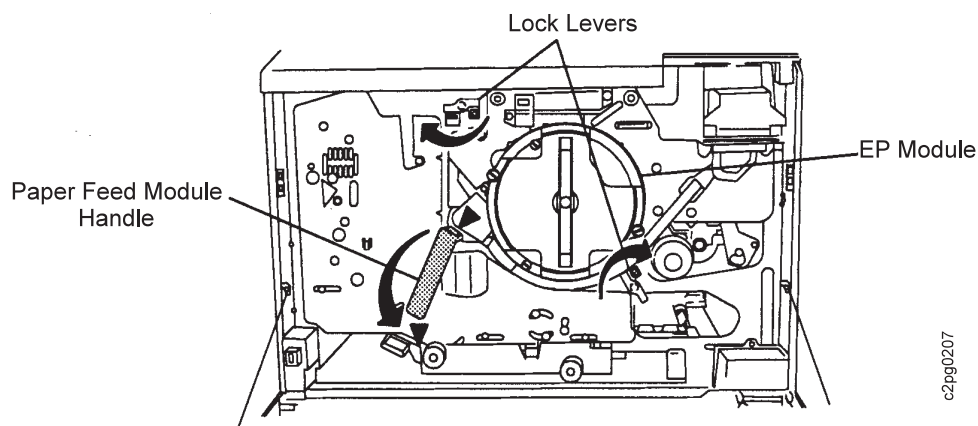
## Replacing the Cleaner Unit

Replace the cleaner unit when the CLEANER UNIT: REPLACE SOON or CLEANER UNIT: REPLACE NOW message appears. To replace the cleaner unit, do the following:

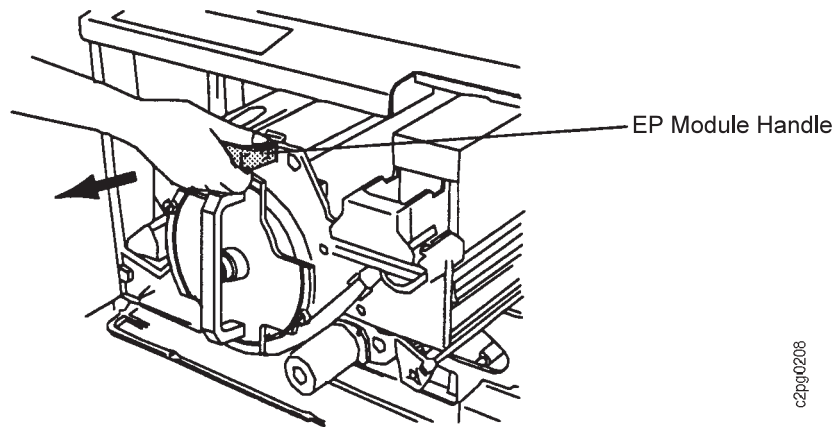
1. Press the **Stop** key (if the printer is READY) to temporarily stop any current print jobs and to make the printer NOT READY.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to SUPPLIES on the main menu, and press the **Enter** key. Enter the key operator password, if prompted.
4. Scroll to CLEANER UNIT, and press the **Enter** key.
5. The CHANGE NOW message appears. (The PLEASE WAIT... message may occur first.)

**Note:** If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE, and press the **Enter** key.

6. Open the front cover.
7. Unlock the EP module; turn the two lock levers clockwise and the paper feed module handle counterclockwise to the RELEASE position.

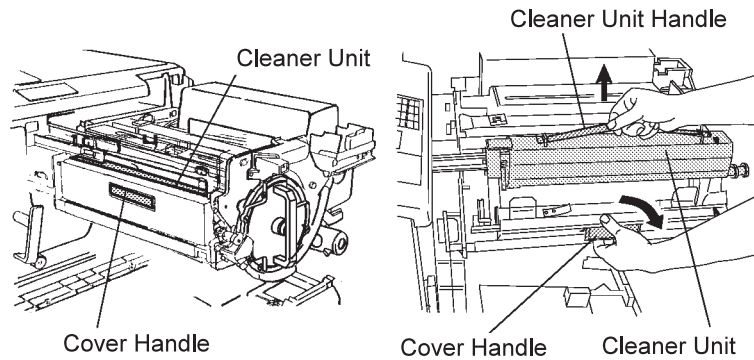


8. Pull out the EP module; pull the EP module handle.



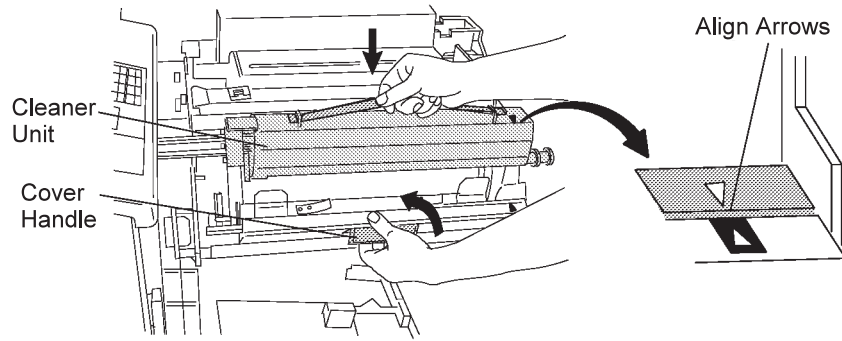
c2pg0206

9. Remove the cleaner unit. Pull the cover handle downward, then lift the cleaner unit out by its handle.



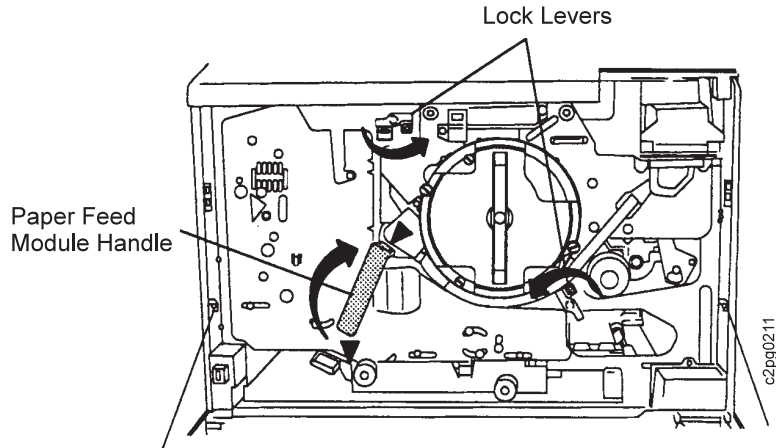
c2pg0208

10. To install the new cleaner unit, align the arrows on the cleaner unit and the EP module. Latch the cleaner unit cover in place.



c2pg0210

11. Push the EP module in and lock it in place; turn the paper feed module handle clockwise to the LOCK position and turn the two lock levers counterclockwise.



12. Close the front cover.
13. When the IS CHANGE COMPLETED? message appears, press the **Enter** key.
14. Press the **Enter** key again to select YES to notify the printer that the replacement is finished. This resets the supply counter.
 

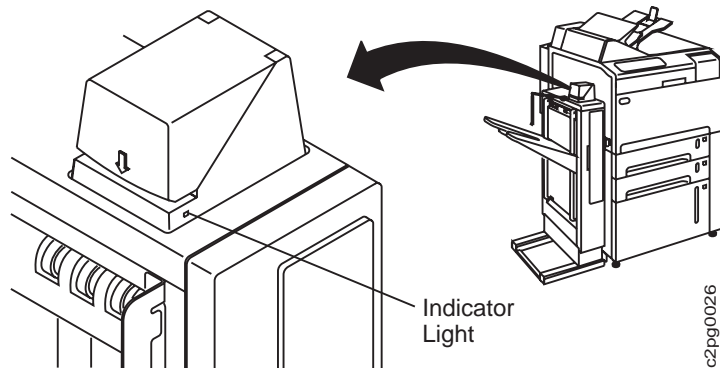
**Note:** If you did not complete this entire procedure (because you did not change the supply, for example) scroll to NO, and press the **Enter** key.
15. Press the **Menu/Exit** key to exit menu.
16. Press the **Start** key to continue printing.
17. Dispose of the used cleaner unit.

---

## Loading Staples in the Convenience Stapler (option)

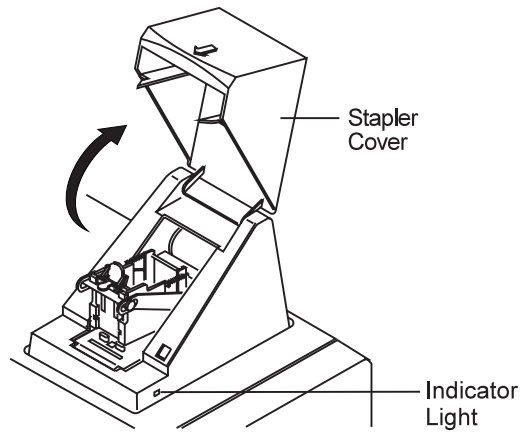
The convenience stapler is located on the top of the 3 000-sheet side stacker. Replenish the stapler with staples when the indicator light is lit.

**Note:** The indicator light also illuminates when the side stacker tray is moving.



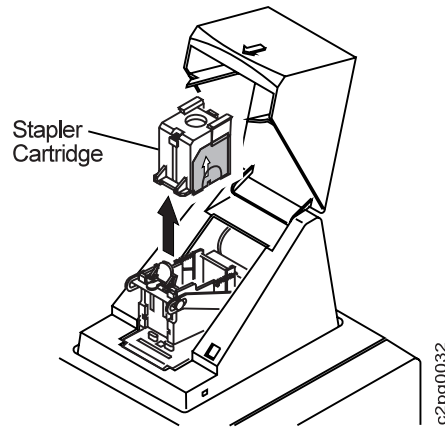
To replace the stapler cartridge, do the following:

1. Open the stapler cover.



c2pg0030

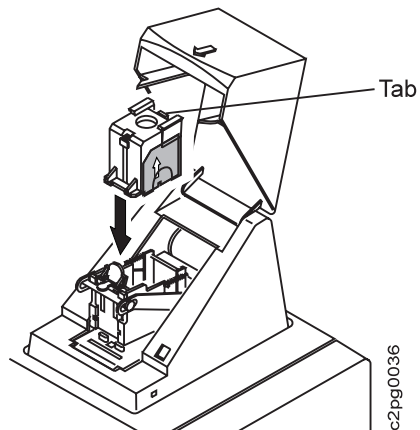
2. Remove the empty stapler cartridge.
  - a. Grip the sides of the cartridge and firmly pull upward.



c2pg0032

- b. Discard the used cartridge.
3. Install a new cartridge. Turn the cartridge so the colored tab is toward the back of the stapler.

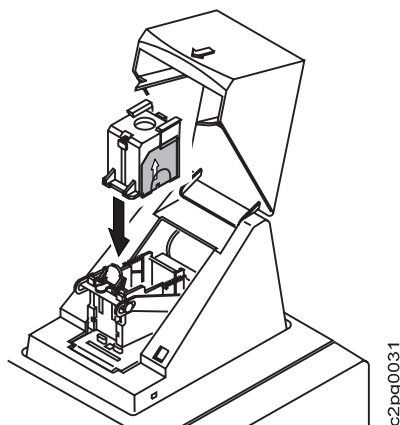
**Note:** The cartridge will only install in one position.



c2pg0036

4. Place the cartridge over the stapler and push down on the cartridge until it locks into place.





5. Close the stapler cover.

---

## Cleaning the Printer

To prevent print quality and operating problems, clean the printer regularly. This section describes the cleaning locations and instructions for the following internal components:

- Printer covers and trays
- Paper feed module parts

More extensive cleaning may be required to solve print quality or operating problems. These parts should require additional cleaning only if you encounter a problem and are instructed to perform the cleaning operation in “Print Quality Problems” on page 7-16.

**Attention: Never use ammonia-based cleaners on or around the printer. Ammonia reacts chemically with the drum surface, toner, and plastic covers.**

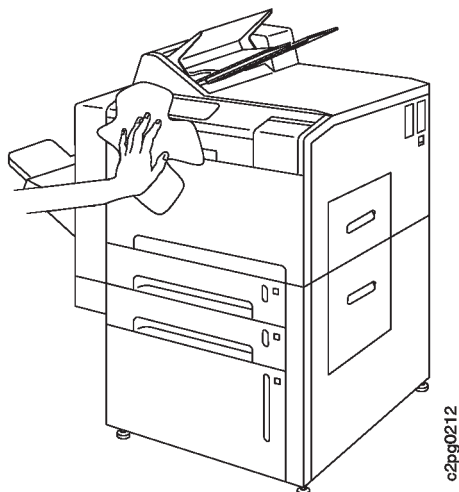
**Note:** If you get toner on your clothes, wipe it off with a dry cloth or brush. Wash the clothing in cold water. Hot water sets toner into the fabric.

## Cleaning the Printer Covers and Trays

Clean the printer covers, trays, and pick rollers monthly. Paper dust and toner inside the printer often cause print quality and operating problems.

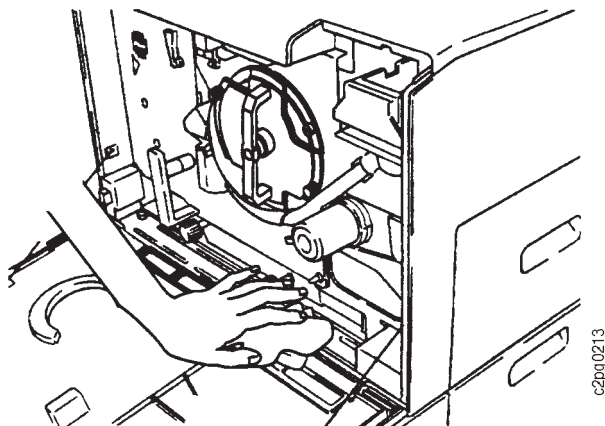
### Printer Cabinet

Wipe the cabinet with a soft cloth. If necessary, dampen the cloth with water.



### Printer Cover Interior

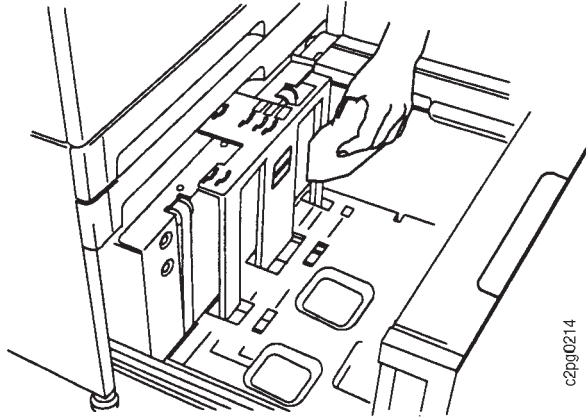
Open the front cover. Wipe the inside of the front cover with a soft cloth.



### Trays and Pick Rollers

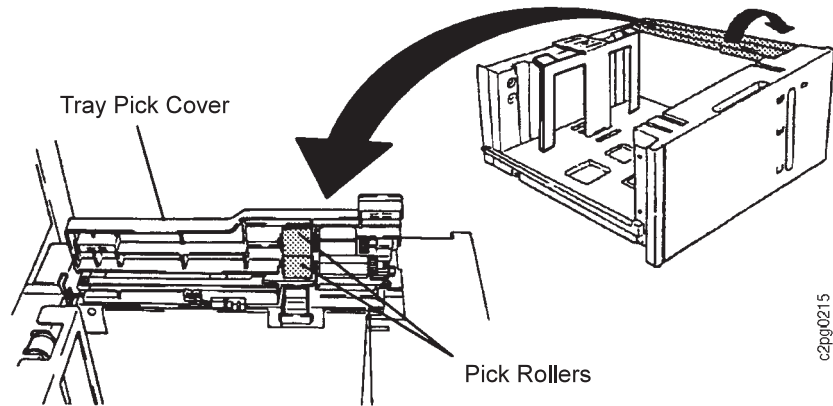
Follow the steps below to clean the pick rollers and each tray on your printer.

1. Individually open each tray.
2. Remove the paper from the tray, then wipe the tray interior with a soft cloth.



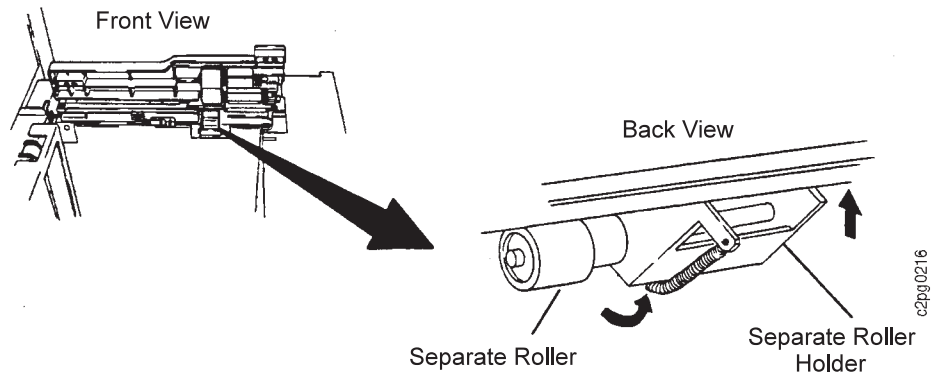
c2pg0214

3. Open the tray pick cover. Wipe the two pick rollers with a lint-free cloth.



c2pg0215

4. Clean the separate roller with a lint-free cloth.



c2pg0216

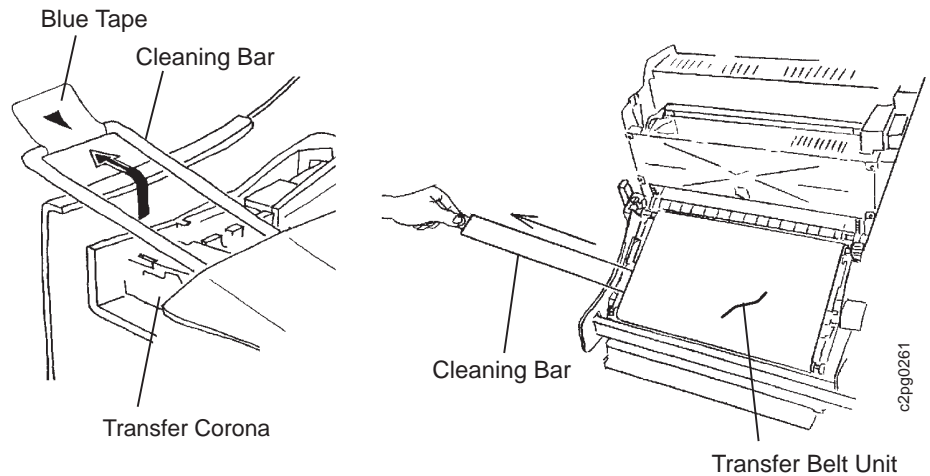
5. Repeat this procedure for the remainder of the trays.

## Cleaning the Paper Feed Module Parts

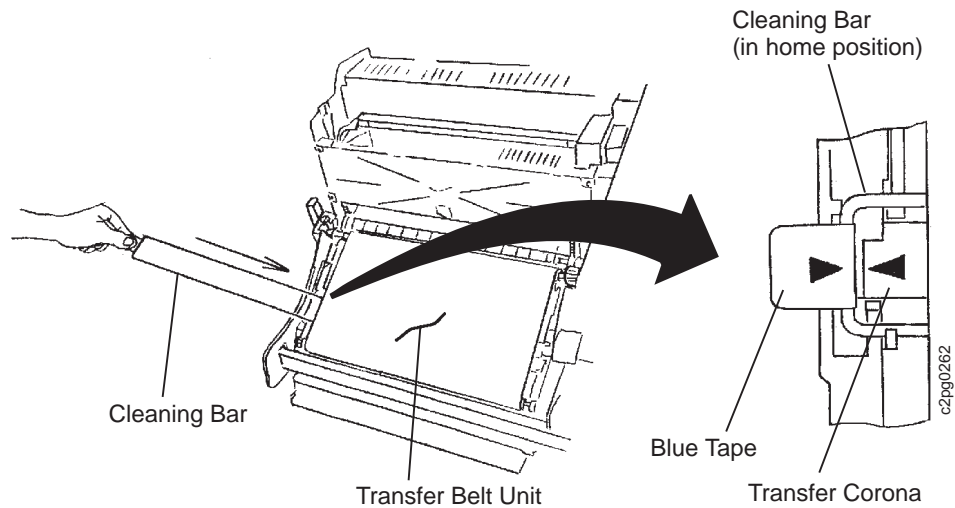
## Cleaning the Transfer Corona

DAILY cleaning of the transfer corona maintains print quality.

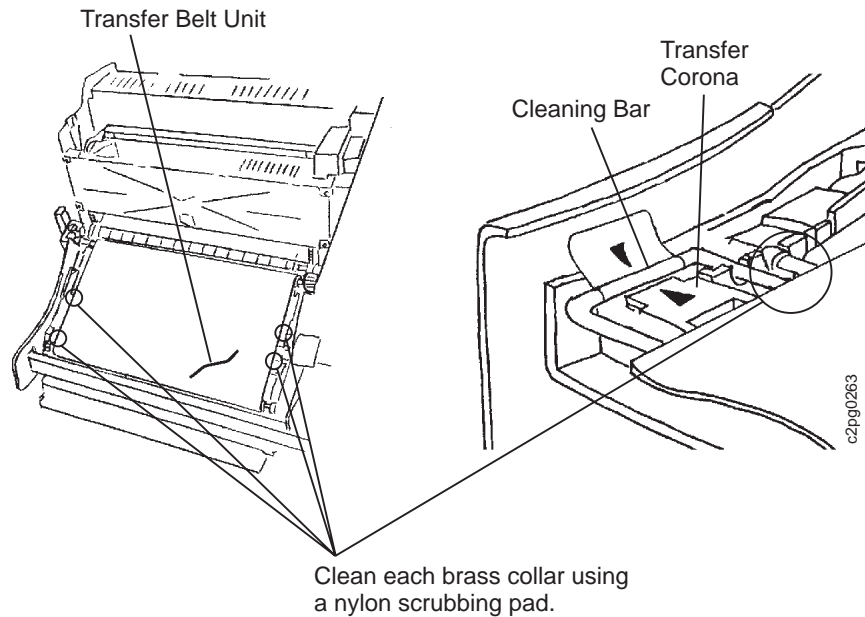
1. Open the front cover.
2. Open the paper feed module by turning the paper feed module handle counterclockwise to the RELEASE position, then pull forward.
3. Clean the transfer corona by lifting the blue tape and sliding the cleaning bar away from the printer until it stops.



4. Return the cleaning bar to the home position by aligning the arrows. Lightly push down on the cleaning bar; be sure both sides of the cleaning bar are locked into place.



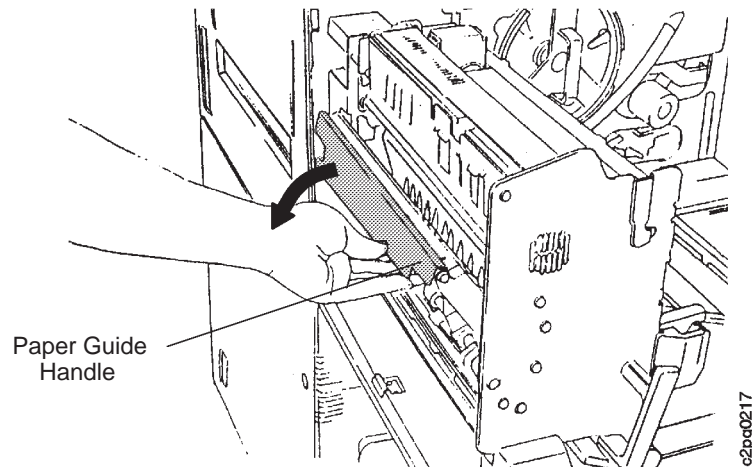
5. Clean each brass collar (2) on both sides of the transfer belt unit.



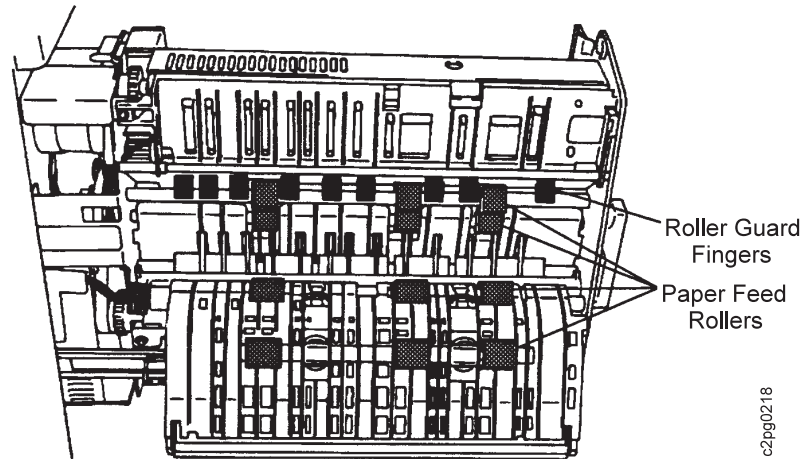
### Paper Feed Rollers

Do the following to clean the paper feed rollers:

1. Open the front cover.
2. Open the paper feed module. Turn the paper feed module handle counterclockwise to the RELEASE position, then pull forward.
3. Open the paper guide by pulling the paper guide handle downward.



4. Clean the paper feed rollers with a lint-free cloth.



5. Close the paper guide by latching the paper guide handle in place.
6. Close the paper feed module; push the paper feed module in, then turn the module handle clockwise to the LOCK position.
7. Close the front cover.

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## Chapter 7. Handling Operation Problems

This chapter provides instructions for resolving some common problems:

- Clearing paper jams
- Clearing stapler jams
- Handling aborts and program checks
- Correcting print quality problems
- Responding to display messages and codes

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### Clearing Paper Jams

Occasionally a sheet of paper may get jammed inside the printer during the printing process. Several things can cause a paper jam.

- The paper was loaded incorrectly or damaged.
- The wrong type of paper was loaded.
- The paper loaded may be curled or damp.
- The printer needs cleaning.
- The printer needs repair.

Select xerographic paper for best results. Store paper in an area that meets temperature and humidity requirements. See "Storing Paper and Supplies" on page 6-4.

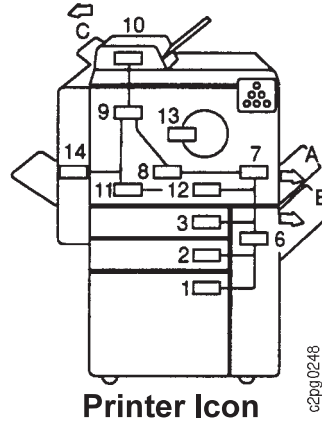
The printer stops printing when a paper jam occurs, and the PAPER JAM message appears on the operator panel. A system reference code (SRC) also appears.

Refer to the *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*, Chapter 4, "Troubleshooting Paper and Stack Problems." It provides information that can help you prevent the following problems:

- Repeated or frequent paper jams
- Frequent misfeeds
- Multiple feeds

### Printer Icon Indicator Lights

Each indicator light on the printer icon identifies an area in the paper path and is associated with numbers or letters. When a paper jam occurs, the printer stops printing and the lights show where the paper jam is located. More than one indicator light may be on at a time.



The following table shows the area of the machine that corresponds to the indicator lights.

Indicator Light	Area of Paper Jam
A	Top auto-eject door
B, 6	Bottom door
C, 10	Base stacker
14	Side stacker
13	EP module area
7, 8, 9, 11, 12	Paper feed module area
1, 2, 3	Tray area

## Clearing a Paper Jam

The printer stops printing when a misfeed occurs, and the PAPER JAM message appears. Paper jams may occur in several areas of the printer. Check the paper path thoroughly. Remove all paper along the paper path in the order described in the following procedure.

To clear the paper jam and operator panel message, do the following:

1. Check the indicator light on the operator panel.
2. If an arrow is lighted, open the corresponding door or tray and remove the paper, starting with the top door. Paper is auto-ejected from this door.
3. Check the paper jam indicator lights again. If any lights remain lit, clear the paper from the corresponding area.
4. Some indicator lights go off immediately when the paper is removed. The indicator lights for the EP and the paper feed modules temporarily remain on. Press the **Start** key to verify that all jams are cleared, to clear the Operator panel message, and to continue printing.

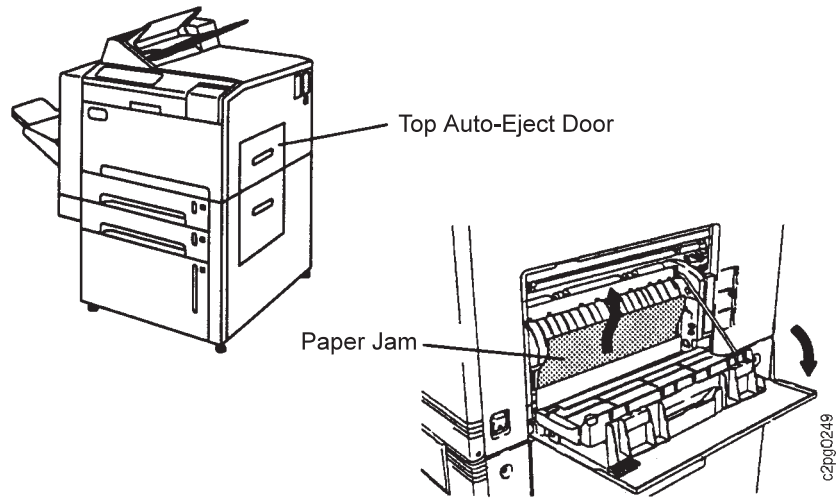
**Note:** Pages removed from the paper path reprint automatically when the printer starts printing again. If the printer is warming up, it may take a few minutes to start printing.



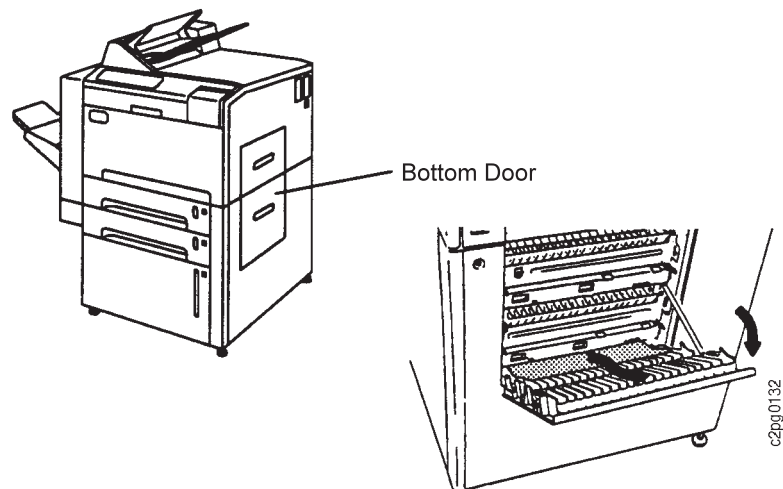
## Clearing Paper from Side Doors

Use the following steps to clear paper from the top door and bottom door (lights A, B, and 6 on the printer icon).

1. Open the top auto-eject door to remove the jammed paper. Paper along the paper path automatically ejects through the top door.



2. Close the top auto-eject door.
3. Open the bottom door to remove any paper.

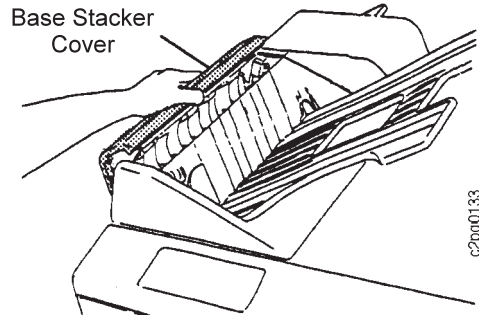


4. Close the bottom door.
5. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

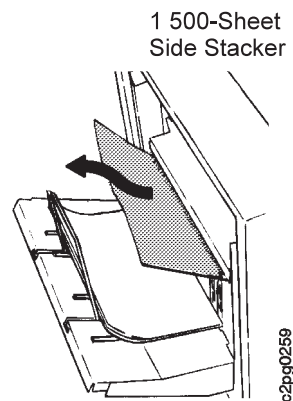
## Clearing Paper from the Base Stacker and 1 500-Sheet Side Stacker

Use the following steps to clear paper from the base stacker and 1 500-sheet side stacker (lights C, 10, and 14 on the printer icon).

1. Open the base stacker cover and remove any jammed paper.



2. Close the base stacker cover.
3. Remove any jammed paper from the 1 500-sheet side stacker by carefully pulling the paper straight out.

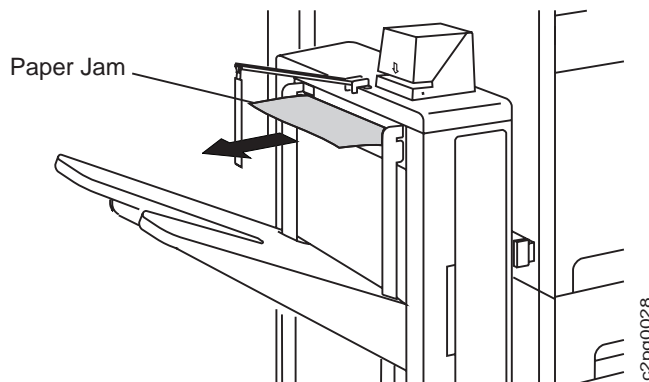


4. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

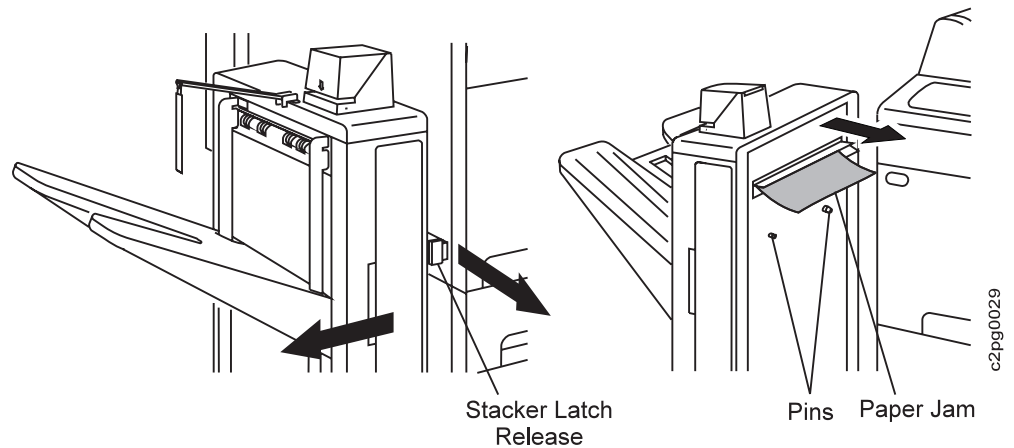
## Clearing Paper from the 3 000-Sheet Side Stacker (option)

Use the following steps to clear paper from the 3 000-sheet side stacker (Light 14 on the printer icon).

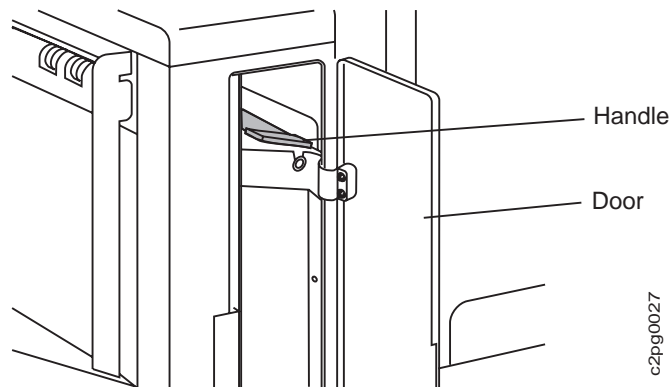
1. Check for jammed paper at the exit of the stacker. Carefully pull the paper straight out.



2. Pull the stacker latch release and roll the stacker away from the printer. Remove any jammed paper by pulling the paper straight out.



3. Roll the stacker toward the printer while aligning the two pins until the stacker latch release locks into place.
4. Open the door on the face of the stacker. Lift the blue handle upward and remove any jammed paper.

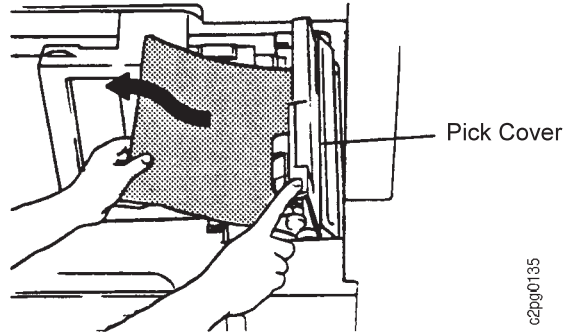


5. Close the door.
6. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

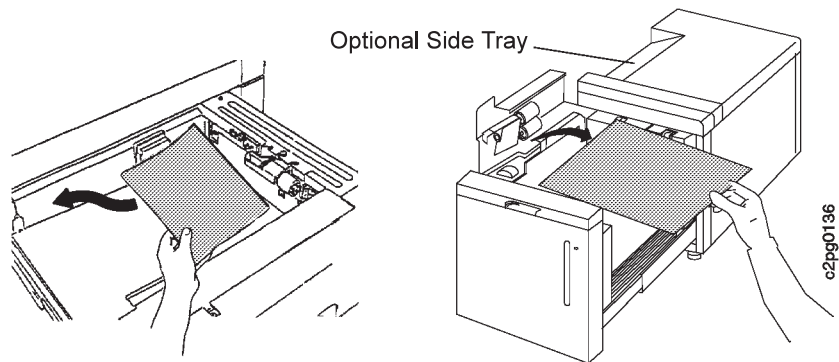
## Clearing Paper from the Trays

Follow the steps below to clear paper from the trays (Lights 1, 2, and 3 on the printer icon).

1. Open the main tray, lift and open the pick cover, then remove the jammed paper.



2. Close the main tray.
3. Repeat Steps 1 and 2 for all trays when an indicator light for that area is lit.

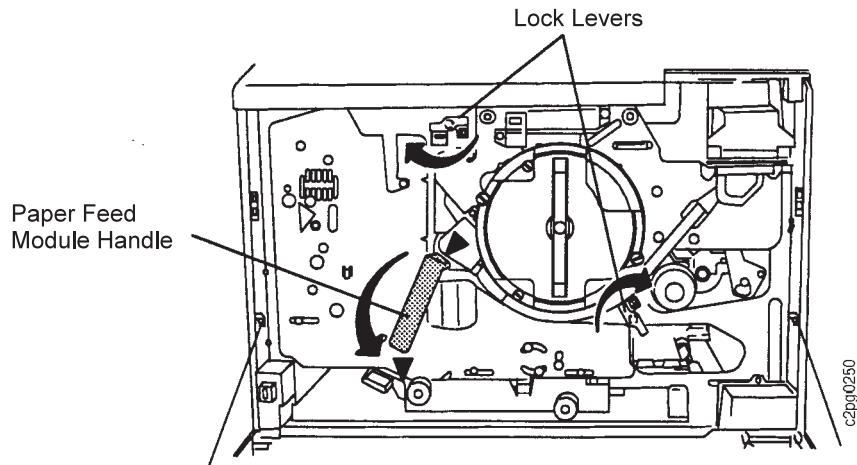


4. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

## Clearing Paper from the EP Module Area

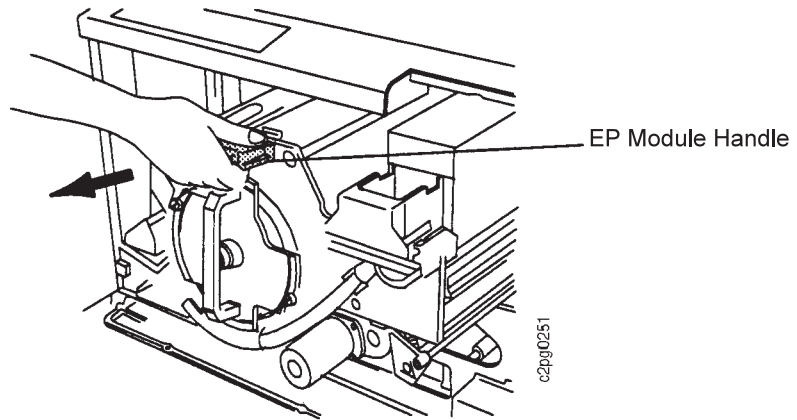
Follow the steps below to clear paper from the EP module area (Light 13 on the printer icon).

1. Open the front cover.
2. Unlock the EP module by turning the two lock levers clockwise and the paper feed module handle counterclockwise to the RELEASE position.

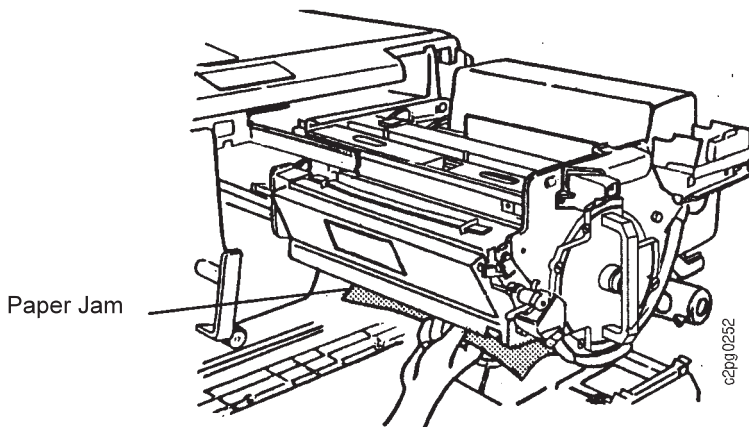


3. Pull out the EP module by pulling the EP module handle.

**Attention: Do not leave the EP module in this position for more than five minutes to avoid photoconductor damage.**

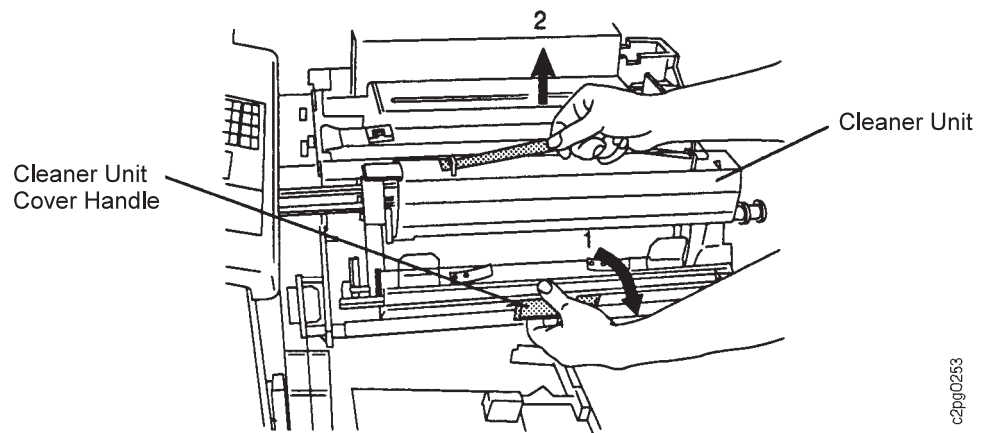


4. Remove any paper from the EP module and drum unit. Avoid scratching or touching the drum unit while removing paper.



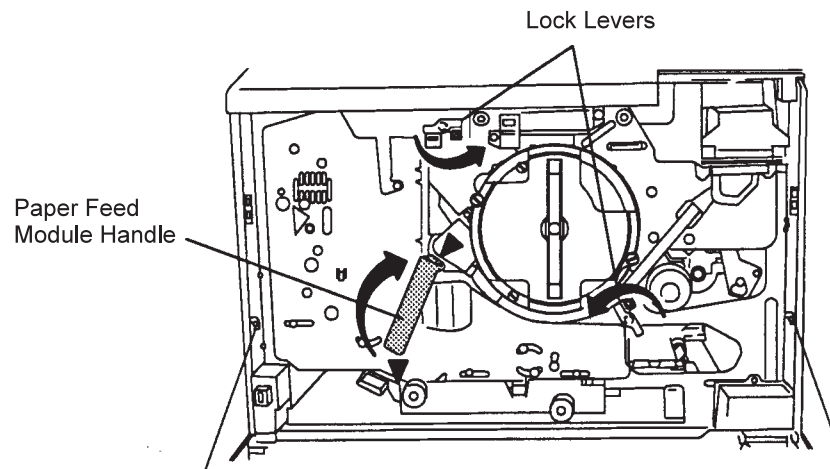
5. If necessary, remove the cleaner unit to remove any paper.

Pull the cleaner unit cover handle out and downward (1), then lift the cleaner unit out by its handle (2).



c2pg0263

6. Return the cleaner unit to its original position. Align the arrows on the cleaner unit and the EP module. Latch the cleaner unit cover handle in place.
7. Push the EP module in using the EP module handle. Lock the EP module in place by turning the paper feed module handle clockwise to the LOCK position and turning the two lock levers counterclockwise.



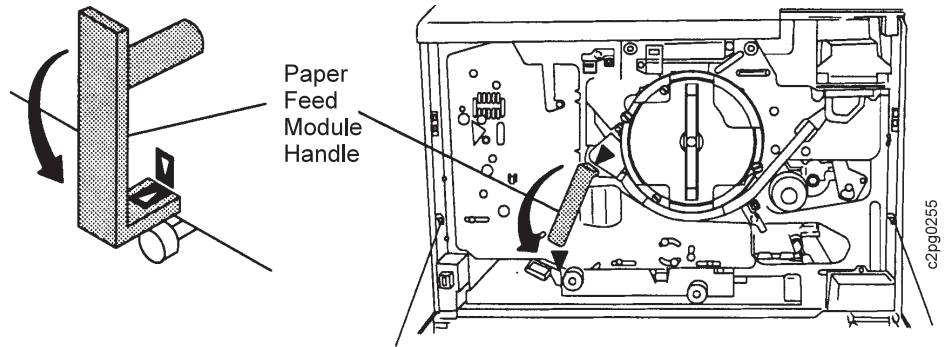
c2pg0254

8. Close the front cover.
9. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

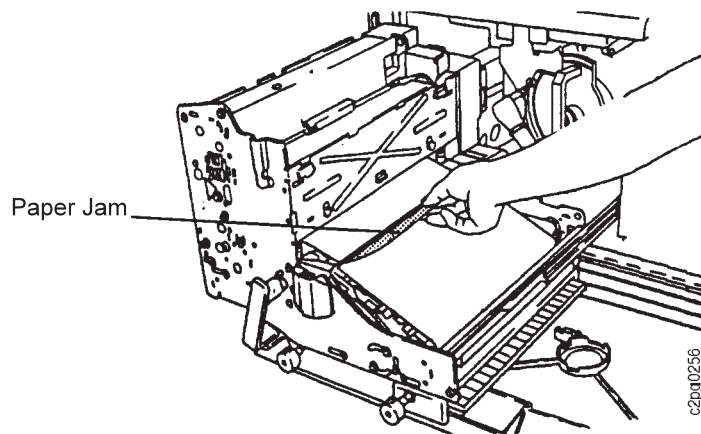
## Clearing Paper from the Paper Feed Module Area

Use the following steps to clear paper from the paper feed module area (lights 7, 8, 9, 11, and 12 on the paper jam indicator).

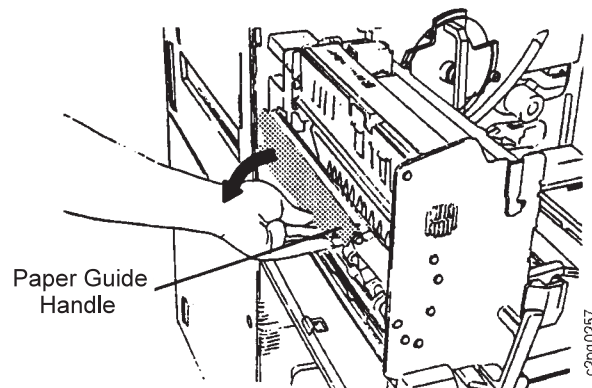
1. Open the front cover.
2. Open the paper feed module by turning the paper feed module handle counterclockwise to the RELEASE position, then pull forward.



3. Remove any jammed paper from the transfer belt unit.

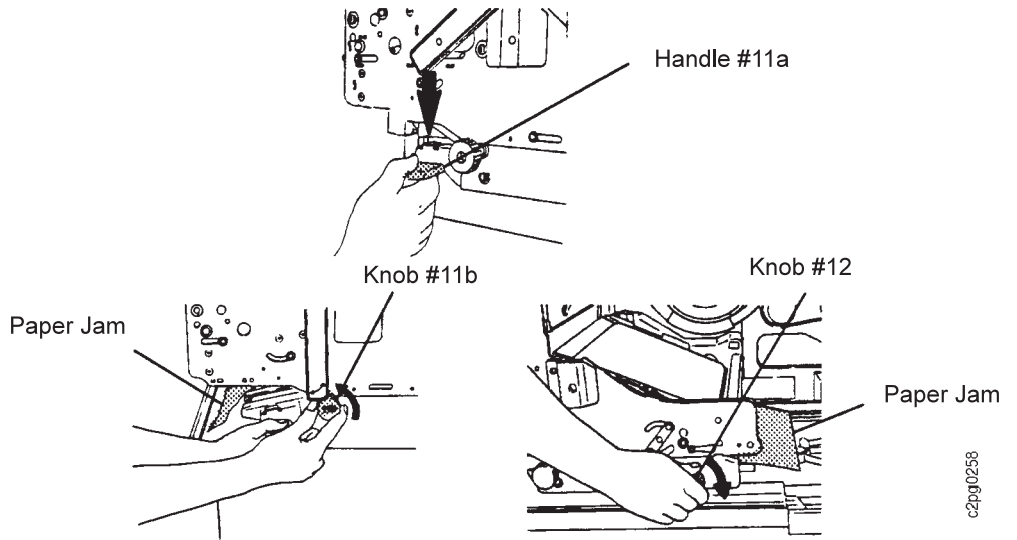


4. Lift the paper guide handle and rotate it downward. Remove any jammed paper from the paper guide.



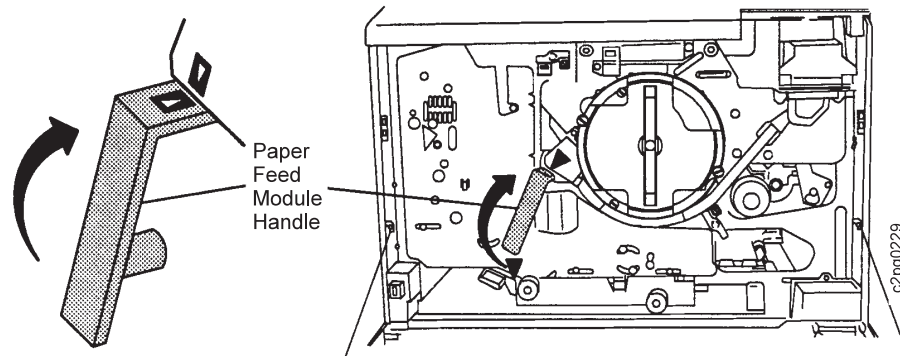
5. If duplex printing, remove any paper from the lower paper guide.

Push handle #11a downward. While holding handle #11a down, rotate each blue knob (#11b and #12), as shown. Remove any jammed paper.

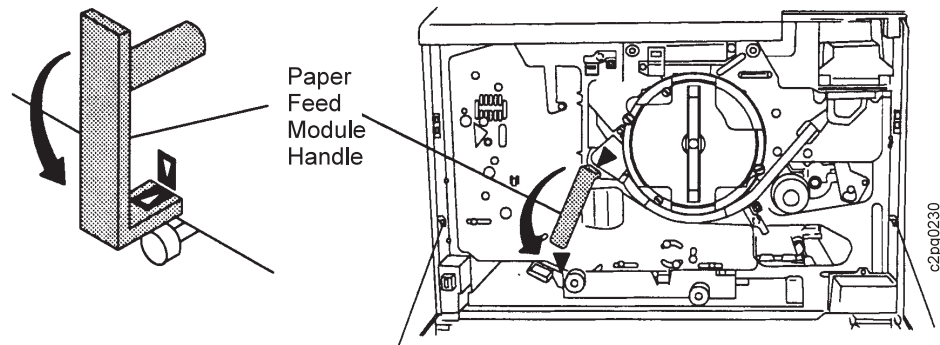


c2pg0256

6. Push the paper feed module in. Turn the paper feed module handle clockwise to the LOCK position.

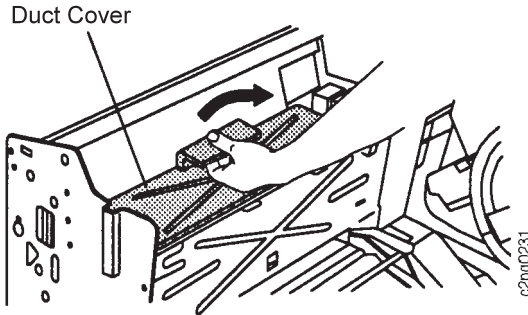


7. Close the front cover.
8. Look at the printer icon. If an indicator light is still lit, remove the fuser unit (Steps 9 through 20). Otherwise, go to Step 19.
9. Open the front cover.
10. Open the paper feed module. Turn the paper feed module handle counterclockwise to the RELEASE position, then pull the handle forward.



11. Lift the duct cover handle up, and rotate the duct cover out.

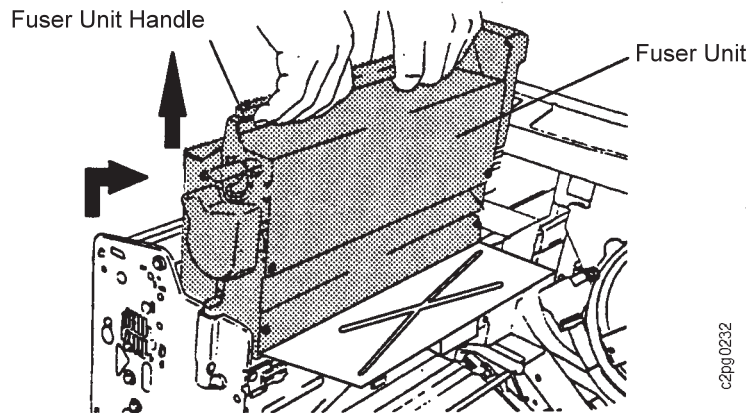




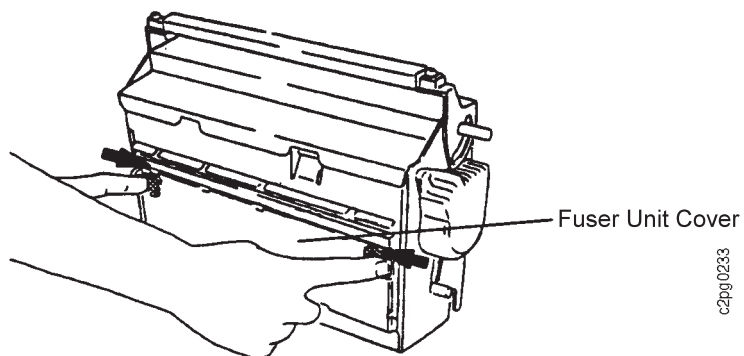
12. Remove the fuser unit by rotating the fuser unit handle upward. Lift out the assembly.

**CAUTION:**

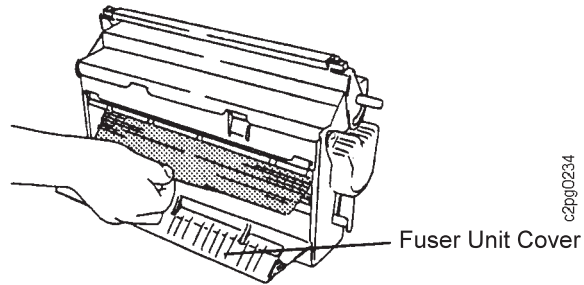
**<28> The fuser unit is hot. Remove jewelry before removing the fuser unit. Touch only the blue handle while handling the fuser unit. The fuser unit takes 30 minutes to cool.**



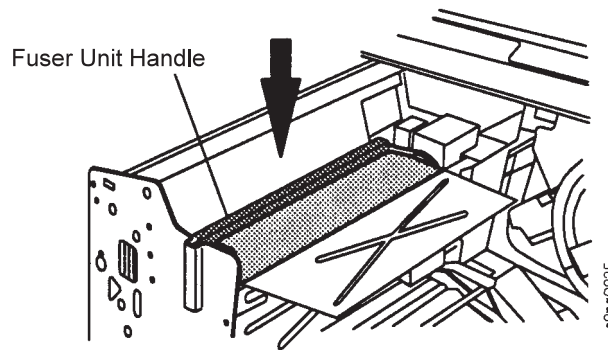
13. Open the fuser unit cover by pushing the latches in on both sides of the fuser unit cover. Rotate the fuser unit cover down.



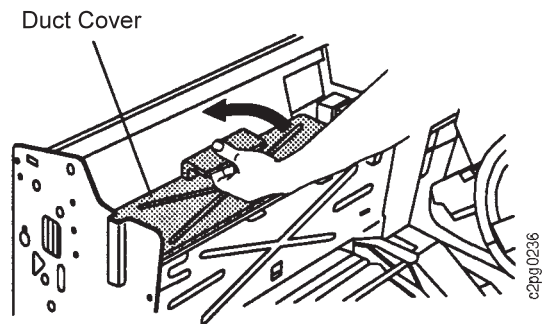
14. Remove the jammed paper. Close and latch the fuser unit cover.



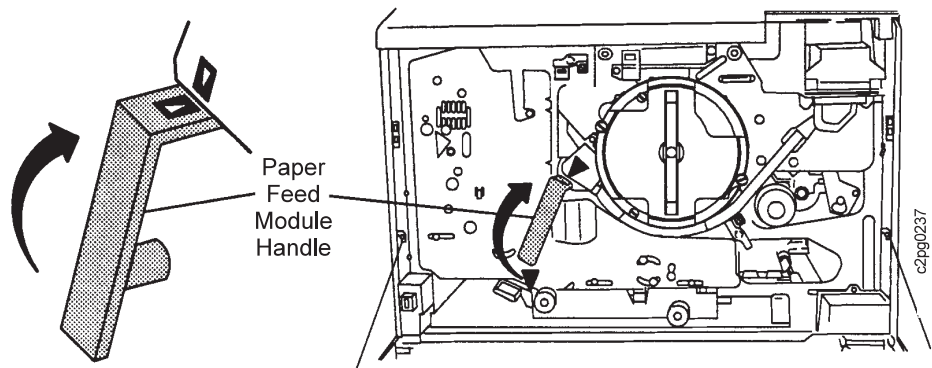
15. Return the fuser unit to its original position. Rotate the handle downward into the latched position. Be sure the handle is completely pushed down into the latched position.



16. Close the duct cover.



17. Push the paper feed module in, then turn the paper feed module handle clockwise to the LOCK position.



18. Close the front cover.
19. Press the **Enter** key to clear any error messages from the operator panel.
20. Press the **Start** key to verify all jams have been cleared, to clear the operator panel message, and to continue printing.

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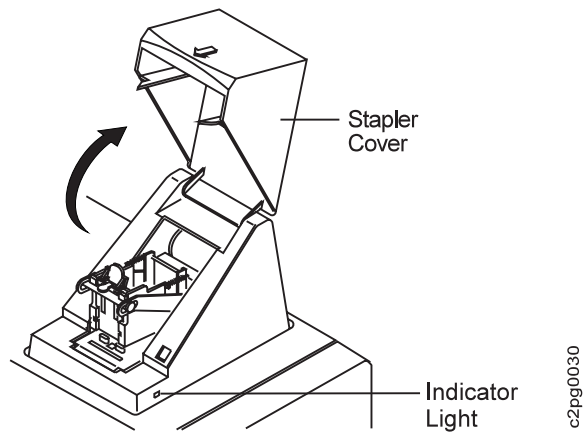
## Clearing Stapler Jams

If the indicator light is lit the stapler may need staples, see “Loading Staples in the Convenience Stapler (option)” on page 6-19. If the stapler contains staples and is not working, it may be jammed.

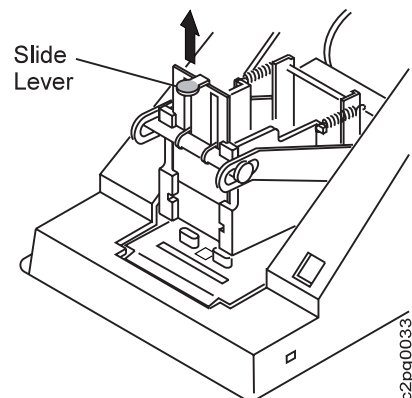
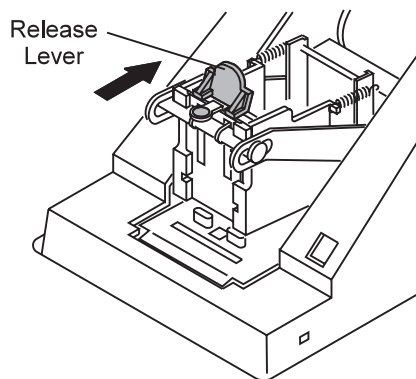
**Note:** The indicator light also illuminates when the side stacker tray is moving.

To clear a stapler jam, do the following:

1. Open the stapler cover.



2. Push the colored release lever back while simultaneously lifting up on the colored slide lever. This reveals the area where staples are formed and driven into a stack of paper.



3. Carefully remove all jammed staples.
4. Push down on the colored slide lever to return to an operating position.
5. Close the stapler cover.
6. If jams persist, install a new staple cartridge.

---

## Handling Aborts and Program Checks

### Hard Abort

A Hard Abort is a failure in the control unit that prevents printer recovery. This indicates a problem with the microcode that controls the printer. Restarting the printer will restore the printer functions.

Persistent or frequent hard aborts should be communicated to IBM. It is possible to capture the failure information with a trace for future analysis. This procedure is not generally needed but may be requested by the service representative or engineering.

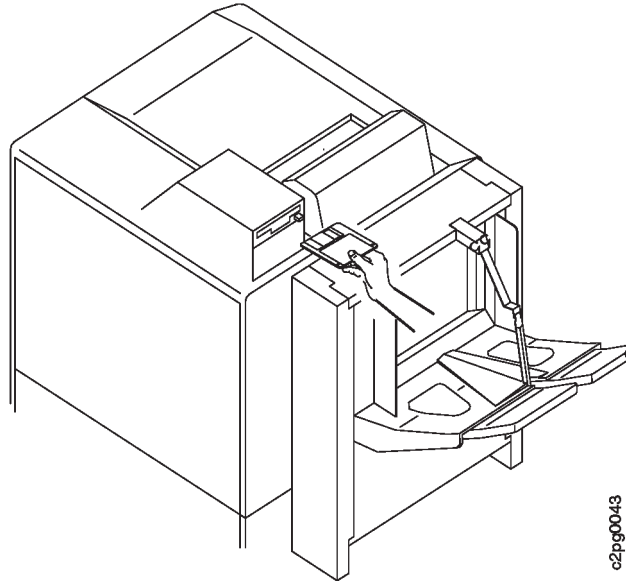
#### Restarting the Printer

1. Press the **Enter** key to clear the message. PRESS ENTER TO RESTART appears.
2. Press the **Enter** key to restart the printer.
3. Wait until the restart procedure is finished. If the HARD ABORT message appears again, press the **Enter** key to clear the message.
4. Press the **Scroll Down** key to PRESS ENTER TO SHUTDOWN.
5. Press the **Enter** key to shutdown the printer.
6. When the SHUTDOWN DONE-POWER OFF message appears, power off the printer and then power the printer back on.
7. Call for service if the problem continues.

#### Saving Data with a Trace

When there is a Hard Abort on the printer, a trace can be saved if it is captured before the printer has been turned off. You must have a 3.5 inch, DOS formatted diskette to save the trace.

1. The HARD ABORT message must be on the display. Scroll down to obtain and record the following information:  
ABORT SOURCE: \_\_\_\_\_  
ABORT ID: \_\_\_\_\_  
ABORT NAME: \_\_\_\_\_  
HEX DATA: \_\_\_\_\_  
ADDITIONAL: \_\_\_\_\_
2. Press the **Enter** key to clear the message. PRESS ENTER TO RESTART is displayed. DO NOT press the **Enter** key yet.
3. Scroll down once. PRESS ENTER TO SHUTDOWN is displayed. DO NOT press the **Enter** key yet.
4. Insert a DOS formatted diskette into the diskette drive.



e2p90043

5. Scroll down once. The **PRESS ENTER TO SAVE TRACE** message is displayed. Press the **Enter** key. The small light on the diskette drive will turn on in a few seconds.
6. When the light turns off (about 20 seconds), the trace is complete. Remove and save the diskette for the service representative. Reinstall the original diskette in the diskette drive, if applicable.
7. Power the printer down. Wait five seconds. Power the printer on. See “Powering On and Off the Printer” on page 5-1.

## Master Abort

Occasionally, during power-on diagnostics, the printer has a problem that affects its internal computer. This error causes the **MASTER ABORT** message. Do the following if you see this message:

1. Press the **Enter** key to clear the message. **CONTINUE** appears.
2. Press the **Enter** key to attempt to continue normal operation.
3. If the **MASTER ABORT** message appears again, press the **Enter** key to clear the message.
4. Press the **Scroll Down** key to **PRESS ENTER TO SHUTDOWN**.
5. Press the **Enter** key to shutdown the printer.
6. When the **SHUTDOWN DONE-POWER OFF** message appears, power off the printer and then power the printer back on.
7. Call for service if the problem continues.

## Program Check

Occasionally the PROGRAM CHECK message appears. Do the following if you see this message:

1. Press the **Enter** key to clear the message.
2. Press the **Start** key to make the printer READY again.

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## Print Quality Problems

### All Black Print Samples

For print quality problems, run the ALL BLACK (4) print sample (see “Running Print Samples” on page 4-18) to see if there is a photoconductor problem. Four copies print. If your print quality problem appears on every other print in the same location, advance the photoconductor. See “Advancing the Photoconductor” on page 6-9. Otherwise continue through the print quality samples.

#### Notes:

1. Run the ALL BLACK print samples in simplex mode only.
2. Do not run ALL BLACK more than two times. Run a different print sample before running ALL BLACK again.

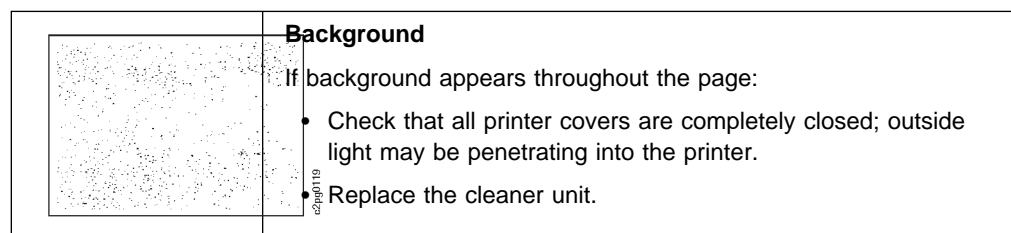
### Other Print Samples


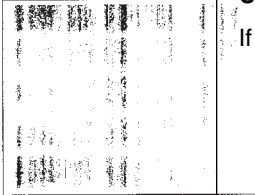
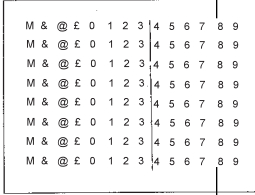
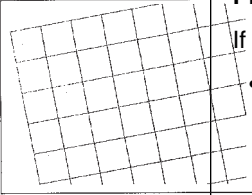

Look at a sample of your print quality problem. If necessary, run a print sample similar to your print quality problem.

The following pages provide suggestions for problems in the appearance of a printed document. The top of each print quality problem sample shown is the leading edge of the form and is in the printer process direction. If the suggested action does not improve the print quality, call for service.

#### Notes:

1. If replacing the supply (when suggested below) does not correct the print quality problem, and the original supply has not reached its end of life, remove the new supply and save it for future use. Return the original supply to the printer.
2. If a supply is replaced and the supply has corrected the print quality problem, enter the SUPPLIES menu to reset the supply counter for the supply item. Do not reset the supply counter if the supply did not correct the print quality problem; the supply counter will be inaccurate. See “When to Replace Supplies” on page 6-1.



	<p><b>Toner does not adhere to paper</b></p> <p>If you can wipe toner off the paper:</p> <ul style="list-style-type: none"> <li>• Ensure that the fuser unit handle is in the latched position.</li> <li>• Replace the fuser unit.</li> </ul>
 <p style="text-align: right; font-size: small;">e2hp0120</p>	<p><b>White spots appear on the image</b></p> <p>white spots appear on the images throughout the page:</p> <ul style="list-style-type: none"> <li>• Ensure the thumb screws that position the transfer belt unit are tight.</li> </ul>
  <p style="text-align: right; font-size: small;">e2hp0121</p>	<p><b>Unwanted lines or stripes</b></p> <p>If black streaks or spots appear on the page:</p> <ul style="list-style-type: none"> <li>• Replace the cleaner unit.</li> </ul>
 <p style="text-align: right; font-size: small;">e2hp0122</p>	<p><b>Print skew</b></p> <p>If the image is misaligned on the page:</p> <ul style="list-style-type: none"> <li>• Ensure the paper supply is not damaged and is correctly aligned in the trays.</li> </ul>
 <p style="text-align: right; font-size: small;">e2hp0123</p>	<p><b>White streak</b></p> <p>a white streak appears in one position on the page:</p> <ul style="list-style-type: none"> <li>• Ensure the thumb screws that position the transfer belt unit are tight.</li> <li>• Replace the transfer belt unit.</li> <li>• Replace the cleaner unit.</li> </ul>

	<p><b>White voids</b></p> <p>If faded areas or white voids appear on the page:</p> <ul style="list-style-type: none"> <li>• Use paper from a sealed package; the paper may be damaged.</li> <li>• Replace the transfer belt unit.</li> </ul>
	<p><b>Image transfer (offset)</b></p> <p>If portions of the image are transferred onto another area of the page:</p> <ul style="list-style-type: none"> <li>• Replace the transfer belt unit.</li> <li>• Replace the fuser unit.</li> </ul>
	<p><b>Smear</b></p> <p>If the image is smeared or there is smearing on the back side of the paper when printing single sided (simplex):</p> <ul style="list-style-type: none"> <li>• Ensure the thumb screws that position the transfer belt unit are tight.</li> <li>• Replace the transfer belt unit.</li> <li>• Replace the fuser unit.</li> </ul>

## Display Messages and Codes

When you see messages on the operator panel, refer to the following table for the recommended recovery action.

After you perform the recovery action, do the following:

1. If the message remains displayed, press the **Enter** key to clear the message.
2. Press the **Start** key to continue printing.

If the recovery action does not clear the message, call for service. Always note the system reference code (SRC) for future reference.



Table 7-1 (Page 1 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
ADJUST BOTTLE	100F	The developer bottle is incorrectly installed	<ol style="list-style-type: none"> <li>1. Open the front cover</li> <li>2. Wiggle the developer mix bottle.</li> <li>3. Close the front cover.</li> <li>4. Press <b>Enter</b> to start the developer mix replacement process.</li> <li>5. If this message remains, call for service.</li> </ol>
ADVANCING PHOTOCONDUCTOR		Photoconductor is advancing.	Not an error; informational only.
ATTACHMENT ADAPTER ERROR	Various SRCs	A hardware problem occurred during an attempt to enable an attachment (possibly during autostart).	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
ATTACHMENT CARD ERROR	AF11	The attachment card was removed.	<ol style="list-style-type: none"> <li>1. Error occurs only once.</li> <li>2. Call for service and report error code AF11.</li> </ol>
ATTACHMENT ENABLED	B001	An attachment was enabled.	Not an error; informational only.
ATTACHMENT NO LONGER SUSPENDED	B011	An attachment was released from suspension.	Not an error; informational only.
ATTACHMENT NOT ACCESSIBLE		An attempt to enable an attachment was unsuccessful (possibly during autostart). This may occur because another attachment already is enabled. Also, a hardware problem may exist.	<ol style="list-style-type: none"> <li>1. Check to see if another attachment already is enabled (under <b>ENABLE STATUS</b> for each attachment, key operator authorization required). If so, disable that attachment.</li> <li>2. If no other attachment was enabled, restart the printer and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ATTACHMENT RESET	B002	An attachment was reset.	Not an error; informational only.
ATTACHMENT SUSPENDED	B010	An attachment was suspended.	Not an error; informational only.
ATTACHMENT TIMED OUT		An attempt to enable an attachment was unsuccessful (possibly during autostart) within a prespecified time-out period.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
AUTOSWITCH NO LONGER VALID		Someone disabled a tray which is designated as the autoswitch tray of another tray.	Not an error; informational only.
AUTOSWITCH TRAY NOT ENABLED		The selected autoswitch tray is disabled.	Select another autoswitch tray.
BOTTOM DOOR OPEN	0104	The lower door on the right side of the printer is open.	Close the door.

Table 7-1 (Page 2 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
CALL FOR SERVICE	5053	Transfer corona problem.	<ol style="list-style-type: none"> <li>1. Clean the transfer corona, see "Cleaning the Transfer Corona" on page 6-24.</li> <li>2. Call for service if the problem continues.</li> </ol>
CALL FOR SERVICE	Various SRCs	An error must be corrected by the customer engineer.	Call for service. Report the SRC displayed.
CANNOT OFFSET OFFSET DISABLED	D007	Attempt to print with offset disabled.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
CANNOT PRINT DISABLED TRAY	D006	Attempt to print with disabled tray.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
CHECK FORM NAME IN MENU		More than one form name is defined for the size of paper loaded in the tray.	If you changed the type of form loaded in the tray, reconfigure that tray with the correct form name (key operator authorization required).
CLEANER UNIT: REPLACE NOW	1009	The cleaner unit needs to be replaced.	Replace the cleaner unit.
CLEANER UNIT: REPLACE SOON	1015	The cleaner unit is near its end-of-life.	Replace the cleaner unit soon.
COMMUNICATIONS ERROR	A440 A441 A442	Ethernet/Token Ring TCP/IP communications error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
COMMUNICATIONS ERROR	AF00 AF01 AF02	Attachment subsystem, cannot open attach driver.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
DEVELOPER MIX CHANGING...	1011	The developer mix is being changed.	Wait for further instructions to appear on the display.
DEVELOPER MIX: REMOVE BOTTLE	100E	The developer mix bottle needs to be removed before printing can continue.	<ol style="list-style-type: none"> <li>1. Open the front cover.</li> <li>2. Remove the developer mix bottle.</li> <li>3. Close the front cover.</li> <li>4. Press <b>Enter</b> to clear the error message.</li> <li>5. Call for service if the problem continues.</li> </ol>
DEVELOPER MIX: REPLACE NOW	1002	The developer mix needs to be changed.	Replace the developer mix.
DEVELOPER MIX: REPLACE SOON	1012	The developer mix needs to be changed soon.	Replace the developer mix.
DUPLEX DISABLED	D005	Attempt to duplex with duplex disabled.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	BA00 through BA02	Program check.	<ol style="list-style-type: none"> <li>1. Restart the printer.</li> <li>2. Call for service if the problem continues.</li> </ol>

Table 7-1 (Page 3 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
ERROR, SEE USER'S GUIDE	BC02	Invalid print head resolution.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	BC03	Invalid tray ID.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	BC04	Invalid maximum paper size.	<ol style="list-style-type: none"> <li>1. Check paper size assigned to each tray.</li> <li>2. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	BC05	Memory configuration changed.	Call for service and report code BC05.
ERROR, SEE USER'S GUIDE	BF01 BF02	Control unit disk error.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	BF03	Automatic backup to diskette failure.	<ol style="list-style-type: none"> <li>1. This error is for the log only.</li> <li>2. Inform the customer engineer on next service call.</li> </ol>
ERROR, SEE USER'S GUIDE	C003 through C004	Control unit error.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	C005	Control unit error.	Call for service if printer does not recover.
ERROR, SEE USER'S GUIDE	D010 through D011	Printer error.	<ol style="list-style-type: none"> <li>1. Restart the printer.</li> <li>2. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	D080 through D3A9	Control unit error.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ERROR, SEE USER'S GUIDE	D300 through D3FF	Printer error.	<ol style="list-style-type: none"> <li>1. Shutdown the printer and power off.</li> <li>2. Power on. Press <b>Start</b>, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A450	Ethernet TCP/IP control unit error.	<ol style="list-style-type: none"> <li>1. Restart the printer and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A451	Ethernet TCP/IP host error.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>

Table 7-1 (Page 4 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
ETHERNET ERROR	A452	Ethernet TCP/IP network error.	<ol style="list-style-type: none"> <li>1. Report network problems to site system network administrator.</li> <li>2. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A453 A454	Ethernet TCP/IP communications error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A455	Ethernet TCP/IP host error.	<ol style="list-style-type: none"> <li>1. Restart the printer and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A456	Ethernet TCP/IP network error.	<ol style="list-style-type: none"> <li>1. Report network problems to site system network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A457 through A45B	Ethernet TCP/IP communications error.	<ol style="list-style-type: none"> <li>1. Report network problems to site system network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A45C	Ethernet TCP/IP Invalid start up.	<ol style="list-style-type: none"> <li>1. Report network problems to site system network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
ETHERNET ERROR	A45D	Ethernet TCP/IP Invalid run-time.	<ol style="list-style-type: none"> <li>1. Report network problems to site system network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
FORM MISMATCH FOR AUTOSWITCH		A different form name was loaded in a tray previously designated as an autoswitch tray. While this different form name remains loaded in this tray, the previously designated autoswitching will not occur.	Not an error; informational only.
FRONT COVER OPEN	0103	The front cover is open.	Close the front cover (if you have finished procedures requiring the door to be open).
FUNCTION UNAVAILABLE MUST BE OFFLINE		You cannot perform this function when the attachment is enabled.	Have the key operator disable the attachment and retry.
FUNCTION UNAVAILABLE STOP PRINTER		You selected a menu item that is not valid when the printer is printing.	<ol style="list-style-type: none"> <li>1. Press <b>Enter</b> to clear the message.</li> <li>2. Press <b>Stop</b> to make the printer NOT READY.</li> <li>3. Re-select the menu item.</li> </ol>
FUSER UNIT: REPLACE NOW	1005	The fuser needs to be replaced.	Replace the fuser unit.

Table 7-1 (Page 5 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
FUSER UNIT: REPLACE SOON	1013	The fuser unit is near its end-of-life.	Replace the fuser unit soon.
INTERNAL PRINT ERROR	A501 through A505	Internal printing-control unit problem.	1. Restart the printer, and continues. retry. 2. Call for service if the problem
JAM RECOVERY OVERRIDDEN	B00D	Operator has overridden jam recovery.	Not an error; informational only.
JAM RECOVERY SUPPRESSED	B00E	Jam recovery was suppressed.	Not an error; informational only.
JOB HAS BEEN CANCELED	B00A	Job was canceled.	Not an error; informational only.
LOWER SUB TRAY OPEN	2011	The lower sub tray is open.	Close the lower sub tray.
MAIN TRAY OPEN	2010	The main tray is open.	Close the main tray.
MISMATCH IN DEFINED FORM	D004	An incorrect form was loaded for this print job.	Assign a different form to the tray or change the definition of the form that is now loaded in the tray.
OUT OF PAPER	D000	Paper out.	Check for properly-loaded paper in paper tray.
OUT OF PAPER LOWER SUB TRAY	2002	The lower sub tray is out of paper.	Load paper in lower sub tray.
OUT OF PAPER MAIN TRAY	2001	The main tray is out of paper.	Load paper in main tray.
OUT OF PAPER SIDE TRAY	2004	The side tray is out of paper.	Load paper in side tray.
OUT OF PAPER UPPER SUB TRAY	2003	The upper sub tray is out of paper.	Load paper in upper sub tray.
OUT OF TONER ADD TONER NOW	1001	The toner cartridge is empty.	Replace the toner cartridge.
PAPER JAM	2020	Paper is detected at the main tray paper path.	Follow directions for clearing paper jams.
PAPER JAM	2021	Paper is detected at the lower sub tray paper path.	Follow directions for clearing paper jams.
PAPER JAM	2022	Paper is detected at the upper sub tray paper path.	Follow directions for clearing paper jams.
PAPER JAM	2032	Paper is detected on paper path 23 (side tray pick jam sensor).	Follow directions for clearing paper jams.
PAPER JAM	2050 2051	A double paper feed from main tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2052 2053	A double paper feed from lower sub tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2054 2055	A double paper feed from upper sub tray was detected.	Follow directions for clearing paper jams.

Table 7-1 (Page 6 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
PAPER JAM	205A 205B	A double paper feed from side tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2060	Paper jam at main tray (before the main tray pick sensor).	Follow directions for clearing paper jams.
PAPER JAM	2061	Paper jam at main tray (main tray pick sensor).	Follow directions for clearing paper jams.
PAPER JAM	2062	Paper jam at main tray.	Follow directions for clearing paper jams.
PAPER JAM	2064 through 2066	Paper jam at lower sub tray.	Follow directions for clearing paper jams.
PAPER JAM	2068 through 206A	Paper jam at upper sub tray.	Follow directions for clearing paper jams.
PAPER JAM	2074 through 2078	Paper jam at side tray.	Follow directions for clearing paper jams.
PAPER JAM	4004	Paper jam on paper path 5 (IS feed sensor).	Follow directions for clearing paper jams.
PAPER JAM	4006	Paper jam on paper path 7 (IS timing sensor).	Follow directions for clearing paper jams.
PAPER JAM	4007	Paper jam on paper path 8 (IS skew 1 sensor).	Follow directions for clearing paper jams.
PAPER JAM	4008	Paper jam on paper path 9 (IS skew 2 sensor).	Follow directions for clearing paper jams.
PAPER JAM	4009	Paper jam on paper path A (IS return to top sensor).	Follow directions for clearing paper jams.
PAPER JAM	4010 through 4013	A paper jam at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4020	A skewed sheet from main tray at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4021	A skewed sheet from lower sub tray at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4022	A skewed sheet from upper sub tray at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4024	A skewed sheet from the return path at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4026	A skewed sheet from side tray at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4030 4031	A paper jam at input station (IS feed sensor)	Follow directions for clearing paper jams.

Table 7-1 (Page 7 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
PAPER JAM	4032 4033	A paper jam at input station (IS top sensor)	Follow directions for clearing paper jams.
PAPER JAM	4034	A paper jam at input station (double feed detector).	Follow directions for clearing paper jams.
PAPER JAM	4037 4038	A paper jam at registration station (IS timing sensor)	Follow directions for clearing paper jams.
PAPER JAM	403E 403F	A paper jam at the registration station (paper top return sensor).	Follow directions for clearing paper jams.
PAPER JAM	600A	Paper jam on paper path B (drum wrap sensor).	Follow directions for clearing paper jams.
PAPER JAM	600B	Paper jam on paper path C (switchback path sensor).	Follow directions for clearing paper jams.
PAPER JAM	600C	Paper jam on paper path D (return path 1 sensor).	Follow directions for clearing paper jams.
PAPER JAM	600D	Paper jam on paper path E (return path 2 sensor).	Follow directions for clearing paper jams.
PAPER JAM	600E	Paper jam on paper path F (PF out sensor).	Follow directions for clearing paper jams.
PAPER JAM	6010	Paper jam on paper path 20 (HR out sensor).	Follow directions for clearing paper jams.
PAPER JAM	6028	The simplex sheet is wrapped around the photoconductor.	Follow directions for clearing paper jams.
PAPER JAM	6029	The duplex sheet is wrapped around the photoconductor.	Follow directions for clearing paper jams.
PAPER JAM	6038 6039	A paper jam at fusing station.	Follow directions for clearing paper jams.
PAPER JAM	6040	A paper jam at switchback.	Follow directions for clearing paper jams.
PAPER JAM	6044 6045	A paper jam at paper feed exit.	Follow directions for clearing paper jams.
PAPER JAM	6048 through 604B	A paper jam at return feed path.	Follow directions for clearing paper jams.
PAPER JAM	7041	Paper jam on paper path 21 (side stacker path sensor).	Follow directions for clearing paper jams.
PAPER JAM	7078	Paper jam at base stacker (before the base stacker out sensor).	Follow directions for clearing paper jams.
PAPER JAM	707A	Paper jam at upper stacker (before the upper stacker out sensor).	Follow directions for clearing paper jams.
PAPER JAM	7080 7081	Paper jam at side stacker (side stacker jam sensor).	Follow directions for clearing paper jams.

Table 7-1 (Page 8 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
PAPER SIZE MISMATCH	2040	Paper size in tray is different from the size presently configured.	<ol style="list-style-type: none"> <li>1. Reload the tray with the correct paper size.</li> <li>2. Call for service if the problem continues.</li> </ol>
PHOTOCOND:REPLACE NOW	1007	The photoconductor needs to be replaced.	Call for service; report SRC.
PHOTOCOND:REPLACE SOON	1006	The photoconductor life is almost finished.	Notify service; report message.
PRINT ADJUST HAS BEEN ENTERED	B009	Printer adjust was entered.	Not an error; informational only.
PRINTER HAS BEEN MADE NOT READY	B00C	Printer is NOT READY.	Not an error; informational only.
PRINTER SETUP HAS CHANGED	B003	Printer attributes have changed.	Not an error; informational only.
REPLACE FUSER CLEANER BRUSH	1004	The fuser cleaner brush needs to be replaced.	Replace the fuser cleaner brush.
SIDE STACKER COVER OPEN	0106	The cover of the open stacker is open.	Close the cover of the side stacker.
SIDE TRAY OPEN	2015	The cassette in the side tray is not installed or not adjusted correctly.	Install or adjust the cassette.
STACKER ENABLED OR DISABLED	B008	Stacker enabled or disabled.	Not an error; informational only.
STACKER FULL	D001	Stacker full.	Check for full stacker or paper jammed on stacker.
STACKER FULL BASE STACKER	700B	Base stacker full.	Remove paper from the stacker.
STACKER FULL SIDE STACKER	700D	Side stacker full.	Remove paper from the stacker.
TOKEN RING ERROR	A460	Token Ring TCP/IP control unit error.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A461	Token Ring TCP/IP host error.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A462	Token Ring TCP/IP network error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A463 A464	Token Ring TCP/IP communications error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A465	Token Ring TCP/IP host error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>



Table 7-1 (Page 9 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
TOKEN RING ERROR	A466	Token Ring TCP/IP network error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A467 through A46B	Token Ring TCP/IP communications error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A46C	Token Ring TCP/IP invalid start up.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A46D	Token Ring TCP/IP invalid run time.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4A0 through A4C0	Token Ring SNA control unit error.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C1	Token Ring SNA host error.	<ol style="list-style-type: none"> <li>1. Press <b>Start</b>, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C2	Token Ring SNA network error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C3 A4C4	Token Ring SNA communications error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C5	Token Ring SNA host error.	<ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C6	Token Ring SNA network error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4C7 through A4CB	Token Ring SNA communications error.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4CC	Token Ring SNA invalid start up.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>

Table 7-1 (Page 10 of 10). Messages and Recovery Actions

Display Message	SRC	Description	Recovery Action
TOKEN RING ERROR	A4CD	Token Ring SNA invalid run time.	<ol style="list-style-type: none"> <li>1. Report network problems to the network administrator.</li> <li>2. Restart the printer, and retry.</li> <li>3. Call for service if the problem continues.</li> </ol>
TOKEN RING ERROR	A4CE	Token Ring SNA waiting for connection.	<p>Normally not an error. If problem continues do the following:</p> <ol style="list-style-type: none"> <li>1. Restart the printer, and retry.</li> <li>2. Report network problems to the network administrator.</li> <li>3. Call for service if the problem continues.</li> </ol>
TONER LOW-REPLACE SOON		Toner cartridge empty.	Replace the toner cartridge
TOP AUTO-EJECT DOOR OPEN	0105	Top auto-eject door open.	Close the top auto-eject door.
TRANSFER BELT: REPLACE NOW	100A	Transfer belt unit needs replacing.	Replace the transfer belt unit.
TRANSFER BELT: REPLACE SOON	1016	Transfer belt unit near end of life.	Replace the transfer belt soon.
TRAY COVER OPEN	0104	Tray cover open.	Close the tray cover.
UPPER SUB TRAY OPEN	2012	The upper sub tray is open.	Close the upper sub tray.
WRONG FORM NAME IN AUTOSWITCH TRAY		The selected autoswitch tray is not loaded with the same form name as that loaded in the original tray.	Select an autoswitch tray loaded with the same form name as that loaded in the original tray.
WRONG PAPER SIZE IN TRAY	BC01	Invalid paper size in input tray.	<ol style="list-style-type: none"> <li>1. Check paper size and cassettes.</li> <li>2. Shutdown the printer and power off.</li> <li>3. Power on. Press <b>Start</b>, and retry.</li> <li>4. Call for service if the problem continues.</li> </ol>

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## Abbreviations

This list describes the acronyms and abbreviations used in this manual and in the other manuals that are part of the InfoPrint 60 documentation library.

<b>ABIC</b>	Adoptive Bi-Level Image Compression.	<b>IPDS</b>	Intelligent Printer Data Stream.
<b>AEA</b>	Alternate Exception Action.	<b>ISO</b>	International Organization for Standardization.
<b>AFCCU</b>	Advanced Function Common Control Unit.	<b>JES2</b>	Job Entry System 2.
<b>AFIG</b>	Advanced Function Image and Graphics.	<b>JES3</b>	Job Entry System 3.
<b>AFP</b>	Advanced Function Presentation. Advanced Function Printing.	<b>LCD</b>	Liquid Crystal Display.
<b>AFPDS</b>	Advanced Function Printing Data Stream.	<b>LED</b>	Light-Emitting Diode.
<b>AFPF</b>	Advanced Function Print Finishing.	<b>LF</b>	Load Font command.
<b>AIX</b>	Advanced Interactive Executive.	<b>LU</b>	Logical Unit.
<b>APA</b>	All-Points Addressable.	<b>MB</b>	Megabyte (1MB=1 048 576 bytes).
<b>ARQ</b>	Active Record Queue.	<b>MICR</b>	Magnetic Ink Character Recognition.
<b>ASHRAE</b>	American Society of Heating, Refrigeration, and Air Conditioning Engineers.	<b>MIH</b>	Missing-Interrupt Handler.
<b>CCITT</b>	Comite Consultatif International Telegraphique et Telephonique.	<b>MMR</b>	Modified-Modified READ 2 dimensional image.
<b>CCW</b>	Channel Command Word.	<b>MR</b>	Modified READ; (READ=Relative Element Address Designate) 2-dimensional image compression algorithm. Also referred to as CCITT Group 3.
<b>CE</b>	Customer Engineer (IBM).	<b>MTU</b>	Maximum Transmission Unit.
<b>CPI</b>	Characters per Inch.	<b>MVS</b>	Multiple Virtual Storage.
<b>CSW</b>	Channel Status Word.	<b>NACK</b>	Negative Acknowledge reply.
<b>CU</b>	Control Unit.	<b>NOP</b>	No Operation instruction.
<b>DASD</b>	Direct Access Storage Device.	<b>OBR</b>	Outboard Recorder.
<b>DPE</b>	Decompression Performance Enhancement.	<b>OCR</b>	Optical Character Recognition.
<b>DPI</b>	Dots per Inch.	<b>OPC</b>	Organic Photoconductor.
<b>EBCDIC</b>	Extended Binary-Coded Decimal Interchange Code.	<b>OS/VS</b>	Operating System/Virtual Storage.
<b>EC</b>	Engineering Change.	<b>PAGEDEF</b>	Page Definition.
<b>EHC</b>	Exception Handling Control command.	<b>PC</b>	Photoconductor.
<b>EMTF</b>	European Money Transfer Form.	<b>PEL</b>	Picture Element.
<b>EP</b>	Electrophotographic.	<b>PEM</b>	Print-Error Marker.
<b>ESCON</b>	Enterprise Systems Connection.	<b>PSF</b>	Print Services Facility.
<b>ESMM</b>	End Select Medium Modification.	<b>RAM</b>	Random Access Memory.
<b>FORMDEF</b>	Form Definition.	<b>RPQ</b>	Request for Price Quotation.
<b>HAID</b>	Host-Assigned ID.	<b>RRL</b>	Request Resource List.
<b>HFSI</b>	High Frequency Service Items.	<b>SCSW</b>	Subchannel Status Word.
<b>IHF</b>	Image Handling Facility.	<b>SDLC</b>	Synchronous Data Link Control.
<b>IML</b>	Initial Microcode Load.	<b>SMM</b>	Select Medium Modification.
<b>IP</b>	Internet Protocol.	<b>SNA</b>	System Network Architecture.
		<b>SRC</b>	System Reference Code.

**TCP/IP** Transmission Control Protocol/Internet Protocol.

**VM** Virtual Machine.

**VSE** Virtual Storage Extended.

**VSE/AF** Virtual Storage Extended/Advanced Function.

**VSE/SP** Virtual Storage Extended/System Package.

**XOA** Execute Order Anystate command.

**XOH** Execute Order Homestate command.

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# Glossary

The following terms are defined as they are used in InfoPrint 60 documentation. If you do not find the term you need, refer to the index or to the *IBM Dictionary of Computing*.

## A

**A4-size paper.** Paper that measures 210 by 297 mm (8.3 x 11.7 in.).

**adhesive label.** Special-application material; typically consists of paper labels coated on one side with an adhesive mixture temporarily affixed to backing material. See also *carrier*.

**adjust print.** To adjust a pre-printed form's point of origin horizontally or vertically so that text lines up correctly on the pre-printed form.

**AFCCU.** Advanced Function Common Control Unit.

**Advanced Function Image and Graphics.** This allows the printer to decompress compressed graphics.

**Advanced Function Printing (AFP).** The set of licensed programs, together with user applications, that use the all-points-addressable concept to print data (text, images, and graphics) on a wide variety of printers. Advanced Function Printing includes creating, formatting, distributing, and printing information.

**Advanced Function Printing data stream (AFP data stream).** A printing data stream that is processed in AFP environments.

**all-points addressability (APA).** The capability to address, reference, and position text, overlays, and images at any defined point on the printable area of a page.

**application.** The use to which an information processing system is put.

**application program.** A program written for or by a user that applies to the user's work, such as a program that does inventory control or payroll.

**application programmer.** A person who develops application programs. Contrast with *system programmer*.

**autostart.** A printer configuration setting. When the printer is powered on, the printer automatically enables the last enabled attachment and makes the printer Ready.

**autoswitch.** An alternate tray. If an autoswitch tray is selected for a tray, that autoswitch tray starts feeding paper when the original tray becomes empty.

## B

**B4-size paper.** Paper that measures 257 mm x 363 mm (10.1 in. x 14.33 in.).

**B5-size paper.** Paper that measures 182 mm x 257 mm (7.17 in. x 10.12 in.).

**bar code.** A code representing characters by sets of parallel bars of varying thickness and separation that are read optically by transverse scanning.

**basis weight.** The weight in pounds of a ream (500 sheets) of paper cut to a given standard size for that grade; for example, 25 x 38 inches for book papers, 17 x 22 inches for bond papers, and other sizes for other grades.

**binder holes.** A series of holes or slots punched at set intervals that allows the form to be inserted in a loose-leaf or ring binder.

**bond (paper).** Paper formulated with at least 80% wood pulp. Bond-paper works best in the IBM InfoPrint 60.

**buffer.** A routine or storage used to compensate for a difference in rate of flow of data, or time of occurrence of events, when transferring data from one device to another.

## C

**caliper.** The thickness of forms. This is usually expressed in thousandths of an inch.

**carrier.** The backing material for labels. Labels consist of the printable material, the adhesive, and the carrier. See also *adhesive label*.

**CCU.** Common Control Unit (CU)

**character.** A letter, number, punctuation mark, or special graphic used for the production of text.

**character set.** (1) A finite set of different characters that is complete for a given purpose; for example, the character set in ISO Standards 646, "7-bit Coded Character Set of Information Processing Interchange." (2) A group of characters used for a specific reason; for example, the set of characters a printer can print.

**cleaner unit.** The printer component that cleans the photoconductor.

**code page.** A font library member that associates code points and character identifiers.

**code point.** An element of a code page or site in a code table to which a character can be assigned.

**command.** A control signal that initiates an action or the beginning of a sequence of actions.

**configuration.** (1) The arrangement of a computer system or network as defined by the nature, the number, and the chief characteristics of its functional units. More specifically, the term configuration may refer to a hardware configuration or a software configuration. (2) The devices and programs that make up a system, subsystem, or network.

**configure.** The procedure used to customize the printer to a specific operating and/or communication environment.

**connector.** A mechanical device for establishing electrical flow.

**constant data.** Data that does not change; for example, the company letterhead and standard text in form letters, or the headings and boxes on a preprinted form. Contrast with *variable data*.

**constant-spaced font.** A font in which the graphic characters are contained in character cells of uniform size. The distance between reference points of adjacent graphic characters is constant in the in-line progression. The white spaces between graphic characters may vary. Synonymous with *fixed-space font*. Contrast with *proportionally-spaced font*.

**consumables.** The items the key operator adds or changes in the printer.

**controlling computer.** The processing unit to which the InfoPrint 60 is attached through a communication attachment.

**controlling computer system.** The data processing system to which a network is connected and with which the system can communicate.

**control storage.** A portion of storage that contains microcode and other data.

**control unit (CU).** (1) A device that controls input and output operations at one or more devices. (2) The electronics and code that control the printer and the communication attachment.

**copy separation.** The mechanism for distinguishing consecutive copies of a single data set. In the stacker, it consists of offset stacking.

**corona wire.** A small diameter wire (or wires, depending on the function) to which a high voltage is applied that causes ionization of the air. The ionization creates an electrical charge that can be used to perform various functions during the printing process.

**CRU.** Customer Replaceable Unit.

**CU (control unit).** See *control unit*.

**curl.** See *paper curl*.

**customer engineer (CE).** An IBM service representative who performs maintenance services for IBM hardware. Synonymous with *service representative*.

**cut-sheet paper.** Paper that is cut into sheets.

## D

**data stream.** (1) All data transmitted through a data channel in a single read or write operation. A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format.

**default.** An alternative value, attribute, or option that is assumed when none has been specified.

**developed image.** The image that has been exposed onto the photoconductor and covered with toner by the developer.

**developer.** The unit in the process assembly that supplies a flow of developer mix over the photoconductor to develop the electrostatic image.

**diagnostic.** Pertaining to the detection and isolation of errors in programs and faults in equipment.

**diagnostic mode.** The operational mode in which the printer can check itself in case of a malfunction. When the InfoPrint 60 is in diagnostic mode, it is not accepting information from the attached controlling computer system. Only customer engineers can use diagnostic mode. See also *status mode* and *test mode*.

**direct attach.** The environment in which an application program directly allocates the InfoPrint 60 printer.

**disable.** To make non-functional. Contrast with *enable*.

**disabled mechanism.** If necessary, the operator can disable some printer functions. The mechanisms that

can be disabled are the paper trays, stackers, and the duplex mechanism.

**diskette.** A thin, flexible, magnetic disk enclosed in a protective container.

**diskette-storage device.** A direct-access-storage device that uses diskettes as the storage medium.

**double-byte character set.** A font in which the characters are defined by two bytes; the first defines a coded-font section, the second defines a code point. Contrast with *single-byte character set*.

**double-byte coded font.** A font in which the characters are defined by two bytes. The first byte is the number of the coded-font section; the second byte is the code point in the code page specified for that section. Contrast with *single-byte coded font*.

**drum count.** One revolution of the drum equals one drum count.

**dry ink.** The material that forms the image on the paper. Synonymous with *toner*.

**duplex printing.** Printing on both sides of a sheet of paper. Synonymous with *two-sided printing*. Contrast with *simplex printing*.

## E

**edge sensitivity.** A setting designed for paper with a non-standard edge; for example, 3-hole paper.

**electronic form.** See *electronic overlay*.

**electronic overlay.** (1) A collection of constant data that is electronically composed in the host system and may be combined with variable data on a sheet during printing. The library member that contains the definition of the electronic overlay. See also *forms overlay*, *overlay*, and *preprinted form*.

**electrophotographic process.** The creation of an image on forms by uniformly charging the photoconductor, creating an electrostatic image on the photoconductor, attracting negatively charged toner to the discharged areas of the photoconductor, and transferring and fusing the toner to paper.

**electrostatic image.** The invisible image consisting of discharged areas of the photoconductor as a result of exposure from digital data.

**enable.** To make functional. Contrast with *disable*.

**Ethernet.** A 10-megabit baseband local area network that allows multiple stations to access the transmission medium at will without prior coordination, avoids

contention by using carrier sense and deference, and resolves contention by using collision detection and transmission. Ethernet uses carrier sense multiple access with collision detection (CSMA/CD).

## F

**feature code.** A code used by IBM to process hardware and software orders.

**fixed-space font.** Synonym for *uniformly-spaced font*.

**font.** (1) A family or assortment of characters of a given size and style; for example, 9-point Bodoni Modern. A font has a unique name and may have a registry number. (2) A font is data used to create an image of each graphic character; for example, a raster pattern.

**format.** (1) The arrangement or layout of data on a data medium. (2) The size, style, type of page, margins, printing requirements, and so on, of a printed page.

**form definition (FORMDEF).** In Print Services Facility (PSF), a resource object that defines the characteristics of the form, which include: overlays to be used, text suppression, position of page data on the form, and number and modifications of a page.

**forms overlay.** That function of the printer that allows customer-prepared data to be printed with variable-page data. See also *overlay* and *electronic overlay*.

**front trays.** Standard paper trays.

**FRU.** Field Replaceable Unit.

**FSC.** Field Support Center.

**fuse.** To use heat and pressure to blend toner onto forms to make a permanent bond.

**fuser.** The assembly that bonds the toned image to the paper using heat and pressure.

**fuser cleaner brush.** The component inside the fuser unit that cleans the fuser heat roll.

## G

**GOCA.** Graphic Object Content Architecture. An IPDS command set that provides data control information for printing graphics on a page, page segment, or an overlay.

**graphic.** A symbol produced by a process such as handwriting, drawing, or printing. See also *vector graphics*.

## H

**hardware.** Physical equipment used in data processing, as opposed to programs, procedures, rules, and associated documentation. Contrast with *software*.

**host processor.** The processing unit to which the printer is attached through a defined interface.

**host system.** (1) The primary or controlling computer in a multiple-computer installation. (2) A computer used to prepare programs for use on another computer or on another data processing system; for example, a computer used to compile, link edit, or test programs to be used on another system.

## I

**IBM branch office.** The local IBM sales or service office.

**IBM customer engineer (CE).** An IBM representative who services IBM products in the field. See also *service representative*.

**IBM marketing representative.** An IBM representative who takes product orders.

**IBM service representative.** An IBM representative who services IBM products.

**icon.** A pictorial representation of an object.

**image.** (1) A string of picture elements organized in scan lines to represent the contrasting portions of a picture. (2) A likeness or imitation of an object. (3) In this printer, an image comprises a string of pels organized in scan lines to represent the contrasting portions of a picture. The image may consist of any data stored as a raster pattern. The term image is interchangeable with impression and is printed on one side of a sheet of paper. See also *impression*.

**impact printer.** A printer in which printing is the result of mechanical impacts. Contrast with *nonimpact printer*.

**impression.** An implied or physical page. Used when calculating the reduction of printer output caused by switching the printer between duplex and simplex modes or upper and lower paper supplies.

**initial microcode load (IML).** A procedure that prepares the InfoPrint 60 for use.

**input.** The data that is entered into a device for processing or storage.

**input key.** A key that performs a specified set of operations when it is pressed.

**installation.** (1) In system development, preparing and placing a functional unit in position for use. (2) A particular computing system, including the work it does and the people who manage it, operate it, apply it to problems, service it, and use the results it produces.

**installation verification procedure.** A procedure distributed with IBM licensed programs that tests the newly installed IBM programs to verify that the basic facilities of the programs are functioning correctly.

**Intelligent Printer Data Stream (IPDS).** An all-points-addressable data stream that allows users to position text, images, and graphics at any defined point on a printed page.

**interface.** A shared boundary. An interface might be a hardware component to link two devices or it might be a portion of storage or registers accessed by two or more computer programs.

**internal print job.** A print job originated on the printer itself; for example, print samples or a current attachment configuration print-out.

**intervention.** An unexpected condition that requires user intervention to clear it; for example, out of toner.

**IOCA.** Image Object Content Architecture. An IPDS command set to print image data on a page, page segment, or overlay.

**IPM.** Impressions-per-minute. Formerly called pages-per-minute. Refers to printer operational characteristics.

**ISO paper sizes.** Pertaining to a set of paper sizes selected from those standardized by the International Organization for Standardization (ISO) for use in data processing.

## J

**jam.** In a printer, a condition where forms have become blocked or wedged in the forms path so the printer cannot operate.

**job separation.** The hardware mechanism that uses the mark-form sequence to distinguish jobs which are consecutively stacked in the output stacker. See also *offset stacking*.



## K

**keyboard input mode.** The mode which allows the operator to access the keyboard.

**key operator.** (1) A user assigned to perform routine maintenance and configuration of the printer. (2) User who has access to all operator functions if the operator password function is in use.

## L

**landscape orientation.** Text and images that are printed parallel to the longer side of the paper. Contrast with *portrait orientation*.

**laser (light amplification by stimulated emission of radiation).** A device that emits a beam of coherent light.

**latent image.** In a printer, the invisible image that exists in the sensitized material after exposure but before development.

**layout plan.** A list of requirements, such as electrical and space, that must be considered before installing the InfoPrint 60.

**leading edge.** The edge of the paper that proceeds through the printer first as it is fed through the paper path.

**ledger-size paper.** Paper that is 279 mm x 432 mm (11 in. x 17 in.).

**legal-size paper.** Paper that measures 216 mm x 356 mm (8.5 in. x 14.0 in.).

**letter-size paper.** Paper that measures 216 mm x 279 mm (8.5 in. x 11.0 in.).

**library.** A collection of related files; for example, one line of an invoice may form an item, a complete invoice may form a file, and the collection of inventory control files may form a library. The libraries used by an organization are known as the data bank.

**licensed program.** A separately priced program that bears an IBM copyright and is offered to customers under the terms and conditions of the Agreement for IBM Licensed Programs.

**line printer.** A printer that formats a line of characters as a unit. Contrast with *page printer*.

**lpi.** Lines-per-inch. A measure of the number of lines per vertical inch of paper.

**logical page.** The print on the page, such as composed text, graphics, and fonts within defined margins. See also *page*. Contrast with *physical page*.

**logo.** An identifying emblem, statement, or motto of a company.

## M

**menu.** A list of procedures or actions available for selection.

**menu mode.** The mode in which the display shows menus and submenus from which different printer settings and choices can be selected. Contrast with *status mode*.

**microcode.** Refers to the microprogramming stored on the microcode diskette. Microcode is used by the control unit to manage the printer and its functions.

## N

**navigating.** The movement through the menu tree; from main menu items to submenu items.

**nonimpact printer.** A printer in which printing is not the result of mechanical impacts. Contrast with *impact printer*.

**normal duplex.** Printing of both sides of a sheet where the top is in the same position on both sides. See also *tumble duplex*.

## O

**OfficeVision.** An IBM software product that helps you manage various office functions, such as notes, documents, and calendars.

**offline.** Not connected to an installed and enabled attachment. Contrast with *online*.

**offset paper.** A grade of paper to which sizing is added to resist moisture and which is treated on the surface to prevent lifting during printing by ink presses.

**offset stacking.** The jogged stacking of output media in the output stacker so that jobs protrude from the balance of the stack to give physical identification. See also *job separation*.

**OK.** An operator panel keyboard selection that causes the printer to accept and save any changed information.

**one-sided printing.** Printing on one side of a sheet of paper. Synonymous with *simplex printing*. Contrast with *duplex printing*.

**online.** Connected to an installed and enabled attachment. Contrast with *offline*.

**OPC.** Organic photoconductor. See *photoconductor*.

**operating environment.** The physical environment; for example, temperature, humidity, layout, or power requirements.

**operating requirements.** A list of requirements, such as environmental, electrical, and space, that must be satisfied before the InfoPrint 60 can be installed.

**Optical Character Recognition (OCR).** Character recognition that uses optical means to identify graphic characters.

**orientation.** The number of degrees an object is rotated relative to a reference; for example, the orientation of an overlay relative to the page point of origin. See also *text orientation*.

**overlay.** A collection of predefined data, such as lines, shading, text, boxes, or logos, that can be combined with variable data on a sheet while printing. See also *electronic overlay* and *forms overlay*.

## P

**page.** A collection of information bound by the beginning page control and its associated end control. A page of printing is one side of a sheet of paper or form. See also *logical page* and *physical page*.

**page printer.** A device that formats one page at a time. Contrast with *line printer*.

**page printer data stream.** A data stream that enables a printer to format a complete page at one time, including text, images, and page segments. It is characterized by a composed-page data-stream format.

**paper curl.** The curve or bend of the paper.

**paper path.** The entire route that paper travels through the printer from a tray to a stacker.

**parallel channel.** A channel having a System/360 and System/370 channel-to-control-unit 1/0 interface that uses bus-and-tag cables as a transmission medium.

**parameter.** A variable that is given a constant value during printer and attachment configuration.

**pattern storage.** Pattern storage contains the fonts and images used for printing the character data, overlays, and segments contained in the page buffer.

**pel (picture element).** (1) An element of a raster pattern; a point where a toned area on the

photoconductor may appear. (2) On an all-points-addressable output medium, each pel is an addressable unit. On a row-column addressable output medium, the only pel addressable is the beginning of a character cell.

**photoconductor (PC or OPC).** (1) The material that is wrapped around the drum. (2) The medium for transferring images to paper. It accepts an electrical charge and discharges where exposed to light.

**physical page.** The form on which the printer is printing, such as an 8½ x 11 inch sheet of paper. See also *page*. Contrast with *logical page*.

**plant.** A manufacturing location.

**point.** A unit of measurement for describing type sizes. There are 12 points to a pica, about 72 points to 1.008 inches.

**point of origin.** The location of the first print position on a logical page. The point of origin is usually stated in terms of X and Y coordinates. The point of origin used by a printer can be affected by factors such as printable area and forms orientation.

**portrait orientation.** Pertaining to a display or hard copy with greater height than width. Contrast with *landscape orientation*.

**power off.** To remove power from the printer.

**power on.** To provide power to the printer.

**PPM.** Pages-per-minute. See also *IPM*.

**preprinted form.** A sheet of paper (form) containing a preprinted design of constant data on which variable data can be printed. See also *electronic overlay*.

**printer.** A device that writes output data from a system onto paper or other media.

**print position.** The physical positions of the characters constituting a print line relative to the form.

**print quality.** The quality of printed output relative to existing standards and in comparison with jobs printed earlier.

**Print Services Facility (PSF).** An IBM licensed program that manages and controls the input data stream and output data stream required by supported IBM page printers. PSF combines print data (from the system spool) with other resources and printing controls to produce the printer data stream (including printer commands) for AFP printers.

**print surface.** The side of a form that receives the printed image.

**process direction.** Describes a direction that is parallel to the movement of the paper path.

**proportionally-spaced font.** A font in which the graphic characters are contained in character cells that may vary with the size of each graphic character and have varying character increments. This allows for even spacing between printed characters and eliminates excess white space around narrow characters. Contrast with *constant-spaced font*.

## R

**RAM.** Random access memory.

**read-only.** A type of access to data that allows it to be read but not copied, printed, or modified.

**registration.** In printing, refers to the relative print positions of images that are printed at different times. For example, when you process preprinted forms, the registration is good if the new image printed by the InfoPrint 60 aligns correctly with the preprinted image. Print that extends beyond box edges and text that overlaps other text are examples of poor registration.

**resident font.** Those font data sets that are resident within the printer. They usually reside on the printer disk media (diskette or hard disk). These font sets are usually commonly used fonts. Having them resident reduces font load time. These fonts may also be used during off line testing of the printer.

**ROM.** Read-only memory.

## S

**scroll keys.** Keys which are used to move through all menus and the keyboard. They are marked by an up and down arrow.

**scrolling.** Moving a display image vertically in order to view data not otherwise visible within the boundaries of the display.

**service representative.** See *IBM Service Representative*.

**sheet.** In reference to paper, a single sheet may be printed on one side (simplex) or both sides (duplex).

**side sensitivity.** A setting designed for paper with a sensitive side or preferred print side; for example, letterhead paper.

**side tray.** Optional tray used for additional paper capacity.

**simplex printing.** Printing on one side of a sheet of paper. Synonymous with *one-sided printing*. Contrast with *duplex printing*.

**single-byte character set.** A character set in which each character is represented by a 1-byte code, for example, the character set used in English. Contrast with *double-byte character set*.

**single-byte coded font.** A font in which the characters are defined by one byte. A single-byte coded font has only one coded-font section. Contrast with *double-byte coded font*.

**sizing.** A process where paper is treated to give it resistance against penetration of liquids.

**skew.** Refers to the angle that the paper is taking while going through the paper path. This will cause the printing lines to not be aligned properly.

**sleep state.** A state in which the fuser shuts off due to inactivity. Once a print job is sent to the printer, within a few seconds the fuser warms up and the printer starts printing.

**software.** Programs, procedures, rules, and associated documentation pertaining to the operation of a computer system or word-processing system. Contrast with *hardware*.

**special-application materials.** Materials such as adhesive labels and preprinted paper that the InfoPrint 60 can print on.

**SRC.** System Reference Code, an error or information code.

**stacker.** A device used to hold paper or other media that have been printed; the output device of a printer. Also called the output stacker.

**stack lean.** A measurable slope from the vertical of a stack of forms. Excessive stack lean can cause failures when feeding paper.

**status mode.** The operational mode in which information is received from the attached controlling computer system and printed output is produced. See also *test mode* and *diagnostic mode*. Contrast with *menu mode*.

**storage.** (1) The retention of data in a storage device. (2) In word processing, a unit into which recorded text can be entered, in which it can be retained and processed, and from which it can be retrieved. (3) A device, or part of a device, that can retain data.

**system administrator.** The person at a computer installation who designs, controls, and manages the use of the computer system.

**system programmer.** A programmer who plans, generates, maintains, extends, and controls the use of an operating system, with the aim of improving overall productivity of an installation. Contrast with *application programmer*.

**System Reference Code (SRC).** A code that contains information for a customer engineer, such as a failing field-replaceable unit.

## T

**task.** A basic unit of work to be accomplished by a device or an operator.

**TCP/IP.** Transmission Control Protocol/Internet Protocol. A set of communications protocols that support peer-to-peer connectivity functions for both local and wide area networks.

**test mode.** The operational mode in which the customer engineer runs diagnostic tests. See also *diagnostic mode* and *status mode*.

**text.** A graphic representation of information on an output medium. Text can consist of alphanumeric characters and symbols arranged in paragraphs, tables, columns, and other shapes.

**text orientation.** The position of text as a combination of print direction and character rotation. See also *orientation*.

**throughput.** A measure of the amount of work performed by the printer over a period of time; for example, number of jobs per day.

**token ring.** A network with a ring topology that passes tokens from one attaching device to another; for example, the IBM Token-Ring Network.

**toner.** (1) The image-forming material used in electrophotographic processes. (2) A supply item for the printer. (3) The black powder used for printing images. Synonymous with *dry ink*.

**trace.** (1) A record of the running of a computer program. It exhibits the sequences in which the instructions were executed. (2) To record a series of

events as they occur. (3) A customer engineer analysis procedure.

**trailing edge.** The edge of the paper that proceeds through the printer last as it is fed through the paper path.

**transmission.** The sending of a print data set to a printer.

**tumble duplex.** Printing of both sides of a sheet where the top on the second side is in the opposite position as the top on the first side. See also *normal duplex*.

**two-sided printing.** Printing on both sides of a sheet of paper. Synonymous with *duplex printing*. Contrast with *simplex printing*.

**typeface.** A specific type style, such as Times or Helvetica.

## U

**uniformly-spaced font.** A font in which the character increment for each character is the same. Contrast with *proportionally spaced font*.

**user.** Anyone who requires the services of a computing system.

## V

**variable data.** Data that can vary. An example are the names and addresses in form letters. Contrast with *constant data*.

**vector graphics.** Computer graphics in which display images are generated from display commands and coordinate data. See also *graphic*.

## X

**xerographic paper.** A paper that is manufactured specifically for the xerographic process, in which key paper qualities are carefully controlled.

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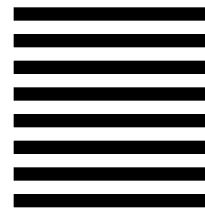
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