

3130 Advanced Function Printer



User 's Guide

3130 Advanced Function Printer



User 's Guide

Note

Before using this information and the product it supports, be sure to read the general information under "Notices" on page xi.

Third Edition (September 1996)

The following paragraph does not apply to any other country where such provisions are inconsistent with local law.

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

Requests for IBM publications should be made to your IBM representative or to your IBM branch office serving your locality. If you request publications from the address given below, your order will be delayed because publications are not stocked there.

IBM welcomes your comments. For your convenience, a form for readers' comments is provided at the back of this publication. You may send your comments by facsimile to 1-800-524-1519, by electronic mail to print_pubs@vnet.ibm.com, or mail your comments to:

IBM Printing Systems Company
Information Development
Department H7FE, Building 003G
P.O. Box 1900
Boulder, CO 80301-9191, U.S.A.

When you send information to IBM, you grant a nonexclusive right to use or distribute the information in any way IBM believes appropriate without incurring any obligation to you.

© **Copyright International Business Machines Corporation 1994, 1996. All rights reserved.**

Note to U.S. Government Users — Documentation related to restricted rights — Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

Contents

Statement of Limited Warranty	vii
Notices	xi
Trademarks	xi
Communications Statements	xii
Federal Communication Commission (FCC) Statement.	xii
Safety Notices	xv
Safety Precautions	xv
Electrical Safety	xv
Laser Safety	xv
Preface	xvii
Audience	xvii
Organization and Contents of This Guide	xvii
Conventions Used	xviii
Terminology	xviii
Related Publications	xix
Chapter 1. Introducing the 3130 Printer	1-1
About the 3130 Printer	1-2
Printer Models	1-2
Optional Accessories	1-2
Model 01S Simplex Printer Features	1-2
Model 02S High-Capacity Simplex Printer Features	1-3
Model 02D Duplex and Model 03S Simplex Printer Features	1-4
Part Names and Their Functions	1-5
External View of the Printer	1-5
Functions—External View	1-6
Internal View of the Printer	1-6
Functions—Internal View	1-7
Relocating the Printer	1-8
Safety Precautions	1-8
Operating Precautions	1-9
Choosing Forms	1-9
Paper and Stock	1-9
Paper Parameters	1-9
Label Parameters	1-10
Envelope Parameters	1-11
Preprinted Paper	1-12
Prepunched Paper	1-13
Chapter 2. Performing Basic Tasks	2-1
Printing Help Pages	2-2
Understanding Status Messages	2-2
Starting Print Jobs and Making the Printer Ready	2-3
Interrupting Printing	2-3
Shutting Down and Powering Off the Printer	2-4
Restarting the Printer	2-4
Loading Paper and Envelopes	2-5

Paper Positioning and Guidelines	2-5
Envelope Positioning and Guidelines	2-6
Changing the Form Name or Paper Assigned to a Tray	2-7
Handling Messages	2-7
Clearing Paper Jams	2-7
Canceling Print Jobs	2-8
Canceling Internal Print Jobs	2-8
Chapter 3. Using the Operator Panel	3-1
Input Keys	3-2
Display	3-4
Status mode	3-5
Menu Mode	3-5
Using the Display in Menu Mode	3-5
Entering and Exiting Menu Mode	3-6
Navigating through the Menu Items	3-6
Entering a Password to Access Menu Items	3-6
Selecting Settings and Actions in the Menu	3-7
Menu Tree	3-7
Using the Keyboard	3-11
Parts of the Display—Keyboard Mode	3-11
Accessing the Keyboard	3-11
Keyboard Order	3-12
Navigating through the Keyboard	3-13
Selecting a Keyboard Character	3-13
Selecting and Saving Your Keyboard Entry	3-13
Editing Keyboard Entries	3-14
Canceling Keyboard Entries	3-14
Status Indicators	3-14
Attention	3-14
Job/Processing	3-15
Duplex	3-15
On Line	3-15
Power	3-15
Intervention Indicator Lights	3-16
Paper Jam Indicator Lights	3-16
Toner Indicator Light	3-16
Beeper	3-17
Error Beeper	3-17
Keys Beeper	3-17
Tutorial: Using the Menu to Enter a Key Operator Password	3-17
Skills Covered	3-17
Prerequisites	3-18
Instructions	3-18
Chapter 4. Customizing the Printer	4-1
Configuring Input Trays	4-2
Tray Names	4-2
Enabling and Disabling Trays	4-3
Tray Selection Defaults	4-4
Changing the Form Name and Paper Size Assigned to a Tray	4-4
Selecting an Autoswitch Tray	4-5
Tray Name Correspondence	4-6
Configuring Output Stacker	4-7

Stacker Names	4-7
Enabling and Disabling Stackers	4-8
Stacker Selection Defaults	4-8
Setting Offset Stacking	4-8
Selecting Offset Stacking	4-9
Autolinking the Output Stackers	4-9
Selecting Autolinking	4-9
Clearing Autolinked Stackers	4-10
Configuring the Printer	4-10
Configuration Menu Items	4-10
Printer Configuration Menu Item Descriptions	4-11
Setting Printer Configuration Items	4-11
Printing the Printer Configuration	4-12
Printing a One-Page Configuration Listing	4-12
Printing a Multi-Page Configuration Listing	4-12
Running Print Quality Samples	4-13
Running the Demonstration Pack	4-14
Adjusting the Print (IPDS Only)	4-14
Determining if You Need to Adjust the Print	4-15
How to Adjust the Print	4-16
Changing the Key-Operator Password	4-17
Defining Forms	4-18
Defining a New Form	4-18
Modifying a Form	4-20
Deleting a Form	4-21
Checking the Current Definition of a Form	4-21
Machine Information	4-22
Machine Information Items	4-22
Viewing Machine Information	4-22
Configuring Attachments	4-23
Enabling and Disabling Attachments	4-23
Enabling and Disabling Applications	4-24
Setting Configuration Parameters	4-25
Printing the Attachment Configuration	4-25
Chapter 5. Printing and Paper Handling	5-1
Powering On and Off the Printer	5-2
Powering On	5-2
Powering Off	5-2
Shutting Down and Restarting the Printer	5-3
Shutdown	5-3
How to Shut Down the Printer	5-3
Restart	5-3
How to Restart the Printer	5-3
Understanding Status Messages	5-4
Clearing Information Messages	5-4
Starting Print Jobs	5-5
Interrupting Printing	5-5
Canceling Print Jobs	5-5
Loading Paper	5-6
Loading Paper into the Main Tray	5-7
Loading Paper into the Lower Sub Tray, Upper Sub Tray, or Top Front Tray	5-9
Loading Paper into the Side Tray	5-13
Adjusting the Side Tray	5-13

Positioning Preprinted and Prepunched Paper	5-15
Preprinted Paper (Prepunched or Nonpunched)	5-15
Prepunched (Not Preprinted)	5-16
Preprinted (Prepunched or Nonpunched)	5-17
Loading Labels	5-17
Loading Envelopes into the Envelope Feeder	5-18
Using the Output Stackers	5-19
Adjusting the Top Stackers (Base and Upper Stackers)	5-20
Adjusting the Side Stacker	5-21
Chapter 6. Maintaining the Printer	6-1
Replacing Supplies	6-2
When to Replace Supplies	6-2
General Guidelines for Supplies	6-3
Display Messages for Supplies	6-4
Replacing the Toner Cartridge	6-5
Replacing the Developer Mix	6-7
Replacing the Photoconductor Belt	6-10
Replacing the Transfer Belt Unit	6-12
Replacing the Fuser Unit	6-16
Replacing the Cleaner Unit	6-18
Cleaning the Printer	6-20
Cleaning the Printer Covers and Trays	6-21
Printer Cabinet	6-21
Printer Cover Interior	6-21
Trays and Rollers	6-21
Cleaning the Drum Unit and Drum Seal	6-23
Cleaning the Paper Guide Rollers and Guard Fingers	6-23
Chapter 7. Handling Operation Problems	7-1
Paper Jams	7-2
Using Paper Jam Indicator Lights to Locate Paper Jams	7-2
Clearing a Paper Jam	7-3
Clearing Paper from the Side Doors and Top Stackers	7-4
Clearing Paper from the EP Module Area	7-6
Clearing Paper from the Paper Feed Module Area	7-8
Clearing Paper from the Front Trays	7-12
Clearing Paper from the Stackers	7-13
Handling Aborts and Program Checks	7-13
Hard Abort	7-13
Program Check	7-13
Correcting Print Quality Problems	7-14
All Black Print Samples	7-14
Other Print Samples	7-14
Appendix A. Display Messages and Codes	A-1
Abbreviations	G-1
Glossary	G-3
Index	X-1

Statement of Limited Warranty

The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally purchase for your use, and not for resale, from IBM or an IBM authorized re-seller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. Machines are subject to these terms only if purchased in the United States or Puerto Rico, or Canada, and located in the country of purchase. If you have any questions, contact IBM or your re-seller.

Machine: 3130

Warranty Period: 90 days

Contact your place of purchase for warranty service information.

Production Status

Each Machine is manufactured from new parts, or new and serviceable used parts (which perform like new parts). In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

The IBM Warranty

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. IBM calculates the expiration of the warranty period from the Machine's Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your re-seller informs you otherwise.

During the warranty period, IBM or your re-seller will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine. IBM or your re-seller will specify the type of service.

For a feature, conversion, or upgrade, IBM or your re-seller may require that the Machine on which it is installed be 1) the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Some of these transactions (called "Net-Priced" transactions) may include additional parts and associated replacement parts that are provided on an exchange basis. All removed parts become the property of IBM and must be returned to IBM.

Replacement parts assume the remaining warranty of the parts they replace.

If a Machine does not function as warranted during the warranty period, IBM or your re-seller will repair or replace it without charge. If IBM or your re-seller is unable to do so, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user.

Warranty Service

To obtain warranty service for the Machine, you should contact your re-seller or call IBM. In the United States, call IBM at 1-800-IBM-SERV (426-7378). In Canada, call IBM at 1-800-465-6666. You may be required to present proof of purchase.

Depending on the Machine, the service may be 1) a “Repair” service at your location (called “On-site”) or at one of IBM’s or a re-seller’s service locations (called “Carry-in”) or 2) an “Exchange” service, either On-site or Carry-in.

When a type of service involves the exchange of a Machine or part, the item IBM or your re-seller replaces becomes its property and the replacement becomes yours. The replacement may not be new, but will be in good working order.

It is your responsibility to:

1. Obtain authorization from the owner (for example, your lessor) to have IBM or your re-seller service a Machine that you do not own;
2. where applicable, before service is provided—
 - a. follow the problem determination, problem analysis, and service request procedures that IBM or your re-seller provide,
 - b. secure all programs, data, and funds contained in a Machine,
 - c. inform IBM or your re-seller of changes in a Machine’s location, and
 - d. for a Machine with exchange service, remove all features, parts, options, alterations, and attachments not under warranty service. Also, the Machine must be free of any legal obligations or restrictions that prevent its exchange; and
3. be responsible for loss of, or damage to, a Machine in transit when you are responsible for the transportation charges.

Extent of Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

Misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, or failure caused by a product for which IBM is not responsible may void the warranties.

THESE WARRANTIES REPLACE ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. HOWEVER, SOME LAWS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES. IF THESE LAWS APPLY, THEN ALL EXPRESS AND IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD.

In Canada, warranties include both warranties and conditions.

Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Limitation of Warranty

Circumstances may arise where, because of a default on IBM's part (including fundamental breach) or other liability (including negligence and misrepresentation), you are entitled to recover damages from IBM. In each such instance, regardless of the basis on which you are entitled to claim damages, IBM is liable only for:

1. bodily injury (including death), and damage to real property and tangible personal property; and
2. the amount of any other actual loss or damage, up to the greater of \$100,000 or the charge for the Machine that is the subject of the claim.

Under no circumstances is IBM liable for any of the following:

1. third-party claims against you for losses or damages (other than those under the first item listed above);
2. loss of, or damage to, your records or data; or
3. economic consequential damages (including lost profits or savings) or incidental damages, even if IBM is informed of their possibility.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from jurisdiction to jurisdiction.

Notices

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM licensed product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any of IBM's intellectual property rights may be used instead of the IBM product. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

Any performance data contained in this document was obtained in a controlled environment based on the use of specific data. The results that may be obtained in other operating environments may vary significantly. Users of this document should verify the applicable data in their specific environment. Therefore, such data does not constitute a performance guarantee or warranty.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Corporation, IBM Director of Licensing, 506 Columbus Ave., Thornwood, N.Y. 105894 U.S.A.

The IBM 3130 Advanced Function Printer meets the requirements of IEC 950, First Edition, Amendments 1 and 2. The laser used in the 3130 complies with IEC 825 and EN 60825.

Trademarks

The following terms are trademarks of the IBM Corporation in the United States or other countries or both:

- Advanced Function Presentation
- Advanced Function Printing
- AFCCU
- AFP
- AIX®
- AIX/6000®
- Application System/400®
- AS/400®
- IBM®
- Intelligent Printer Data Stream
- IPDS
- MVS/ESA
- MVS/SP
- MVS/XA
- OS/2®
- OS/400®
- Personal System/2®
- Print Services Facility
- PS/2®
- PSF
- PSF/6000
- RISC System/6000®

WIN-OS/2

The following terms are trademarks or registered trademarks of other companies:

Trademark	Company
Agfa	Agfa-Gevaert A.G.
Agfa Rhombus	Agfa-Gevaert A.G.
AXIS	AXIS Communication, Inc.
CG Intellifont	Miles, Inc.
CG Omega	Miles, Inc.
CG Times	Miles, Inc. under license from Monotype Corp. (Times New Roman)
ITC Advant Garde Gothic	International Typeface Corp.
ITC Bookman	International Typeface Corp.
ITC Zapf Chancery	International Typeface Corp.
ITC Zapf Dingbat	International Typeface Corp.
Lexmark	Lexmark International, Inc.
Marigold	AlphaOmega Typography Corp.
NetWare	Novell Inc.
PostScript	Adobe Systems, Inc.
PCL	Hewlett-Packard Co.
PCL5e	Hewlett-Packard Co.
TrueType	Apple Computer Co.
Univers	Linotype AG and Subsidiaries
Windows	Microsoft Corp.

Communications Statements

Federal Communication Commission (FCC) Statement.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communication. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Shielded Cables (European Statement): Properly shielded and grounded cables must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. Such cables and connectors are available from IBM authorized dealers. IBM cannot accept responsibility for any interference caused by using other than recommended cables and connectors.

European Community (EC) Conformity Statement: This product is in conformity with the protection requirements of EC Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

German Conformity Statement: Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse A. Für diese Klasse von Geräten gilt folgende Bestimmung nach dem EMVG:

Geräte dürfen an Orten, für die sie nicht ausreichend entstört sind, nur mit besonderer Genehmigung des Bundesministers für Post und Telekommunikation oder des Bundesamtes für Post und Telekommunikation betrieben werden. Die Genehmigung wird erteilt, wenn keine elektromagnetischen Störungen zu erwarten sind.

(Auszug aus dem EMVG vom 9.Nov.92, Para.3, Abs.4)

The United Kingdom Telecommunications Act 1984: This apparatus is approved under approval No. NS/G/1234/J/100003 for the indirect connections to the public telecommunications systems in the United Kingdom.

Canadian Department of Communications Compliance Statement: This Class A digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité aux normes du ministère des Communications du Canada: Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Statement of CISPR 22 Edition 2 Compliance: Attention

This is a Class A Product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

この装置は、第一種情報装置（商工業地域において使用されるべき情報装置）で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制協議会（VCCI）基準に適合しております。

従って、住宅地域またはその隣接した地域で使用すると、ラジオ、テレビジョン受信機等に受信障害を与えることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

1000

Safety Notices

There are three levels of safety notices:

DANGER calls attention to a situation that is potentially or extremely hazardous to people.

CAUTION calls attention to a situation that is potentially hazardous to people.

Attention calls attention to the possibility of damage to a program, device, system, or data. Attention notices are located throughout this publication, but are not listed here.

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 common-sense measures, such as keeping potentially combustible materials (for example, curtains and chemicals) away from the printer, providing adequate ventilation and cooling, limiting unattended operation, 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 1 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 1 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 1 Laser Product. No adjustments that affect laser operation or power are accessible to the operator.

This printer is a Class 1 Laser Product that contains an enclosed Class 3B laser.

Preface

The *IBM 3130 Advanced Function Printer: User's Guide* explains how to operate and maintain the IBM 3130 Advanced Function Printer.

Audience

This publication is intended for users and key operators of the IBM 3130 Advanced Function Printer. 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. Chapter 2 contains information about basic tasks that users perform. Chapters 1, 3, 4, 5, and 7 are also directed to users. Some topics in chapters 3, 4, 5, and 6 describe tasks performed only by key operators.

A *key operator* is someone designated to handle more complex printer functions, such as replacing the toner cartridge. The key operator helps keep the printer in optimal working order and changes printer settings as needed. All chapters are directed to key operators.

An *administrator* (either a systems administrator or LAN administrator) is someone designated to set up attachment configurations, job management options, and font management options for the printer.

A *customer engineer* (IBM service representative) may also refer to this publication. The customer engineer is responsible for service actions, such as maintaining preventive maintenance logs and event logs, performing disk operations, and running printer diagnostics.

Organization and Contents of This Guide

This publication is designed to provide all basic information needed to operate, customize, and maintain the printer. It consists of the following chapters:

- Chapter 1, "Introducing the 3130 Printer" gives a general description of the printer features and functions of the 3130 printer. Illustrations are used to identify key parts of the printer.
- Chapter 2, "Performing Basic Tasks" explains the tasks that users perform on a regular basis. This chapter is designed to be used as a quick reference guide.
- Chapter 3, "Using the Operator Panel" describes how to use the operator panel keys, display, and indicators to control printer functions and set printer configurations. This chapter also contains a tutorial to help in using the keyboard to enter characters.
- 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. It 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.
- Appendix A, “Display Messages and Codes” describes messages and recommended recovery actions.

This publication also contains a list of abbreviations, a glossary, and an index.

Conventions Used

The following typeface conventions are used in this publication.

Names of keys on the operator panel are shown in Helvetica Bold typeface.

Examples are:

- Press the **Enter** key.
- Press **Stop**.

Text shown on the operator panel display is shown in Helvetica Narrow typeface.

Examples are:

- Scroll to SETUP.
- The operator panel displays NOT READY.

Terminology

Printer Models

This publication refers to the following 3130 printer models:

- Model 01S: Simplex
- Model 02S: High-capacity simplex
- Model 02D: Duplex
- Model 03S: Simplex

Paper Input and Output Receptacles

Input receptacles are called *trays*. Output receptacles are called *stackers*.

Related Publications

The following 3130 publications are also available:

- *IBM 3130 Advanced Function Printer: System Administration Guide*, S544-5328
- *IBM 3130 and 3160 Advanced Function Printer: Safety Information*, S544-3978
- *IBM 3130 Advanced Function Printer: Introduction and Planning Guide*, G544-3974
- *IBM InfoPrint 60; 3130, 3160 and 3935 Advanced Function Printer: Attachment Configuration Handbook*, S544-3977
- *IBM 3130 Advanced Function Printer: Programming Reference*, S544-5329
- *IBM IPDS Handbook for Printers That Use The Advanced Function Common Control Unit*, G544-3895

The following books contain information that relates to the IBM 3130 Advanced Function Printer:

- *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 other publications related to Advanced Function Printing.
- *Guide to Advanced Function Presentation*, G544-3876.

Contact your IBM marketing representative for information concerning either the 3130, its publications, or its associated licensed programs.

Chapter 1. Introducing the 3130 Printer

This chapter introduces some of the features and functions of the IBM 3130 Advanced Function Printer. Descriptions of the following are provided:

- Features of the 3130
- Printer models
- Optional accessories for the 3130
- Part names and functions

This chapter also contains basic guidelines concerning:

- Relocation information
- Safety precautions
- Printer operation precautions
- Selection of forms (paper specifications)

About the 3130 Printer

The 3130 printer provides the following standard features:

- 30 printed impressions of letter-size or A4 paper per minute
- Resolution of 240 or 300 pels (dots per inch)
- Choice of five attachment methods:
 - Ethernet host attachment is standard.
 - PC Parallel host attachment is standard.
 - One additional interface slot is available for an additional host attachment (token ring, twinaxial, or SDLC).
- An operator panel, including a display and keys for user input
- A wide range of paper sizes available

Printer Models

There are four models of the 3130 printer:

- Model 01S: Simplex
- Model 02S: High-capacity simplex
- Model 02D: Duplex
- Model 03S: Simplex

Optional Accessories

The following accessories are optional for the printer:

- 1 500-sheet side stacker (optional for all models)
- 1 000-sheet dual top stacker (optional for Model 01S simplex and Model 02S high-capacity simplex printers)
- 500-sheet side tray (optional for Model 02S high-capacity simplex, Model 02D duplex, and Model 03S Simplex printers)
- 250-sheet cassette for front trays (optional for all models)
- 500-sheet cassette for the side tray (optional for all models)
- Envelope feeder (optional for all models but side tray must be installed)

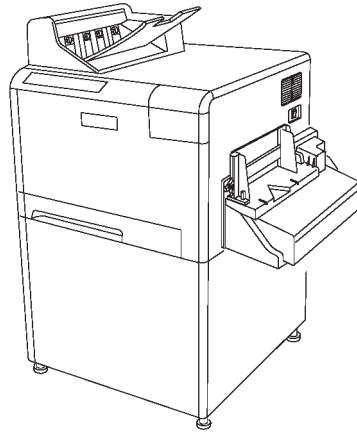
Model 01S Simplex Printer Features

The following are standard features of the 3130 Model 01S simplex printer:

- Simplex (single-sided) printing
- One internal tray (250-sheet capacity)
- One side tray (500-sheet capacity)
- Single top paper stacker with offset feature (500-sheet capacity)

The following are optional features of the 3130 Model 01S simplex printer:

- Envelope feeder (100-envelope capacity)
- Dual top stacker with offset feature (1 000-sheet capacity)
- Side stacker with offset feature (1 500-sheet capacity)



SIMPLEX MODEL

Figure 1-1. Model 01S Simplex Printer with Optional Envelope Feeder

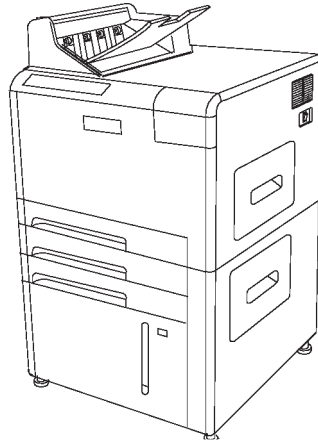
Model 02S High-Capacity Simplex Printer Features

The following are standard features of the 3130 Model 02S high-capacity simplex printer:

- Simplex (single-sided) printing
- Four internal trays (three 250-sheet capacity and one 2 000-sheet capacity)
- Single top paper stacker with offset feature (500-sheet capacity)

The following are optional features of the 3130 Model 02S high-capacity simplex printer:

- Side tray (500-sheet capacity)
- Envelope feeder (100-envelope capacity)
- Dual top stacker with offset feature (1 000-sheet capacity)
- Side stacker with offset feature (1 500-sheet capacity)



HIGH-CAPACITY SIMPLEX MODEL

Figure 1-2. Model 02S High-Capacity Simplex Printer

Model 02D Duplex and Model 03S Simplex Printer Features

The following are standard features of the 3130 Model 02D duplex and Model 03S simplex printers:

- Simplex (single-sided) and duplex (double-sided) printing (Model 02D only)
- Three internal trays (two 250-sheet capacity and one 2 000-sheet capacity)
- Dual top stacker with offset feature (1 000-sheet capacity)

The following are optional features of the 3130 Model 02D duplex and Model 03S simplex printers:

- Side tray (500-sheet capacity)
- Envelope feeder (100-envelope capacity)
- Side stacker with offset feature (1 500-sheet capacity)

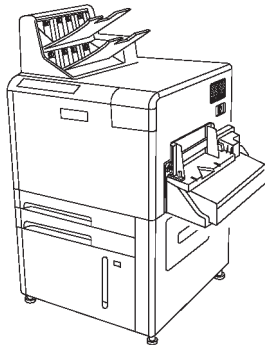


Figure 1-3. Model 02D Duplex and Model 03S Simplex Printers

Part Names and Their Functions

External View of the Printer

Figure 1-4 shows the external parts of the printer. The printer shown includes all possible trays and stackers.

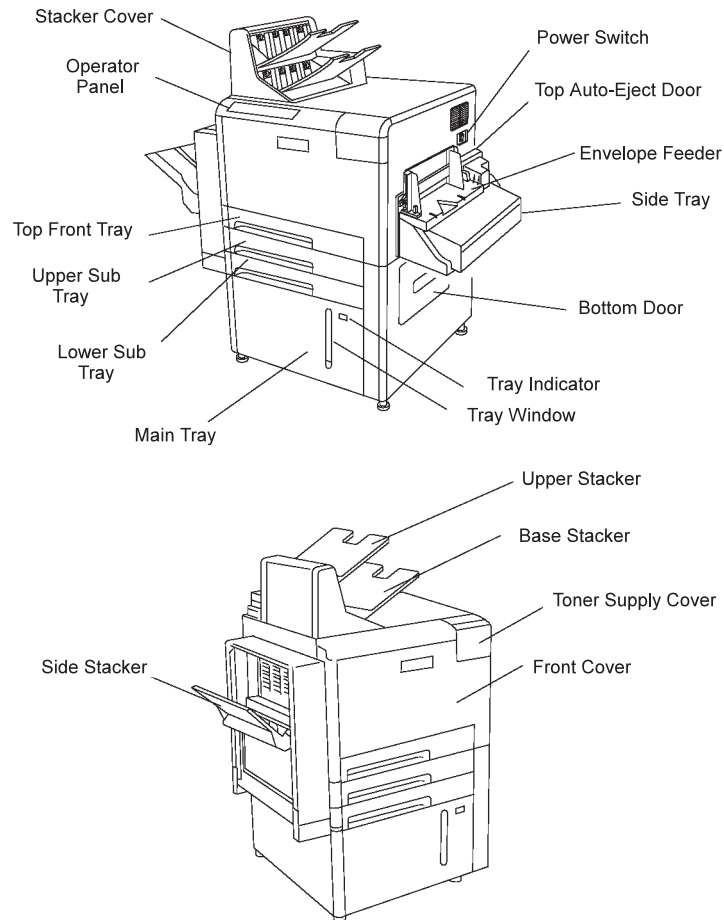


Figure 1-4. External View of the Printer (All Optional Accessories Are Shown)

Functions—External View

Table 1-1 describes each external part.

Table 1-1. Description of External Printer Parts

Front Cover	Open to replace consumable assemblies, clear paper jams, or clean the inside of the printer.
Top Auto-Eject Door	Open to clear paper jams. When the side tray is used, it is installed at this location.
Bottom Door	Open to clear paper jams.
Stacker Cover	Open to clear paper jams.
Toner Supply Cover	Open to replace the toner cartridge.
Main Tray	Holds up to 2 000 sheets of paper.
Lower Sub Tray	Holds up to 250 sheets of paper.
Upper Sub Tray	Holds up to 250 sheets of paper.
Top Front Tray	Holds up to 250 sheets of paper.
Side Tray	Holds up to 500 sheets of paper.
Envelope Feeder	Holds up to 100 envelopes.
Operator Panel	Contains the indicator lights, input keys, and LCD display.
Upper Stacker	Collects the printed paper. It holds up to 500 sheets of paper. Upper stacker is the name of the top section of a dual top stacker.
Base Stacker	Collects the printed paper. It holds up to 500 sheets of paper. Base stacker is the name of the single top stacker and also the bottom section of a dual top stacker.
Side Stacker	Collects the printed paper. It holds up to 1 500 sheets of paper.
Power Switch	Powers on (turn on) and powers off (turn off) the printer.
Tray Indicator	Indicates the main tray is in use. Do not open the main tray when the indicator light is on.
Tray Window	Shows the paper level in the main tray.

Internal View of the Printer

Figure 1-5 on page 1-7 shows the internal parts of the printer. The printer is shown with the front cover open. To access a module or unit, use the indicated handles or levers. You will need to access these areas to clear paper jams, replace supplies, and clean the printer.

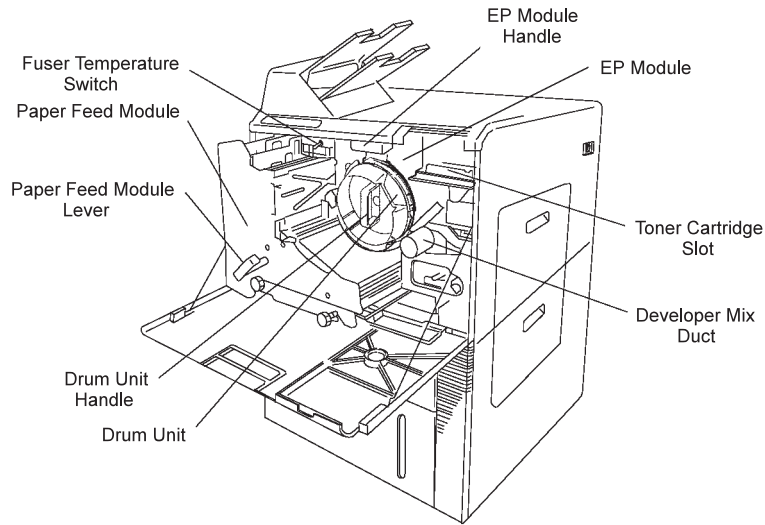


Figure 1-5. Internal View of the Printer

Functions—Internal View

Table 1-2 describes each internal part.

Table 1-2. Description of Internal Printer Parts

Developer Mix Duct	Mount the developer mix bottle onto the developer mix duct to replace the developer mix.
Paper Feed Module	Consists of the transfer belt assembly and fuser assembly.
Paper Feed Module Lever	Turn to the RELEASE position; then pull forward to access the paper feed module components.
EP Module	Consists of the drum unit, cleaner assembly, charger assembly, developer unit, pre-clean unit, and the toner hopper unit.
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.
Drum Unit	Part of the EP module. Consists of the drum and a photoconductor belt mounted around the drum.
Drum Unit Handle	Turn to the RELEASE position; then pull forward to access the drum unit components, including the photoconductor.
Fuser Temperature Switch	Switch to raise the temperature of the fuser by approximately 10°C to aid in fusing heavier weights of paper. The normal setting should be used for paper weights below 27 lb.
Toner Cartridge Slot	Insert the toner cartridge into the toner cartridge slot to replace toner.

Relocating the Printer

Whenever the printer is to be moved to another location, a relocation kit is required. The customer engineer will disconnect and reconnect the printer, but the customer is responsible for ordering the relocation kit.

The relocation kit part number is 45G1611.

Safety Precautions

Always follow these safety precautions:

- Always keep the area around the printer clean. Use the printer under the proper lighting (500-1 000 lux). Keep sufficient space around the printer so the paper trays can be pulled forward and the printer can be serviced. Space required in the vicinity of the printer is as follows:
 - Front: 129.5 cm (51 inches)
 - Left and right sides: 76 cm (30 inches)
 - Rear: 15 cm (6 inches)
- Do not place anything on the printer. Keep this guide on a shelf nearby instead of on top of the printer.
- Do not open any covers (except the toner cover and paper trays) during printing operation. Personal injury might result if moving elements or electrical parts are accidentally touched.
- After opening the front cover, touch only blue parts. Other parts may be hot.
- Be particularly careful when working in the fuser unit area. Do not touch the inside of the fuser unit. The fuser unit becomes very hot, and it may cause personal injury if accidentally touched.
- Toner and developer mix are composed of powdery particles. Avoid inhaling toner or developer. If the toner or developer mix spill on the floor, immediately clean with a water-dampened cloth. Do not leave toner or developer mix on the floor. Developer mix may cause accidents if stepped on as it contains slippery beads of metal.
- Limit your operations to those described in this publication. Contact the customer engineer or service technician for operations that are not explained in this publication.
- Provide proper ventilation for the printer to prevent high ozone concentration. Long-term exposure should be limited to 0.1 ppm calculated as an 8-hour time weighted average concentration. Avoid installing the printer in a room smaller than or equal to 81 cubic m (1 000 cubic ft), which approximately equals a 3 x 3 m (10 x 10 ft) room. If installing in a space smaller than 81 cubic m (1 000 cubic ft), air exchange ventilation is necessary.
- Take care not to allow ties, sleeves, shirts, jewelry, and long hair to be caught in the printer.
- Be careful not to touch the hazardous parts near the caution labels.
- Never touch the high voltage portions of the printer (where caution labels are attached) when the printer is on. Touching these areas may cause personal injuries.

Operating Precautions

- Follow the procedures and instructions described in this publication to optimize printer performance and to ensure safe operation.
- Properly load the paper into the trays to prevent paper skew and paper jams. See “Loading Paper and Envelopes” on page 2-5 for more information.
- Use only paper that complies with the supply specifications, as detailed in “Choosing Forms.”

Choosing Forms

The following information can help you choose the most appropriate forms to use in the 3130. Also see *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers* for additional specifications to consider when choosing forms.

Paper and Stock

Printing on paper that does not comply with the specifications may result in paper jams and print quality degradation. The 3130 can use standard white paper, colored paper, pre-punched or drilled paper, preprinted paper, cardstock, labels, and envelopes (with optional envelope feeder installed).

The following standard paper sizes are supported:

- 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)

The following standard envelope sizes are supported:

- Commercial #10 (4.5 x 9.5 in.)
- International DL (110 x 220 mm)

Select only high quality papers and forms. IBM recommends that you initially test several reams of special use materials in your 3130 before you purchase large quantities for a given application. For more detailed information regarding pretesting, see *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*.

Paper Parameters

Table 1-3 on page 1-10 summarizes recommendations that can help you and your paper supplier choose paper that is most suitable for your 3130.

Table 1-3. Recommended Paper Parameters

Paper Parameter	Recommendation
Fiber composition	Preferred: 100% chemical wood pulp Acceptable: Recycled or with cotton content
Color	White or pastel colors
Grain direction	Parallel to the long dimension
Cutting method	Rotary precision cut (Leonids, Will, or equivalent)
Cutting tolerances	Length and width: ± 0.787 mm (± 0.031 in.) Squareness: All corners $90^\circ \pm 0^\circ 6'$
Basis weight	Preferred: 75 g/m ² (20-lb) bond Acceptable: 60 to 160 g/m ² (16- to 42-lb) bond† 200 g/m ² (110-lb) index paper
Smoothness (Sheffield)	100-200 Sheffield units (75 to 90 g/m ²)
Coefficient of static friction	0.35 to 0.62
Stiffness (Tabor Method)	Machine direction: 1.7 minimum Cross direction: 0.8 minimum
Moisture content	3.4 to 5.5 %
Surface resistivity	5x10 ⁹ to 2.1012 ohms

†For paper heavier than 27-lb bond, you may need to set the fuser temperature switch to the high setting.

For more detailed information about paper, cardstock, and other forms, see *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*.

Label Parameters

The 3130 can also print on the paper face of self-sticking adhesive-backed labels in simplex mode. Because the use of labels may cause more problems than printing on plain xerographic paper, IBM recommends that you and your label supplier consider the parameters recommended in Table 1-4 when purchasing labels:

Table 1-4. Recommended Label Parameters

Label Parameter	Recommendation
Total basis weight	60-160 g/m ²
Caliper	175 microns (6.8 mils) maximum
Face stock smoothness	70 to 200 Sheffield units

For more detailed information about labels, see *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*.

Envelope Parameters

For optimal printing results, use new 90 g/m² (24-lb) 100% chemically pulped wood, or 25% cotton bond envelopes. You should try samples of any envelopes you are considering using in your printer. This includes envelopes with rough or highly textured surfaces, such as laid finishes.

The laser printing process heats envelopes to a temperature of 175°C (350°F). Only use envelopes that are able to withstand these temperatures without sealing, excessive curling, wrinkling, or releasing hazardous emissions. Check with the manufacturer or vendor of the envelopes you plan to use to determine if they are usable with laser printers, which heat them to 175°C.

For optimal performance and to prevent paper jams, do not use envelopes that:

- Have excessive curl or twist
- Are stuck together
- Are damaged in any way
- Contain windows, holes, perforations, cutouts, or deep embossing
- Have exposed flap adhesive when the flap is placed in the sealed or closed position
- Have an interlocking design
- Have postage stamps attached

Table 1-5 summarizes recommendations that can help you and your paper supplier choose envelopes that are most suitable for your 3130.

Table 1-5. Recommended Envelope Parameters

Envelope Parameter	Recommendation
Fiber composition	Preferred: 100% chemical wood pulp Acceptable: 25% cotton bond
Total basis weight	75 to 90 g/m ² (20 to 24 lb)

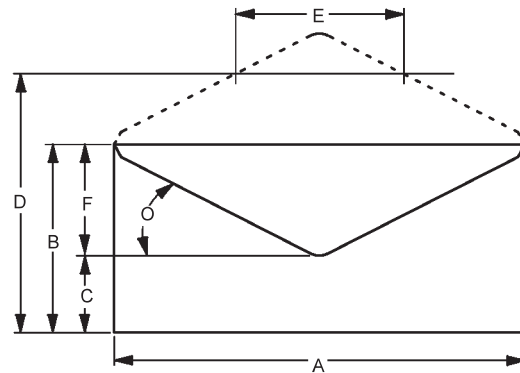
Note: Only commercial #10 (4.12 x 9.5 in.) and ISO DL (110 x 220 mm) envelopes that meet the conditions stated in Table 1-6 on page 1-12 are supported.

Table 1-6 shows allowable dimensions for overall length (A) and width (B) of envelopes as well as limitations on flap width (F) and length (E).

Table 1-6. Allowable Dimensions for Envelope

Dimension	Maximum	Minimum
A	254 mm	162 mm
B	140 mm	95 mm
C	—	41 mm†
D	200 mm	137 mm
E	—	110 mm
F	70 mm	—

†The C dimension must be 41 mm or greater and the angle (O) must be larger than 0°.

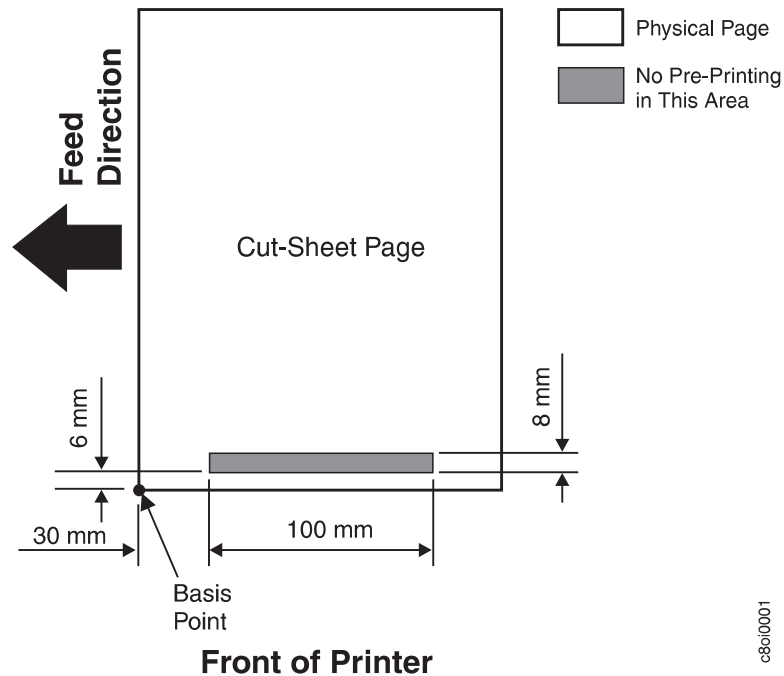


Preprinted Paper

Preprinted paper has ink applied to it before it is used in the 3130 printer. Be sure that ink used in preprinting is non-volatile and contains drying or resin oils. Ink must not transfer when fusing temperatures are 200°C (392°F) and pressures are 450 kPA (65 lb/in.²) for several seconds. IBM recommends the following inks:

- 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.



Prepunched Paper

Prepunched paper should be flat and without deformation. Discard paper with ragged or damaged hole edges. Do not allow chads (the little 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.

Prepunched paper clearances for A4, B5, and letter-size paper are shown in Figure 1-6.

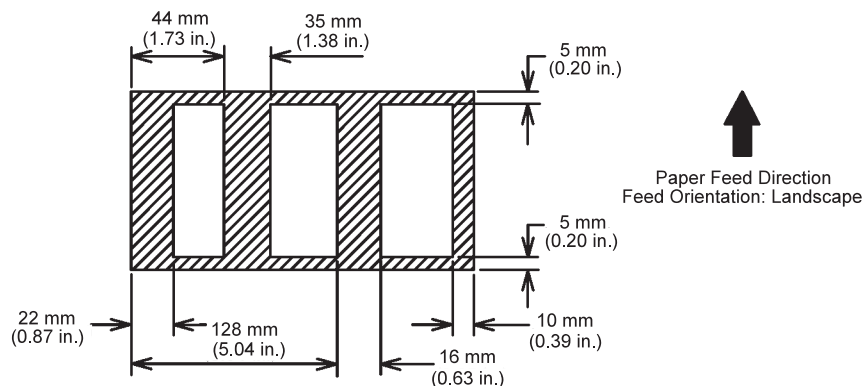


Figure 1-6. Prepunched Paper Clearances—A4, B5, and Letter Size

Prepunched paper clearances for A3, B4 and ledger-size paper are shown in Figure 1-7.

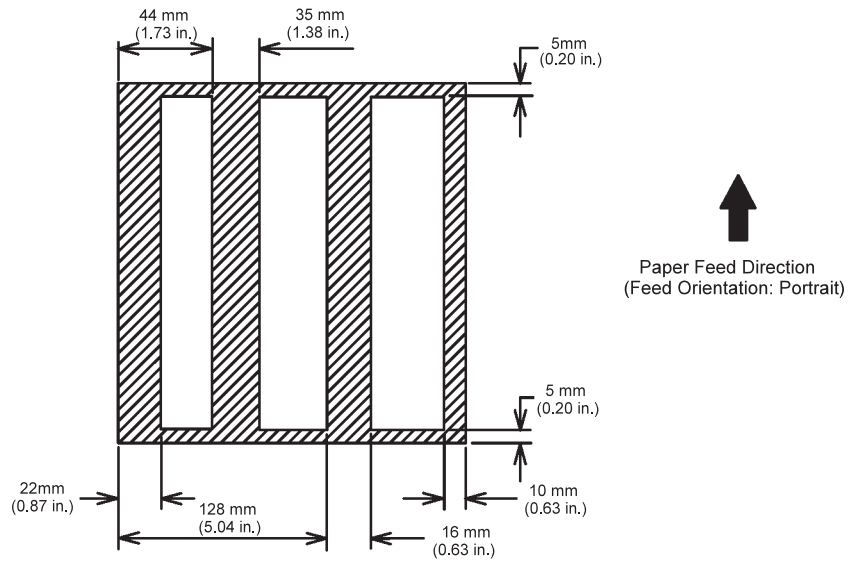


Figure 1-7. Prepunched Paper Clearances—A3, B4, and Ledger Size

Chapter 2. Performing Basic Tasks

This chapter contains information about basic, everyday printer tasks that users perform. Use this chapter for quick reference.

The following general procedures are described in this chapter:

- Printing help pages
- Understanding status messages
- Starting print jobs and making the printer ready
- Interrupting printing
- Shutting down the printer
- Restarting the printer
- Loading paper and envelopes
- Changing the form name and paper assigned to a tray
- Handling messages
- Clearing paper jams
- Canceling print jobs

Information in this chapter is intentionally brief. The following chapters contain more detailed instructions and explanations:

- Chapter 3, "Using the Operator Panel"
- Chapter 4, "Customizing the Printer"
- Chapter 5, "Printing and Paper Handling"
- Chapter 7, "Handling Operation Problems"

Printing Help Pages

You can print internal help pages to keep near the printer for quick reference. The help pages contain:

- The menu tree (an illustration of the display menu options that are available on the operator panel display)
- A help page that contains a labeled illustration of the 3130 printer instructions for performing basic printer tasks

To print the help pages, do the following:

1. Press the **Menu/Exit** key. HELP appears on the display.
2. Press the **Enter** key. PRINT HELP PAGE appears on the display.
3. Press the **Enter** key. Scroll to PRESS ENTER TO PRINT, and press the Enter key to request printing. The help pages will be put in the print queue.
Note: If the printer is busy, the help pages may not print immediately.
4. Press the **Menu/Exit** key to exit the menu.

If you want to change the defaults for quantity, input tray (A4, letter paper only), stacker, or duplex, scroll to each menu item and change the setting. See “Running Print Quality Samples” on page 4-13.

Understanding Status Messages

Status messages are displayed in status mode when no intervention messages are outstanding and the printer is not receiving data. Status messages are displayed on the operator panel two-line display. The top line shows general status messages (READY or NOT READY). The bottom line shows printer status messages (PRINTING, RECEIVING, WARMING UP, SLEEPING, or TRACING). These messages do not indicate errors; they give information about the current status of the printer.

Table 2-1 lists both general status and printer status messages. Recommended user actions follow each explanation.

Table 2-1 (Page 1 of 2). Status Messages and Recommended Actions

Message	Recommended Action
READY	Description: The printer is ready to receive information from a host or network if an attachment is on line. Action: No action is required.
NOT READY	Description: The printer is in a stopped mode and cannot print information from a host or network. Action: Press Start to make the printer Ready. The message PRINTER HAS BEEN MADE READY appears. The printer will then start to print if a print job is waiting and an attachment is online.
RECEIVING	Description: The printer is receiving information from a host or network. Action: No action is required.
PRINTING	Description: The printer is printing a print job. Action: No action is required.

Table 2-1 (Page 2 of 2). Status Messages and Recommended Actions

Message	Recommended Action
WARMING UP	Description: The printer is warming up. The printer will be ready to print in 1 to 5 minutes. Action: Wait for the printer to warm up. If the printer is Ready, it will start printing as soon as it warms ups (if print jobs are waiting).
SLEEPING	Description: The printer is in sleep mode, which means the fuser has turned off due to inactivity. The fuser will turn on and the printer will warm back up when it receives a print job or, if the printer is in the Not Ready state, when the Start key is pressed. Action: No action is required.
TRACING	Description: The printer is tracing an application or attachment. The tracing operation may slow down throughput and should be turned off when not needed. Action: No action is required. Contact the key operator or customer engineer if you think the tracing function was left on in error.

You can scroll to see other messages (if present). Press the down arrow key to display the messages.

Starting Print Jobs and Making the Printer Ready

To start (or continue) print jobs, do the following:

1. After performing the recovery action (listed in Appendix A, “Display Messages and Codes”), press **Enter** to clear any existing error conditions.
2. Press **Start**. Any pending print jobs will continue or begin printing. If you press **Start** again, the message ALREADY STARTED is displayed.

Interrupting Printing

If you want to temporarily stop printing, you can do so at any time. No print job information will be lost. Any print jobs currently printing will continue after you start the printer again.

To interrupt printing, do the following:

1. Press **Stop**. The printer will complete printing the current page and any other page that is in the print queue. The message STOPPING... appears while the printer finishes printing. When printing has stopped, the message PRINTER HAS BEEN MADE NOT READY is displayed.

If you press **Stop** again, the message ALREADY STOPPED is displayed.
2. If you wish, you may run internal prints, load paper into empty trays, and so on.
3. Press **Start** to continue printing.

Shutting Down and Powering Off the Printer

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

Attention: Always shut down the printer before powering off.

To shut down and power off the printer, do the following:

1. If the printer is Ready, press **Stop**.
2. Press **Menu/Exit** to enter menu mode. HELP is displayed.
3. Press the down arrow key until SYSTEM SHUTDOWN is displayed and press **Enter**. PRESS ENTER TO SHUTDOWN is displayed. Press **Enter** to begin the shutdown.
4. Wait for the message SHUTDOWN DONE-POWER OFF to be displayed before you power off.
5. Press the power switch (on the right side of the printer) to the Off (O) position to power off the printer.

Note: An alternate method to shut down the printer: Press *at the same time* the **Down Arrow**, **Enter**, and **Start** keys. Wait for the SHUTDOWN DONE-POWER OFF message to appear before you power off the printer.

Restarting the Printer

A restart is similar to a shutdown, but the printer starts up again automatically after the shutdown. Restart the printer only when instructed to do so in recovery actions.

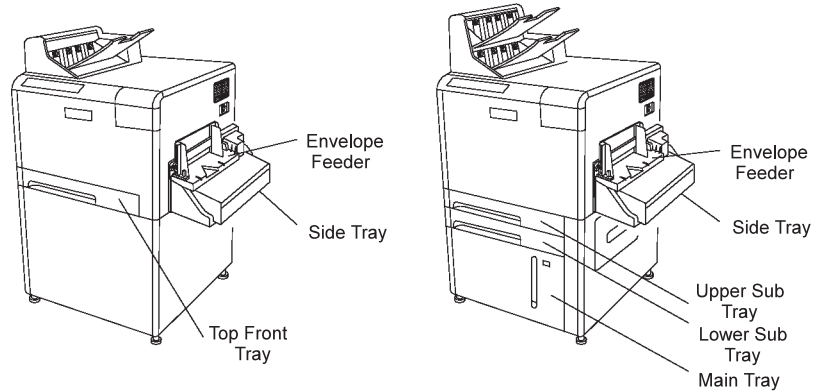
To restart the printer, do the following:

1. Press the Power On switch (on the right side of the printer) to the On (I) position to power on the printer.
2. Press **Menu/Exit** to enter menu mode. HELP is displayed.
3. Press the down arrow key until SYSTEM SHUTDOWN is displayed, and press **Enter**. PRESS ENTER TO SHUTDOWN is displayed.
4. Press the down arrow key until PRESS ENTER TO RESTART is displayed and press **Enter** to begin the restart.
5. Wait for the restart procedure to complete. If the printer displays the message NOT READY, press **Start** to make the printer Ready, so the printer can print waiting print jobs.

Note: If the **On Line** indicator light is not lit, the printer attachments and/or applications may need to be enabled. Contact the key operator to enable the attachments.

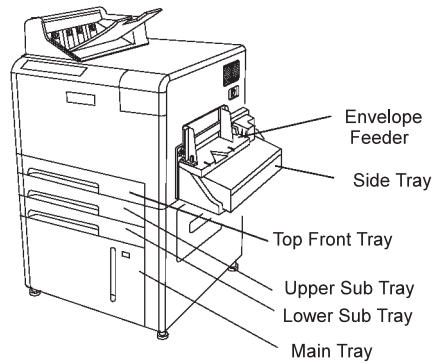
Loading Paper and Envelopes

An OUT OF PAPER message is displayed on the operator panel whenever a tray is empty. The message names the empty tray. Refer to these labeled illustrations to determine which tray is out of paper. The printer may have up to six trays depending on the model and options installed.



MODEL 01S SIMPLEX PRINTER

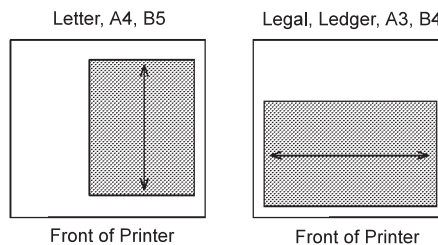
MODEL 02D DUPLEX and
MODEL 03S SIMPLEX PRINTERS



MODEL 02S HIGH-CAPACITY
SIMPLEX PRINTER

Paper Positioning and Guidelines

Refer to the drawings below to ensure that you load the paper in the correct position for that paper size.



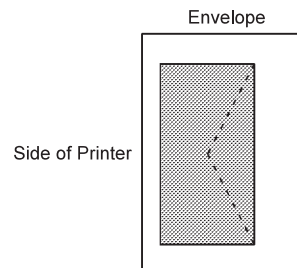
When loading paper, follow these guidelines to prevent paper jams and stacking problems:

- Do not use paper that is creased, folded, or damaged.
- Rewrap partially used reams to maintain moisture content.
- Pull firmly on the trays to open them.
- 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 marking (in all front trays).

See “Loading Paper” on page 5-6 for detailed instructions.

Envelope Positioning and Guidelines

Refer to the drawings below to ensure that you load the envelopes in the correct position in the envelope feeder.



When loading envelopes, follow these guidelines to prevent paper jams and stacking problems:

- Do not use envelopes that have excessive curl or twist, are stuck together, or are damaged in any way.
- Do not use envelopes that contain windows, holes, perforations, cutouts, or deep embossing, or that have exposed flap adhesive when the flap is placed in the sealed or closed position.
- Do not use envelopes that have an interlocking design or have postage stamps attached.
- Load only one size and type of envelope into the envelope feeder.
- Do not overfill the envelope feeder. Do not load more than 100 envelopes into the envelope feeder.

See “Loading Envelopes into the Envelope Feeder” on page 5-18 for detailed instructions.

Changing the Form Name or Paper Assigned to a Tray

If you have changed the form loaded in a tray, you may need to change (or verify) the form name assigned to that tray. Do this when the message CHECK FORM NAME FOR TRAY is displayed on the operator panel.

To clear the message and change the form name assigned to a tray:

1. Press **Enter** to clear the message.
2. Press **Menu/Exit** to enter menu mode.
3. Press the down arrow key until TRAYS/STACKERS is displayed. Press **Enter**.
4. Press the down arrow key until the input tray for which you have changed the loaded form is displayed. Press **Enter**.
5. Press the down arrow key until FORM NAME is displayed. Press **Enter**.
6. Press the down arrow key until the form name loaded in the tray is displayed. Press **Enter**.

Note: If there is only one form name with the form size you have loaded in the tray, the printer will automatically choose that form name.

Handling Messages

When you see a message that indicates an error condition, do the following:

1. Find the display message (and code, if present) in Appendix A, "Display Messages and Codes."
2. Perform the recovery action recommended for the displayed message and code.
3. Press **Enter** to clear the message.
4. Press **Start** to continue printing.

Clearing Paper Jams

The printer stops printing when a misfeed occurs, and the message PAPER JAM is displayed on the operator panel.

Do the following to clear the paper jam and the error message:

1. Check the operator panel intervention indicators.
2. If an arrow indicator light is lit, open the corresponding side door and empty the paper, starting with the upper door, *before* you open the front cover or trays.
3. If the top stacker arrow indicator light is lit, clear paper from that area.
4. Check the intervention indicators again. If any lights remain lit, clear the paper from the corresponding area.

Paper jams may occur in several areas of the printer. Check the paper path thoroughly and remove all paper along the paper path according to the procedures described in Chapter 7, "Handling Operation Problems."

5. When all the paper is removed and all indicator lights are off, press **Enter** to clear the error message from the operator panel.

The message NOT READY, WARMING UP, or SLEEPING may appear on the display.

6. Press **Start** to continue printing.

The pages removed from the paper path are reprinted automatically when the printer starts printing again. If the printer is warming up, printing may take a few minutes to start.

Note: To ensure that no data is lost, the 3130 may print a few extra pages.

Canceling Print Jobs

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

1. Press **Stop** to stop the printer.
2. Check the output stacker after all sheets have been ejected.
Note: If the print job you want to cancel 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 **Cancel Print**.
Note: If there are no jobs in the print queue, the message NO PRINT JOBS TO CANCEL appears.
4. When the prompt message SELECT STACKER TO CANCEL appears, press **Enter**. A list of stacker names displays. Scroll to the stacker that is being used for your job and press **Enter**.

If you do not want to cancel printing, press the down arrow key to display RETURN, and press **Enter**. The print job is not canceled.
5. Press **Start** to continue printing other print jobs.

Canceling Internal Print Jobs

If you are printing pages generated by the printer itself and not from the data stream, such as help pages or print quality samples, you can cancel the print job at any time by pressing any key on the operator panel.

Chapter 3. Using the Operator Panel

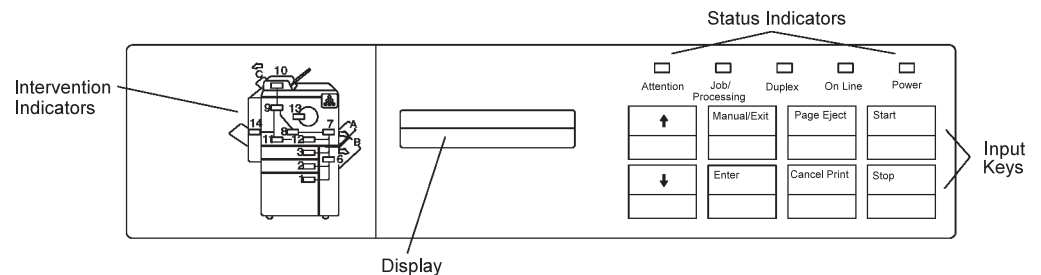
This chapter describes the operator panel. The operator panel consists of input keys, display, status indicators, and intervention indicators.

The operator panel is used to:

- Display messages .Show the printer status
- Indicate the location of paper jams
- Configure and control the printer

This chapter describes each portion of the operator panel:

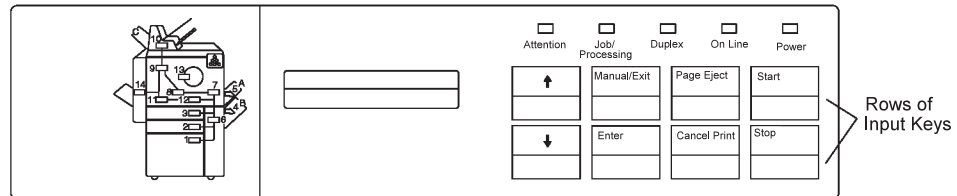
- Input keys
- Display
- Status indicators
- Intervention indicators
- Beeper



This chapter also contains a tutorial to help you use the keyboard to enter or change your password.

Input Keys

Outline



The input key area of the operator panel consists of eight input keys, which are used to:

- Change the state of the printer to Ready or Not Ready, using the **Start** and **Stop** keys
- Change between status mode and menu mode, using the **Menu/Exit** key (see “Display” on page 3-4 for more information about status mode and menu mode)
- Navigate and select items in the menu, using the Scroll Up and Scroll Down keys and the **Enter** key

Each input key is described below.



Scroll Up

Use the Scroll Up key to scroll up through the menu mode items. You can also use the Scroll Up 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.

The Scroll Up key operates in a circular scroll fashion; when the top item on a list has been displayed, the menu rolls over to the last item, and scrolling continues.

If you press the Scroll Up key when there is no information to scroll through or access, the key press is ignored. No action occurs.

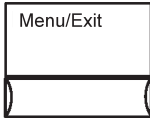


Scroll Down

Use the Scroll Down key to scroll down through the menu mode items. You can also use the Scroll Down key to access and scroll through status and information messages. Each time you press the key, the next menu item or message displays.

The Scroll Up key operates in a circular scroll fashion; when the top item on a list has been displayed, the menu rolls over to the last item, and scrolling continues.

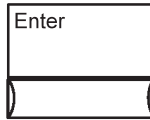
If you press the Scroll Down key when there is no information to scroll through or access, the key press is ignored. No action occurs.



Menu/Exit

If the display is in status mode, use the **Menu/Exit** key to switch the display to menu mode. While in the menu mode, you can scroll through the list of items with the scroll keys and select items using the **Enter** key.

If the display is in menu mode, use this key to exit from the menu and switch the display to status mode.



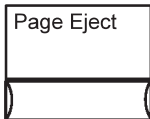
Enter

While in menu mode, use the **Enter** key to:

- Navigate between menu levels
- Select a choice on a menu
- Initiate an action
- Accept a character or operation for keyboard input

While in keyboard input mode, use the **Enter** key to select a character, proceed after an error is posted, or select the keyboard edit operations. See "Using the Keyboard" on page 3-11 for more information about using the **Enter** key in keyboard input mode.

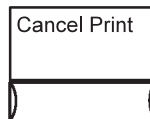
While in status mode, press the **Enter** key to clear an information or error message.



Page Eject

When ASCII jobs are printing, use the **Page Eject** key to force a page to print (for applications that do not send a page eject until the page buffer is full).

Note: This key functions for PC parallel attachments only. When IPDS jobs are printing, this key is not active.



Cancel Print

This key is active only when the printer is receiving or processing a print job and the printer is in the Not Ready state. (You can put the printer into the Not Ready state by pressing the Stop key.)

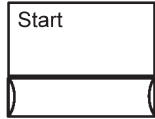
If you press the **Cancel Print** key when there are no jobs in the print queue, the message NO PRINT JOBS TO CANCEL appears.

If you press the **Cancel Print** key when the printer is not stopped, a message is issued telling you to stop the printer. After the job is canceled at the printer, the job is deleted at the host queue. This key also cancels internal print jobs (those originated at the printer).

Verification is required: When you press the **Cancel Print** key, the message SELECT STACKER TO CANCEL appears. When you select the output stacker assigned to the print data stream (either the base, upper, or side stacker) and press **Enter**, the print job is canceled.

A CANCEL COMPLETE message indicates that the print job was canceled. To avoid canceling the print job after pressing the **Cancel Print** key, scroll to RETURN and press the **Enter** key. The printer continues as though the **Cancel Print** key had not been pressed.

Note: To avoid canceling another person's print job, verify that the job that is printing is the job you want to cancel. After you press **Stop**, wait until pages are ejected into the stacker. Check those pages. If the print job you wish to cancel has not finished printing, proceed to cancel the print job. If the print job has finished printing, do not cancel it, because this would cancel the next print job sent to the printer.

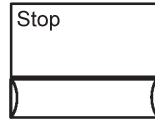


Start

Use the **Start** key to initiate a request for the printer to change to a Ready state. Printing proceeds only when the printer is Ready.

You can also use the **Start** key to attempt to clear some errors and interventions. Preventive maintenance messages are not cleared.

Start is inactive when the printer is in a Ready state.



Stop

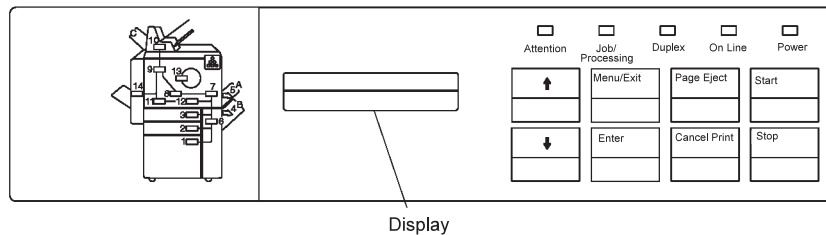
Use the **Stop** key to initiate a request for the printer to change to a Not Ready state.

If you press the **Stop** key while the printer is printing, the printer continues to process the current pages. When processing is completed, the printer stops.

The **Stop** key is inactive when the printer is in a Not Ready state.

Stop does not cancel a print job, internal or external. Print jobs are canceled using the **Cancel Print** key (even while in menu mode). The **Stop** key stops the printer until the **Start** key is pressed. At that time, the printer continues what it had been doing at the stop.

Display



The LCD display area of the operator panel consists of two rows of 16 characters each. The following types of information can be displayed:

- Printer status
- Intervention conditions
- Menu operations

The display operates in two modes: status mode and menu mode. These are described in detail in the following sections.

The display text can appear in one of the following languages, which the operator can select: English, German, French, Spanish, Brazilian Portuguese, Japanese, Italian, or Dutch.

Status mode

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

- General status messages (READY or NOT READY) are displayed when no intervention messages are outstanding and the printer is not receiving data.
- Printer status messages (RECEIVING, PRINTING, WARMING UP, SLEEPING, or TRACING) are displayed when no intervention messages are outstanding and the printer is not receiving data. These messages indicate the current condition of the printer.
- Notification that replaceable supplies are low or need to be replaced.
- Error messages when the printer encounters difficulty.
- Confirmation of requested actions.

See Appendix A, “Display Messages and Codes” for a list of messages and their meanings.

Menu Mode

In menu mode, the display shows menus and submenus from which you select choices to:

- Print the help pages
- Enable and disable trays and stackers
- Perform actions such as shutting down and restarting the printer
- Replace supplies
- Configure the printer and its attachments
- Perform printer setup functions, such as printing samples, setting machine configuration parameters, defining forms, viewing machine information, adjusting print, changing passwords, and printing current printer configuration

The menu options are arranged in a “menu tree,” which shows the basic menu choices. See “Menu Tree” on page 3-7 for an illustration of the menu tree. Not all menu items are shown.

Using the Display in Menu Mode

Use the menu to configure the printer and its attachments and to perform actions such as shutting down the printer and entering the password to access password-protected items.

Menu items are arranged in a “menu tree.” “Menu Tree” on page 3-7 illustrates the basic menu choices available in menu mode. Not all menu items are shown. From each main-menu item, you select the second-level submenu item. From the second-level submenu item, you select the third level submenu items, and so on.

Entering and Exiting Menu Mode

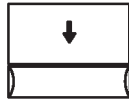
To enter menu mode from status mode, press the **Menu/Exit** key. To exit menu mode, press the **Menu/Exit** key.

Navigating through the Menu Items

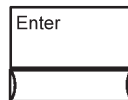
When using the display in menu mode, the arrow keys and the **Enter** key become navigation and selection keys.



Use the Up Arrow key to scroll up through the menu and submenu items. When you scroll, the items wrap so that you can access all items by scrolling either up or down.



Use the Down Arrow key to scroll down through the menu and submenu items. When you scroll, the items wrap so that you can access all items by scrolling either up or down.



Use the **Enter** key to:

- Select the main menu item and access its submenu.
- Select a submenu item and access its submenu.

Entering a Password to Access Menu Items

The 3130 password feature limits access to some menu items that are restricted to either the key operator or the customer engineer. When you try to access a restricted menu item, the message ENTER KEY OP PASSWORD or ENTER CE PASSWORD appears on the display. If you are a user not assigned to key operator duties, you cannot access that menu item. All SERVICE menu items are restricted 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 **Enter** to clear the message.
2. Press the Up Arrow or Down Arrow key until <CANCEL> is displayed, and press **Enter**. Either return to the parent menu item or press **Menu/Exit** 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 on 3-17.

Selecting Settings and Actions in the Menu

Use the **Enter** key to:

- Select and save a submenu setting from a list, such as any of the following:
 - Printer configuration items such as BEEPER>ERROR>OFF
 - Attachment configuration items such as ETHERNET>ENABLE STATUS>ENABLE
 - Tray settings such as MAIN TRAY>AUTOSWITCH>NONE
- Select characters for a unique value (on the keyboard), such as any of the following:
 - Attachment configuration items such as XID NUMBER
 - Number of print samples desired
 - Key operator password
- Select and save a keyboard entry when you have completed it.
- Select and perform an action, such as:
 - PRESS ENTER TO SHUT DOWN
 - PRESS ENTER TO RESTART

Items that are currently selected are indicated by an asterisk (*). When only one item can be selected from a list of choices, * indicates which item is selected. When you select an item that is not selected, an * appears to the left of the item to indicate that it is now selected. Pressing **Enter** on an item that is preceded by * returns the display to the parent menu item.

Menu Tree

Menu items are arranged in a “menu tree.” The following pages contain illustrations of the basic menu choices available in menu mode. Not all menu items are shown. From each main-menu item, you select the second-level submenu item. From the second-level submenu item, you select the third-level submenu items, and so on.

The first two pages show the available main menu items:

- HELP
- TRAYS/STACKERS
- SYSTEM SHUTDOWN
- SUPPLIES
- ATTACHMENTS
- SETUP
- SERVICE

The third page shows the detailed menu items available for MACHINE CONFIGURATION.

3130 RELEASE 2 MAIN MENU

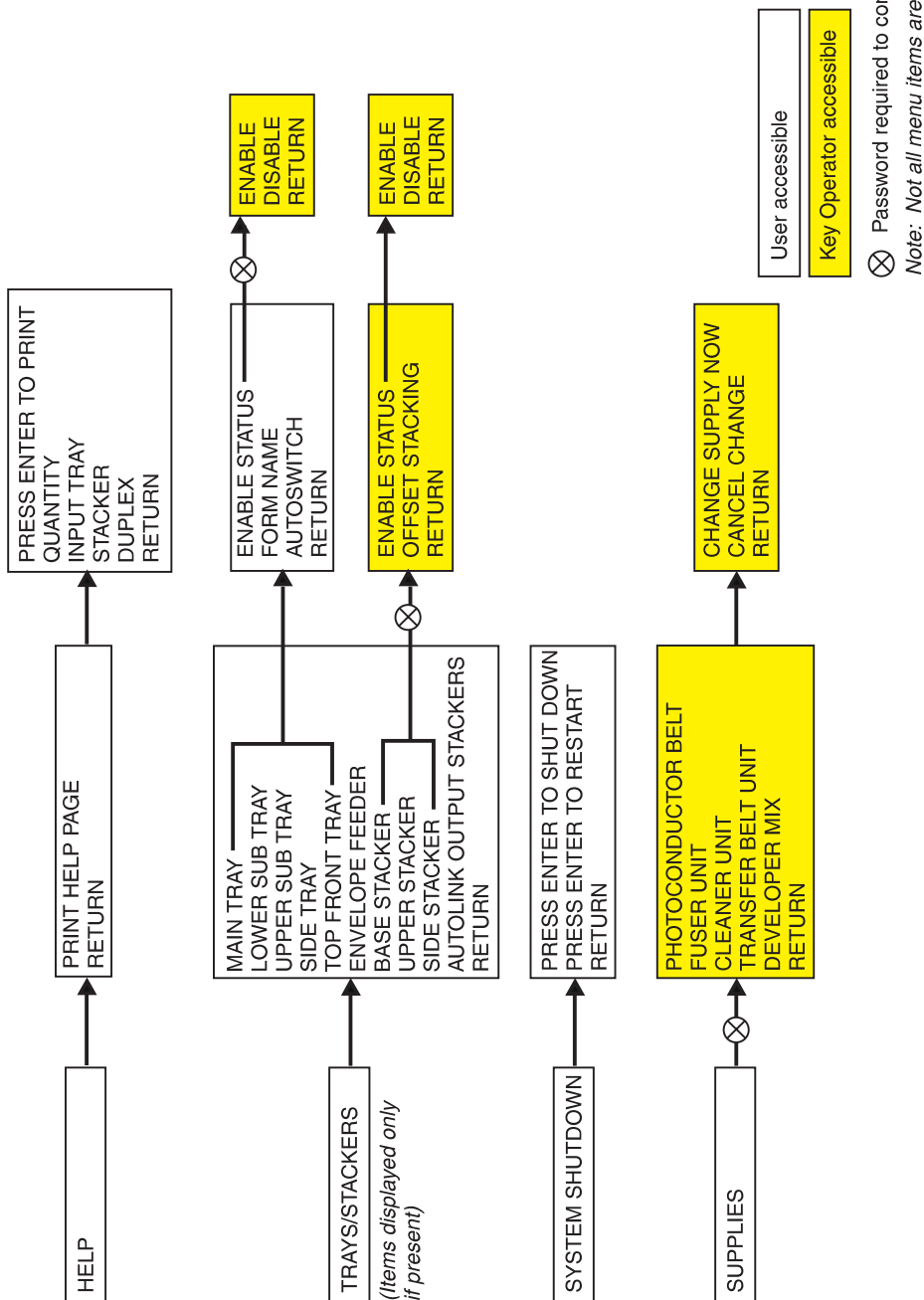
C80G1004

Submenu
4th Level

Submenu
3rd Level

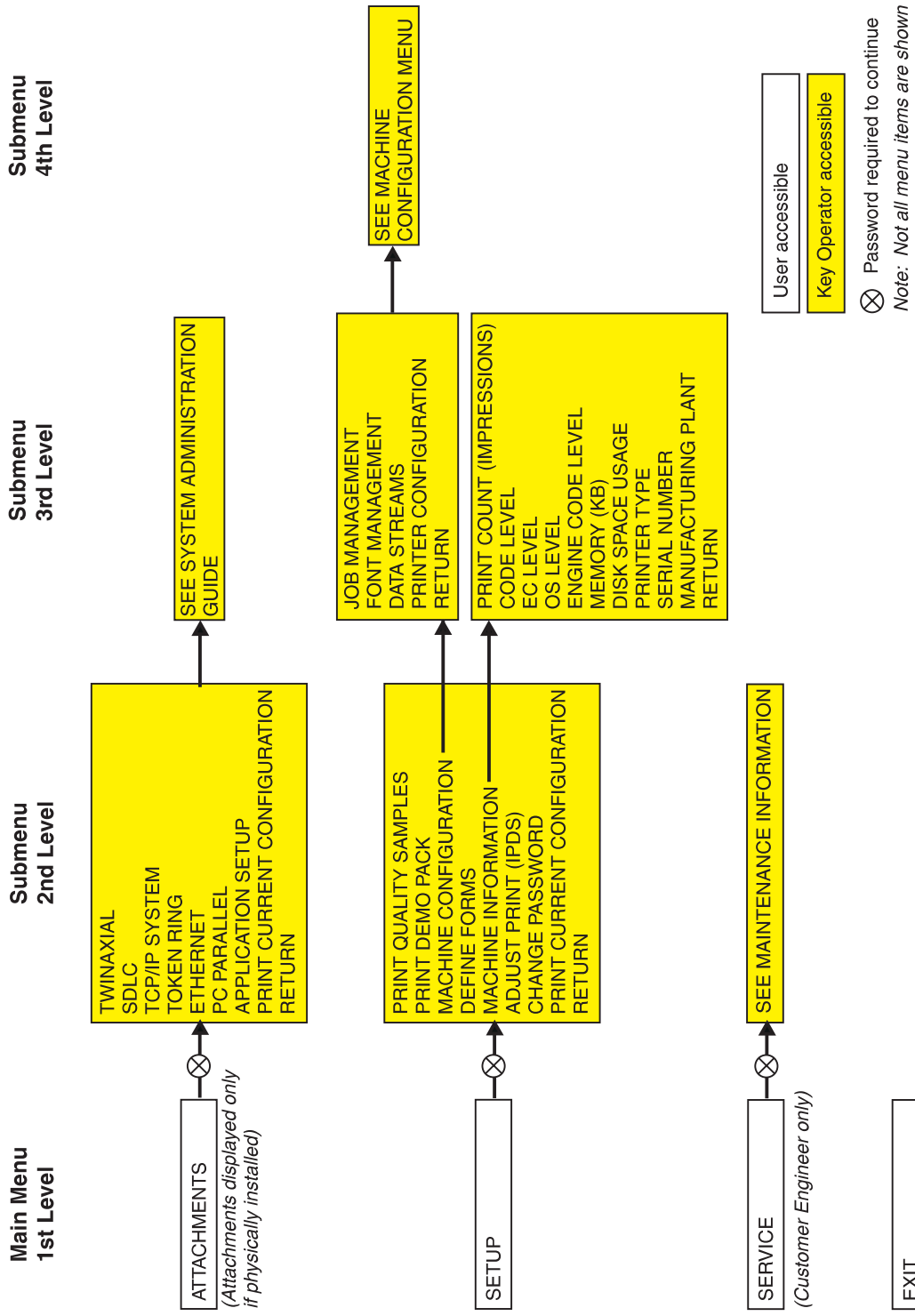
Submenu
2nd Level

Main Menu
1st Level



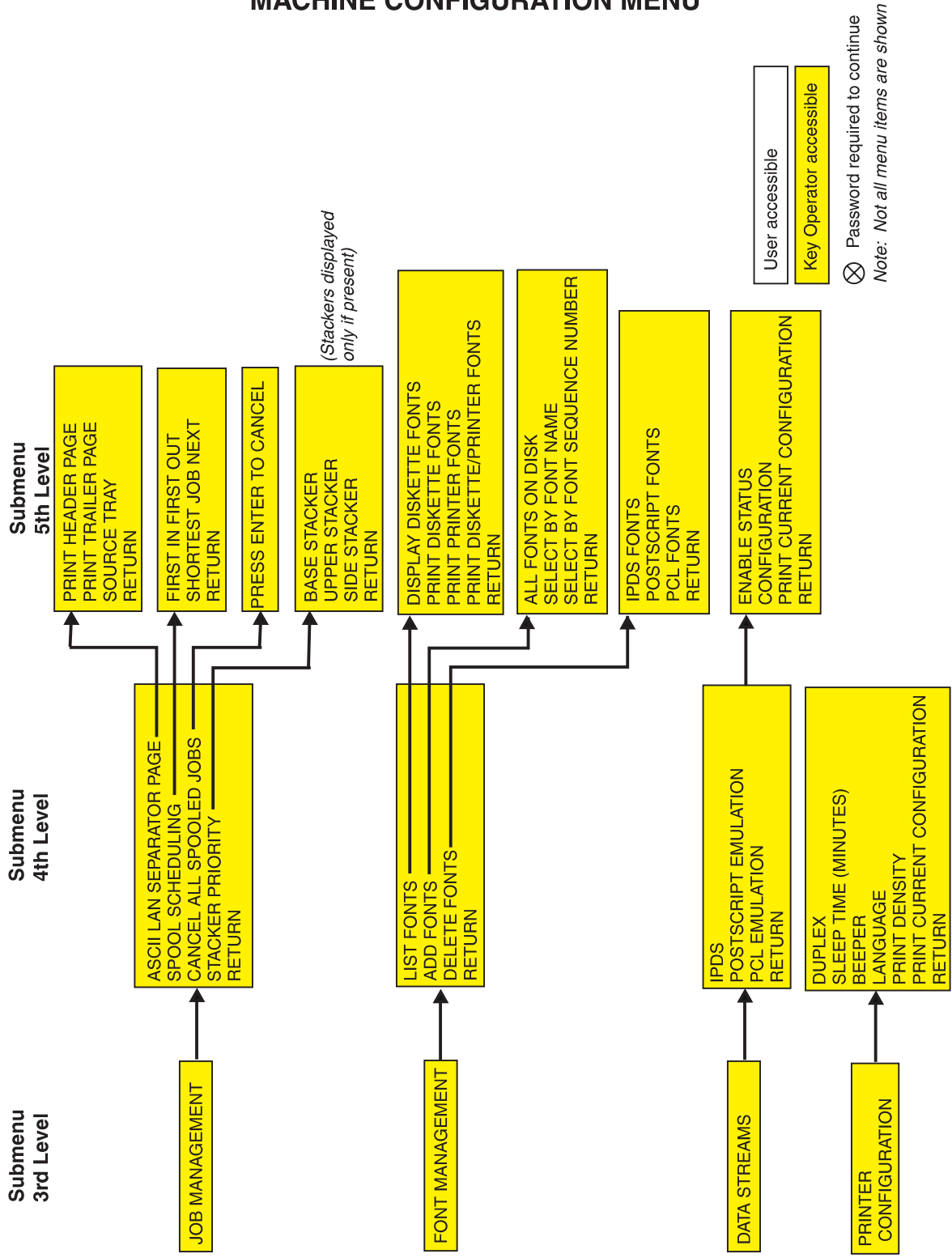
3130 RELEASE 2 MAIN MENU

0010080



3130 RELEASE 2 MACHINE CONFIGURATION MENU

C8OG1006



⊗ Password required to continue
 Note: Not all menu items are shown

Using the Keyboard

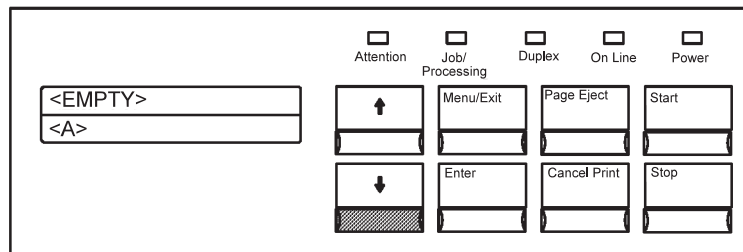
Some settings in the menu cannot be selected from a list of choices. Instead, you select from a scrollable field known as the keyboard.

The contents of the keyboard can vary. Only those characters that are appropriate for the particular setting are displayed. Possible items are:

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

Parts of the Display—Keyboard Mode

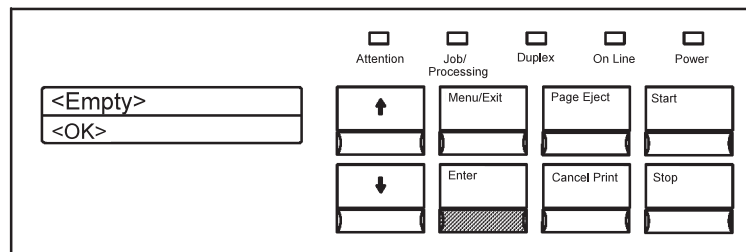
When you are using the keyboard, the bottom line of the display contains keyboard choices. The top line contains your input. As you select characters from the keyboard line, they are displayed on the top line.



Accessing the Keyboard

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

Note: <OK> appears on the keyboard only after you have made an acceptable selection.



Keyboard Order

Only those characters needed for the specific submenu items you have selected are displayed. Figure 3-1 shows all possible characters and operations in the order that they appear on the keyboard. Not all characters appear on the keyboard for each submenu item. You can access all valid characters by scrolling either up or down (using the Up Arrow key or the Down Arrow key).

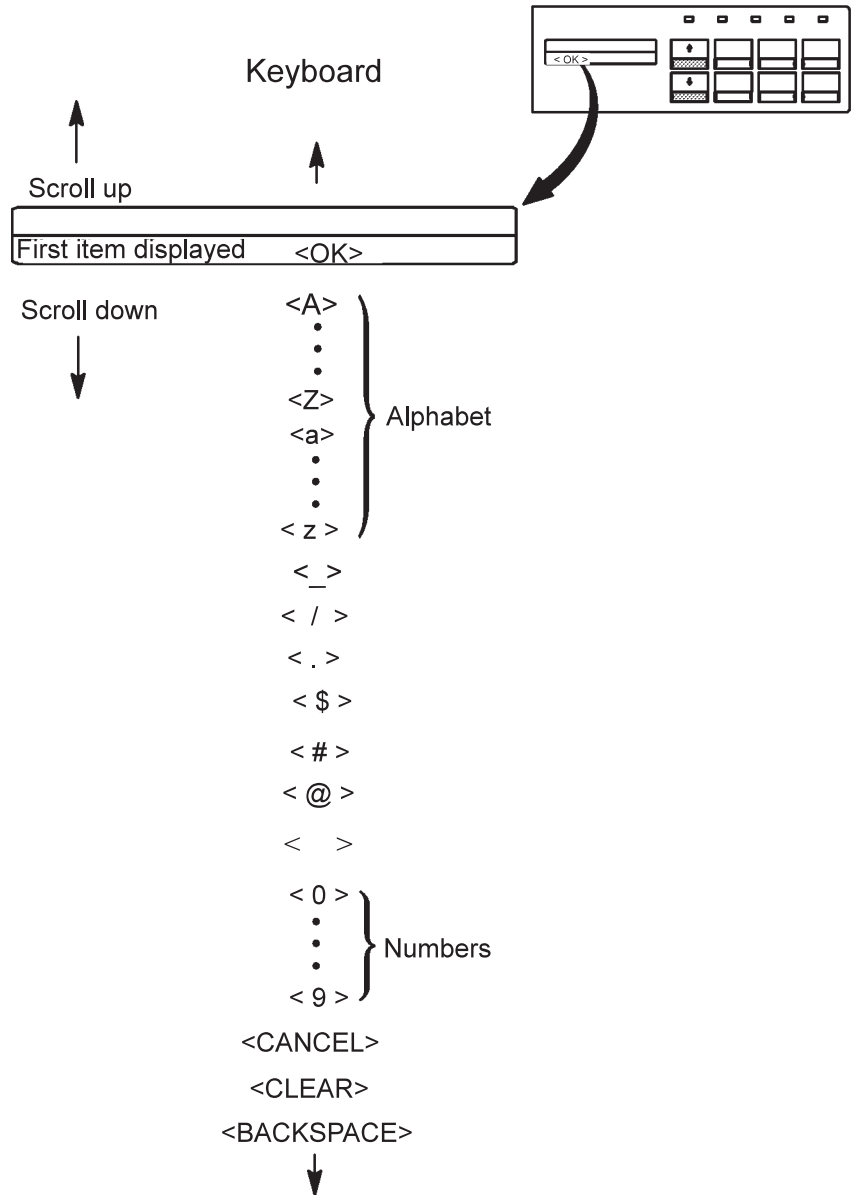
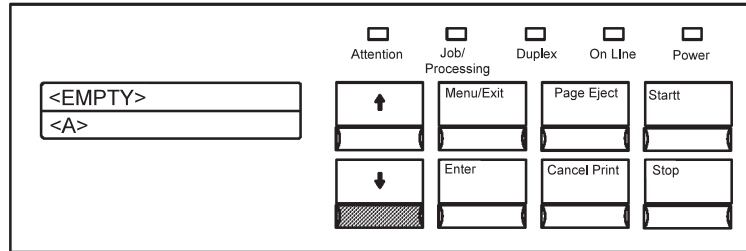


Figure 3-1. Keyboard Scrolling Order

Navigating through the Keyboard

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

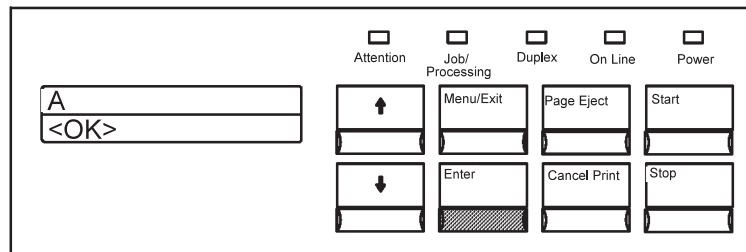
Use the Up Arrow and Down Arrow keys to move (scroll) through the keyboard. The following figure shows the use of the Down Arrow key to scroll to the letter <A>.



Selecting a Keyboard Character

When you have scrolled down to the keyboard character you want to select, press **Enter**. The selected keyboard character is then placed on the input line (the top line) of the display, and the keyboard line (always the second line) returns to its starting keyboard character <OK>. You can then choose the next character or value.

The following figure shows the resulting display after you press **Enter** to select the letter <A>.



Selecting and Saving Your Keyboard Entry

Press **Enter** when <OK> is displayed on the keyboard line to select your completed keyboard entry. After you have finished selecting all the keyboard characters for your entry, press **Enter** to select <OK>. The entry is selected and saved, and you return to the submenu item for which you made the entry.

Editing Keyboard Entries

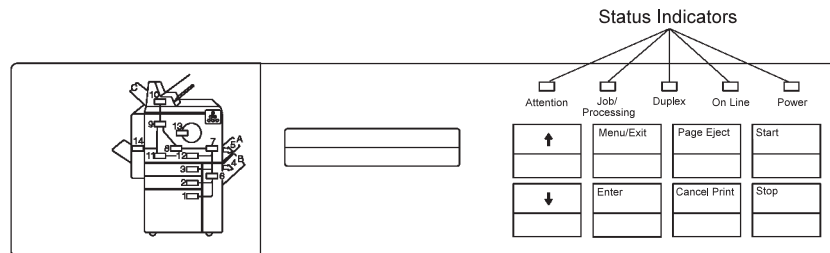
If you want to change one of your keyboard character selections, use the edit operations <BACKSPACE>, <CLEAR>, or <CANCEL> as follows:

- <BACKSPACE> Discards the previous character and displays <BACKSPACE> on the bottom line of the keyboard.
- <CLEAR> Deletes all characters from the top (input) line.
- <CANCEL> Discards any changes to the previous entry and returns to the parent menu item.

Canceling Keyboard Entries

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 and then pressing the **Enter** key.

Status Indicators



Five status indicators on the right side of the operator panel indicate printer activity and existing conditions:

- Attention
- Job/Processing
- Duplex
- On Line
- Power

During the power-on procedure, the **Power** indicator flashes. After the printer is powered on, the indicators light up depending on printer activity and existing conditions.

Attention

The **Attention** indicator lets you know when a condition exists that requires your attention. The Attention indicator has three states. Table 3-1 on page 3-15 describes each state and any recommended actions.

Table 3-1. Attention Indicator State Descriptions

State	Description/Action
Blinking	Description: A new condition requiring attention exists. The message on the display shows the condition. Action: Perform the recovery action (listed in Appendix A, "Display Messages and Codes"), or press Enter to clear the message. The blinking will stop when the condition is corrected or the message is cleared.
On (not blinking)	Description: One or more unresolved conditions exist. Action: To view any unresolved conditions, press the Down Arrow key (while in status mode). 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 changing soon). Other unresolved conditions require correction before the printer can continue printing.
Off	Description: No new or unresolved conditions that require attention. Action: None.

Job/Processing

When the **Job/Processing** indicator is lit, data is currently being received, processed, or printed. When the indicator is not lit, there is no data to be processed.

Duplex

The **Duplex** indicator light indicates when the 3130 is printing in duplex mode.

On Line

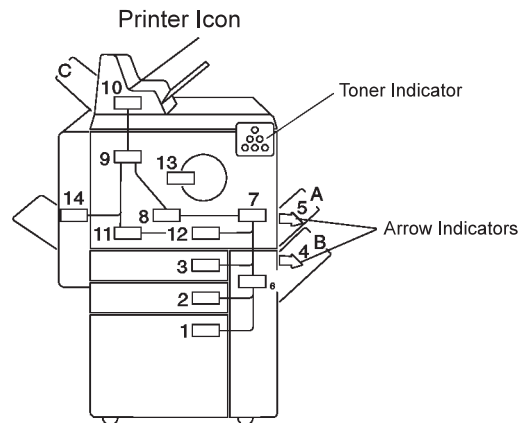
The **On Line** indicator is lit when any attachment with a corresponding application is enabled. The indicator is not lit when all attachments are disabled.

Power

The **Power** indicator shows whether the printer power is on or off. When the printer is started, the **Power** indicator lights up and remains lit until the printer is powered off. The **Power** indicator blinks during the power-on procedure.

Intervention Indicator Lights

The left side of the operator panel contains a printer icon in a configuration that closely matches that of your model printer. There are several intervention indicator lights within the printer icon. Each intervention indicator light identifies an area in the paper path.



The intervention indicator lights show:

- The location of a paper jam (paper jam indicators 1-13)
- The door or cover to be opened when a paper jam occurs (arrow indicators A, B, C)
- A toner low condition (toner indicator)

When an intervention indicator light is turned on, it indicates the location in the printer where a problem exists. There may be more than one intervention indicator light turned on at any one time.

When the printer senses a problem, you may be required to perform a recovery action, also known as an intervention. The first step you should take is shown by an arrow indicator light that is turned on. The display will have a message that corresponds to the intervention indicator light. After the intervention resolution has been completed, the indicator light usually turns off within one second. See “Using Paper Jam Indicator Lights to Locate Paper Jams” on page 7-2 for paper jam recovery information.

Paper Jam Indicator Lights

When a paper jam occurs, the printer stops printing, and the paper jam indicator lights show where the paper jam has occurred. See “Clearing a Paper Jam” on page 7-3 for instructions on clearing paper jams.

Toner Indicator Light

The toner indicator light turns on when the toner supply is low. See “Replacing the Toner Cartridge” on page 6-5 for instructions on adding toner to maintain print quality and printer operation.

Beeper

Two types of audible cues are available. The first is the error beeper, which sounds when a condition requiring intervention occurs. The second is the feedback that is given when an input key is pressed. Each of these cues is configured using menu options under the SETUP main menu.

Error Beeper

Menu options used to configure the error beeper are described in the following table.

Menu Option	Description
TIMED	The error beeper sounds for three minutes or until a key is pressed. This is the original factory setting.
CONTINUOUS	The error beeper sounds until the intervention is cleared or any key is pressed.
OFF	The error beeper does not sound.

Keys Beeper

Menu options used to configure the keys beeper are described in the following table.

Menu Option	Description
ON	The beeper sounds when a key is pressed (except when the keyboard is displayed).
OFF	The beeper does not sound when a key is pressed.

If you press a key at a time when it is not accessible, the key press is ignored. However, if the keyboard beeper is turned on, a beep sounds when you press an input key.

Tutorial: Using the Menu to Enter a Key Operator Password

The following tutorial is a hands-on exercise for key operators. It is designed to provide practice in navigating through the menu and using the keyboard.

Skills Covered

In this tutorial, you will learn how to:

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

Prerequisites

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

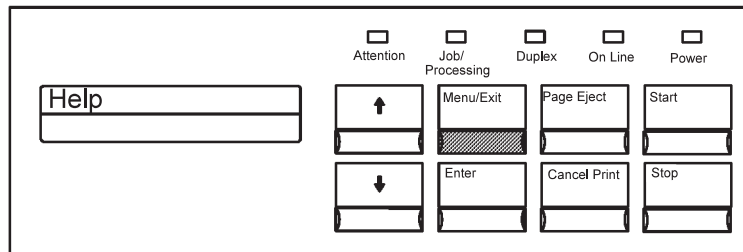
- You have key operator authorization.
- The customer engineer has set up a key-operator password.
- You know this key-operator password.
- The printer is in status mode.

Instructions

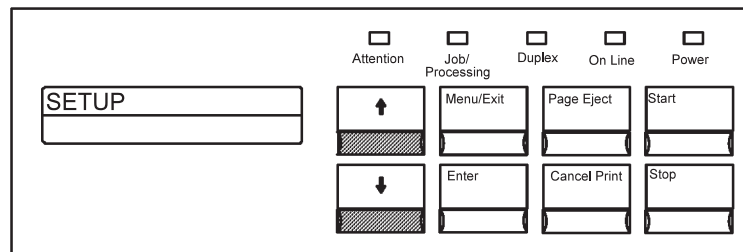
The hands-on steps that follow instruct you to enter the password A1. This is not your correct password; you will enter it as a learning exercise. After entering the incorrect password, you will be instructed how to clear it. You will then be asked to enter your correct password.

Follow the steps below.

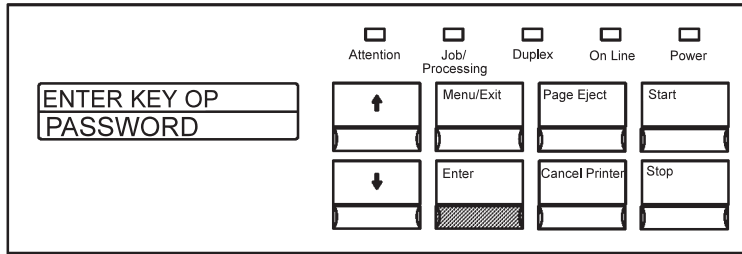
1. Press the **Menu/Exit** key to change to menu mode, if it is not already in menu mode.



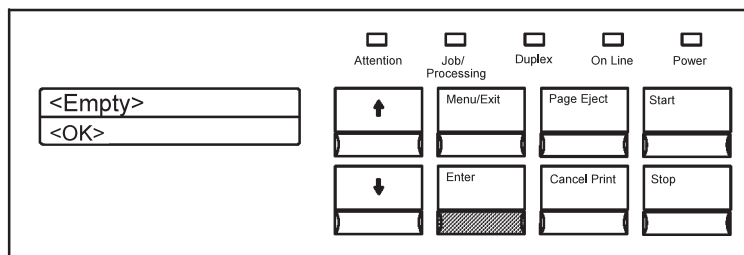
2. Press the Down Arrow key several times until you see SETUP displayed.



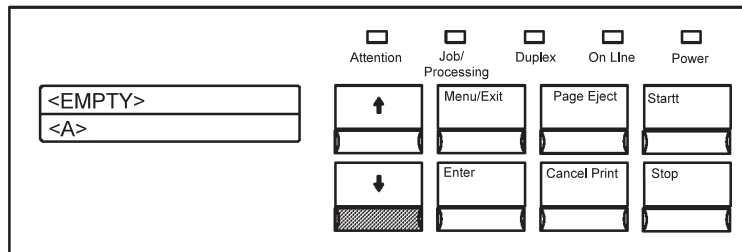
3. Press the **Enter** key to select SETUP. Access to SETUP menu items requires key-operator authorization. A prompt message appears asking you to enter the key-operator password.



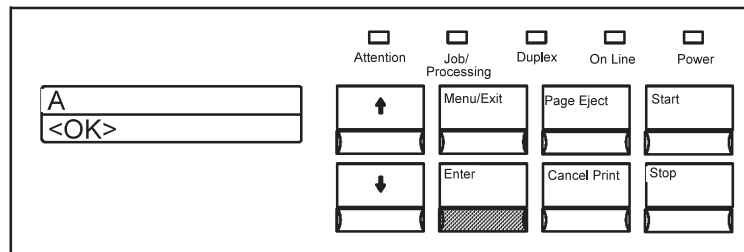
4. Press **Enter** again. The first item <OK> in the keyboard is displayed on the second line. <EMPTY> appears on the top line until you select a character and press **Enter** (see step 6).



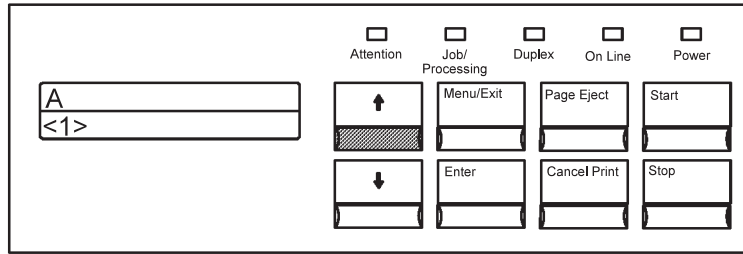
5. Press the Down Arrow key several times to scroll to the letter <A>.



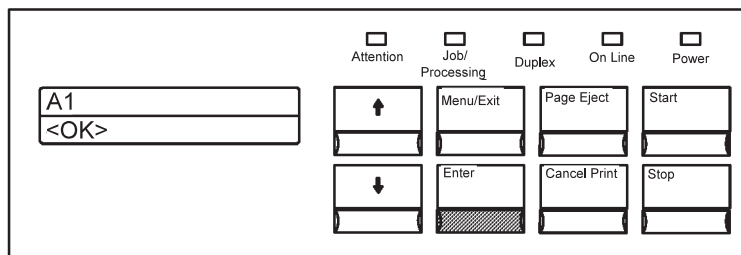
6. Press **Enter** to select the letter A. The selected character appears on the top input line. The keyboard line returns to the first item <OK>.



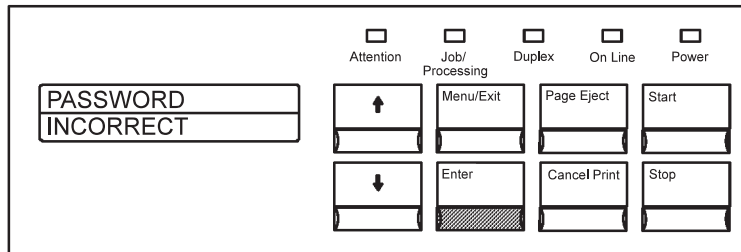
7. Press the Up Arrow key several times to scroll to the number <1>.



- Press **Enter** to select the number 1. The keyboard line returns to the first item <OK>.

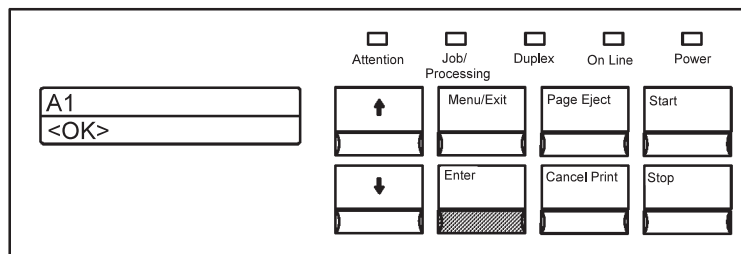


- Press **Enter** again to select the entire entry (by selecting <OK>). Because you have not entered your correct password, the message **PASSWORD INCORRECT** is displayed

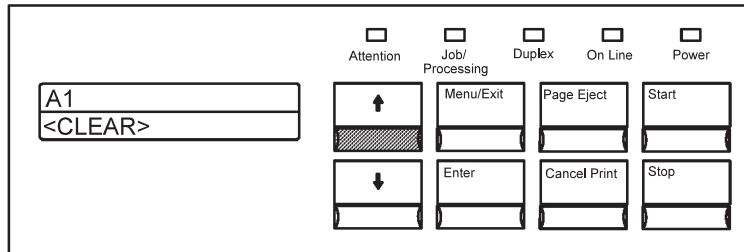


Note: The remaining steps are editing steps. They instruct you to clear the **PASSWORD INCORRECT** message.

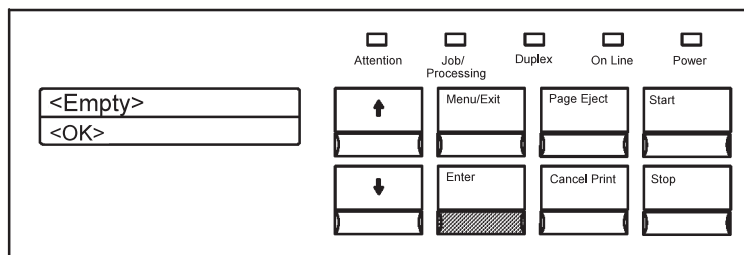
- Press **Enter** to return to the keyboard and the previously entered password.



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



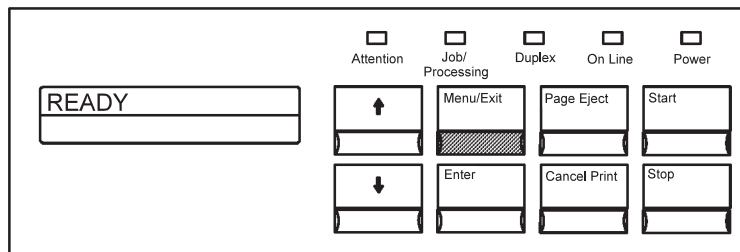
12. Press **Enter** to clear (erase) the incorrect password.



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) is displayed.

14. Press **Menu/Exit** 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 display to change the printer settings and thus customize the way the printer operates. Changing the settings is called configuring. You can configure the trays, stackers, printer attachments, and printer setup.

In this chapter you will find instructions for:

- Configuring the input trays
- Configuring the output stackers
- Configuring the printer
- Running print quality samples
- Running the demonstration pack
- Adjusting the print (IPDS only)
- Changing the key-operator password
- Defining forms
- Viewing machine information
- Configuring attachments

Configuring Input Trays

Both users and key operators can configure certain items relating to the paper input trays.

A user or key operator can do the following:

- Change the paper size and form name assigned to each tray.
- Select an autoswitch tray.
- Enable and disable trays (key operator only).

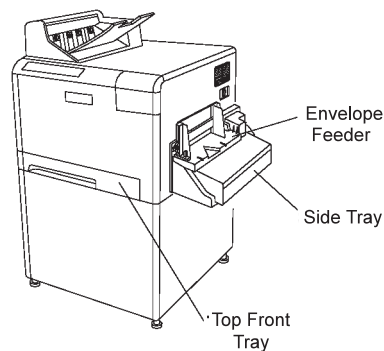
Note: Always adjust the input tray itself for the correct paper size before configuring that tray. See the instructions for loading trays in Chapter 5, "Printing and Paper Handling."

Tray Names

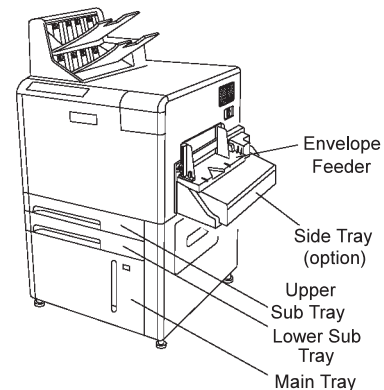
Each model of the 3130 printer may have a different set of standard and optional trays and stackers. The figure below shows each model with all possible trays installed. Your printer may not have all these trays installed.

Possible input trays are:

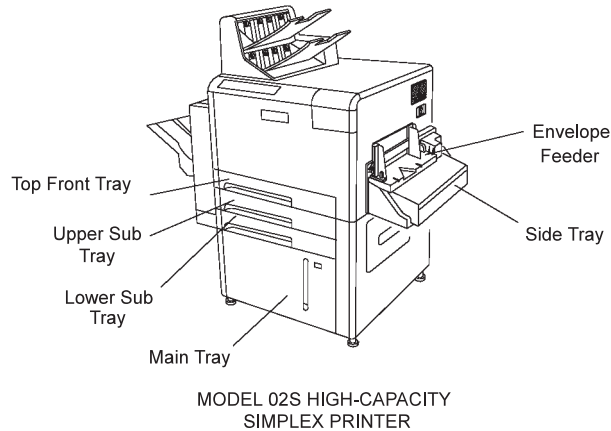
- Top front tray
- Upper sub tray
- Lower sub tray
- Main tray
- Envelope feeder
- Side tray



MODEL 01S SIMPLEX PRINTER



MODEL 02D DUPLEX and
MODEL 03S SIMPLEX PRINTERS



Note: Paper input (feeding) receptacles are called trays. Paper output receptacles are called stackers.

Enabling and Disabling Trays

The key operator can enable or disable any of the input trays. If a tray is enabled, it can be used by the printer. 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).

To enable or disable a tray, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to the input tray you want to enable or disable, and press **Enter** to make the selection.
4. Press **Enter** on ENABLE STATUS. You may be prompted to enter the key-operator password.
5. Scroll to ENABLE, and press **Enter** to enable the tray. Scroll to DISABLE, and press **Enter** to disable the tray.

Note: When you disable a tray that has been designated as the autoswitch tray for another tray, the informational message AUTOSWITCH NO LONGER VALID appears. Press **Enter**, if necessary, to clear this message.

Tray Selection Defaults

If the host or network does not tell the printer which tray to use, the printer uses the following order of priority. All trays may not be present on your printer model.

Priority	Model 01S Simplex	Model 02S High-Capacity Simplex	Model 02D Duplex and Model 03S Simplex
1	Side Tray	Main Tray	Main Tray
2	Top Front Tray	Side Tray	Side Tray
3		Lower Sub Tray	Lower Sub Tray
4		Upper Sub Tray	Upper Sub Tray

Note: Default input trays can be configured by data streams.

If the selected tray is not available because the tray is out of paper, has the wrong paper size, or is removed, the printer stops printing, and a message appears on the operator panel display. See Appendix A, "Display Messages and Codes" for a list of messages and their meanings.

Changing the Form Name and Paper Size Assigned to a Tray

If you have changed the form loaded in a tray, you need to change (or verify) the form name assigned to that tray.

Printing media (paper, forms, and envelopes) used in the printer are called forms. If there are user-defined forms (defined for specific customer needs, such as preprinted paper), the paper size may be the same for several user-defined forms. Each defined form has a unique form name.

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 the following paper sizes: letter, legal, ledger, A3, A4, B4, and B5. The envelope feeder handles only #10 or DL envelopes.

Note: Always adjust the input tray itself before configuring that tray. Only those form names that match the paper size of the current adjusted tray are available for configuration.

To change the form name assigned to a tray:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to the input tray for which you have changed the loaded form and press **Enter** to make the selection.
4. Scroll to FORM NAME and press **Enter**.
5. Scroll to the desired form name and press **Enter**.

Notes:

1. When loading a new form into a tray, if there is only one form name defined with the form size you have loaded in the tray, the printer will automatically choose that form name. If several defined form names have the same size as the one you have loaded, the message CHECK FORM NAME IN MENU appears. You must then verify or change the form name assigned to the tray.
2. If you change the form name loaded in a tray that has another tray designated as the autoswitch tray or has been previously designated as the autoswitch tray for another tray, then the informational message FORM MISMATCH FOR AUTOSWITCH appears. Press **Enter**, if necessary, to clear this message.

Selecting an Autoswitch Tray

You can select an input tray that will automatically start feeding paper when the originally selected tray becomes empty. When an autoswitch tray has been assigned to the original input 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.

Notes:

1. The original factory setting for autoswitch tray is NONE.
2. Before designating an autoswitch tray, you must first select the original tray.
3. You can return the autoswitch tray designation to NONE at any time a job is not printing.

Do the following to designate an autoswitch tray:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to the original input tray for which you wish to assign another tray as the autoswitch tray and press **Enter** to make the selection. See the example below.
4. Scroll to AUTOSWITCH and press **Enter**.
5. Scroll to the autoswitch tray name and press **Enter**. It becomes the autoswitch tray for the tray selected in Step 3.

Example: The following example selects the side tray as the autoswitch (alternate) tray for the main tray (original). The procedure is as follows:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to MAIN TRAY and press **Enter**.
4. Scroll to AUTOSWITCH and press **Enter**.
5. Scroll to SIDE TRAY and press **Enter**.

Notes:

1. The autoswitch tray must be loaded with the same form name as the original tray. If you choose an autoswitch tray that has a different form name loaded in it, the message WRONG FORM IN AUTOSWITCH TRAY is displayed. You must then choose a different autoswitch tray.
2. If you choose an autoswitch tray that is disabled, the message AUTOSWITCH TRAY NOT ENABLED is displayed. You must then choose a different autoswitch tray. (If you do not choose another one, there will be no autoswitch tray.)
3. If someone changes the form name loaded in an autoswitch tray, that tray will no longer act as an autoswitch tray.
4. If no autoswitch tray is selected, the job will stop printing when the original tray is empty.
5. Before designating an autoswitch tray, you must first select the original tray.

Tray Name Correspondence

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

Table 4-1 shows the correspondence between input bin numbers and printer tray names and between output bin numbers and printer stacker names. Remember that not all models have all trays and stackers installed.

Note: Select the base stacker or upper stacker for all label printing.

Table 4-1. Input Bin and Output Bin Numbers

Input Bin Number	Printer Tray Name	Capacity (No. of Sheets)
1	Main Tray	2 000
2	Lower Sub Tray	250
3	Upper Sub Tray	250
4	Side Tray	500
5	Envelope Feeder	100
6	Top Front Tray	250
Output Bin Number	Printer Stacker Name	Capacity (No. of Sheets)
1	Base Stacker	500
2	Upper Stacker	500
3	Side Stacker	1 500

Configuring Output Stackers

Only key operators can configure the output stackers. Three tasks compose stacker configuration:

- Enable and disable stackers.
- Turn the offset stacking function on or off.
- Autolink the stackers.

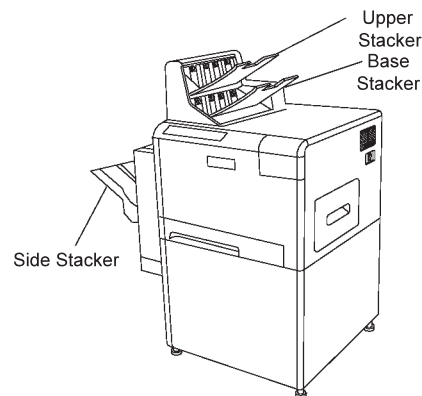
Stacker Names

Each model of the 3130 printer has standard and optional trays and stackers. The following figure shows each model with all possible stackers. Your printer may not have all these stackers installed.

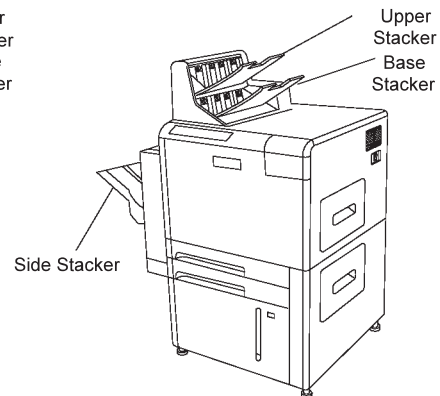
Possible output stackers are:

- Upper stacker
- Base stacker
- Side stacker

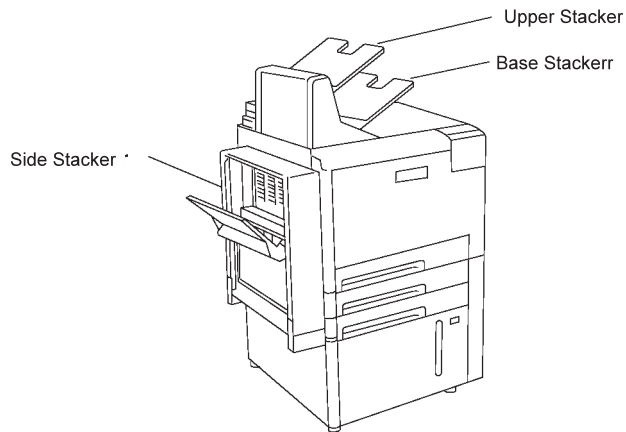
Note: Paper input (feeding) receptacles are called trays. Paper output receptacles are called stackers. If the printer has only a single top stacker, it is called the base stacker.



MODEL 01S SIMPLEX PRINTER



MODEL 02D DUPLEX and
MODEL 03S SIMPLEX PRINTERS



MODEL 02S HIGH-CAPACITY
SIMPLEX PRINTER

Enabling and Disabling Stackers

The key operator can enable or disable any of the stackers. If a stacker is enabled, it can be used by the printer. If a stacker is disabled, it cannot be used.

To enable or disable a stacker, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to the stacker you want to enable or disable and press **Enter**.
4. Press **Enter** on ENABLE STATUS. You may be prompted to enter the key-operator password.
5. Scroll to ENABLE, and press **Enter** to enable the stacker. Scroll to DISABLE, and press **Enter** to disable the stacker.

Stacker Selection Defaults

If the data stream is not configured for a specific stacker and the print job does not instruct the printer which stacker to use, the following order of priority is followed:

- Base stacker
- Upper stacker
- Side stacker

Note: Not all stackers are installed on all printers.

If the selected stacker is not available because it is full, the job stops printing and a message is displayed.

Setting Offset Stacking

When a stacker has the offset stacking function turned on, print job separation is indicated by the jogging of forms at the beginning of each print job. This is known as offset stacking.

You can configure each stacker so that the offset stacking function is enabled or disabled.

Selecting Offset Stacking

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

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the TRAYS/STACKERS menu and press **Enter**.
3. Scroll to the name of the stacker for which you want to enable or disable offset stacking and press **Enter**. You may be prompted to enter the key-operator password.
4. Scroll to OFFSET STACKING and press **Enter**.
5. Scroll to YES, and press **Enter** to set offset stacking. Scroll to NO and press **Enter** to turn off offset stacking.

Autolinking the Output Stackers

The key operator can autolink the output stackers. When the stackers are autolinked, the printer automatically switches to another stacker when the first stacker becomes full. The printer continues doing this until all 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. Your printer may not have all stackers installed.

Autolink Order	Stacker
1	Side stacker
2	Base stacker
3	Upper stacker

Selecting Autolinking

To select autolinking, do the following:

1. Press the **Stop** key (if the printer is Ready) to make the printer Not Ready.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the TRAYS/STACKERS menu and press **Enter**.
4. Scroll to AUTOLINK OUTPUT STACKERS and press **Enter**. You may be prompted to enter the key-operator password.
5. Scroll to YES and press **Enter** to select autolinking. Scroll to NO and press **Enter** to deselect autolinking.
6. Press the **Menu/Exit** key to exit menu mode (if desired).
7. Empty all the stackers before pressing Start to continue printing.

Note: When using autolinked stackers, be sure to completely empty all the 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 all enabled stackers become full. When all stackers are full and the printer stops printing, the autolinked stackers can be cleared.

To clear the autolinked stackers, do the following:

1. Completely empty all stackers. The STACKER FULL messages no longer appear.
2. Press Start to continue printing. Printing does not continue if any of the stackers are full.

Note: To ensure job integrity, do not press **Start** until all stackers are completely empty. Although the printer does not stack forms in full stackers, it does stack forms in partially full stackers.

Note: If you want to reset the autolink stacker function and start sending pages to the first stacker in the autolinking order, do the following:

1. Press and hold the **Enter** key.
2. Press the **Page Eject** key.
3. Release both keys.

Configuring the Printer

There are several choices you can make regarding how your printer functions. Establishing the setup that best suits your particular printing environment involves configuring the printer using the SETUP > MACHINE CONFIGURATION menu items. Only a key operator or customer engineer can configure the printer.

Configuration Menu Items

Some of the items on the Machine Configuration Menu are discussed in this book and others are discussed in the *3130 Advanced Function Printer: System Administration Guide*.

Job Management	<i>System Administration Guide</i> , Chapter 4
Font Management	<i>System Administration Guide</i> , Chapter 5
Data Streams	<i>System Administration Guide</i> , Chapter 4
Printer Configuration	See Table 4-2 on page 4-11

Printer Configuration Menu Item Descriptions

Table 4-2 describes general printer configuration items and available values for each item. These items can be configured by a key operator.

Table 4-2. Printer Configuration Menu Items

Item	Available Values	Description
DUPLEX	ENABLE or DISABLE	Duplex indicates whether two-sided printing is enabled or disabled (duplex model only).
SLEEP TIME (MINUTES)	1-999 minutes or 0 (never sleeps)	Sleep time is the number of minutes of printer inactivity (no print jobs) before the fuser turns off. Values 1 through 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.
BEEPER	ERROR <ul style="list-style-type: none">• TIMED BEEP• CONTINUOUS• OFF KEYS <ul style="list-style-type: none">• ON• OFF	<p>The beeper may be set to sound when the 3130 detects an error or when keys are pressed.</p> <p>You can set the ERROR beeper to sound until any operator panel key is pressed (CONTINUOUS), to sound for three minutes, or until a key is pressed and then stop (TIMED BEEP) or to never sound at all (OFF). The original factory setting is TIMED BEEP.</p> <p>You can set the KEYS beeper to ON or OFF. The original factory setting is ON.</p>
LANGUAGE	ENGLISH, FRENCH, GERMAN, JAPANESE KATAKANA, ITALIAN, SPANISH, BRAZILIAN PORTUGUESE, DUTCH	Language specifies the language used to display operator panel text for general users and key operators. The original factory setting is ENGLISH. (Text for customer engineer-only items is in English only.)
PRINT DENSITY	LIGHT, MEDIUM, or DARK	Print density 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 a darker print density to enhance graphics or images. IBM recommends MEDIUM. The darker selection uses more toner. The original factory setting is MEDIUM.

Setting Printer Configuration Items

To configure the printer, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to MACHINE CONFIGURATION and press **Enter**.
4. Scroll to PRINTER CONFIGURATION and press **Enter**.
5. Scroll to the submenu item you want to configure and press **Enter**.
6. Scroll to the desired value, and press **Enter** to make the selection. Press **Enter** again to return to the parent menu. Or use the keyboard to enter your selection.

Printing the Printer Configuration

You have two options for printing printer configuration items and their current settings. One option prints a one-page listing of the current settings for DUPLEX, SLEEP TIME, BEEPER, LANGUAGE, and PRINT DENSITY. The other option prints a multi-page listing of the current settings for all options that can be configured for the printer. This includes attachments, data streams, job management, and so forth, as well as the settings on the one-page listing.

Printing a One-Page Configuration Listing

To print a one-page listing, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to MACHINE CONFIGURATION and press **Enter**.
4. Scroll to PRINTER CONFIGURATION and press **Enter**.
5. Scroll to PRINT CURRENT CONFIGURATION and press **Enter**.
6. If you want to specify the number of copies desired, scroll to QUANTITY and press **Enter**. 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 **Enter**. Scroll to the desired tray and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
8. If you want to specify the stacker desired, scroll to STACKER and press **Enter**. Scroll to the desired stacker and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
9. (Duplex model only with DUPLEX enabled in the printer configuration.) If you want to specify whether the information is to be printed in duplex or simplex, scroll to DUPLEX and press **Enter**. Scroll to YES or NO and press **Enter**. Press **Enter** again to return to the parent menu.
10. Scroll to PRESS ENTER TO PRINT and press **Enter** to request printing. The configuration page is put in the print queue.

Note: If the printer is busy, the configuration page may not print immediately.

Printing a Multi-Page Configuration Listing

To print a multi-page listing of all option values, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to PRINT CURRENT CONFIGURATION and press **Enter**.
4. If you want to specify the number of copies desired, scroll to QUANTITY and press **Enter**. Use the keyboard to indicate the number of copies.

Note: This listing can be quite large. It is recommended that you print one copy before requesting multiple copies.

5. If you want to specify the input tray desired, scroll to INPUT TRAY and press **Enter**. Scroll to the desired tray and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.

6. If you want to specify the stacker desired, scroll to STACKER and press **Enter**. Scroll to the desired stacker and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
7. (Duplex model only with DUPLEX enabled in the printer configuration.) If you want to specify whether the information is to be printed in duplex or simplex, scroll to DUPLEX and press **Enter**. Scroll to YES or NO and press **Enter**. Press **Enter** again to return to the parent menu.
8. Scroll to PRESS ENTER TO PRINT and press **Enter** to request printing. The configuration pages are put in the print queue.
Note: If the printer is busy, the configuration pages may not print immediately.

Running Print Quality Samples

You can run print quality samples to test print quality. Print samples are pages of text or patterns. These pages are generated from the printer itself, not from the data stream.

Print quality samples can be printed at 300 or 240 pel resolution. Selecting 300 PEL sets the print resolution to 300 dpi; selecting 240 PEL sets the print resolution to 240 dpi.

When you select 300 PEL, the available print samples are LETTER, PRIMARY, ALL WHITE, and ALL BLACK. If you specify ALL SAMPLES, all print samples except ALL BLACK are printed. When you choose ALL BLACK, the printer always prints four simplex copies of the all black print sample.

When you select 240 PEL, PRIMARY is the only available print sample.

To print the print quality samples, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Press **Enter** on PRINT QUALITY SAMPLES.
4. Scroll to 300 PEL or 240 PEL and press **Enter**.
5. Scroll to the type of print samples you want to print and press **Enter** to make the selection.
6. If you want to specify the number of copies desired, scroll to QUANTITY and press **Enter**. 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 **Enter**. Scroll to the desired tray and press **Enter**. Press **Enter** again to return to the parent menu.
Note: For ALL SAMPLES, PRIMARY, or ALL BLACK, you can select only input trays containing LETTER or A4 size paper.
8. If you want to specify the stacker desired, scroll to STACKER and press **Enter**. Scroll to the desired stacker and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
9. (Duplex model only with DUPLEX enabled in the printer configuration.) If you want to specify that the information be printed in duplex or simplex, scroll to

- DUPLEX and press **Enter**. Scroll to YES or NO and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
10. Scroll to PRESS ENTER TO PRINT and press **Enter** to request printing. The print sample pages will be put in the print queue.
- Note:** If the printer is busy, the print sample pages may not print immediately.

Running the Demonstration Pack

You can run the Demonstration Pack to preview the types of printing possible on the 3130 Printer. The Demonstration Pack also contains useful information about the 3130 Printer capabilities. These pages are generated from the printer itself, not from the data stream.

The Demonstration Pack contains samples of all internal fonts.

To print the Demonstration Pack, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to PRINT DEMO PACK and press **Enter**.
4. If you want to specify the number of copies desired, scroll to QUANTITY and press **Enter**. Use the keyboard to indicate the number of copies.
5. If you want to specify the input tray desired, scroll to INPUT TRAY and press **Enter**. Scroll to the desired tray and press **Enter**. Press **Enter** again to return to the parent menu.

Note: You should print the Demonstration Pack on LETTER or A4 size paper.

6. If you want to specify the stacker desired, scroll to STACKER and press **Enter**. Scroll to the desired stacker and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
7. (Duplex model only with DUPLEX enabled in the printer configuration.) If you want to specify that the information be printed in duplex or simplex, scroll to DUPLEX and press **Enter**. Scroll to YES or NO and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
8. Scroll to PRESS ENTER TO PRINT and press **Enter** to request printing. The demonstration pages will be put in the print queue.

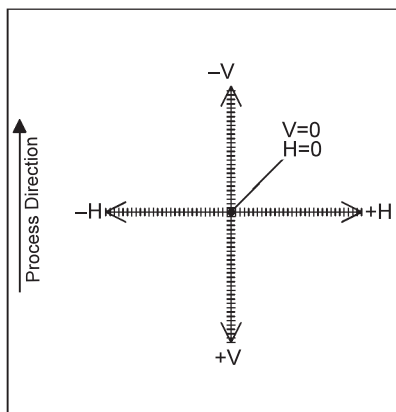
Note: If the printer is busy, the demonstration pages may not print immediately.

Adjusting the Print (IPDS Only)

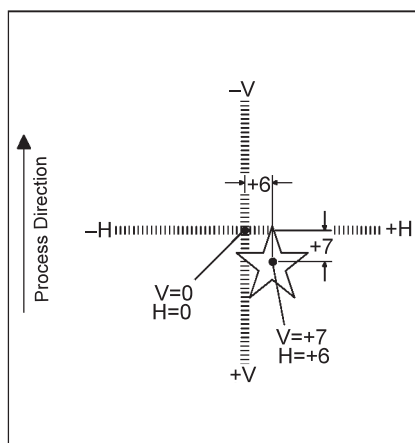
Do this task when you load preprinted forms, adhesive labels, or other forms that require a precise registration that is not satisfied by the factory-set default registration.

All controls required for this task are available under the ADJUST PRINT (IPDS) submenu. Print adjustment can be done for IPDS jobs only.

In printing, the term *registration* refers to the relative print positions of images. 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.



The figure above illustrates the original factory setting 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 3 1/2 inches or 90 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 next figure shows the result of changing the vertical position to +7 and the horizontal position to +6.



Determining if You Need to Adjust the Print

Before making any adjustments, determine whether 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 the following:

- A defined form is loaded in the printer and that form is assigned to the tray (using the TRAYS/STACKER menu options).
- A job is waiting to be run.

Do the following to determine whether you need to adjust the print:

1. Press the **Stop** key.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key operator password.
4. Scroll to ADJUST PRINT (IPDS) and press **Enter**.
5. Scroll to the form you want to adjust and press **Enter**.
6. Scroll to the side you want to adjust and press **Enter**.
7. If you want to specify the number of pages desired for the print test, scroll to NUMBER OF PAGES and press **Enter**. Use the keyboard to indicate the number of copies.
8. If you want to specify the stacker, scroll to STACKER and press **Enter**. Scroll to the desired stacker and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
9. Run a print test of the current setting. You must have a job waiting to be run in order to run a print test. To start the print test, scroll to PRESS ENTER TO PRINT and press **Enter**.

Note: The test pages printed will consist of the next pages in the IPDS data stream. If no job is waiting, no pages are printed.
10. Look at the pages just printed to determine if adjustments are necessary. If needed, determine how far to adjust the print position.

How to Adjust the Print

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

Note: If you have just run a test print, as instructed above, start at Step 7.

1. Press the **Stop** key.
2. Press the **Menu/Exit** key to enter menu mode.
3. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
4. Scroll to ADJUST PRINT (IPDS) and press **Enter**.
5. Scroll to the form you want to adjust and press **Enter**.
6. Scroll to the side you want to adjust and press **Enter**.

Note: If a form is duplex, each side may have unique horizontal and vertical adjustment amounts.
7. To make a horizontal adjustment, scroll to HORIZONTAL (PELS) and press **Enter**. The keyboard is displayed. The keyboard displays the value entered when this form was last adjusted, or the original factory setting of 0 if this form has never been adjusted.

8. Use the keyboard to clear the current value. Enter the new value, and then press **Enter** when <OK> is displayed. The range is -999 to 999.

When you increase the horizontal value by one, you move the origin right one pel. When you decrease the horizontal value by one, you move the origin left one pel. Ten pels equals about one millimeter.
9. To make a vertical adjustment, scroll to VERTICAL (PELS) and press **Enter**. The keyboard is displayed. The keyboard displays the value entered when this form was last adjusted, or the original factory setting of 0 if this form has never been adjusted.
10. Use the keyboard to clear the current value. Enter the new value, and then press **Enter** when <OK> is displayed. The range is -999 to 999.

When you increase the vertical value by one, you move the origin down one pel. When you decrease the vertical value by one, you move the origin up one pel. Ten pels equals about one millimeter.
11. If you want to specify the number of pages desired for the print test, scroll to NUMBER OF PAGES and press **Enter**. Use the keyboard to indicate the number of copies.
12. If you want to specify the stacker, scroll to STACKER and press **Enter**. Scroll to the desired stacker, and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
13. Run a print test of the new setting. You must have a job waiting to be run in order to run a print test. To start the print test, scroll to PRESS ENTER TO PRINT and press **Enter**.

Note: The adjusted test pages printed will consist of the next pages in the IPDS data stream. If no job is waiting, no pages are printed.
14. If the registration is still not correct, repeat Step 7 on page 4-16 through Step 13 until you are satisfied with the registration.
15. When the registration is satisfactory, scroll to RETURN and press **Enter** or press **Menu/Exit** to exit menu mode. The printer stores the horizontal and vertical adjustment values.

Note: When you adjust the print position for a user-defined form, the 3130 printer automatically stores the new point of origin as part of the current definition of the form.
16. Press **Start** to continue printing.

Changing the Key-Operator Password

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

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to CHANGE PASSWORD and press **Enter**.
4. Press **Enter** on KEY OP/ADMIN. ENTER NEW PASSWORD is displayed.
5. Press **Enter** to access the keyboard.

6. Enter the new password using the keyboard. (See “Tutorial: Using the Menu to Enter a Key Operator Password” on page 3-17 for detailed instructions.) RE-ENTER THE PASSWORD is displayed.
7. Press **Enter** to access the keyboard.
8. Enter the new password again to verify it. After you select <OK>, the password is changed.

Defining Forms

Every type of printing media (paper, forms, or envelopes) that you plan to use must be defined to the printer in the DEFINE FORMS menu. Printing media are called *forms*. Each defined form has a unique form name. Some form names were included at the time of manufacture. Key operators can define new forms 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 form, but the preprinted text and graphics may be different.

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

- Form name
- Form size
- Duplex (two-sided)
- Paper orientation: edge sensitivity, side sensitivity (duplex model only with duplex set to YES), for preprinted or prepunched forms
- Definitions of the type of paper, color of paper, weight of paper, and matchall parameters for the paper (PostScript emulation only). These values are available for use in custom PostScript applications.

When you access DEFINE FORMS in the SETUP menu, you can add, view, 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). You must define a form before that form will appear in the list of forms that can be loaded for that tray.

Example: You define a form with the form name INVOICE and the form size 8.5 x 11 IN (LETTER). INVOICE appears in the lists of forms that can be loaded for any tray adjusted for letter-size paper. If you delete the form INVOICE, it will not appear in the lists of forms to be loaded for any tray.

Defining a New Form

Add a form any time you load (or plan to load) a form that has not yet been defined for the printer. Certain standard forms are already defined when the printer comes from the factory.

To add a new form, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.

3. Scroll to DEFINE FORMS and press **Enter**.
4. Press **Enter** on ADD FORM NAME. The keyboard is displayed.
5. Use the keyboard to enter the new form name. The form name can consist of any unique descriptive or numeric name up to 12 characters.

Press **Enter** on <OK> when you have finished entering the form name. The ADDING FORM message displays momentarily, and then the FORM ADDED message displays.
6. Scroll to VIEW /MODIFY FORM and press **Enter**. A list of all currently defined forms is displayed.
7. Scroll to the form name just added and press **Enter**.
8. Press **Enter** on FORM SIZE.

Note: The default for each new form parameter is indicated by an asterisk (*).
9. Scroll to the form size desired and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
10. (Duplex model only with DUPLEX enabled in the printer configuration.) Scroll to DUPLEX and press **Enter**. 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 **Enter** again to return to the parent menu.
11. Scroll to PAPER ORIENTATION and press **Enter**.
12. Press **Enter** on EDGE SENSITIVITY. Scroll to YES or NO and press **Enter** 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 **Enter** again to return to the parent menu.
13. (Duplex model only with DUPLEX set to YES [Step 10.] Scroll to SIDE SENSITIVITY and press **Enter**. Scroll to YES or NO, and press **Enter** 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.

If you are running custom-written PostScript jobs that interrogate the printer to determine media characteristics, do the following steps also:

14. Scroll to TYPE and press **Enter**.
15. Use the keypad to enter a code that indicates the type of print medium to be used. Press **Enter** on <OK>.
16. Scroll to COLOR and press **Enter**.
17. Use the keypad to enter a code that indicates the color of the print medium. Press **Enter** on <OK>.
18. Scroll to WEIGHT and press **Enter**.
19. Use the keypad to enter the weight of the print medium. Press **Enter** on <OK>.
20. Scroll to MATCHALL and press **Enter**.
21. Select YES or NO and press **Enter**. If you select YES, at least one tray on the printer must have a form loaded whose form definition includes the criteria

specified for TYPE, COLOR, and WEIGHT. If none of the forms loaded in the printer match all three, the job is not printed.

If you select NO, the job is printed even if none of the forms loaded in the printer matches all three criteria. NO is the original factory setting.

For more information on custom-written PostScript printing, see *PostScript Language Reference Manual* by Adobe Systems Inc.

Modifying a Form

To modify a form, follow the directions given below. The current settings for each item are indicated by an asterisk (*).

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to DEFINE FORMS and press **Enter**.
4. Scroll to VIEW/MODIFY FORM and press **Enter**. A list of all currently defined forms is displayed.
5. Scroll to the form name you wish to modify and press **Enter**.
6. Press **Enter** on FORM SIZE.
7. Scroll to the form size desired and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
8. (Duplex model only with DUPLEX enabled in the printer configuration.) Scroll to DUPLEX and press **Enter**. Scroll to YES or NO and press **Enter** to make the selection. Selecting YES defines the form as duplex (can be printed on both sides). Selecting NO defines it as simplex (can be printed on one side only). Press **Enter** again to return to the parent menu.
9. Scroll to PAPER ORIENTATION and press **Enter**.
10. Press **Enter** on EDGE SENSITIVITY. Scroll to YES or NO and press **Enter**. 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 **Enter** again to return to the parent menu.
11. (Duplex model only with DUPLEX set to YES [Step 8].) Scroll to SIDE SENSITIVITY and press **Enter**. Scroll to YES or NO, and press **Enter**. 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.

Deleting a Form

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. Therefore, you cannot assign a deleted form name to a tray.

To delete a form, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to DEFINE FORMS and press **Enter**.
4. Scroll to DELETE FORM and press **Enter**.
5. Scroll to the form name you wish to delete and press **Enter**.
6. Press **Enter** on PRESS ENTER TO DELETE to delete the selected form.

Note: To avoid deleting the form when PRESS ENTER TO DELETE is displayed, scroll to RETURN and press **Enter**.

Checking the Current Definition of a Form

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

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the SETUP menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to DEFINE FORMS and press **Enter**.
4. Scroll to VIEW /MODIFY FORM and press **Enter**. A list of all currently defined forms is displayed.
5. Scroll to the form name you wish to view and press **Enter**.
6. Press **Enter** on FORM SIZE. The current selection is displayed with an asterisk (*) next to it. Press **Enter** again to return to the parent menu.
7. (Duplex model only with DUPLEX enabled in the printer configuration.) Scroll to DUPLEX and press **Enter**. The current selection is displayed with * 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 **Enter** again to return to the parent menu.
8. Scroll to PAPER ORIENTATION and press **Enter**.
9. Press **Enter** on EDGE SENSITIVITY. The current selection is displayed with * next to it. When EDGE SENSITIVITY is set to YES, the printer rotates the image 180° before printing it on the page. Press **Enter** again to return to the higher-level menu.
10. (Duplex model only with DUPLEX set to YES [Step 7].) Scroll to SIDE SENSITIVITY and press **Enter**. The current selection is displayed with * 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.

Machine Information

Information regarding your specific printer is available for viewing only (read only). This information may be requested by the customer engineer or your system administrator.

Machine Information Items

The machine information includes the following items:

PRINT COUNT (IMPRESSIONS)	The total number of prints (impressions) run on this printer to the present date
CODE LEVEL	Controller code level
EC LEVEL	Engineering change level (for customer engineers)
OS LEVEL	Operating system level (for customer engineers)
ENGINE CODE LEVEL	Microcode level (for customer engineers)
MEMORY (KB)	Number of kilobytes of memory installed on the control unit system board
AVAILABLE SPOOL SPACE (MB)	Amount of available disk space for spooling ASCII jobs
PRINTER TYPE	3130 Advanced Function Printer
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 **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to MACHINE INFORMATION and press **Enter**.
4. Scroll to an item you wish to view and press **Enter**. The read-only information is displayed. You cannot change this information.
5. Press **Enter** to return to the parent menu. View other item information by repeating the previous step.

Configuring Attachments

The communications and cable attachments are configured at the time of printer installation by the customer engineer. 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 or network administrator. Only key operators or system administrators can change the attachment configuration.

Attention:

Changing the attachment configuration may make your printer inoperable.

For information on how to set up your system and configure the attachments, see *IBM 3130 Advanced Function Printer: System Administration Guide*.

For information on configuration, see *IBM Advanced Function Printer: Attachment Configuration Handbook*.

The 3130 printer supports the following attachments:

- Twinaxial
- SDLC (SNA)
- Token Ring (TCP/IP, NetWare, and SNA)
- Ethernet (TCP/IP and NetWare)
- PC Parallel

Each attachment has configuration items that are specific to that attachment.

Twinaxial, SDLC (SNA), token ring (TCP/IP and SNA), and Ethernet (TCP/IP) support an IPDS data stream, but IPDS can be connected to only a single attachment at a time. Token ring (TCP/IP), Ethernet (TCP/IP), and PC Parallel support both PCL and PostScript data streams.

Enabling and Disabling Attachments

An enabled attachment attempts to establish communication with the host or network. When the current attachment is enabled and the application that will receive the data to be printed is enabled, the printer is online. When the current attachment is disabled, the printer is offline and cannot receive data from the host or network.

Attention:

The IPDS application must be disabled before you disable token ring SNA or SDLC SNA. See “Disabling IPDS” on page 4-24.

The Netware application must be disabled before you disable token ring or Ethernet. See “Enabling or Disabling NetWare, LPR, FTP, or TFTP” on page 4-24.

To enable or disable attachments, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the attachments you want to enable or disable, and press **Enter**.
4. Scroll to ENABLE STATUS and press **Enter**.
5. Scroll to ENABLE or DISABLE and press **Enter**. Enable the attachment as directed by your system administrator.

For information on how to set up and configure the attachments, see *IBM 3130 Advanced Function Printer: System Administration Guide*.

Enabling and Disabling Applications

Enabling IPDS: To enable the IPDS, do the following:

Note: Ensure that the attachment that IPDS will be using is enabled before you begin enabling IPDS.

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the APPLICATION SETUP menu and press **Enter**.
4. Press **Enter** on IPDS.
5. Scroll to CONFIGURATION and press **Enter**.
6. Press **Enter** on SOURCE ATTACHMENT.
7. Scroll to the attachment you want to use to receive IPDS jobs and press **Enter**.
8. The IPDS menu appears again. Select ENABLE STATUS and press **Enter**.
9. Press **Enter** on ENABLE.

Disabling IPDS: To disable the IPDS, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the APPLICATION SETUP menu and press **Enter**.
4. Press **Enter** on IPDS.
5. Scroll to ENABLE STATUS and press **Enter**.
6. Scroll to DISABLE and press **Enter**.

Enabling or Disabling NetWare, LPR, FTP, or TFTP: To enable or disable NetWare, LPR, FTP, or TFTP, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the APPLICATION SETUP menu and press **Enter**.

4. Scroll to the application you want to enable or disable and press **Enter**.
5. Press **Enter** on ENABLE STATUS.
6. Press **Enter** on ENABLE or scroll to DISABLE and press **Enter**.

Notes:

1. If a particular attachment is enabled when AUTO START is selected, that attachment is enabled when the printer is made ready and when it is powered on or restarted.
2. With a 3174 controller, the attachment should be enabled before the host system is activated.

Setting Configuration Parameters

To configure an attachment, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the attachments you want to configure, and press **Enter** to make the selection.

For information on how to setup and configure the attachments, see *IBM 3130 Advanced Function Printer: System Administration Guide*.

4. Scroll to CONFIGURATION and press **Enter**.
5. For each parameter, select from the choices, or use the keyboard to enter the desired value.

For descriptions of configuration parameter values, see *IBM 3130, 3160, and 3935 Advanced Function Printer: Attachment Configuration Handbook*.

Printing the Attachment Configuration

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

Note: The attachment configuration page prints after the current job completes.

To print the attachment configuration, do the following:

1. Press the **Menu/Exit** key to enter menu mode.
2. Scroll to the ATTACHMENTS menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to the attachment whose configuration you want to print. Press **Enter**.
4. Scroll to PRINT CURRENT CONFIGURATION and press **Enter**.
5. If you want to specify the number of copies desired, scroll to QUANTITY and press **Enter**. Use the keyboard to select the number of copies.
6. If you want to specify the input tray desired, scroll to INPUT TRAY and press **Enter**. Scroll to the desired tray and press **Enter**. Press **Enter** again to return to the parent menu.

7. If you want to specify the stacker desired, scroll to STACKER and press **Enter**. Scroll to the desired stacker, and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
8. (Duplex model only with DUPLEX enabled in the printer configuration.) If you want to specify that the information be printed in duplex or simplex, scroll to DUPLEX and press **Enter**. Scroll to YES or NO, and press **Enter** to make the selection. Press **Enter** again to return to the parent menu.
9. Scroll (if necessary) to PRESS ENTER TO PRINT, and press **Enter** to request printing. The help pages will be put in the print queue.

Note: If the printer is busy, the help pages may not print immediately.

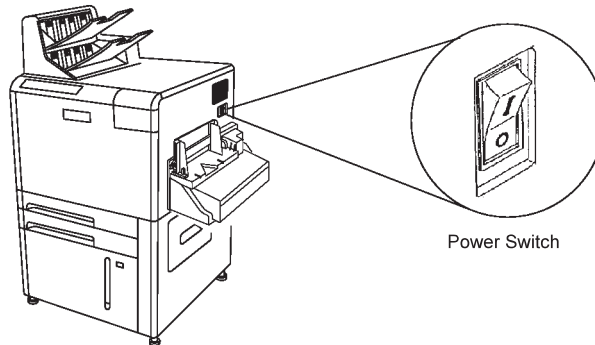
Chapter 5. Printing and Paper Handling

This chapter describes the paper handling and printing features of the printer. You will find instructions for:

- Powering on and off the printer
- Shutting down and restarting the printer
- Understanding status messages
- Handling information messages
- Starting print jobs
- Interrupting printing
- Canceling print jobs
- Loading paper
- Positioning preprinted and prepunched forms
- Loading labels
- Loading envelopes
- Using the output stackers

Powering On and Off the Printer

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



Powering On

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 display. A delay of several minutes occurs after 299 is displayed. Then the printer processes its internal computer programs, with four-digit numbers appearing on the display.

When the power-on sequence has finished, the READY message appears.

Powering Off

Before you power off the printer, you must always shut down the printer. Shut down the printer from the SYSTEM SHUTDOWN menu. Do not power off until the message SHUTDOWN DONE-POWER OFF is displayed.

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

Shutting Down and Restarting the Printer

Both users and key operators may need to shut down and restart the printer.

Shutdown

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

Shut down the printer only when necessary:

- Before turning the printer power off. (A shut down is required whenever powering off.)
- When instructed to do so in recovery procedure instructions.

How to Shut Down the Printer

To shut down the printer, do the following:

1. Press **Menu/Exit** to enter menu mode.
2. Scroll down to SYSTEM SHUTDOWN and press **Enter**.
3. Scroll down to PRESS ENTER TO SHUT DOWN, and press **Enter** to begin the shutdown. Wait for the message SHUTDOWN DONE-POWER OFF to be displayed before you power off.
4. 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 similar to a shutdown, but the printer starts up again automatically after the shutdown. Use the restart procedure only when instructed to do so in recovery actions.

How to Restart the Printer

To restart 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 **Menu/Exit** to enter menu mode.
3. Scroll down to SYSTEM SHUTDOWN and press **Enter**.
4. Scroll down to PRESS ENTER TO RESTART and press **Enter** to begin the restart.
5. Wait for the restart procedure to finish. If NOT READY is displayed, press **Start** to make the printer Ready, so the printer can print waiting print jobs.

Note: If the **On Line** indicator light on the operator panel is not lit, you need to enable the attachment.

Understanding Status Messages

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

Message	Description and Recommended Action
READY	<i>Description:</i> The printer is ready to receive information from a host or network if an attachment is online. <i>Action:</i> No action is required.
NOT READY	<i>Description:</i> The printer is in a stopped mode and cannot print information from a host or network. <i>Action:</i> Press Start to make the printer Ready. The message PRINTER HAS BEEN MADE READY appears. The printer can then start to print if a print job is waiting and the attachment is online.
RECEIVING	<i>Description:</i> The printer is receiving information from a host or network. <i>Action:</i> No action is required.
PRINTING	<i>Description:</i> The printer is printing. <i>Action:</i> No action is required.
WARMING UP	<i>Description:</i> The printer is warming up. The printer will be ready to print in 1 to 5 minutes. <i>Action:</i> Wait for the printer to warm up. If the printer is Ready and the attachment is online, printing starts as soon as the printer warms ups (if print jobs are waiting).
SLEEPING	<i>Description:</i> The printer is in sleeping mode, which means the fuser has turned off due to inactivity. The fuser turns on, and the printer warms back up when it receives a print job, or, if the printer is in the Not Ready state, when the Start key is pressed. <i>Action:</i> No action is required.
TRACING	<i>Description:</i> The control unit is tracing an application or attachment. The tracing operation may slow down throughput and should be turned off when not needed. <i>Action:</i> Contact the key operator or customer engineer if you think the tracing function was left on in error.

You can scroll to see other messages, if any. Simply press the Down Arrow key to display the messages.

Clearing Information Messages

Information messages are displayed as needed while the printer is printing. To clear an information message, press the **Enter** key.

For information on handling messages that require action, see Appendix A, "Display Messages and Codes."

Starting Print Jobs

To start print jobs, do the following:

1. Clear any existing error conditions by performing the recovery action and pressing the **Enter** key. (See Appendix A, "Display Messages and Codes.")
2. Press **Start**. Any pending jobs in the print queue will begin printing.

Interrupting Printing

If you want to temporarily stop printing, you can do so at any time. No print job information will be lost. Any print jobs printing continue after you start the printer again.

To interrupt printing, do the following:

1. Press **Stop**. The printer finishes printing the current page and any other page that is in the printer buffer. The message STOPPING... appears while the printer finishes printing. When printing has stopped, the message PRINTER HAS BEEN MADE NOT READY is displayed.

If you press **Stop** again, the message ALREADY STOPPED is displayed.

2. If you wish, you may run internal prints, load paper into empty trays, and so on.
3. Press **Start** to continue printing.

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 **Stop** to stop the printer.
2. Check the output stacker after all sheets have been ejected.
Important: If your 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 **Cancel Print**.

Note: If there are no jobs in the print queue, the message NO PRINT JOBS TO CANCEL is displayed.

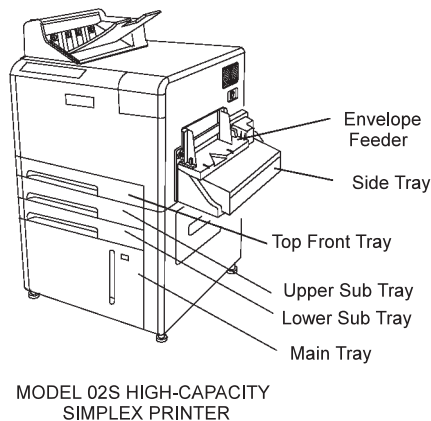
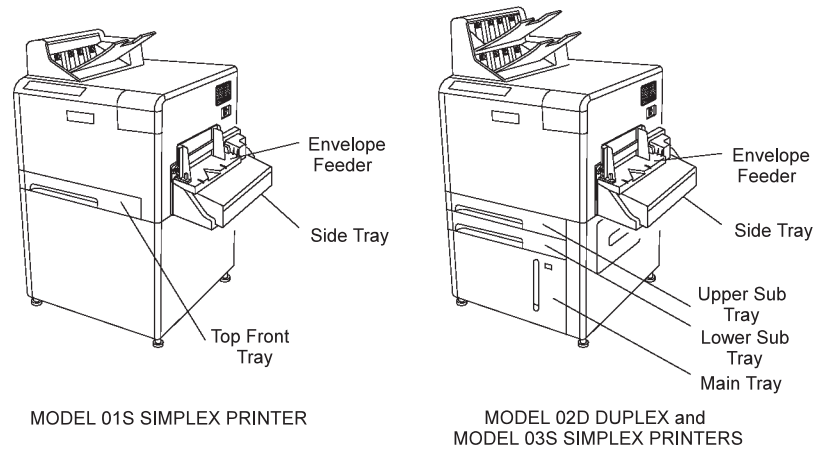
4. When the prompt message SELECT STACKER TO CANCEL appears, press **Enter**. A list of stacker names displays. Scroll to the stacker that is being used for your job and press **Enter**.

If you do not want to cancel printing, press the Down Arrow key to display RETURN and press **Enter**. The print job is not canceled.

5. Press **Start** to continue printing.

Loading Paper

The printer can have up to six trays depending on the model and options installed. The following figure shows the name of each tray for each printer model.



When loading paper into a tray, follow these guidelines to prevent paper jams and stacking problems:

- Do not use paper that is creased, folded, or damaged.
- Re-wrap 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 marking (in all front trays).

See *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers* for additional instructions on loading paper correctly. It explains the correct procedure for opening reams, fanning paper, and determining curl.

Several sizes of paper can be used in your printer, provided they meet certain guidelines. For best results, use only xerographic paper. See *IBM 3130 Advanced Function Printer: Introduction and Planning Guide* for specific paper recommendations.

Table 5-1 shows the sheet capacity and paper sizes for each tray.

Table 5-1. Sheet Capacity and Paper Sizes for Printer Trays

Printer Tray	Capacity (20 lb paper)	Paper Size
Main Tray	2 000 sheets	Letter, Legal, Ledger, A3, A4, B4, B5
Lower Sub Tray	250 sheets	Letter, Legal, Ledger, A3, A4, B4, B5
Upper Sub Tray	250 sheets	Letter, Legal, Ledger, A3, A4, B4, B5
Top Front Tray	250 sheets	Letter, Legal, Ledger, A3, A4, B4, B5
Side Tray	500 sheets	Letter, A4
Envelope Feeder	100 envelopes†	#10, ISO DL

†The envelope feeder can hold up to 100 envelopes depending on the weight of the envelopes.

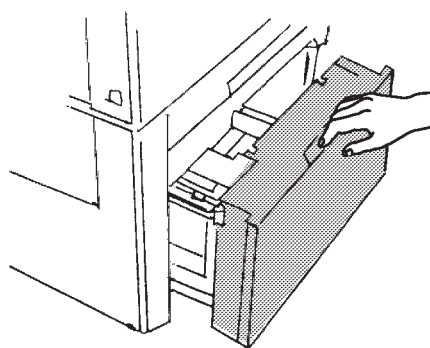
When a tray is out of paper or disabled, or when the cassette has been removed and no other tray is available, the printer stops printing and the operator panel displays a message. See Appendix A, "Display Messages and Codes," for a list of messages and their meanings.

See "Positioning Preprinted and Prepunched Paper" on page 5-15 for more information about positioning special types of paper.

Loading Paper into the Main Tray

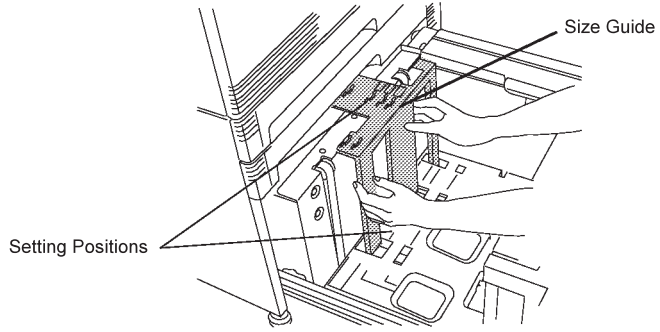
Follow the steps below to load paper into the main tray.

1. Open the main tray.



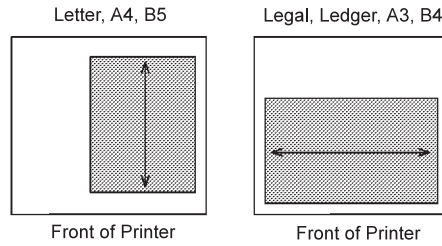
2. Adjust the size guide according to the paper size.

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 accordingly. Be sure that both the top and bottom of the guide are properly in place.

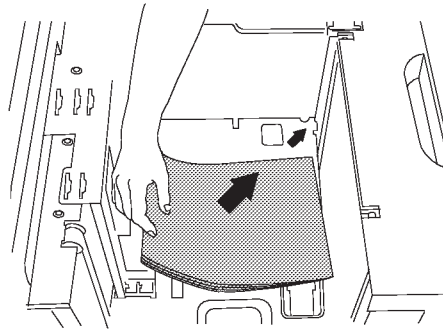


3. Position the paper in the tray.

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

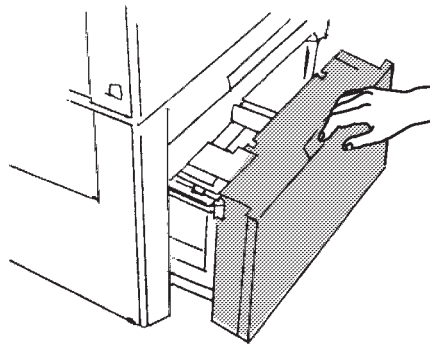


The corner of the paper must be flush against the corner of the tray, marked with an arrow (as shown below).



Note: Do not stack paper above the red line.

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

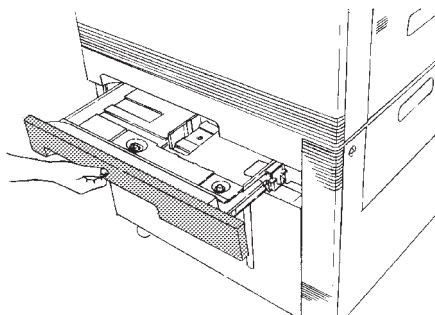


5. If you have changed the paper being loaded (different size or different type of form), and the message CHECK FORM NAME IN MENU is displayed, press **Enter** to clear the message, and then perform Steps 6 through 10.
6. Press the **Menu/Exit** key to enter menu mode.
7. Scroll to TRAYS/STACKERS and press **Enter**.
8. Press **Enter** on MAIN TRAY.
9. Press **Enter** on FORM NAME.
10. Scroll to the name of the form that you have loaded in the tray and press **Enter**.
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 Forms" on page 4-18 for directions on defining forms.
11. If desired, designate an autoswitch (alternate) tray for the main tray. See "Selecting an Autoswitch Tray" on page 4-5 for directions on setting an autoswitch tray.

Loading Paper into the Lower Sub Tray, Upper Sub Tray, or Top Front Tray

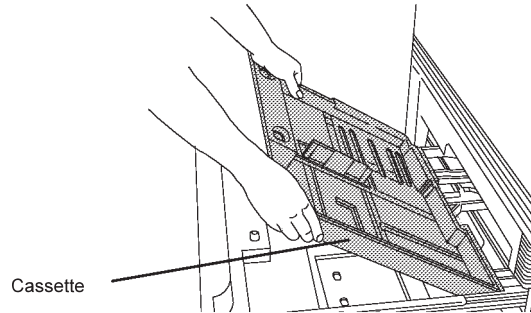
Follow the steps below to load paper into the lower sub tray, the upper sub tray, or the top front tray.

1. Open the tray.

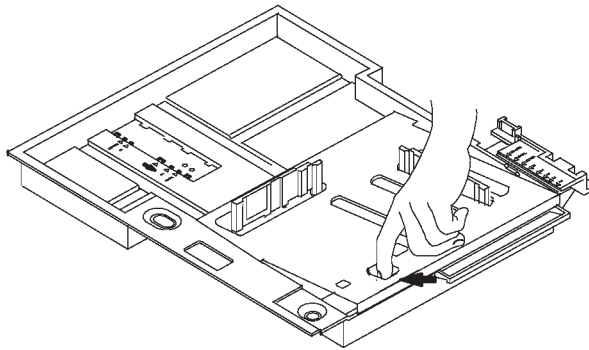


Note: If you are reloading paper without changing the size, skip to Step 8 on page 5-11. To reset the cassette for a different paper size continue to Step 2 on page 5-10.

2. Remove the cassette from the tray.

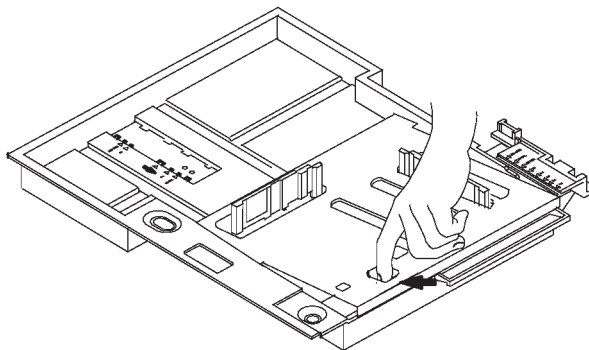


3. Remove the bottom plate from the cassette.

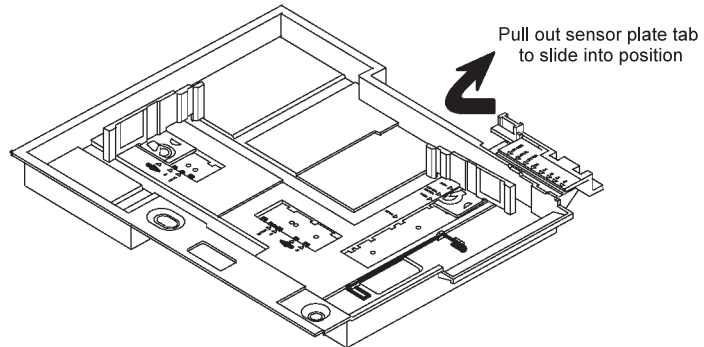


4. Adjust the cassette paper size guides for the paper size to be used. Squeeze the paper size guide tab and slide into position, or remove and insert the tab into the correct paper size slot.

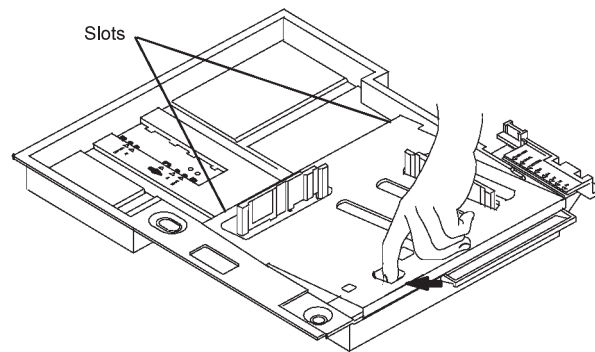
Note: Paper size guide 1 must be used in slot 1 or slot 2. Paper size guide 2 must be used in slot 3. Each guide must be set to the same paper size. The paper sizes are marked next to each slot.



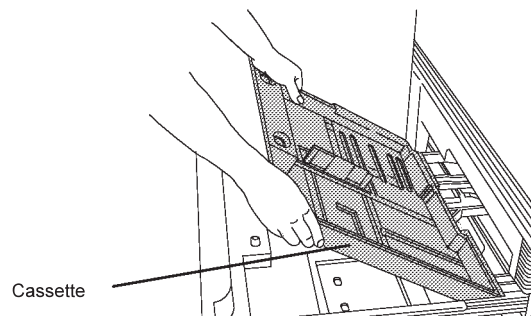
5. Use the sensor plate tab to set the paper size. Set the sensor plate to the same paper size that was used in Step 4. The paper sizes are marked on the sensor plate.



6. Position the bottom plate into the cassette. Insert the tabs into the slots on the bottom of the cassette, and lower the bottom plate into position.

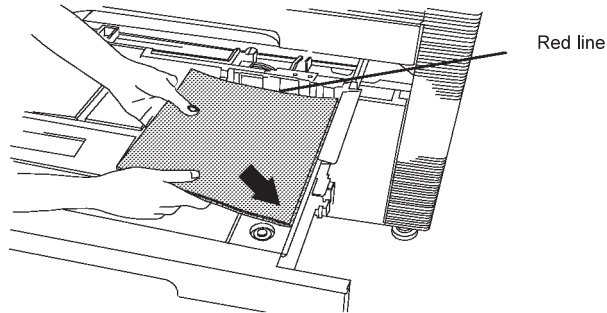
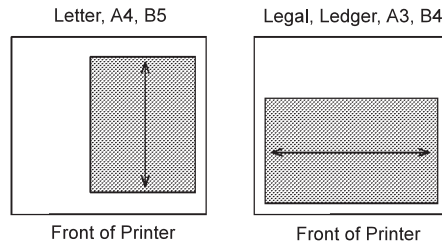


7. Reinstall the cassette into the tray.



8. Place the paper in the cassette.

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



Note: The position for the paper size is marked on the bottom of the cassette. Place the paper so the corner is flush against the front right corner of the cassette. Do not stack paper above the red line in the cassette.

9. Push the tray into the cabinet.
10. If you have changed the paper being loaded (different size or different type of form), and the message CHECK FORM NAME IN MENU is displayed, press **Enter** to clear the message, and then perform Steps 11 through 16.
11. Press the **Menu/Exit** key to enter menu mode.
12. Scroll to TRAYS/STACKERS and press **Enter**.
13. Scroll to the name of the tray in which you have changed the paper and press **Enter**.
14. Press **Enter** on FORM NAME.
15. Scroll to the form name that you have loaded in the tray and press **Enter**.

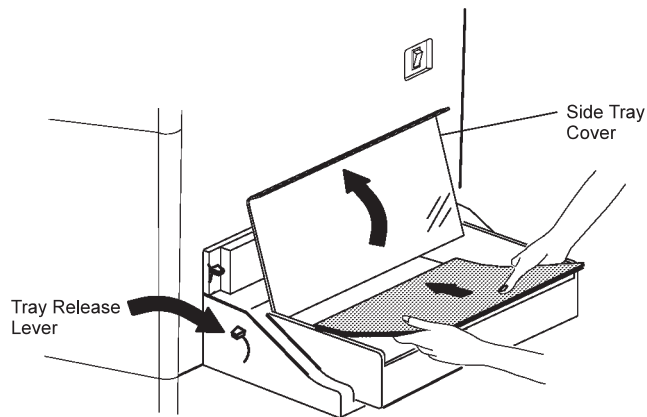
Note: Only those forms that have been defined in the Define Forms procedure are listed as available for loading. If you are loading a new form name, define it first using the DEFINE FORMS menu item (key-operator authorization required). See "Defining Forms" on page 4-18 for directions on defining forms.

16. If desired, designate an autoswitch (alternate) tray for the tray you selected in Step 13. See "Selecting an Autoswitch Tray" on page 4-5 for directions on setting an autoswitch tray.

Loading Paper into the Side Tray

To load paper into the side tray (without changing the paper size), do the following:

1. Push down the tray release lever to release the side tray.
2. For printers with envelope feeders installed, push down the tray release lever to release the side tray and remove the side tray.
3. Open the side tray cover.



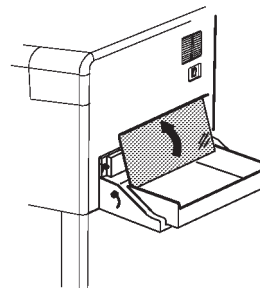
4. Load the paper into the tray (letter size or A4 only), as shown above. Load as much paper as can fit easily into the tray. There is no red line to indicate maximum level of paper.
5. Lower the side tray cover.
6. Replace the side tray.

Note: Refer to “Loading Envelopes into the Envelope Feeder” on page 5-18 for loading envelopes.

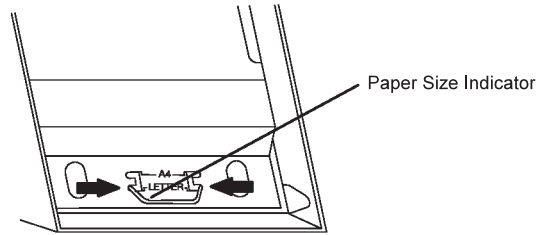
Adjusting the Side Tray

If you need to adjust the side tray, which holds only letter and A4 size paper, do the following:

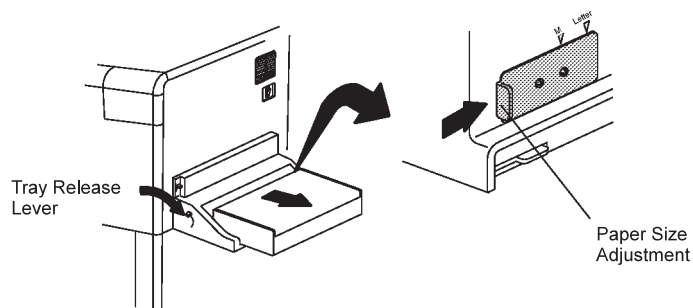
1. Push down the tray release lever to release the side tray.
2. Open the side tray cover.



3. Adjust the paper size indicator by squeezing it and moving it to the correct position for the paper size being loaded.



4. Push down the tray release lever to release the side tray and remove the side tray. Slide the paper size adjustment (on the back of the tray) until it clicks into place at the correct paper size.



5. Replace the side tray.
6. If you have changed the paper being loaded (different size or different type of form), and the message CHECK FORM NAME IN MENU is displayed, press **Enter** to clear the message, and then perform Steps 7 through 12.
7. Press the **Menu/Exit** key to enter menu mode.
8. Scroll to TRAYS/STACKERS and press **Enter**.
9. Scroll to SIDE TRAY and press **Enter**.
10. Press **Enter** on FORM NAME.
11. Scroll to the name of the form that you have loaded in the tray and press **Enter**.

Note: Only those forms that have been defined in the Define Forms procedure and fit the adjusted tray are listed as available for loading. If you are loading a new type of form, define it first using the DEFINE FORMS menu (key-operator authorization is required). See "Loading Paper into the Side Tray" on page 5-13 for directions on loading forms.
12. If desired, designate an autoswitch (alternate) tray for the side tray. See "Selecting an Autoswitch Tray" on page 4-5 for directions on setting an autoswitch tray.

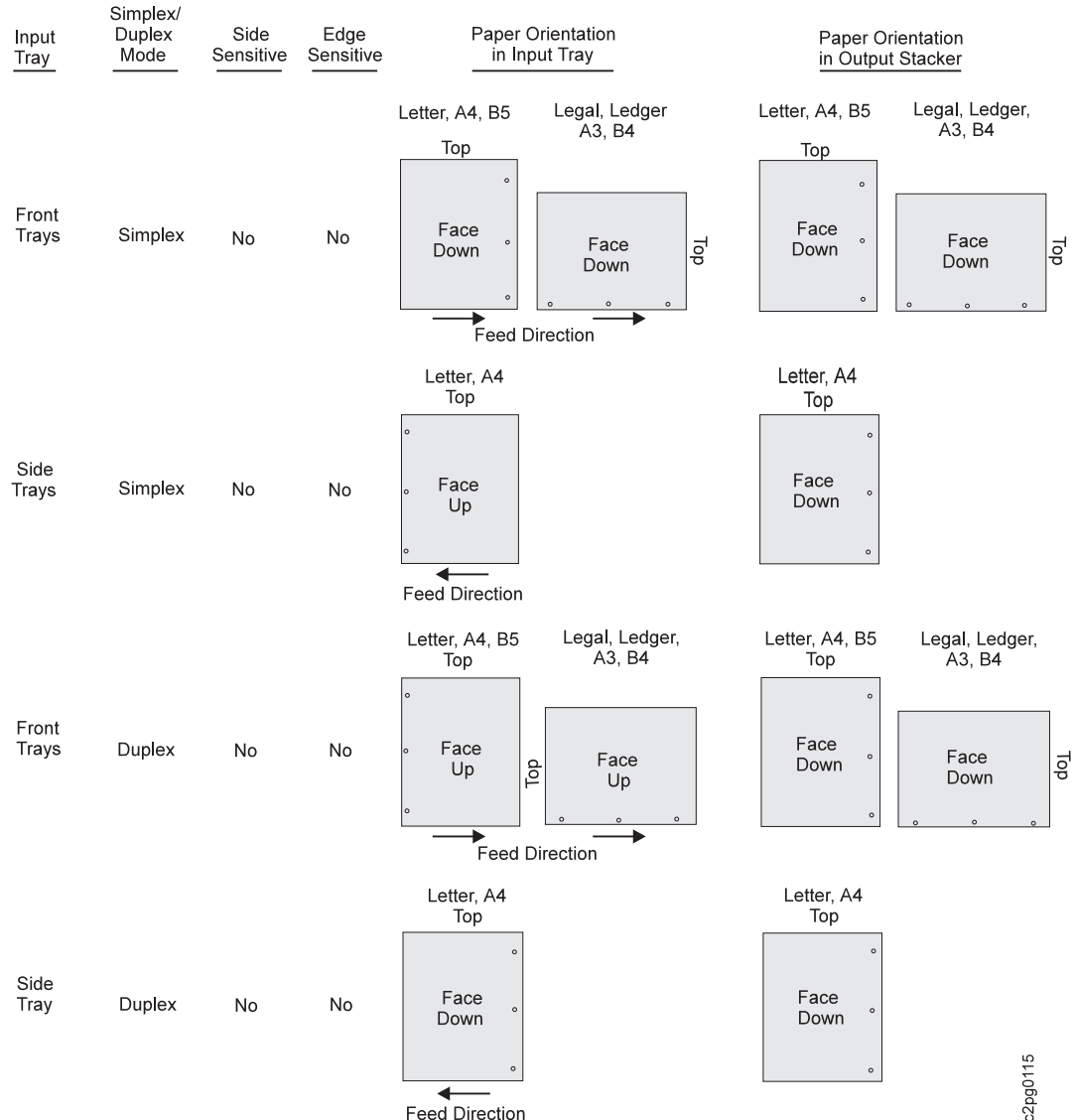
Positioning Preprinted and Prepunched Paper

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 a New Form” on page 4-18.

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.

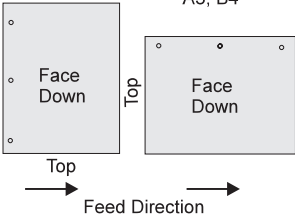
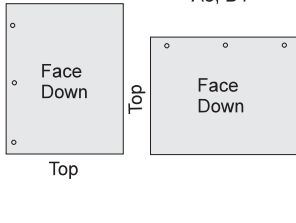
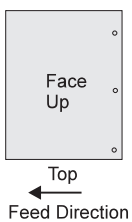
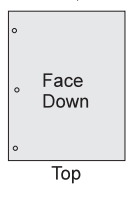
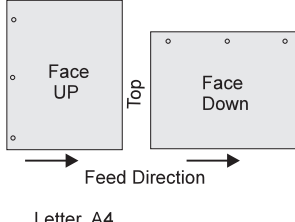
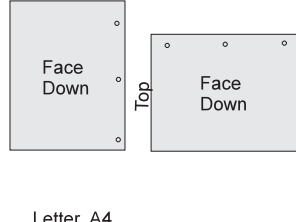
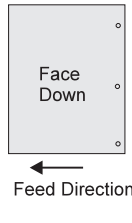
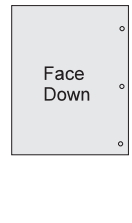
Preprinted Paper (Prepunched or Nonpunched)



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.

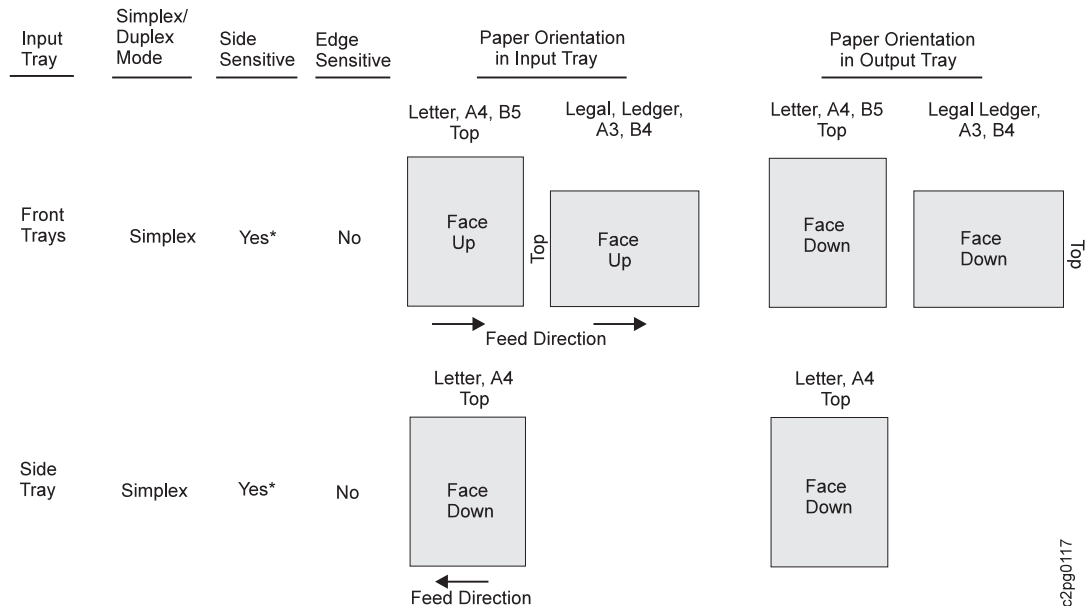
Prepunched (Not Preprinted)

Input Tray	Simplex/ Duplex Mode	Side Sensitive	Edge Sensitive	Paper Orientation in InputStacker	Paper Orientation in Output Stacker
Front Tray	Simplex	No	Yes	Letter A4, B5 	Letter, A4, B5 
Side Tray	Simplex	No	Yes	Letter, A4 	Letter, A4 
Front Trays	Duplex	No	Yes*	Letter, A4, B5 Top 	Letter, A4, B5 Top 
Side Tray	Duplex	No	Yes*	Letter, A4 Top 	Letter, A4 Top 

***Note:**

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)



*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.

Loading Labels

Follow the steps below to load labels:

1. Load labels face down in the desired tray.

Note: Labels may be loaded into the main tray, the lower sub tray, the upper sub tray, or the top front tray. Do **not** load labels into the side tray.
2. When defining the form name for a label in a duplex model printer, set SIDE SENSITIVITY to NO and DUPLEX to NO.

Note: SIDE SENSITIVITY will no longer be active.

See "Changing the Form Name and Paper Size Assigned to a Tray" on page 4-4 for instructions on changing form names.
3. Scroll to the TRAYS /STACKERS menu and press **Enter**.
4. Scroll to AUTOLINK OUTPUT STACKERS and press **Enter**. You may be prompted to enter the key-operator password.
5. Scroll to NO, and press **Enter** to deselect autolinking.
6. Press the **Menu/Exit** key to exit menu mode.

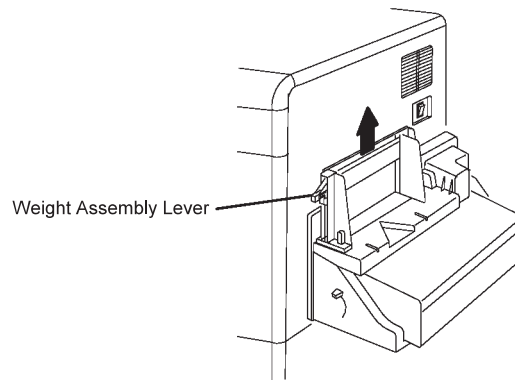
Remember to remove unused label stock and reset the printer configuration parameters after the label application is complete.

Note: Use only the base stacker or upper stacker for labels. Using the side stacker for labels may damage the printer.

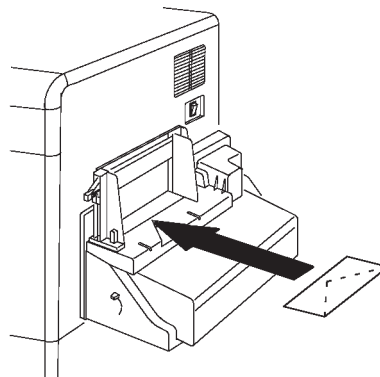
Loading Envelopes into the Envelope Feeder

To load envelopes into the envelope feeder, do the following:

1. Press the weight assembly lever and lift the weight assembly until it locks into place.



2. Load the envelopes into the envelope feeder (Number 10 or DL envelopes only), as shown below. Envelopes must be loaded with the flap side down and facing away from the printer. Load only as many envelopes as can fit easily into the envelope feeder (the maximum number of envelopes is 100). There is no red line to indicate the maximum level of envelopes.



3. Press the weight assembly lever and lower the weight assembly onto the envelopes.

Using the Output Stackers

The printer may have up to three stackers depending on the model and options installed. Figure 5-1 shows the position of each output stacker for all models of the 3130.

The top stackers (the base stacker and the upper stacker) can hold up to 500 sheets each, and the optional side stacker can hold 1 500 sheets of printed paper.

All the stackers hold printed sheets face-down and provide a job offset feature.

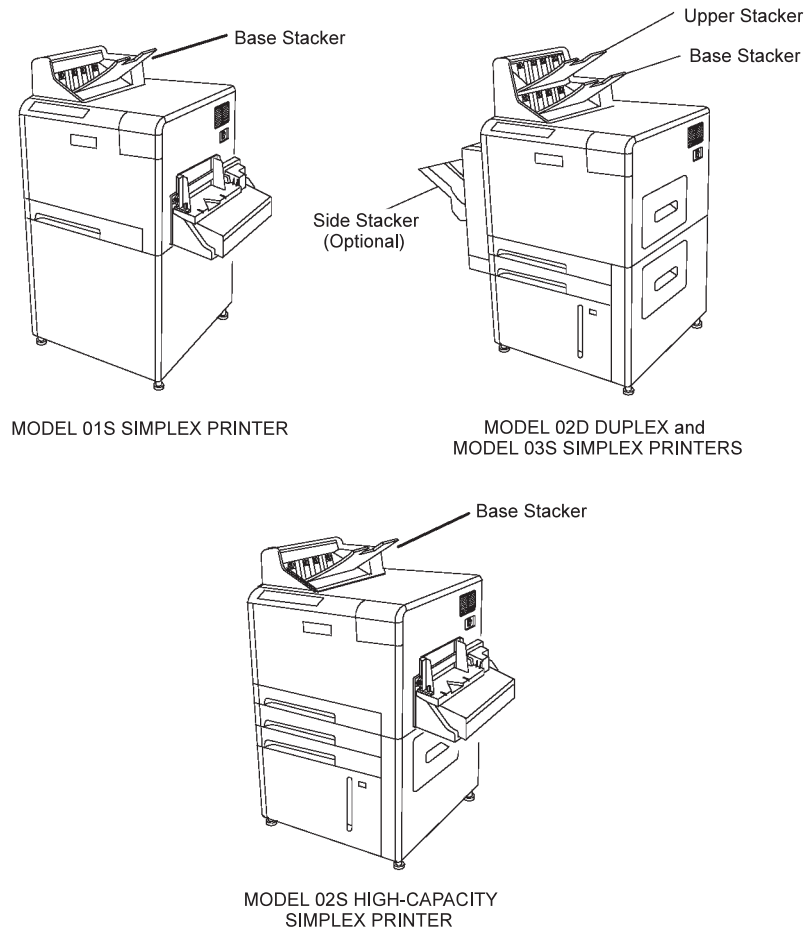


Figure 5-1. Paper Output Stackers for Each Model

When all the stackers are full, the printer stops printing, and the operator panel displays a message asking you to clear one of the stackers. See Appendix A, “Display Messages and Codes” for a list of messages and their meanings.

Adjusting the Top Stackers (Base and Upper Stackers)

Refer to Figure 5-2 when adjusting the top stackers for the appropriate paper size.

- For B5, A4, and letter paper sizes, push the black slide in until it clicks into place and the appropriate filled-in arrows match.
- For B4, A3, legal, and ledger paper sizes, pull out the black slide out until it clicks into place and the appropriate outlined arrows match.

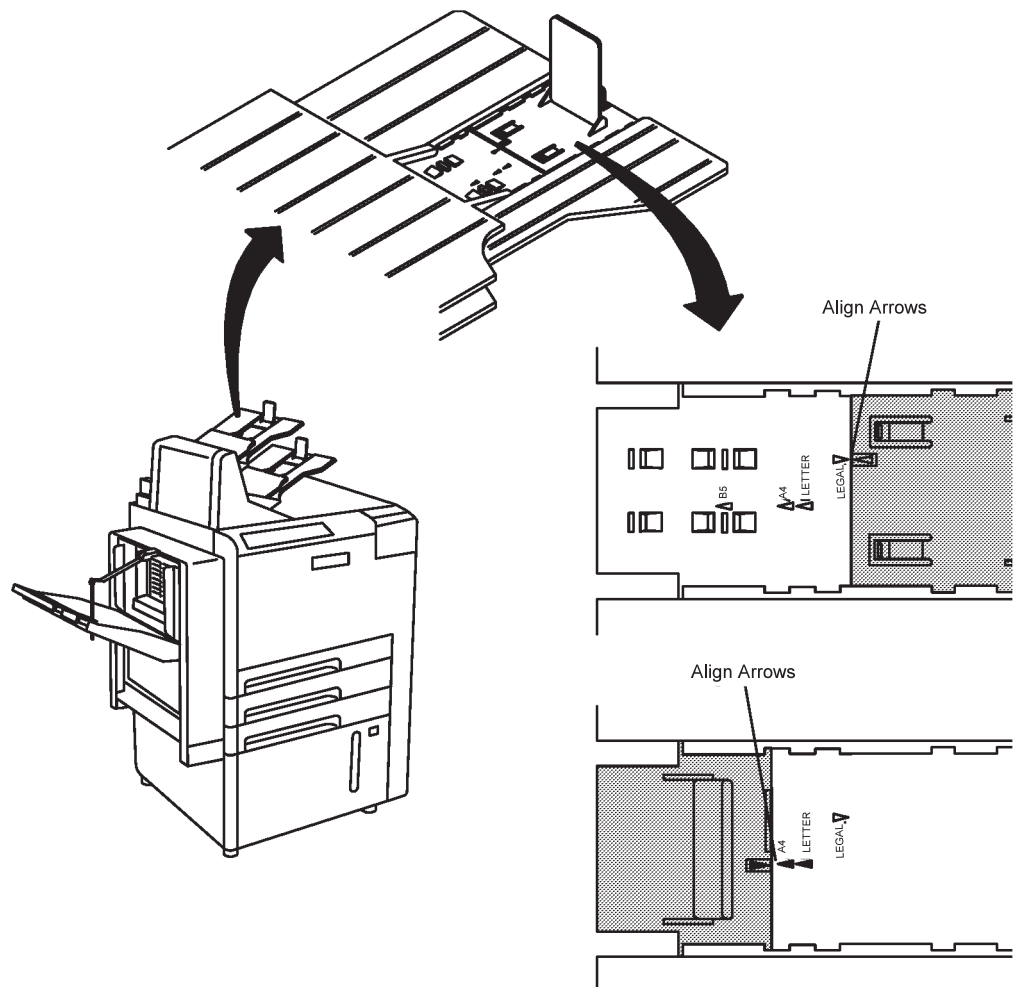
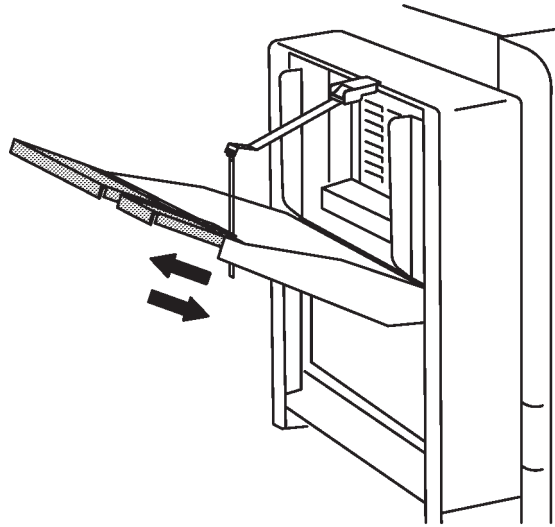


Figure 5-2. Adjusting the Top Stackers

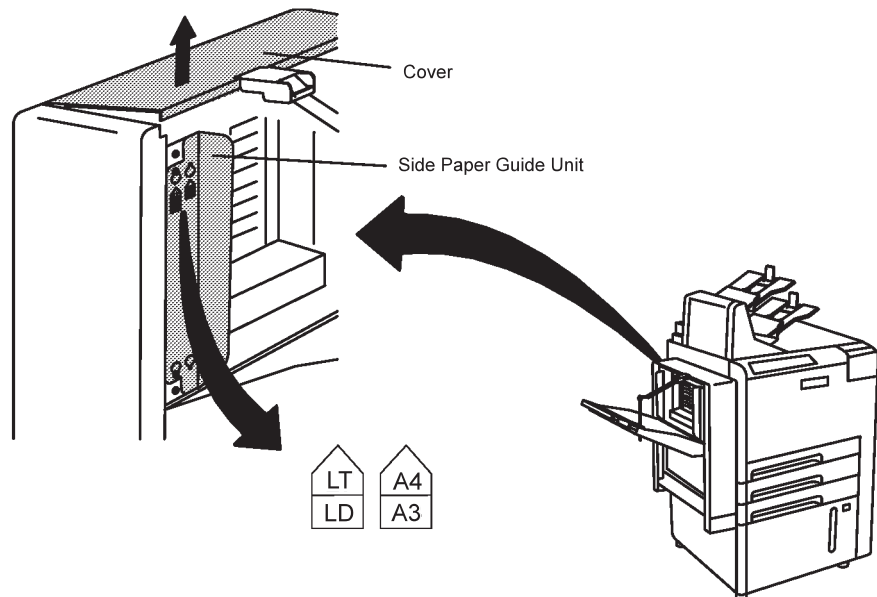
Adjusting the Side Stacker

Refer to the figure below each instruction when adjusting the side stacker for the appropriate paper size.

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

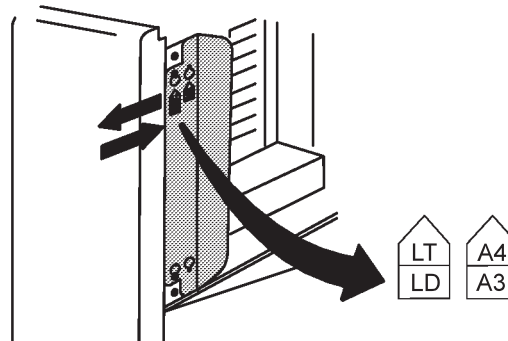


2. If necessary, adjust the side paper guide unit at the top left of the stacker so that it matches the selected paper size. Raise the side tray cover to more easily access the side paper guide unit.



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 paper guide unit.
- c. Move the side paper guide unit up slightly, and remove it by positioning the holes over the loosened screw.
- 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 side tray cover.

Note: If you need a guide for legal-size paper, your service representative can get one for you.

Chapter 6. Maintaining the Printer

This chapter contains information on maintaining the printer for the best performance. Routine care and maintenance of the printer is the responsibility of the key operator. You will find instructions regarding:

- When to replace consumables (other than paper)
- Replacing the following consumables:
 - Toner
 - Developer mix
 - Photoconductor belt
 - Transfer belt unit
 - Fuser unit
 - Cleaner unit
- Cleaning the following parts:
 - Printer cover and trays
 - Drum unit and drum seal (EP module)
 - Paper guide rollers and guard fingers (paper feed module)

Replacing Supplies

The key operator is responsible for replacing six consumable supplies. Step-by-step instructions and corresponding figures are provided in this chapter. Labels on the printer (viewable when the front cover is open) contain pictures to help guide you through these tasks.

It is usually the key operator's responsibility to order the consumable supplies. Be sure that there is always a replacement on hand. If multiple printers are installed, replacement supplies can be shared among printers in the same location.

To order supplies for the IBM 3130 Advanced Function Printer in the United States, use any of the following methods:

- Contact a Lexmark International, Inc. authorized supply dealer.
- Call Lexmark Telemarketing at 1-800-438-2468 from 8 a.m. to 8 p.m. Eastern Standard Time.
- Fax a complete order form to 1-800-522-3422.
- 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 procedures are necessary.
- You are directed to replace a supply to correct a print quality problem according to "Correcting Print Quality Problems" on page 7-14.

Note: If replacing a supply to correct a print quality problem does not correct the problem, remove the new supply and put it back on the shelf for future use. Return the original supply to the printer.

The following table will help you anticipate when to replace supplies. The supply yields in this table are approximate average yields and were obtained from extensive supply testing. The majority of this testing was performed at an average printer utilization of 85% and with a print coverage of 4%.

The printer performs non-printing cycles to prepare the printer for operation. These non-printing cycles cause wear on the supplies. Operating the printer at a lower utilization or at higher percent print coverages will reduce the lives of the supplies. 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) can also affect supply lives. Special applications (for example, adhesive labels, extensive graphics, bar codes, some landscape applications, and preprinted forms) may significantly reduce supply lives.

Supply	Replace Every...	Part Number
Toner Cartridge	35 000 impressions	1402690
Photoconductor Belt	50 000 to 100 000 impressions	1372472
Fuser Unit	600 000 impressions	1372475 (100V) 1372478 (200V)
Transfer Belt Unit	600 000 impressions	1372477
Cleaner Unit	300 000 to 500 000 impressions	1372476
Developer Mix	600 000 impressions	1402691

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 to establish the life of the supply in the end user's application.
2. Supply warranties are only for defects in materials and workmanship at the time of shipment and installation. They 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.
3. Waste material may be disposed of or incinerated under conditions which meet all federal, state, and local environmental regulations. Since regulations may vary from one locale to another, check with the agency that governs waste disposal in your area for correct procedures.

General Guidelines for Supplies

Following are the general guidelines for supplies:

- Replacement of the developer mix, fuser unit, photoconductor belt, cleaner unit, and transfer belt unit is associated with print count.
- Replacement of the photoconductor belt and cleaner unit is also associated with your application (type of print job).
- Replacement of the toner is associated with the amount of toner detected by the printer.
- The printer must be Not Ready (stopped) when changing all supplies except the toner. You may add toner while the printer is printing.
- The printer must be turned on (powered on) while you change a supply.
- 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 warning message, you can scroll to see it. See "Display Messages for Supplies" on page 6-4. The **Toner Low** indicator on the operator panel lights up when the toner is low.
- When replacing supplies other than paper, touch blue parts of the printer only. The blue color indicates that the part is not hot and is safe to touch.

Display Messages for Supplies

When the life of a consumable supply is exceeded, the following warning message indicates the consumable is low or near the end of its life, and you should replace it. You may wait to replace it if you wish. The following occur:

- The printer stops printing and becomes Not Ready.
- The error beeper sounds (if configured to sound).
- A message is displayed on the operator panel requesting that you replace the consumable soon. For example:

DEVELOPER MIX: REPLACE SOON

- For toner only, the **Toner Low** indicator lights up.
- The printer continues printing after you press **Enter** to clear the message and press **Start** to make the printer Ready.
- The warning message is added as a scrollable status message.

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 normal status mode:

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

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


- The printer stops printing and becomes Not Ready.
- The error beeper sounds (if configured to sound).
- The **Attention** indicator flashes.
- A message is displayed on the printer operator panel requesting that you replace the consumable now. For example:

DEVELOPER MIX: REPLACE NOW

- Printing cannot be resumed until you replace the consumable and indicate (using the operator panel display) that the change has been completed. This chapter contains separate instructions for changing each supply.

Note: Changing toner does not require that you indicate to the printer (using the operator panel display) that the change has been completed. You must do so for all the other consumables.

Replacing the Toner Cartridge

Replace the toner cartridge only when the **Toner Low** indicator  on the operator panel lights up. A message is displayed when the toner cartridge is empty.

The toner cartridge can be replaced 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 Low** indicator is lit, replace the toner cartridge as soon as possible before the toner reservoir becomes empty. Because of this toner reservoir, there is no advantage to waiting to add toner.

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

Note: If toner gets on your clothes, wipe it off with a dry cloth and wash the clothes in cold water. Hot water sets the toner in the fabric. Although toner is nontoxic, avoid breathing toner particles.

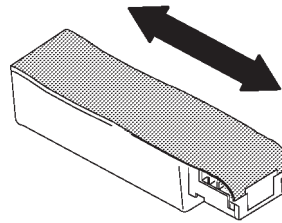
Follow the steps below to replace the toner cartridge:

1. Remove the new toner cartridge and cardboard from the box.

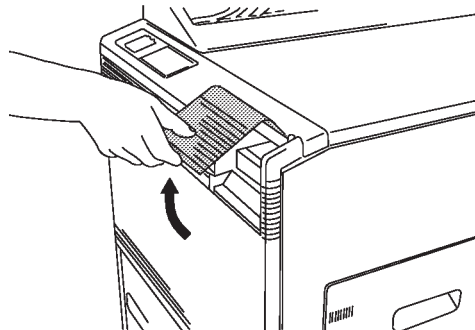
The cardboard is used when the empty toner cartridge is removed from the toner cartridge slot.

2. Level the toner in the new cartridge:

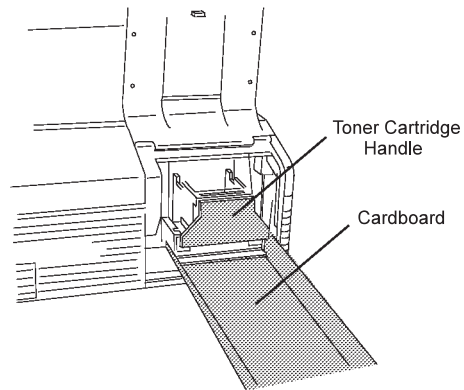
Shake the toner cartridge several times to level out the surface of the toner in the toner cartridge.



3. Open the toner supply cover.

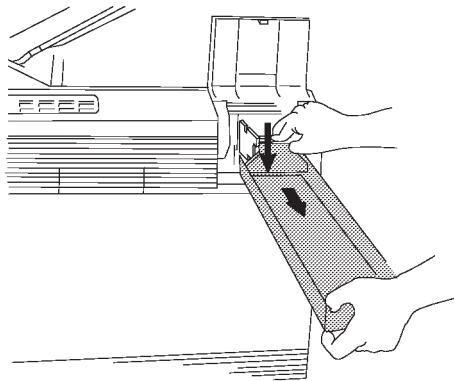


4. Put the cardboard under the toner cartridge handle.



5. Remove the empty toner cartridge.

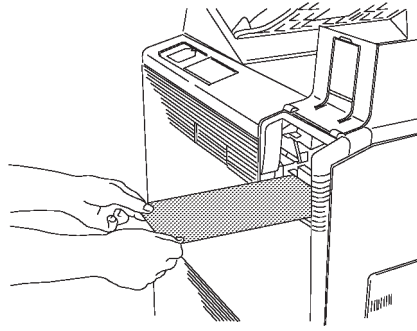
Push down the toner cartridge handle, and remove the toner cartridge by pulling forward with the cardboard underneath. Place the used toner cartridge and cardboard in the empty plastic bag.



6. Install the new toner cartridge.

Slide the new toner cartridge into the toner cartridge slot until it stops.

Remove the sealing tape by pulling and rolling up and inward to prevent the toner on the sealing tape from scattering. Place the sealing tape in the plastic bag with the used toner cartridge. Seal and properly dispose of the bag.



7. Close the toner supply cover.

Replacing the Developer Mix

Replace the developer mix when the message DEVELOPER MIX: CHANGE SOON or DEVELOPER MIX: CHANGE NOW is displayed on the operator panel display.

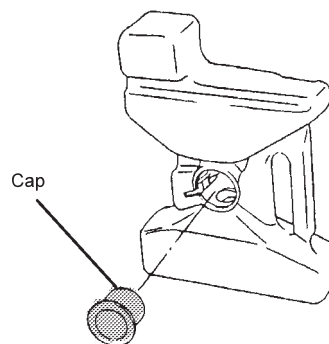
Follow the steps below to replace the developer mix:

1. Press **Menu/Exit** to enter menu mode.
2. Scroll to SUPPLIES on the main menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to DEVELOPER MIX and press **Enter**.
4. The message CHANGE SUPPLY NOW is displayed. (The message PLEASE WAIT... may occur first.)

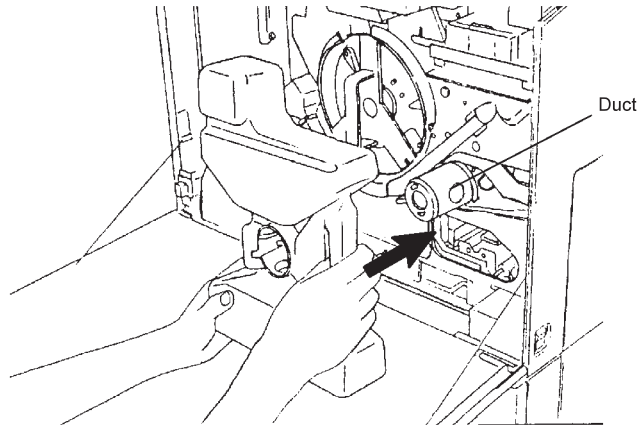
Note: If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE and press **Enter**.

5. Remove the developer mix bottle from the box.
6. Open the front cover.
7. Remove the developer mix bottle cap:

Remove the cap from the center of the bottle by pulling the cap straight out.

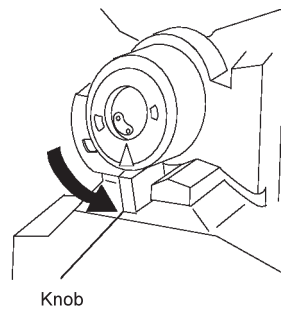


8. Install the developer mix bottle onto the developer mix duct.

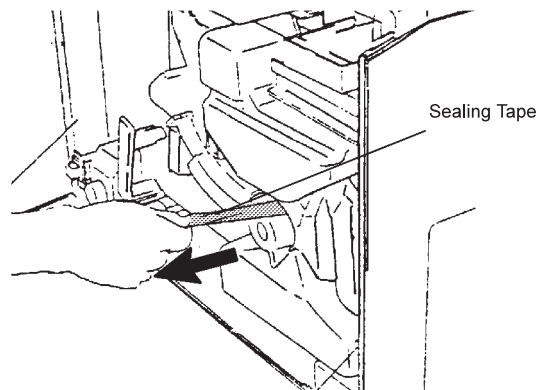


9. Lock the developer mix bottle in place:

Turn the developer mix bottle knob counterclockwise to the LOCK position.



10. Remove the sealing tape from the bottle by pulling the tape straight out.



11. Close the front cover. The message PRESS ENTER TO START CHANGE is displayed.

12. Press **Enter** to start the developer mix replacement process. The message DEVELOPER MIX CHANGING... is displayed.

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

13. Wait approximately four minutes for the message REMOVE BOTTLE to appear.

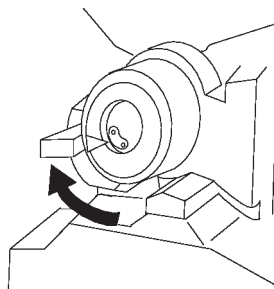
Attention:

Do not open the front cover until the REMOVE BOTTLE message is displayed. Opening the front cover too soon can disrupt the replacement procedure.

14. Remove the developer mix bottle.

Open the front cover.

Turn the bottle knob clockwise to the RELEASE position, then remove the bottle.



15. Clean any spilled developer mix from the printer.

16. Close the front cover.

Note: If the developer mix bottle has not been removed, a message will appear instructing you to remove the developer mix bottle before the printer can resume printing. Press **Enter** to clear the error message.

17. When the message IS CHANGE COMPLETED? appears, press **Enter**.

18. Press **Enter** again to select YES to notify the printer that the replacement is finished. This resets the supply counter.

19. Press **Menu/Exit** to exit menu mode.

20. Press **Start** to continue printing.

21. Properly dispose of the developer mix.

Replacing the Photoconductor Belt

Replace the photoconductor belt (sometimes called a PC or OPC belt) when the message PHOTOCOND BELT: REPLACE SOON or PHOTOCOND BELT: REPLACE NOW is displayed on the operator panel.

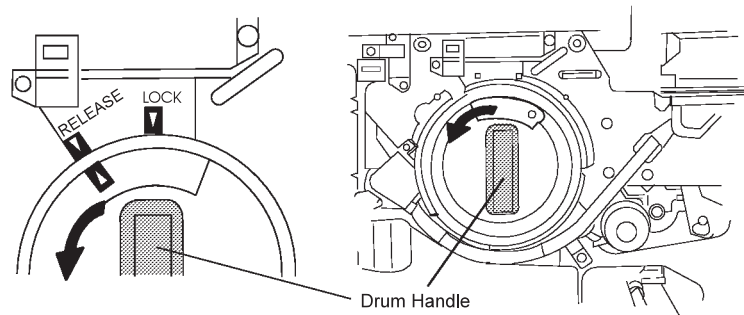
Follow the steps below to replace the photoconductor belt:

1. Press **Menu/Exit** to enter menu mode.
2. Scroll to SUPPLIES on the main menu and press **Enter**. You may be prompted to enter the key operator password.
3. Press **Enter** on PHOTOCONDUCTOR BELT. This rotates the drum into the proper position to change the photoconductor belt.
4. The message CHANGE SUPPLY NOW is displayed. (The message PLEASE WAIT... may occur first.)

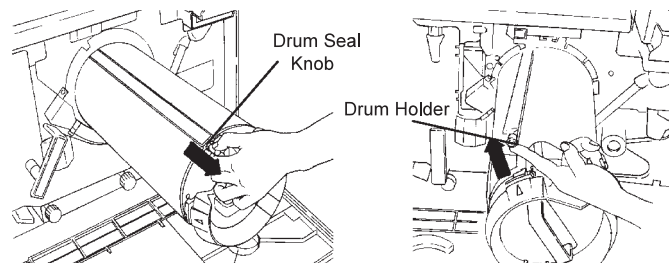
Note: If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE and press **Enter**.

5. Open the front cover.
6. Open the drum unit.

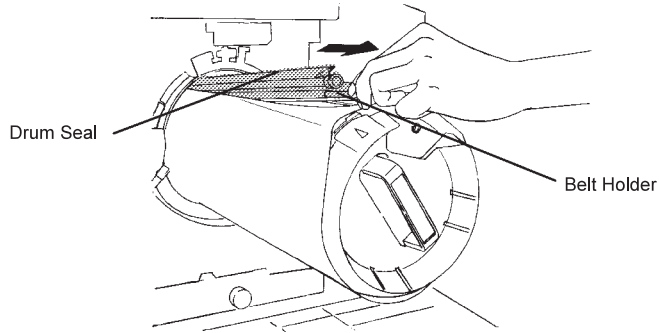
Turn the drum unit handle counterclockwise to the RELEASE position, then pull toward you.



7. Release the drum seal by pulling the drum seal knob (blue) forward, then lifting up from the drum holder.



8. Remove the used photoconductor belt by pulling the photoconductor belt holder out of the guide of the drum seal.



9. Clean the surface of the drum unit, and clean the top and sides of the drum seal, with a lint-free cloth.

10. Remove the new photoconductor belt from the box.

Attention:

- Do not touch the photoconductor belt surface (green).
- Do not expose the photoconductor belt to sunlight or excessive direct light.
- Use care to avoid wrinkling the photoconductor belt.

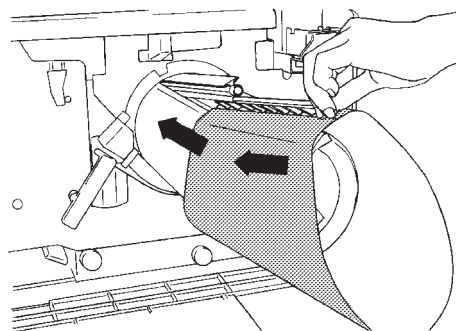
11. Install the new photoconductor belt.

Carefully insert the new photoconductor belt holder into the guide of the drum seal until it stops. Some noise from the photoconductor belt can be expected.

Close the drum seal by pulling the drum seal knob forward and inserting it into the drum front holder.

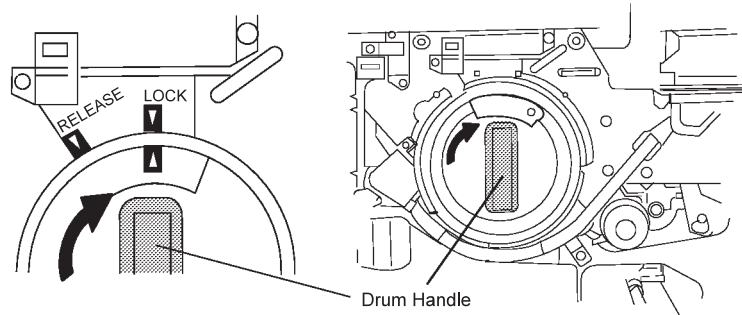
Attention:

- The rear edge can be easily damaged during installation.
- Be sure the drum seal knob is fully seated in the front holder after installing the new photoconductor belt.



12. Close the drum unit and lock in place.

Push the drum unit in, using the drum unit handle; then turn the drum unit handle clockwise to the LOCK position.



13. Close the front cover.
14. When the message IS CHANGE COMPLETED? appears, press **Enter**.
15. Press **Enter** 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 **Enter**.
16. Press **Menu/Exit** to exit menu mode.
17. Press **Start** to continue printing.
18. Properly dispose of the old photoconductor belt.

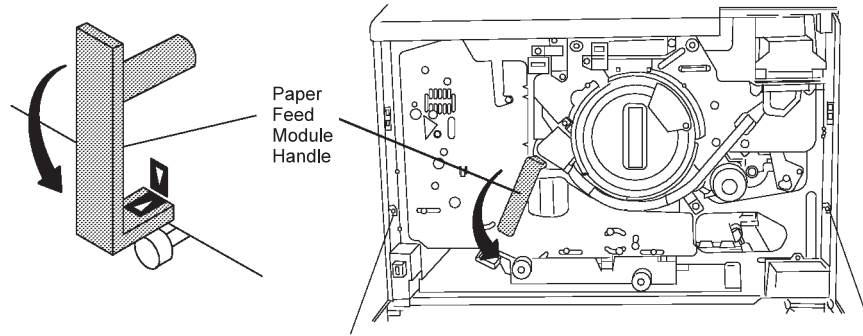
Replacing the Transfer Belt Unit

Replace the transfer belt unit when the message TRANSFER BELT: REPLACE SOON or TRANSFER BELT: REPLACE NOW is displayed on the operator panel.

Follow the steps below to replace the transfer belt unit:

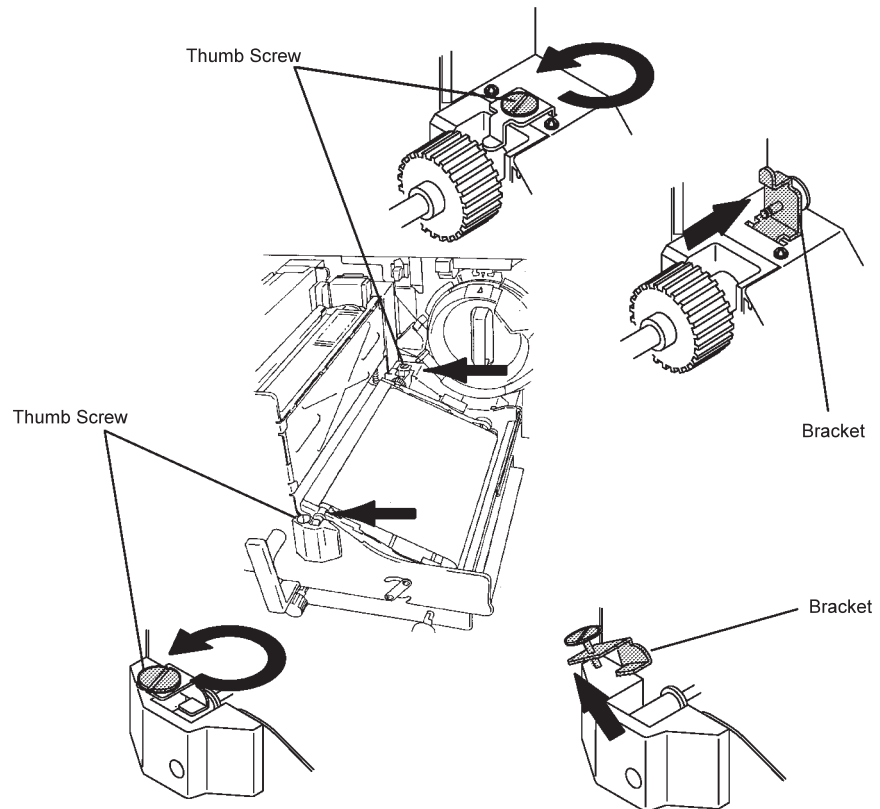
1. Press **Menu/Exit** to enter menu mode.
2. Scroll to SUPPLIES on the main menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to TRANSFER BELT UNIT and press **Enter**.
4. The message CHANGE SUPPLY NOW is displayed. (The message PLEASE WAIT... may occur first.)

Note: If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE and press **Enter**.
5. Open the front cover.
6. Open the paper feed module.
7. Turn the paper feed module handle counterclockwise to the RELEASE position, and then pull the handle forward.



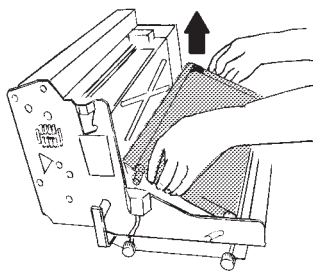
8. Loosen the thumb screw on each side of the transfer belt unit.

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



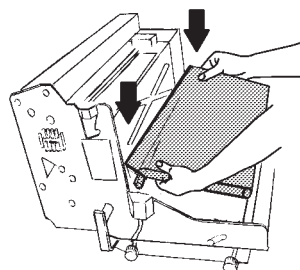
9. Remove the transfer belt unit.

Lift the transfer belt unit out by the top end of the unit.

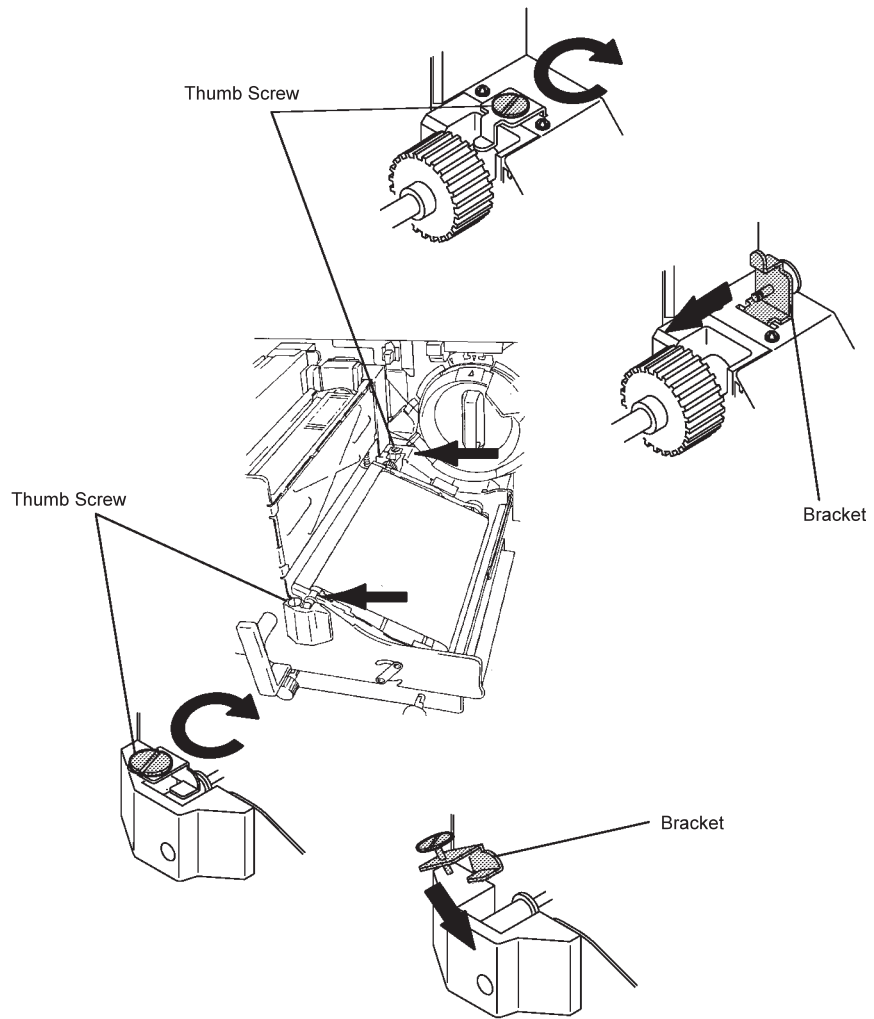


10. Install the new transfer belt unit.

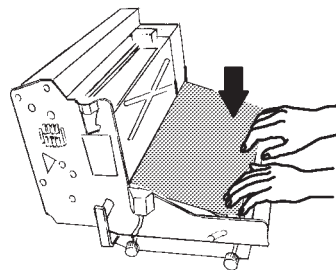
Position the top end of the new transfer belt unit into the paper feed module first.



11. Secure the transfer belt unit by positioning the two thumb screw brackets in place on each side of the transfer belt unit. Tighten the thumb screws in a clockwise direction.

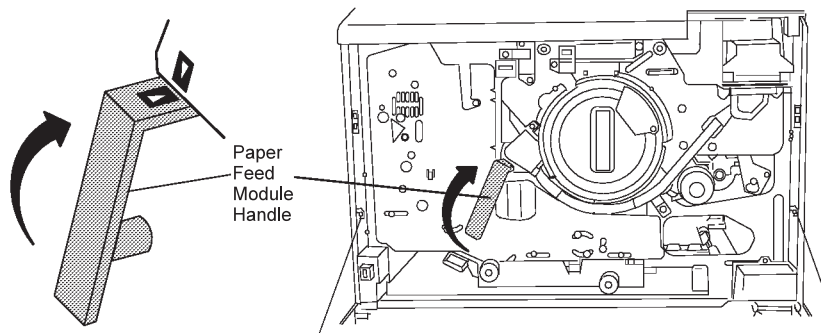


12. Gently push the lower end of the transfer belt unit downward.



13. Close the paper feed module and lock in place.

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



14. Close the front cover.
15. When the message IS CHANGE COMPLETED? appears, press **Enter**.
16. Press **Enter** 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 **Enter**.
17. Press **Menu/Exit** to exit menu mode.
18. Press **Start** to continue printing.
19. Properly dispose of the transfer belt unit.

Replacing the Fuser Unit

Replace the fuser unit when the message FUSER UNIT: REPLACE SOON or FUSER UNIT: REPLACE NOW is displayed on the operator panel.

Follow the steps below to replace the fuser unit:

CAUTION:

<28> **The fuser unit may be very hot. Remove jewelry before changing the fuser unit. Touch only the blue handle while changing the fuser unit. Place the used fuser unit in a safe place, and allow it to cool for 30 minutes before disposing of it.**

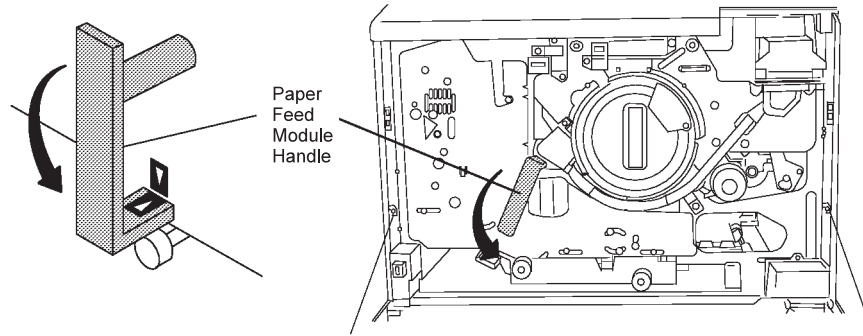
1. Press **Menu/Exit** to enter menu mode.
2. Scroll to SUPPLIES on the main menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to FUSER UNIT and press **Enter**.

The message CHANGE SUPPLY NOW is displayed. (The message PLEASE WAIT.... 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 **Enter**.

4. Open the front cover.
5. Open the paper feed module.

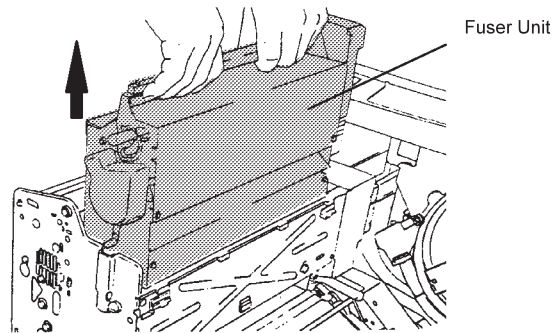
Turn the paper feed module handle counterclockwise to the RELEASE position, then pull the handle forward.



- Remove the fuser unit by rotating the fuser unit handle upward, and then lifting the unit out.

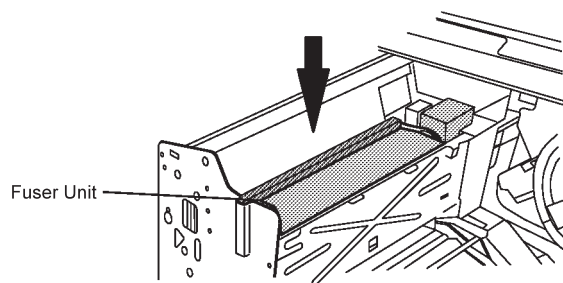
CAUTION:

<28> The fuser unit may be very hot. Remove jewelry before changing the fuser unit. Touch only the blue handle while changing the fuser unit. Place the used fuser unit in a safe place, and allow it to cool for 30 minutes before disposing of it.



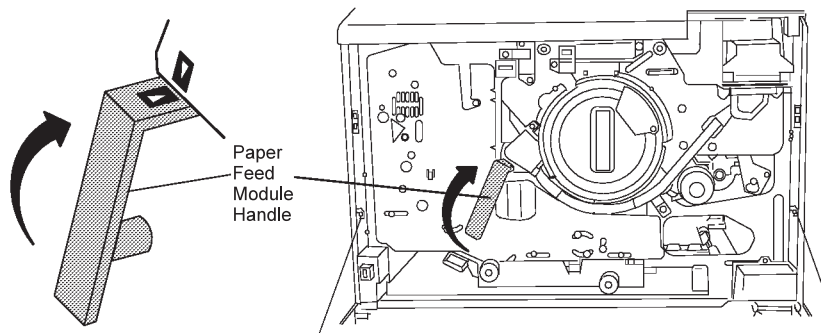
- Install the new fuser unit.

Secure the fuser unit in place by rotating the handle downward into the latched position. Be sure that the fuser unit handle is pushed all the way down.



- Close the paper feed module and lock it in place.

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



9. Close the front cover.
10. When the message IS CHANGE COMPLETED? appears, press **Enter**.
11. Press **Enter** 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 **Enter**).
12. Press **Menu/Exit** to exit menu mode.
13. Press **Start** to continue printing.
14. Properly dispose of the used fuser unit.

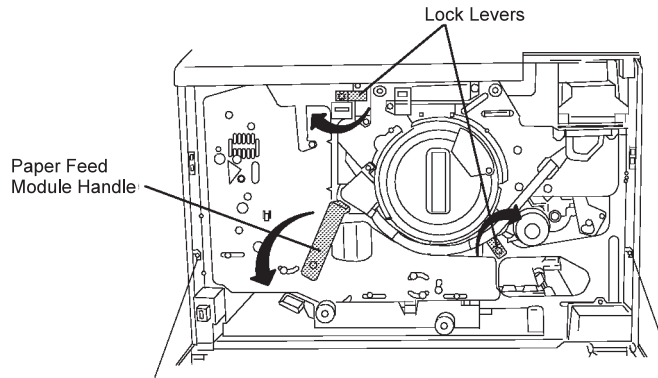
Replacing the Cleaner Unit

Replace the cleaner unit when the message CLEANER UNIT: CHANGE SOON or CLEANER UNIT: CHANGE NOW is displayed on the operator panel.

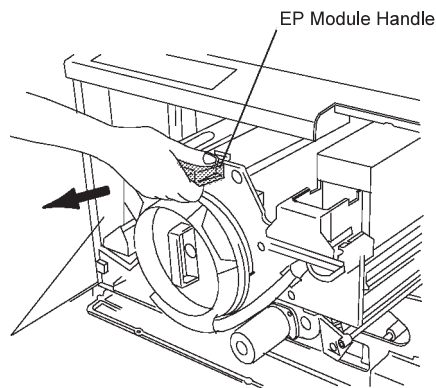
Follow the steps below to replace the cleaner unit:

1. Press **Menu/Exit** to enter menu mode.
2. Scroll to SUPPLIES on the main menu and press **Enter**. You may be prompted to enter the key-operator password.
3. Scroll to CLEANER UNIT and press **Enter**.
4. The message CHANGE SUPPLY NOW is displayed. (The message PLEASE WAIT... may occur first.)

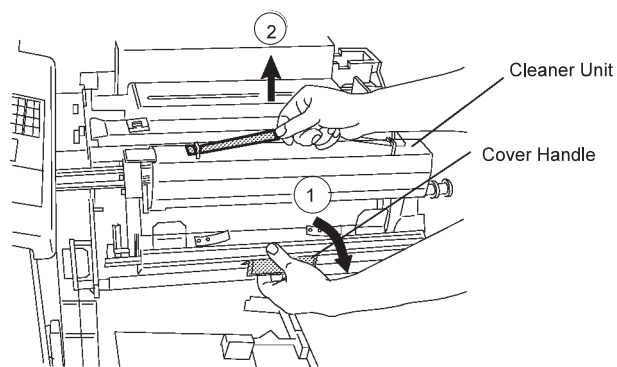
Note: If you selected SUPPLIES by mistake and do not want to begin a replacement procedure, scroll to CANCEL CHANGE and press **Enter**.
5. Open the front cover.
6. Unlock the EP module by turning the two lock levers clockwise and the paper feed module handle counterclockwise to the RELEASE position.



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



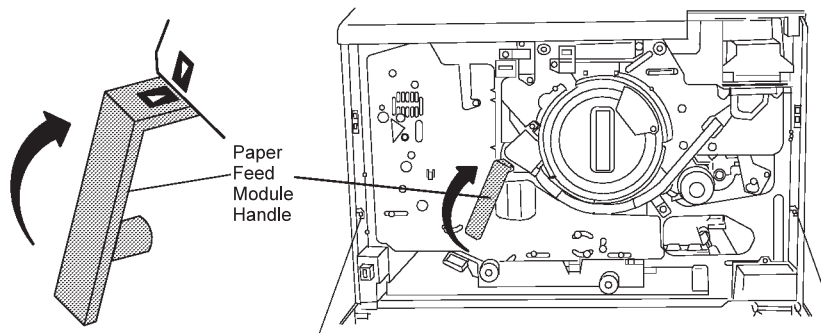
8. Remove the cleaner unit by pulling the cover handle downward (1), and then lifting the cleaner unit out by its handle (2).



9. Install the new cleaner unit by aligning the arrows on the cleaner unit and the EP module. Latch the cleaner unit cover in place.

10. Close the EP module and lock in place.

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.



11. Close the front cover.
12. When the message IS CHANGE COMPLETED? appears, press **Enter**.
13. Press **Enter** 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 **Enter**).

14. Press **Menu/Exit** to exit menu.
15. Press **Start** to continue printing.
16. Properly dispose of the used cleaner unit.

Cleaning the Printer

To prevent print quality and operating problems, regular cleaning of the printer is required.

This section describes the cleaning locations and instructions for cleaning the following internal components:

- Printer cabinet
- Printer interior
- Printer trays and tray rollers
- Drum unit and drum seal
- Paper-guide roller-guard fingers and rollers

More extensive cleaning may be required to solve print quality or operating problems. These parts should only require additional cleaning if you have encountered a problem and are instructed to perform the cleaning operation in "Correcting Print Quality Problems" on page 7-14.

Attention:

Never use ammonia-based cleaners on or around the printer. Ammonia may react chemically with the toner and with the printer plastic covers.

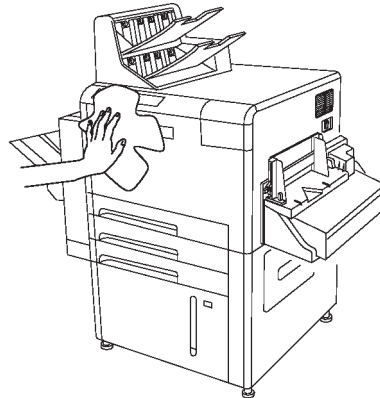
Note: If you get toner on your clothes, wipe it off with a dry cloth or brush. Wash the clothing in cold water. Hot water sets toner in the fabric.

Cleaning the Printer Covers and Trays

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

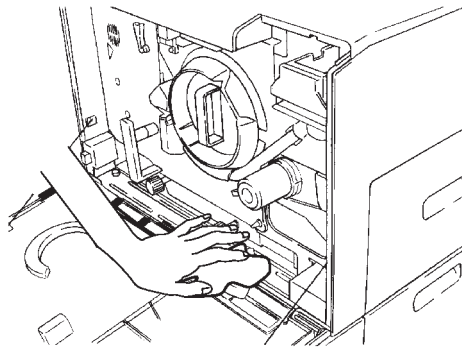
Printer Cabinet

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



Printer Cover Interior

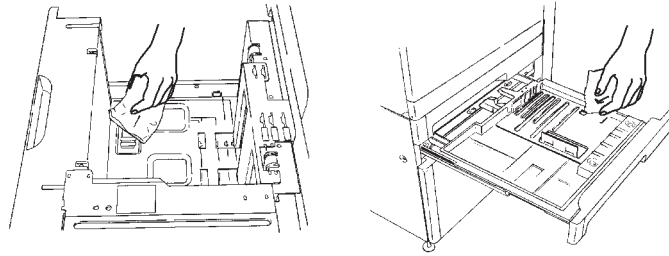
Open the front cover. Wipe the inside of the front cover with a clean soft cloth.



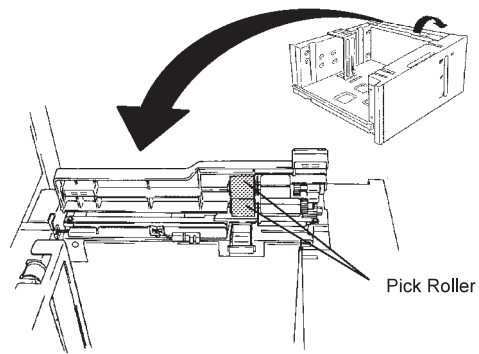
Trays and Rollers

Follow the steps below to clean the printer trays and the main tray rollers.

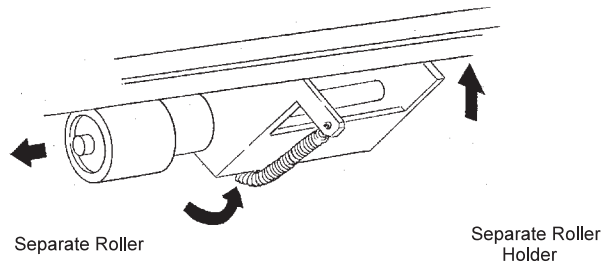
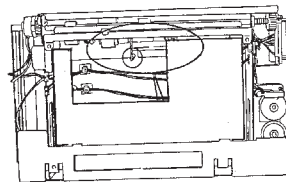
1. Open the tray.
2. Remove the paper from the tray, and then wipe the tray interior with a soft clean cloth.



3. If you have a duplex or high-capacity simplex printer, perform the following steps to clean the main tray rollers.
4. Open the main tray pick cover.



5. Clean the two pick rollers with a clean lint-free cloth.
6. Clean the separator roller with a clean lint-free cloth.



Cleaning the Drum Unit and Drum Seal

Clean the drum unit and drum seal only when replacing the photoconductor belt.

Cleaning the Paper Guide Rollers and Guard Fingers

Clean the paper feed module parts every two months.

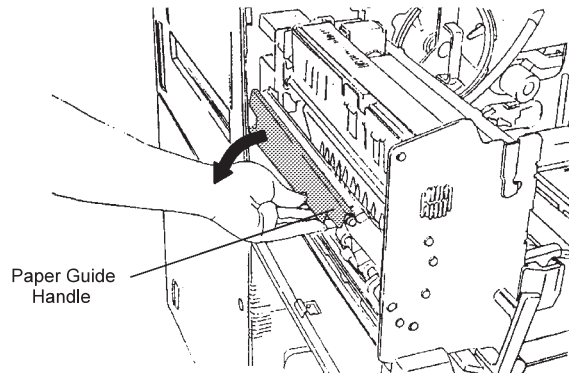
Follow the steps below to clean the paper-feed module paper-guide parts.

1. Open the front cover.

2. Open the paper feed module.

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

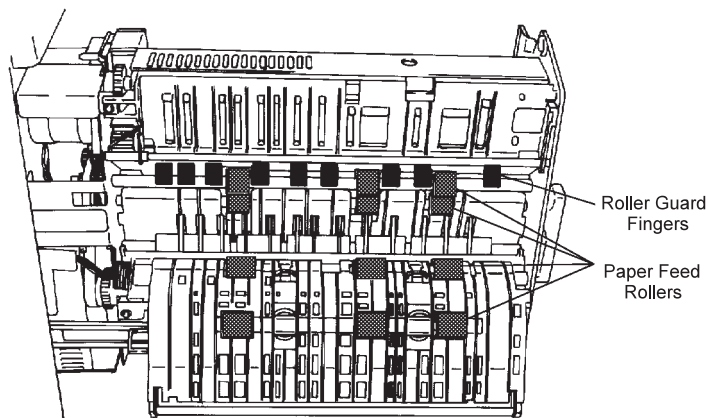
3. Open the paper guide by pulling the handle downward.



4. Clean the roller-guard fingers and paper-feed rollers.

To clean the nine roller-guard fingers, clean the front face and upper rear face of the fingers with a lint-free cloth.

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

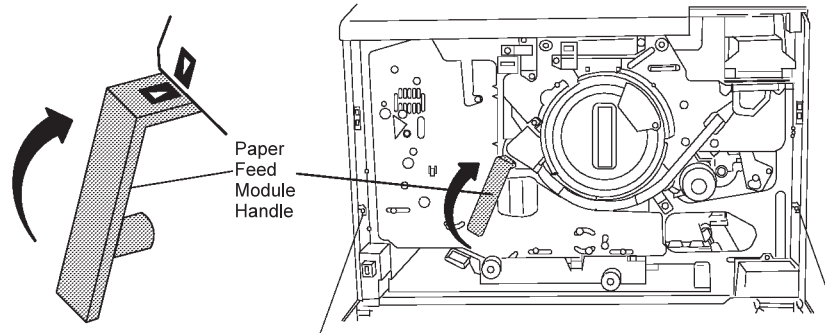


5. Close the paper guide.

Latch the paper guide handle in place.

6. Close the paper feed module and lock it in place.

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



7. Close the front cover.

Chapter 7. Handling Operation Problems

This chapter provides information for solving common problems you may encounter while using your printer:

- Clearing paper jams
- Handling aborts and program checks
- Correcting print quality problems

Paper Jams

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

- The paper may be installed incorrectly.
- The wrong type of paper may be used.
- The paper may be curled or damp.
- The printer may need cleaning.

Best results are obtained with laser-quality or xerographic paper. Store paper in an area that meets temperature and humidity requirements.

The printer stops printing when a paper jam occurs, and the message PAPER JAM is displayed on the operator panel. A code is also displayed.

The operator-panel paper-jam indicator-lights identify the area of the paper path where paper must be removed, including the location where the paper jam has occurred. Each lamp on the indicator corresponds to an area of the printer. A light indicates a paper jam location.

Refer to the troubleshooting information in *Advanced Function Printer: Cut Sheet Paper Reference for Use with IBM Electrophotographic Printers*. It provides information that can help you prevent the following problems:

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

Using Paper Jam Indicator Lights to Locate Paper Jams

When a paper jam occurs, the printer stops printing and the intervention indicator lights on the printer icon show where the paper jam has occurred. The paper jam indicator lights and arrow indicator lights are numbered (or lettered) lights that turn on to indicate the area where the paper jam is located. More than one indicator light may be lit at any one time.

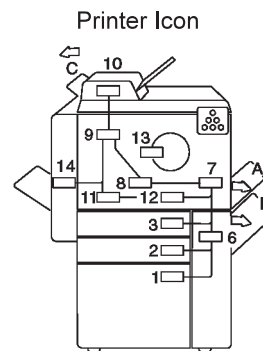


Figure 7-1. Operator Panel Paper Jam Indicator Lights

Note: The paper jam indicators vary according to the model.

Table 7-1 on page 7-3 shows the area of the paper jam that corresponds to each indicator number or letter and the location of the appropriate recovery procedure.

Table 7-1. Paper Jam Indicator and Recovery Procedure Cross Reference

Light	Area of Paper Jam	Recovery Procedure
A	Top auto-eject door	"Clearing Paper from the Side Doors and Top Stackers" on page 7-4
B, 6	Bottom door	"Clearing Paper from the Side Doors and Top Stackers" on page 7-4
C, 10	Top stacker (base stacker and/or upper stacker)	"Clearing Paper from the Side Doors and Top Stackers" on page 7-4
13	EP module area	"Clearing Paper from the EP Module Area" on page 7-6
7, 8, 9, 11, 12	Paper feed module area	"Clearing Paper from the Paper Feed Module Area" on page 7-8
1, 2, 3	Tray area	"Clearing Paper from the Front Trays" on page 7-12
14	Stacker area	"Clearing Paper from the Stackers" on page 7-13

Clearing a Paper Jam

The printer stops printing when a misfeed occurs, and the message PAPER JAM is displayed.

Perform the following steps to clear the paper jam and operator panel error message:

1. Check the intervention indicators on the printer icon.
2. If an arrow is lit, open the corresponding door and empty the paper, starting with the upper door.
3. If the top stacker arrow is lit, clear paper from that area.
4. Check the indicators again. If any lights remain lit, clear the paper from the corresponding area.

Paper jams may occur in several areas of the printer. Check the paper path thoroughly, and remove all paper along the paper path according to the procedures for each area. This chapter contains instructions for clearing paper jams from each area of the printer

5. When all the paper is removed and all indicator lights are off, press the **Start** key twice to clear the error message from the display.

The message NOT READY, WARMING UP, or SLEEPING may appear on the display.

6. Press **Start** to continue printing.

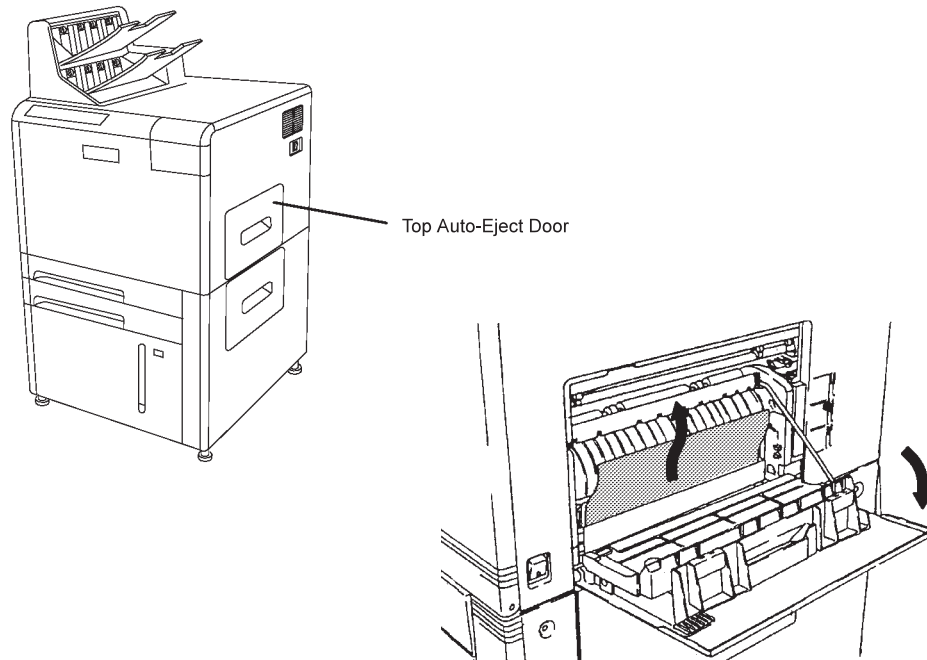
The pages removed from the paper path are reprinted automatically when the printer starts printing again. If the printer is warming up, it may take a few minutes to start printing.

Clearing Paper from the Side Doors and Top Stackers

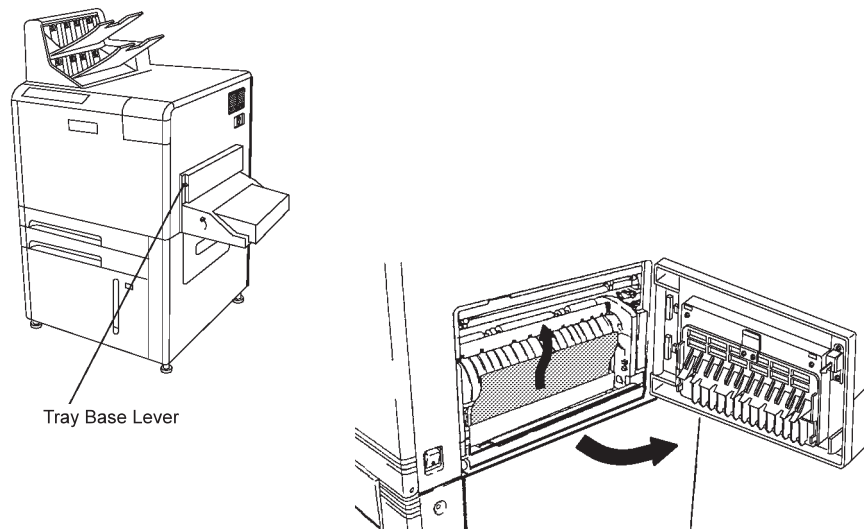
Follow the steps below to clear paper from the top auto-eject door and bottom door (indicator lights A, B, and 6 on the printer icon) and the base stacker and upper stacker (indicator lights C and 10 on the printer icon).

1. Open the top auto-eject door to remove the jammed paper.

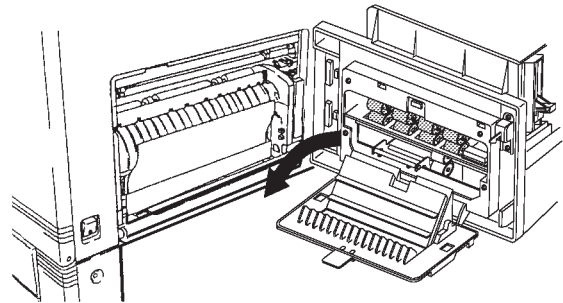
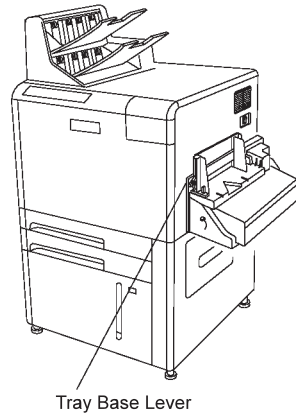
Paper along the paper path is automatically ejected through the top auto-eject door.



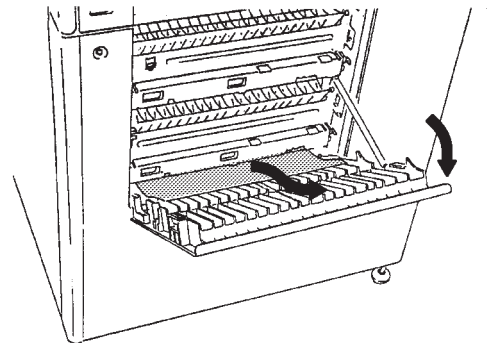
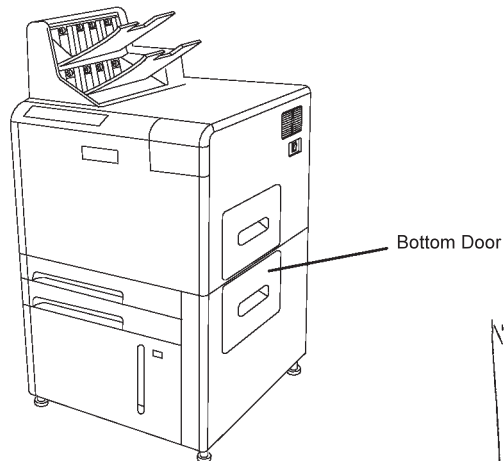
2. If the side tray is installed, push the tray base lever to open the tray base as shown below. Remove any jammed paper.



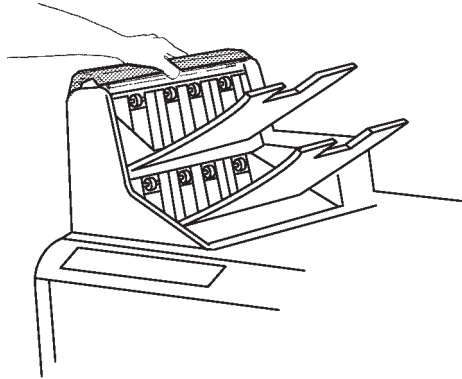
If the envelope feeder is installed, push the tray base lever to open the tray base as shown below. Remove any jammed envelopes.



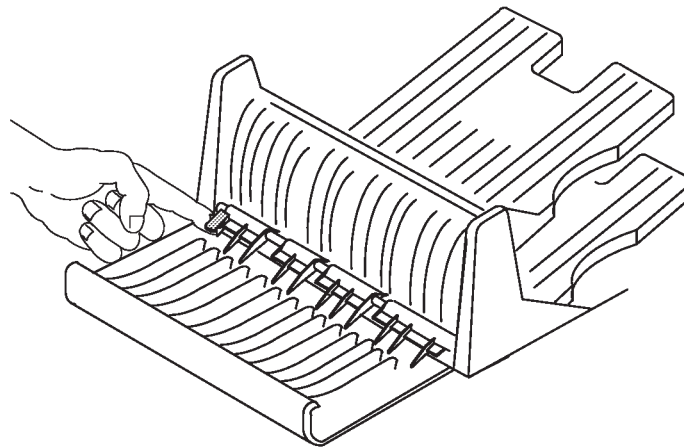
3. Close the top auto-eject door. Leave the tray base open if the side tray is installed.
4. Open the bottom door to remove any paper (in Models 02S, 02D, and 03S only).



5. Close the bottom door. If necessary, close and latch the side tray base.
6. Open the top stacker cover, and remove any jammed paper.



7. Lift the tab on the gate, and remove any paper (in the dual top stacker only).



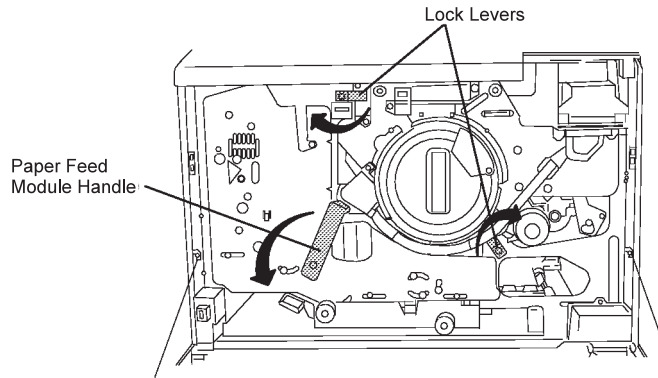
8. Close the top stacker cover.

Press **Enter** to clear any error message.

Clearing Paper from the EP Module Area

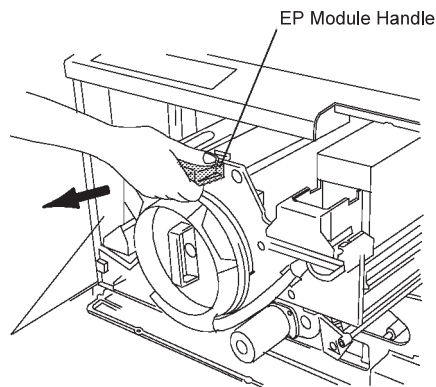
Follow the steps below to clear paper from the EP module area (indicator light 13 on the printer icon).

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.

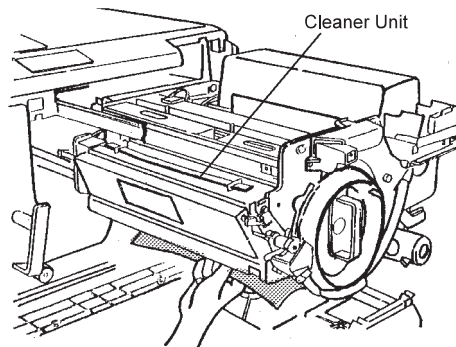


3. Open the EP module.

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

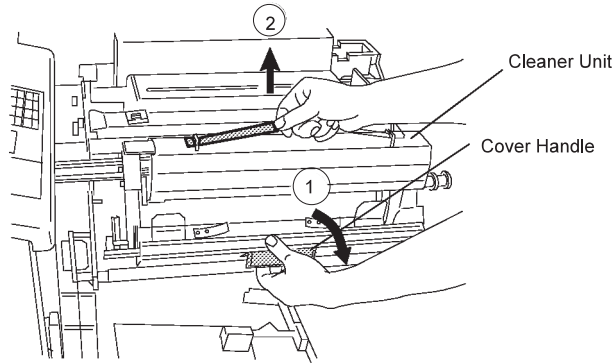


4. Remove any paper from the EP module and drum unit. Take care to avoid scratching or touching the drum unit while removing paper.



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

Remove the cleaner unit by pulling the cleaner unit cover handle downward (1), and then lifting the cleaner unit out by its handle (2).

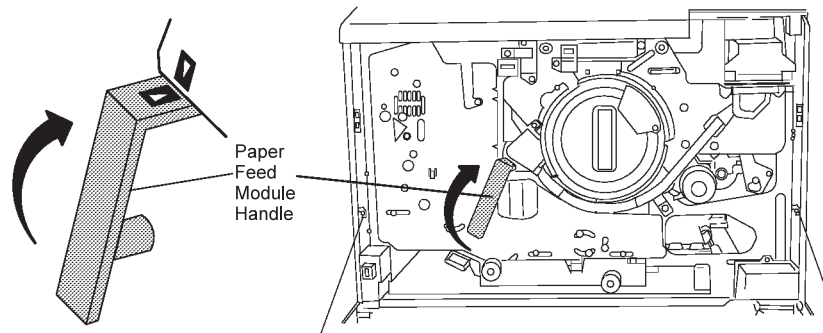


6. Return the cleaner unit to its original position.

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

7. Close the EP module and lock it in place.

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.



8. Close the front cover.

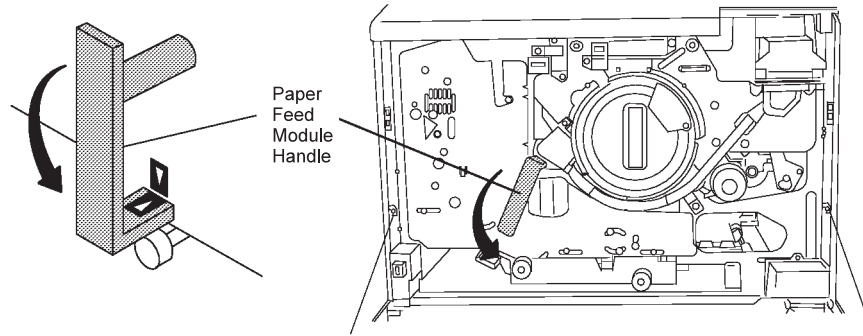
Press **Enter** to clear any error messages.

Clearing Paper from the Paper Feed Module Area

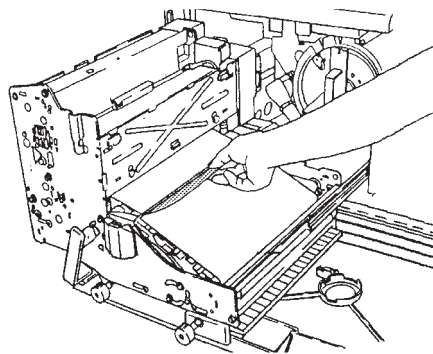
Follow the steps below to clear paper from the paper feed module area (indicator lights 7, 8, 9, 11, and 12 on the printer icon).

1. Open the front cover.
2. Open the paper feed module.

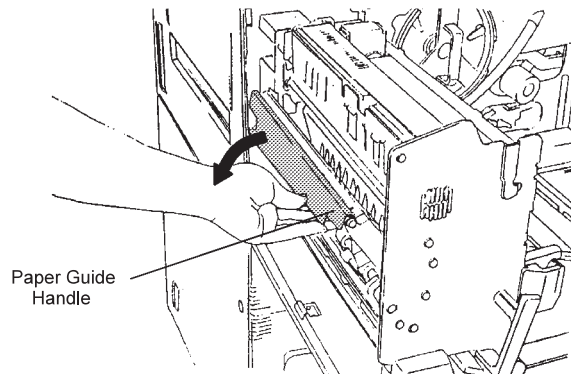
Turn the paper feed module handle counterclockwise to the RELEASE position, and then pull forward.



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

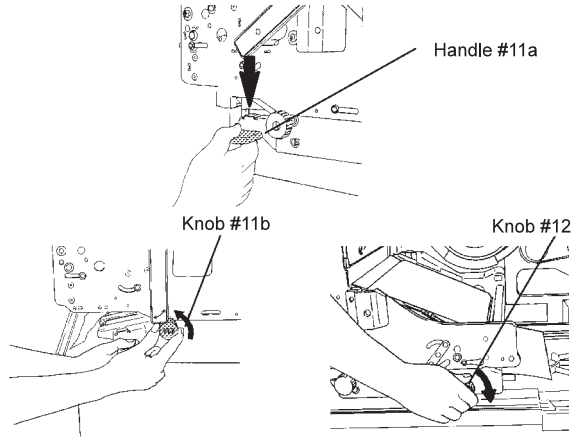


4. Remove any jammed paper from the paper guide:
Open the paper guide by pulling the handle downward.

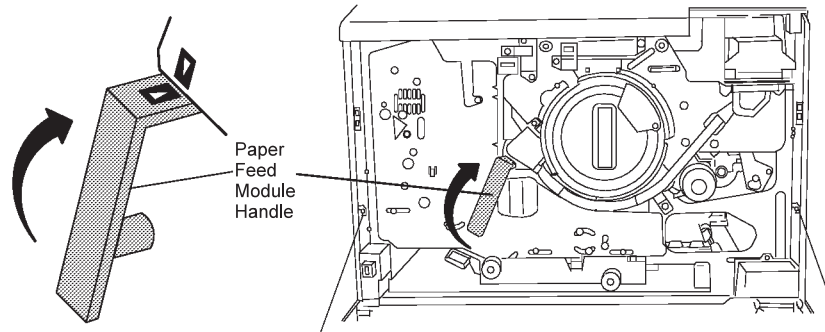


5. If duplex printing, remove any paper from the lower paper guide.

Open the lower paper guide by pushing handle # 11a downward. While holding handle # 11a down, rotate each blue knob (# 11b and # 12), as shown, to remove any jammed paper.

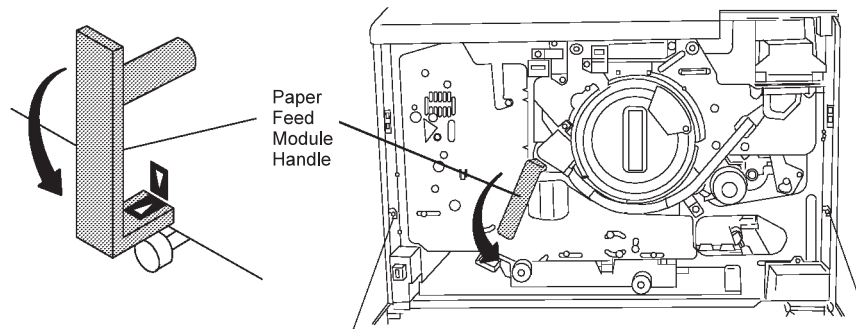


6. Close the paper feed module, and lock it in place.



7. Close the front cover.
8. Look at the paper jam indicator. If a paper feed module indicator is still lit, you need to remove the fuser unit (Step 9 through Step 16 on page 7-12).
9. Open the front cover.
10. Open the paper feed module.

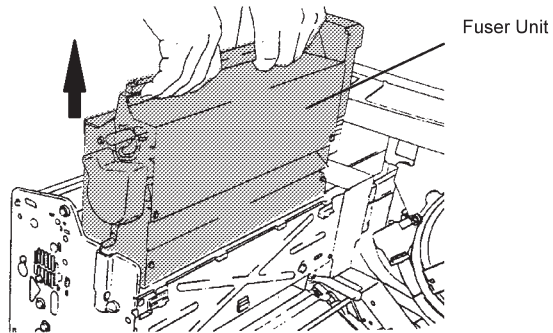
Turn the paper feed module handle counterclockwise to the RELEASE position, and then pull the handle forward.



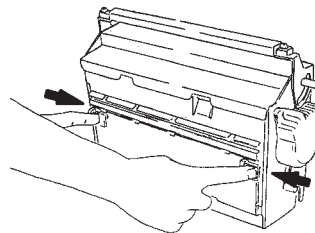
CAUTION:

<29> The fuser unit may be very hot. Remove jewelry before removing the fuser unit. Touch only the blue handle while handling the fuser unit. Place the fuser unit in a safe place.

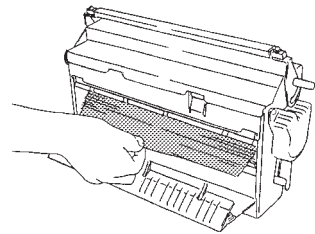
11. Remove the fuser unit by rotating the fuser unit handle upward, and lifting out the assembly.



12. Open the fuser unit cover by pushing the tabs on both sides of the cover inward to drop down the cover.



13. Remove jammed paper.

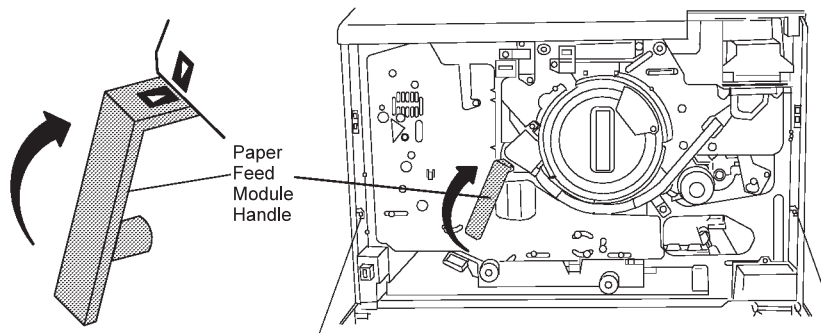


14. Return the fuser unit to its original position.

Secure the fuser unit in place by rotating the handle downward into the latched position. Be sure to push the handle completely down into the latched position.

15. Close the paper feed module, and lock it in place.

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

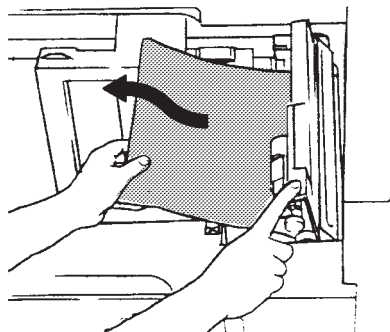


16. Close the front cover.
17. Press **Enter** to clear any error messages.

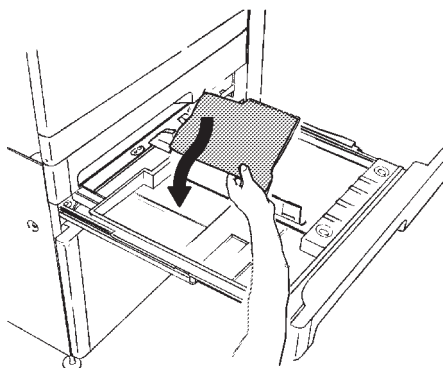
Clearing Paper from the Front Trays

Follow the steps below to clear paper from the main tray, lower sub tray, upper sub tray, and top front tray areas (indicator lights 1, 2, and 3 on the printer icon).

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



2. Close the tray.
3. Open the lower sub tray, the upper sub tray, or the top front tray, and remove the jammed paper.

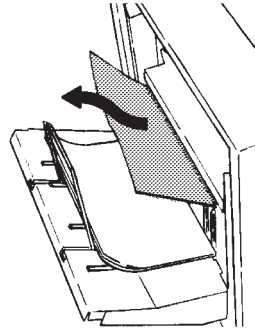


4. Close the tray.

Press **Enter** to clear any error messages.

Clearing Paper from the Stackers

Remove any jammed paper from the stackers (indicator light 14 on the printer icon) by carefully pulling the paper straight out. The side stacker is shown below.



Press **Enter** to clear any error messages.

Handling Aborts and Program Checks

Hard Abort

Occasionally, during printer operation, the printer has a problem that affects its internal computer. Restart the printer and retry.

Call for service if the problem continues. This problem displays the message

Do the following if you see this message:

1. Press **Enter** to clear the message.
2. PRESS ENTER TO RETRY is displayed. Press **Enter** to restart the printer.
3. If the hard abort error occurs again, press **Enter** to clear the message.
4. Press the Down Arrow key to scroll to PRESS ENTER TO SHUT DOWN.
5. Press the **Enter** key to shut down the printer.
6. When the message SHUTDOWN DONE-POWER OFF is displayed, power off the printer and power on again.
7. Call for service if the problem continues.

Program Check

Occasionally the message PROGRAM CHECK is displayed. Do the following if you see this message.

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

Correcting Print Quality Problems

All Black Print Samples

For print quality problems, run the ALL BLACK (4) print sample (see “Running Print Quality Samples” on page 4-13) to see if there is a photoconductor problem. Four copies will be printed. If the print quality problem appears on *every other print* in the *same location*, replace the photoconductor.

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.

Note: If replacing a supply (as directed below) does not correct the print quality problem, and the original supply has not reached the end of its life, remove the new supply and put it back on the shelf for future use. Return the original supply to the printer.

Light print

1 2 3 4

If the image is too light (too little toner consumed): Check PRINT DENSITY and TONER SAVER MODE settings. Clean and check the position of the transfer belt unit. Clean the transfer belt unit.

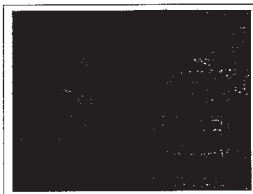
1 2 3 4

1 2 3 4

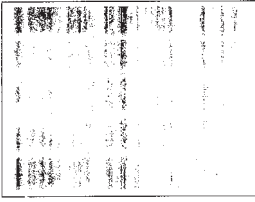
Toner does not adhere to paper

If toner does not adhere to the paper and can be easily wiped off: Ensure that the fuser unit handle is in the latched position. Replace the fuser unit; the fuser unit may be bad.

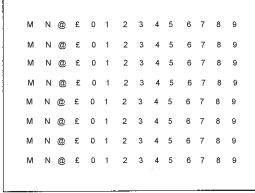
White spots appear on the image

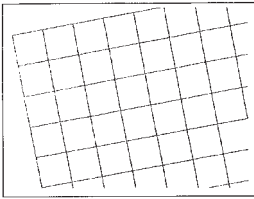


If white spots appear in the images throughout the page: Clean and check the position of the transfer belt unit.

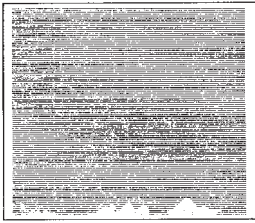
Unwanted lines or stripes

If black streaks or spots appear on the page: Clean the drum unit surface by wiping it with a lint-free cloth. Replace the photoconductor belt.



Print skew

If the image is misaligned on the page: If using the main tray, clean the pick and separator rollers. If using another tray, call for service.

White voids

If faded areas or white voids appear on the page: Use paper from a sealed package; the paper may be damaged. Clean the transfer belt unit wires.

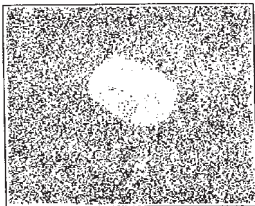
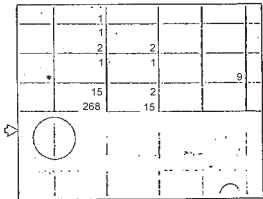


Image transfer (offset)

If portions of the image are transferred onto another area of the page: Clean and check the position of the transfer belt unit.

Appendix A. Display Messages and Codes

When you see error and information messages on the operator panel display, refer to Table A-1 on page A-2 for the recommended recovery action.

After you perform the recovery action, do the following:

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

If the recovery action does not solve the problem, call for service. Always note the system reference code (*SRC*), if it is displayed. Give this code to the customer engineer.

Table A-1 (Page 1 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
ADJUST BOTTLE	100F	The developer bottle is incorrectly installed.	<ol style="list-style-type: none"> 1. Open the front cover. 2. Wiggle the developer mix bottle. 3. Close the front cover. 4. Press Enter to start the developer mix replacement process. 5. If this message remains, call for service.
ALL JOBS CANCELLED		You selected and confirmed the CANCEL ALL SPOOLED JOBS menu item. The operation has been completed.	Not an error, informational only.
ATTACHMENT ADAPTER ERROR		There is a hardware problem during an attempt to enable an attachment (possibly during autostart).	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
ATTACHMENT CARD ERROR	AF11	The attachment card has been removed.	<p>Error occurs only once.</p> <p>Call for service and report error code AF11.</p>
ATTACHMENT ENABLED	B001	An attachment has been enabled.	Not an error, informational only.
ATTACHMENT NO LONGER SUSPENDED	B011	Attachment has been 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 is already enabled. This also may be due to a hardware problem.	<ol style="list-style-type: none"> 1. Check to see if another attachment is already enabled (under ENABLE STATUS for each attachment-key operator authority required). If so, disable that attachment. 2. If no other attachment was enabled, restart the printer and retry. 3. Call for service if the problem continues.
ATTACHMENT RESET	B002	An attachment has been reset.	Not an error, informational only.
ATTACHMENT TIMED OUT		An attempt to enable an attachment was unsuccessful (possibly during autostart) within a pre-specified time-out period.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
ATTACHMENT SUSPENDED	B010	An attachment has been suspended.	Not an error, informational only.
AUTOSWITCH NO LONGER VALID		Someone has disabled a tray that 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.
CALL FOR SERVICE	<i>various code numbers</i>	There is an error that must be corrected by the Customer Engineer.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.

Table A-1 (Page 2 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
CANCELING ...		The printer is canceling a print job. This message can apply to internal print jobs or to jobs submitted by a host system.	Not an error, informational only.
CANNOT ATTACH TO FILE SERVER	A700	The NetWare print server in the printer cannot successfully attach to a print queue in the file server.	<ol style="list-style-type: none"> 1. Check to see if the file server is down. 2. Check the spelling of the print server name in both the printer and the file server; they should match. 3. Check to see if a password for the print server is needed. If so, check the spelling of the password in both the printer and the file server. 4. Check to see if a file server name was entered under ADVANCED CONFIGURATION in the printer. If so, check the spelling of the file server name in the printer. 5. Check that printer slot 0 has been chosen in PConsole for printer configuration under Print Server Information.
CANNOT OFFSET OFFSET DISABLED	D007	Attempt to print with offset tray.	<ol style="list-style-type: none"> 1. Press Start and retry. 2. Call for service if the problem continues.
CANNOT PRINT DISABLED TRAY	D006	Attempt to print with disabled tray.	<ol style="list-style-type: none"> 1. Press Start and retry. 2. Call for service if the problem continues.
CHANGING ...		The printer is processing a request to change a configuration value.	Not an error, informational only.
CHECK FORM NAME IN MENU		There is more than one form name defined for the size of paper loaded in the tray.	If you have 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 life is almost finished.	Replace the cleaner unit soon.
COMMUNICATIONS ERROR	A440 A441 A442	Ethernet/Token Ring TCP/IP Communications error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
COMMUNICATIONS ERROR	AF00 AF01 AF02	Attachment subsystem—Cannot open attach driver.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Restart the printer and retry. 3. Call for service if the problem continues.
CONFIG CHANGED RESTART REQUIRED		The changes made to certain IPDS configuration items do not take effect until the IPDS subsystem is restarted.	Restart IPDS using the SETUP / MACHINE CONFIGURATION / DATA STREAMS / IPDS / CONFIGURATION / RESTART IPDS NOW menu. (This menu item appears only when needed.)
DELETION FAILED	E020	Deletion of fonts has failed.	<ol style="list-style-type: none"> 1. Follow the proper procedure and try to delete the font again. 2. Call for service if the problem continues.

Table A-1 (Page 3 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
DEVELOPER MIX CHANGING...	1011	The developer mix is being changed.	Please wait for further instructions.
DEVELOPER MIX: REMOVE BOTTLE	100E	The developer mix bottle needs to be removed before printing can continue.	<ol style="list-style-type: none"> 1. Open the front cover. 2. Remove the developer mix bottle. 3. Close the front cover. 4. Press Enter to clear the error message. 5. Call for service if the problem continues.
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.
DISKETTE IS NOT INSERTED	E004	A diskette is not inserted in the drive or the diskette is corrupted.	Insert a diskette and retry.
DUPLEX DISABLED	D005	Attempt to duplex with duplex disabled.	<ol style="list-style-type: none"> 1. Press Start and retry. 2. Call for service if the problem continues.
ENABLING ...		The printer is attempting to activate an attachment card or application.	Not an error, informational only.
ERROR SEE USER'S GUIDE	BA00 through BA02	Program check.	<ol style="list-style-type: none"> 1. Restart the printer. 2. Call for service if the problem continues.
ERROR SEE USER'S GUIDE	BC02	Invalid print head resolution.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.
ERROR SEE USER'S GUIDE	BC03	Invalid tray ID.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.
ERROR SEE USER'S GUIDE	BC04	Invalid maximum paper size.	<ol style="list-style-type: none"> 1. Check paper size assigned to each tray. 2. Call for service if the problem continues.
ERROR SEE USER'S GUIDE	BC05	Memory configuration changed.	Call for service and report code BC05.
ERROR SEE USER'S GUIDE	BF01 through BF02	Control unit disk error.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.
ERROR SEE USER'S GUIDE	BF03	Automatic backup to diskette failure.	<ol style="list-style-type: none"> 1. This error is for the log only. 2. Inform the Customer Engineer on next service call.
ERROR SEE USER'S GUIDE	C003 through C004	Control unit error.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.
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"> 1. Restart the printer. 2. Call for service if the problem continues.

Table A-1 (Page 4 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
ERROR SEE USER'S GUIDE	D300 through D3FF	Printer error.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Power on. Press Start and retry. 3. Call for service if the problem continues.
ETHERNET ERROR	A450	Ethernet TCP/IP—Control unit error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
ETHERNET ERROR	A451	Ethernet TCP/IP—Host error.	<ol style="list-style-type: none"> 1. Press Start and retry. 2. Call for service if the problem continues.
ETHERNET ERROR	A452	Ethernet TCP/IP—Network error.	<ol style="list-style-type: none"> 1. Report network problems to site System Network Administrator. 2. Call for service if the problem continues.
ETHERNET ERROR	A453 A454	Ethernet TCP/IP—Communications error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
ETHERNET ERROR	A455	Ethernet TCP/IP—Host error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
ETHERNET ERROR	A456	Ethernet TCP/IP—Network error.	<ol style="list-style-type: none"> 1. Report network problems to site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
ETHERNET ERROR	A457 through A45B	Ethernet TCP/IP—Communications error.	<ol style="list-style-type: none"> 1. Report network problems to site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
ETHERNET ERROR	A45C	Ethernet TCP/IP—Invalid startup.	<ol style="list-style-type: none"> 1. Report network problems to site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
ETHERNET ERROR	A45D	Ethernet TCP/IP—Invalid run time.	<ol style="list-style-type: none"> 1. Report network problems to site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
FONT DISK SPACE IS FULL	E023	The hard disk space reserved for fonts is full.	Delete some fonts from the hard disk and retry.
FORM MISMATCH FOR AUTOSWITCH		A different form name has been 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.
FORMATTING ...		The printer is creating the print job for an internal print request, such as PRINT CURRENT CONFIG or PRINT SAMPLES.	Not an error, informational only. Wait for the message to clear.
FRONT COVER OPEN	0103	The front cover is open.	Close the front cover (if you have finished procedures requiring the door to be open).

Table A-1 (Page 5 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
FUNCT. UNAVAIL DISABLE IPDS		You attempted to disable an attachment adapter while it was the active IPDS source attachment and the IPDS application was enabled.	Disable the IPDS application using the ATTACHMENTS / APPLICATIONS / IPDS / ENABLE STATUS menu.
FUNCT. UNAVAIL DISABLE TOK RING FUNCT. UNAVAIL DISABLE ETHERNET FUNCT. UNAVAIL DISABLE SDLC FUNCT. UNAVAIL DISABLE LPR FUNCT. UNAVAIL DISABLE FTP FUNCT. UNAVAIL DISABLE TFTP FUNCT. UNAVAIL DISABLE PC PARALLEL FUNCT. UNAVAIL DISABLE ATTACHMT		Certain configuration items can be changed only when the attachment adapter or application is not active. You attempted to change one of these items when the card or application was active.	Disable the adapter or application and try again.
FUNCTION UNAVAIL ENABLE IPDS		You attempted to access the IPDS configuration menu while the printer's IPDS subsystem was not running.	Enable the IPDS subsystem using the SETUP / MACHINE CONFIGURATION / DATA STREAMS / IPDS / ENABLE STATUS menu.
FUNCTION UNAVAIL ENABLE PCL		You attempted to access the PCL configuration menu while the printer's PCL subsystem was not running.	Enable the PCL subsystem using the SETUP / MACHINE CONFIGURATION / DATA STREAMS / PCL / ENABLE STATUS menu.
FUNCTION UNAVAIL ENABLE POSTSCRIPT		You attempted to access the POSTSCRIPT configuration menu while the printer's POSTSCRIPT subsystem was not running.	Enable the PCL subsystem using the SETUP / MACHINE CONFIGURATION / DATA STREAMS / POSTSCRIPT / ENABLE STATUS menu.
FUNCTION UNAVAIL INSTALL PCL		You attempted to access the PCL menu on a printer that does not have the PCL feature installed.	Contact your point of purchase and order the PCL feature.
FUNCTION UNAVAIL INSTALL POSTSCRIPT		You attempted to access the POSTSCRIPT menu on a printer that does not have the PostScript feature installed.	Contact your point of purchase and order the PostScript feature.
FUNCTION UNAVAIL MUST BE OFFLINE		You cannot perform the requested function when the attachment is enabled.	Have the key operator disable the attachment. Retry the function.
FUNCTION UNAVAIL (READ ONLY)		You attempted to change a value displayed on the menu, but the menu item is a fixed value and cannot be changed.	No action required. Do not attempt to change this item.

Table A-1 (Page 6 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
FUNCTION UNAVAIL STOP PRINTER		You selected a menu item that is not valid when the printer is printing.	<ol style="list-style-type: none"> 1. Press Enter to clear the message. 2. Press Stop to make the printer Not Ready. 3. Reselect the menu item.
FUSER UNIT: REPLACE NOW	1005	The fuser needs to be replaced.	Replace the fuser unit.
FUSER UNIT: REPLACE SOON	1013	The fuser unit life is almost finished.	Replace the fuser unit soon.
HARD ABORT			See "Hard Abort" on page 7-13 for recovery actions.
HOST APP OFF		The PSF Writer application is not operational on the host. This message appears if the printer is running in a PSF Printer Sharing environment with other VTAM PSF application or with PostScript or PCL jobs. Normally this message does not appear when the printer is connected to a single PSF that is not being shared.	<ol style="list-style-type: none"> 1. Determine if the printer is in a PSF Sharing environment and if there is a job in the PSF print queue. 2. If the printer is in a PSF Sharing environment, wait 20 minutes before proceeding to the next step. 3. Start the PSF Writer application on the host. If this fails for a new installation, check the PSF Writer configuration on the host. If the PSF Writer is operational on the host and you have a new installation, check the networking configuration path to the printer. (This applies to an SNA attachment only.)
IN PROGRESS ...		The printer is processing a request you made on the operator panel.	Not an error, informational only. Wait for the request to be processed.
INSTALLATION FAILED	E003	Installation of fonts has failed.	<ol style="list-style-type: none"> 1. Follow the proper procedure and try to install the fonts again. 2. Call for service if the problem continues.
INTERNAL PRINT ERROR	A501 through A505	Internal printing—Control unit problem.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
INVALID FILE FORMAT	E016	The format of the file is invalid.	Check the formats of the font files you are trying to install. If the problem continues, get another diskette or call your font vendor.
INVALID FONT SELECTED	E015	An invalid font was selected for installation.	Do not select a font that you have previously installed.
IPDS ATTACHMENT NOT ACCESSIBLE	E030	Operator cannot query for IPDS attachment status.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
IPDS ATTACHMENTS NOT DISABLED	E019	You were using the font management utility to add or delete an IPDS font while the printer had an active IPDS communication session with a host.	Disable the active IPDS communication session by using the ATTACHMENTS / APPLICATIONS / IPDS / ENABLE STATUS / DISABLE menu. Then try the font management operation again.

Table A-1 (Page 7 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
IPDS BUSY TRY LATER	E032	The IPDS font data base is busy.	Try the procedure again when IPDS is not busy.
IPDS FAILED	E031	The query for the IPDS font data base failed.	<ol style="list-style-type: none"> 1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
JAM RECOVERY OVERRIDDEN	B00D	Operator has overridden jam recovery.	Not an error, informational only.
JAM RECOVERY SUPPRESSED	B00E	Jam recovery has been suppressed.	Not an error, informational only.
JOB HAS BEEN CANCELED	BOOA	Job has been canceled.	Not an error, informational only.
JOB n CANCELLED		The job numbered "n" has been canceled.	Not an error, informational only.
LISTING OF FONTS FAILED	E022	The listing font procedure has failed.	<ol style="list-style-type: none"> 1. Follow the proper procedure and try to list the fonts again. 2. Call for service if the problem continues.
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	The loaded form for this print job cannot be used.	Assign a different form to the tray or change the definition of the form that is now loaded in the tray.
NO ATTACHMENT SELECTED / AVAILABLE		<p>You attempted to enable the IPDS application, but one of the following occurred:</p> <ul style="list-style-type: none"> • No IPDS attachment has been selected in the ATTACHMENT / APPLICATIONS / IPDS / CONFIGURATION / SOURCE ATTACHMENT menu • The adapter you selected in the ATTACHMENT / APPLICATIONS / IPDS / CONFIGURATION / SOURCE ATTACHMENT menu is not installed in the machine. 	Make a valid selection in the SOURCE ATTACHMENT menu.
NO A4 OR LETTER PAPER LOADED		Certain print samples are designed to print only on paper sizes A4 or LETTER. You have requested one of these samples, but there is not paper of either size loaded in the printer or the tray in which the required paper is loaded is disabled.	Load the appropriate paper or enable the tray in which it is already loaded.

Table A-1 (Page 8 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
NO HOST CONNECT		There is no line connection made for the SNA Token Ring or SNA SDLC connection to the host.	For PSF/400, vary on the AS/400 controller for the line. For all other hosts, check the configurations and communication controller connections. If the line connection is up on the host system, check the configuration to ensure that the host is configured correctly. Try changing the call direction on the printer to CALL for Token Ring. Changing to CALL sometimes causes the system to attach and overcome other configuration problems. (This applies to an SNA attachment only.)
NO SPOOLED JOBS		You selected the QUEUE STATUS menu item when there were no jobs spooled to the printer.	Not an error, informational only.
NO VALID FONT FILE FOUND	E017	No valid file was found on the diskette.	Insert another diskette with valid font formats or call the font vendor.
NO VALID FONT TO DELETE	E021	No more installed fonts to delete.	Stop the deletion procedure.
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	2006	The side tray is out of paper.	Load paper in side tray.
OUT OF PAPER TOP FRONT TRAY	2005	The top front tray is out of paper.	Load paper in top front 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.
PAGE EJECTING IN PROGRESS ...		You pressed the PAGE EJECT key. The PC Parallel job that has been received is now being processed to completion.	Not an error, informational only. Wait for the job to print.
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	2031	Paper is detected on paper path 22 (top front tray pick jam sensor).	Remove paper from the paper path.

Table A-1 (Page 9 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
PAPER JAM	2032	Paper is detected on paper path 23 (side tray pick jam sensor).	Remove paper from the paper path.
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 feed from lower sub tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2054 2055	A double feed from upper sub tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2058 2059	A double feed from top front tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	205A 205B	A double feed from side tray was detected.	Follow directions for clearing paper jams.
PAPER JAM	2060	There is a paper jam at main tray (before the main tray pick sensor).	Follow directions for clearing paper jams.
PAPER JAM	2061	There is a paper jam at main tray (main tray pick sensor).	Follow directions for clearing paper jams.
PAPER JAM	2062	There is a paper jam at main tray.	Follow directions for clearing paper jams.
PAPER JAM	2064 through 2066	There is a paper jam at lower sub tray.	Follow directions for clearing paper jams.
PAPER JAM	2068 through 206A	There is a paper jam at upper sub tray.	Follow directions for clearing paper jams.
PAPER JAM	2070 through 2072	There is a paper jam at top front tray.	Follow directions for clearing paper jams.
PAPER JAM	2074 through 2078	There is a paper jam at side tray.	Follow directions for clearing paper jams.
PAPER JAM	4004	Paper is detected on paper path 5 (IS feed sensor).	Follow directions for clearing paper jams.
PAPER JAM	4006	Paper is detected on paper path 7 (IS timing sensor).	Follow directions for clearing paper jams.
PAPER JAM	4007	Paper is detected on paper path 8 (IS skew 1 sensor).	Follow directions for clearing paper jams.
PAPER JAM	4008	Paper is detected on paper path 9 (IS skew 2 sensor).	Follow directions for clearing paper jams.
PAPER JAM	4009	Paper is detected on paper path A (IS return top sensor).	Follow directions for clearing paper jams.
PAPER JAM	4010 through 4013	There is a paper jam at the registration station.	Follow directions for clearing paper jams.

Table A-1 (Page 10 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
PAPER JAM	4020	A skewed sheet from main tray was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4021	A skewed sheet from lower sub tray was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4022	A skewed sheet from upper sub tray was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4024	A skewed sheet from the return path was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4025	A skewed sheet from top front tray was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4026	A skewed sheet from side tray was detected at the registration unit.	Follow directions for clearing paper jams.
PAPER JAM	4030 4031	There is a paper jam at the input station (IS feed sensor).	Follow directions for clearing paper jams.
PAPER JAM	4032 4033	There is a paper jam at the input station (IS top sensor).	Follow directions for clearing paper jams.
PAPER JAM	4034	There is a paper jam at the input station (double feed detector).	Follow directions for clearing paper jams.
PAPER JAM	4037 4038	There is a paper jam at the registration station (IS timing sensor).	Follow directions for clearing paper jams.
PAPER JAM	403E 403F	There is a paper jam at the registration station (paper top return sensor).	Follow directions for clearing paper jams.
PAPER JAM	600A	Paper is detected on paper path B (drum wrap sensor).	Follow directions for clearing paper jams.
PAPER JAM	600B	Paper is detected on paper path C (switch-back path sensor).	Follow directions for clearing paper jams.
PAPER JAM	600C	Paper is detected on paper path D (return path 1 sensor).	Follow directions for clearing paper jams.
PAPER JAM	600D	Paper is detected on paper path E (return path 2 sensor).	Follow directions for clearing paper jams.
PAPER JAM	600E	Paper is detected on paper path F (PF out sensor).	Follow directions for clearing paper jams.
PAPER JAM	6010	Paper is detected on paper path 20 (HR out sensor).	Follow directions for clearing paper jams.
PAPER JAM	6028	The simplex sheet is wrapped around the photoconductor belt.	Follow directions for clearing paper jams.

Table A-1 (Page 11 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
PAPER JAM	6029	The duplex sheet is wrapped around the photoconductor belt.	Follow directions for clearing paper jams.
PAPER JAM	6038 6039	There is a paper jam at the fusing station.	Follow directions for clearing paper jams.
PAPER JAM	6040	There is a paper jam at the switch back.	Follow directions for clearing paper jams.
PAPER JAM	6044 6045	There is a paper jam at the paper feed exit.	Follow directions for clearing paper jams.
PAPER JAM	6048 through 604B	There is a paper jam at the return feed path.	Follow directions for clearing paper jams.
PAPER JAM	7041	Paper is detected on paper path 21 (side path sensor).	Follow directions for clearing paper jams.
PAPER JAM	7078	There is a paper jam at base stacker (before the base stacker out sensor).	Follow directions for clearing paper jams.
PAPER JAM	707A	There is a paper jam at upper stacker (before the upper stacker out sensor).	Follow directions for clearing paper jams.
PAPER JAM	7080 7081	There is a paper jam at side stacker (side stacker jam sensor).	Follow directions for clearing paper jams.
PASSWORD INCORRECT		You entered an incorrect password at the ENTER PASSWORD prompt.	Enter the correct password.
PASSWORD CHANGE SUCCESSFUL		The new password has been set.	Not an error, informational only.
PASSWORD CHANGE FAILED		You entered the new password differently the first and second times. The password was not set or changed.	Repeat the process to set or change the password.
PC PARALLEL: INTERNAL ERROR	A602	PC parallel internal error.	Call for service if the problem continues.
PC PARALLEL: INTERNAL ERROR	A603	PC parallel control unit error.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PC PARALLEL: INTERNAL ERROR	A604	Configuration error.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PC PARALLEL: LOAD FAILED	AF20	PC parallel load driver failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PC PARALLEL: UNLOAD FAILED	AF21	PC parallel unload driver failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.

Table A-1 (Page 12 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
PC PARALLEL: OPEN FAILED	AF22	PC parallel open driver failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PC PARALLEL: CLOSE FAILED	AF23	PC parallel close driver failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PC PARALLEL: COMMUN FAILED	AF24	PC parallel communication failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PCL BUSY TRY LATER	E008	The PCL device (pcl) is busy and cannot be suspended.	Try the procedure again when PCL is not busy.
PCL FAILED	E007	Communication with the PCL device (pcl) failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PCL NOT RESUMED	E011	Communication with the PCL device (pcl) failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PHOTOCOND BELT: REPLACE NOW	1007	The photoconductor belt needs to be replaced.	Replace the photoconductor belt.
PHOTOCOND BELT: REPLACE SOON	1014	The photoconductor belt life is almost finished.	Replace the photoconductor belt soon.
POSTSCRIPT BUSY TRY LATER	E010	The PostScript device (ps) is busy and cannot be suspended.	Try the procedure again when PostScript is not busy.
POSTSCRIPT FAILED	E009	Communication with the PostScript device (ps) failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
POSTSCRIPT NOT RESUMED	E013	Communication with the PostScript device (ps) failed.	1. Shut down the printer and power off. 2. Restart the printer and retry. 3. Call for service if the problem continues.
PRINT ADJUST HAS BEEN ENTERED	B009	Printer adjust has been entered.	Not an error, informational only.
PRINT FONT LIST FAILED	E018	Printing of the font list failed.	1. Follow the proper procedure and try to print the listing again. 2. Call for service if the problem continues.
PRINTER HAS BEEN MADE NOT READY	B00C	Printer has been made not ready.	Not an error, informational only.
PRINTER SETUP HAS CHANGED	B003	Printer attributes have changed.	Not an error, informational only.
PROCESSING ...		The printer is processing the request you made on the operator panel.	Not an error, informational only.
PROGRAM CHECK			See "Program Check" on page 7-13 for recovery actions.

Table A-1 (Page 13 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
READING ...		The printer is reading internal data and processing it to determine the next message to display.	Not an error, informational only.
REENTER PASSWORD		When you set or change a password, it must be entered a second time to ensure it was entered correctly.	Enter the correct password again.
REMOVE DEVELOPER MIX BOTTLE	100E	The developer mix bottle needs to be removed before printing can continue.	<ol style="list-style-type: none"> 1. Open the front cover. 2. Remove the developer mix bottle. 3. Close the front cover. 4. Press Enter to clear the error message. 5. Call for service if the problem continues.
RESTART IN PROGRESS		The IPDS subsystem is being restarted because you selected the SETUP / MACHINE CONFIGURATION / DATA STREAMS / IPDS / CONFIGURATION / RESTART IPDS NOW menu item.	Not an error, informational only.
SDLC ERROR	A4A0 A4A1 A4A2	SDLC/Token Ring SNA—Communication error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
SIDE STACKER COVER OPEN	0106	The cover of the side stacker is open.	Close the cover of the side stacker.
SIDE TRAY OPEN	2015	The cassette in the side tray is not installed or adjusted correctly.	Install or adjust the cassette.
SIZE MISMATCH LOWER SUB TRAY	2040	The paper size in lower sub tray is different from the size presently configured.	<ol style="list-style-type: none"> 1. Reload the tray with the correct paper size. 2. Call for service if the problem continues.
SIZE MISMATCH MAIN TRAY	2040	The paper size in main tray is different from the size presently configured.	<ol style="list-style-type: none"> 1. Reload the tray with the correct paper size. 2. Call for service if the problem continues.
SIZE MISMATCH SIDE TRAY	2040	The paper size in the side tray is different from the size presently configured.	<ol style="list-style-type: none"> 1. Reload the tray with the correct paper size. 2. Call for service if the problem continues.
SIZE MISMATCH TOP FRONT TRAY	2040	The paper size in top front tray is different from the size presently configured.	<ol style="list-style-type: none"> 1. Reload the tray with the correct paper size. 2. Call for service if the problem continues.
SIZE MISMATCH UPPER SUB TRAY	2040	The paper size in upper sub tray is different from the size presently configured.	<ol style="list-style-type: none"> 1. Reload the tray with the correct paper size. 2. Call for service if the problem continues.
SNA SDLC ERROR	A4B0	SNA SDLC—Control unit error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
SNA SDLC ERROR	A4B1	SNA SDLC—Host error.	<ol style="list-style-type: none"> 1. Press Start and retry. 2. Call for service if the problem continues.

Table A-1 (Page 14 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
SNA SDLC ERROR	A4B2 A4B3	SNA SDLC—Network error.	1. Report network problems to the site System Network Administrator. 2. Call for service if the problem continues.
SNA SDLC ERROR	A4B4	SNA SDLC—Communications error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
SNA SDLC ERROR	A4B5	SNA SDLC—Host error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
SNA SDLC ERROR	A4B6	SNA SDLC—Network error.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
SNA SDLC ERROR	A4B7 through A4BB	SNA SDLC—Communications error.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
SNA SDLC ERROR	A4BC	SNA SDLC—Invalid startup.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
SNA SDLC ERROR	A4BD	SNA SDLC—Invalid run time.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
SNA SDLC ERROR	A4BE	SNA SDLC—Waiting for connection.	Normally not an error. If problem continues, do the following: 1. Restart the printer and retry. 2. Report network problems to the site System Network Administrator. 3. Call for service if the problem continues.
SPOOL SPACE FULL	A605	The printer's internal space for holding jobs before they are printed is full. No more data can be received from an attachment or application that is using spooling.	Wait for some of the jobs to print—which frees the space they had been occupying—or cancel some or all the spooled jobs.
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	The base stacker is full of paper.	Remove paper from the stacker.
STACKER FULL SIDE STACKER	700D	The side stacker is full of paper.	Remove paper from the stacker.
STACKER FULL UPPER STACKER	700C	The upper stacker is full of paper.	Remove paper from the stacker.

Table A-1 (Page 15 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
STARTING ...		The printer is processing the start request you made by pressing the START button on the operator panel. The printer is being made READY.	Not an error, informational only.
STOPPING ...		The printer is processing the stop request you made by pressing the STOP button on the operator panel. The printer is being made NOT READY.	Not an error, informational only.
TOKEN RING ERROR	A460	Token Ring TCP/IP—Control unit error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A461	Token Ring TCP/IP—Host error.	1. Press Start and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A462	Token Ring TCP/IP—Network error.	1. Report network problems to the site System Network Administrator. 2. Call for service if the problem continues.
TOKEN RING ERROR	A463 A464	Token Ring TCP/IP—Communications error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A465	Token Ring TCP/IP—Host error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A466	Token Ring TCP/IP—Network error.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A467 through A46B	Token Ring TCP/IP—Communications error.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A46C	Token Ring TCP/IP—Invalid startup.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A46D	Token Ring TCP/IP—Invalid run time.	1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A4A0 through A4C0	Token Ring SNA—Control unit error.	1. Restart the printer and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A4C1	Token Ring SNA—Host error.	1. Press Start and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A4C2	Token Ring SNA—Network error.	1. Report network problems to the site System Network Administrator. 2. Call for service if the problem continues.
TOKEN RING ERROR	A4C3 A4C4	Token Ring SNA—Communications error.	1. Restart the printer and retry. 2. Call for service if the problem continues.

Table A-1 (Page 16 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
TOKEN RING ERROR	A4C5	Token Ring SNA—Host error.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
TOKEN RING ERROR	A4C6	Token Ring SNA—Network error.	<ol style="list-style-type: none"> 1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A4C7 through A4CB	Token Ring SNA—Communications error.	<ol style="list-style-type: none"> 1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A4CC	Token Ring SNA—Invalid startup.	<ol style="list-style-type: none"> 1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TOKEN RING ERROR	A4CD	Token Ring SNA—Invalid run time.	<ol style="list-style-type: none"> 1. Report network problems to the site System Network Administrator. 2. Restart the printer and retry. 3. Call for service if the problem continues.
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"> 1. Restart the printer and retry. 2. Report network problems to the site System Network Administrator. 3. Call for service if the problem continues.
TOP AUTO-EJECT DOOR OPEN	0105	The top auto-eject door is open.	Close the auto-eject door.
TOP FRONT TRAY OPEN	2014	The top front tray is open.	Close the top front tray.
TRANSFER BELT: REPLACE NOW	100A	The transfer belt unit needs to be replaced.	Replace the transfer belt unit.
TRANSFER BELT: REPLACE SOON	1016	The transfer belt unit life is almost finished.	Replace the transfer belt unit soon.
TRAY COVER OPEN	0104	The tray cover is open.	Close the tray cover.
TWINAXIAL ERROR	A100	Twinaxial—Station Address compare error.	<ol style="list-style-type: none"> 1. Check the station address in configuration. 2. Check cables. 3. Call for service if the problem continues.
TWINAXIAL ERROR	A101	Twinaxial—Line parity error.	<ol style="list-style-type: none"> 1. Check cables. 2. Call for service if the problem continues.
TWINAXIAL ERROR	A107	Twinaxial—Severe communication error, generates off-line condition.	<ol style="list-style-type: none"> 1. Check that attachment cables are connected. 2. Restart the printer and retry. 3. Call for service if the problem continues.
TWINAXIAL ERROR	A108 A109	Twinaxial—Printer control unit error, generates off-line condition.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.

Table A-1 (Page 17 of 17). Messages and Recovery Actions

Display Message	Code (SRC)	Description	Recovery Action
TWINAXIAL ERROR	A10A through A10E	Twinaxial—Printer control unit or communications error, generates off-line condition.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
TWINAXIAL ERROR	A1CC through A1FF	Twinaxial—Diagnostics or configuration failure.	<ol style="list-style-type: none"> 1. Restart the printer and retry. 2. Call for service if the problem continues.
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 INPUT TRAY	BC01	Invalid paper size in input tray.	<ol style="list-style-type: none"> 1. Check paper size and cassettes. 2. Shut down the printer and power off. 3. Power on. Press Start and retry. 4. Call for service if the problem continues.
WRONG SEQUENCE NUMBER	E006	The wrong sequence number was entered when adding or deleting fonts.	Correct the sequence number and retry. (Do not use the same sequence number twice.)

Abbreviations

This list explains the acronyms and abbreviations used in this manual and in the other manuals that are part of the 3130 documentation library.

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

RPQ	Request for Price Quotation.	TCP/IP	Transmission Control Protocol/Internet Protocol.
RRL	Request Resource List.	TCS	Two-Channel Switch.
SBCS	Single-byte Character Set.	VM	Virtual Machine.
SCSW	Subchannel Status Word.	VSE	Virtual Storage Extended.
SDLC	Synchronous Data Link Control.	VSE/AF	Virtual Storage Extended/Advanced Functions.
SMM	Select Medium Modification.	VSE/SP	Virtual Storage Extended/System Package.
SNA	System Network Architecture.	XOA	Execute Order Anystate command.
SPX	Sequenced Packet Exchange.	XOH	Execute Order Homestate command.
SRC	System Reference Code.		

Glossary

The following terms are defined as they are used in 3130 documentation. If you do not find the term you need, refer to the index or to the *IBM Dictionary of Computing*, ZC20-1699 or the *IBM Dictionary of Printing*, G544-3973.

A

A3-size paper. Paper that is 297 x 420 mm (11.7 x 16.5 in.). An ISO standard size.

A4-size paper. Paper that is 210 x 297 mm (8.3 x 11.7 in.). An ISO standard size.

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 preprinted form's point of origin horizontally or vertically so that text lines up correctly on the preprinted form.

Advanced Function Image and Graphics. This allows the 3130 to decompress compressed graphics in GOCA format and images in IOCA format.

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. 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*.

ASCII. American National Standard Code for Information Interchange. The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including parity check), that is used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters.

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 an input tray, that autoswitch tray starts feeding paper when the original input tray becomes empty.

B

B4-size paper. Paper that is 257 x 363 mm (10.1 x 14.33 in.). A JIS standard size.

B5-size paper. Paper that is 182 x 257 mm (7.17 x 10.12 in.). A JIS standard size.

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 forms work best in the IBM 3130. See also *cotton bond*.

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

calender. A process to make paper smooth or glossy by passing it through a series of metal rollers during the last steps of a paper-making machine.

calender cut. Slits, glazed lines, or discolored lines across the paper caused when wrinkles pass through the calender rollers.

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*.

chad. (1) The material separated from a data medium when punching a hole. (2) The residue separated from the carrier holes in continuous forms.

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 Standard 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.

chemically pulped wood. The process by which the non-cellulose material that binds wood fibers together is extracted chemically.

coated paper. Paper that has had a surface coating applied to produce smoothness.

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.

coded font. A font file (data set, library member, or resource object) that associates a code page and font character set. For double-byte fonts, a coded font associates multiple pairs of code pages and font character sets.

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

commercial number 10 envelope. A common North American envelope size (4.12 x 9.5 in.).

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 3130 for a specific operating and communication environment.

connector. A means of 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*.

control storage. In the 3130, 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) In the 3130, the electronics and code that control the printer and the communication attachment.

controlling computer. The processing unit to which the 3130 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.

copy group. One or more copies of a sheet of paper. Each may have modifications applied; for example, overlays and text suppression.

copy modification. The process of adding, deleting, or replacing data on selected copies of certain sheets of paper.

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

corner cut. In a form, a cut or opening of any size containing one or more right angles.

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

cotton bond. Paper made of wood fiber and cotton. Bond papers were developed for items such as stocks, bonds, certificates, and other documents that are subjected to repeated handling, filing, and long-term storage. Bond paper is usually designated by the percentage of cotton in the paper, such as 25% cotton bond. See also *bond paper*.

cure. The process of drying ink sufficiently for minimum transfer of the ink to any parts of the printer it contacts.

curl. See *paper curl*.

customer engineer. The person responsible for installing and repairing the printer. Synonymous with *service representative*.

cut. The severed part of a perforation. Cuts are separated by ties.

cutout. A part of the form that has been eliminated or perforated for subsequent removal; for example, corner cuts and binder holes.

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. (2) A continuous stream of data elements being transmitted, or intended for transmission, in character or binary-digit form, using a defined format.

data-transfer mode. See *data-transfer phase*.

data-transfer phase. The phase of a data call during which data signals can be transferred between data terminal equipments (DTEs) connected via the network.

deep embossing. The process of creating a paper surface by raising or depressing localized areas of the paper in a specific pattern that is more exaggerated than standard embossing. Embossing is usually done with engraved rolls that press the desired pattern into the paper. Deep embossing can cause multiple sheet feeds and paper jams.

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 3130 is in diagnostic mode, it is not accepting information from the attached controlling computer system. In the 3130, only customer engineers can use diagnostic mode. Contrast with *status mode* and *test mode*.

direct attach. The environment in which an application program directly allocates the 3130 printer.

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

disabled mechanism. If necessary, the operator can disable some printer functions. In the 3130, the mechanisms that can be disabled are the paper trays, stackers, and the duplex mechanism.

diskette. A thin, flexible magnetic disk and a protective jacket, in which the disk is permanently enclosed. A 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 *double-byte coded font*.

double-tag interlock. See *high-speed transfer*.

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. Synonym for *two-sided printing*. Contrast with *simplex printing*.

E

edge sensitivity. A setting designed for paper with a nonstandard edge. 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. (2) The library member that contains the definition of the *electronic overlay*. See also *forms*, *preprinted form*, *overlay*, and *forms overlay*.

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 forms.

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

emboss. To press and raise the surface of paper into a design. Embossed paper appears thicker than non-embossed paper, can increase printer wear, and can degrade print quality. See also *deep embossing*.

enable. To make functional. Contrast with disable.

error log. (1) A data set or file in a product or system where error information is stored for later access. (2) A record of machine checks, device errors, and volume statistical data.

error-recovery procedure. Procedures designed to help isolate and, where possible, to recover errors in equipment. The procedures are often used in conjunction with programs that record the statistics of machine malfunctions.

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).

European money transfer form. A form used for financial transactions. Its size is 210 mm x 317 mm (8.3 in. x 12.5 in.).

exception. (1) An invalid or unsupported data-stream construction. (2) In IPDS, a condition requiring host notification or requiring the host to resend data.

F

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.

font section. A subdivision of a double-byte font character set. The section consists of a maximum of 256 characters.

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. The material on which output data is printed, such as paper or adhesive labels. See *electronic overlay* and *preprinted form*.

forms overlay. In the 3130, that function of the printer that allows customer-prepared data to be printed with variable-page data. See also *overlay* and *electronic overlay*.

forms path. The entire route that forms travel during processing. The forms path usually begins where the forms are loaded and ends at the stacker. Synonym for *paper path*.

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

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.

G

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

graphic character. A character that is normally represented by a graphic, independent of code points or fonts. A graphic character is often in the form of a spatial arrangement of adjacent or connected strokes; for example, a letter or digit.

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

H

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

Hewlett-Packard Printer Command Language (HP-PCL). A data stream used for printing on Hewlett-Packard laser printers and compatible printers.

Hewlett-Packard Printer Job Language (HP-PJL). A language for controlling the printer at the job level.

high-speed transfer. A transfer method using 'service out'/'service in' and 'data out'/'data in' lines. This method is faster than single-tag interlock.

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 office.

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

icon. A pictorial representation of an object.

ideographic. Pertaining to 2-byte characters consisting of pictograms, symbolic characters, and other types of symbols.

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*.

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

image 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. See also *image*.

Initial microcode load (IML). A procedure that prepares the 3130 for use.

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

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.

interlocked mode. Prevents a machine or device from initiating further operations until an operation in process is completed.

interlocking design. An envelope design that can cause adjacent envelopes in a stack to lock together and be difficult to separate with a picking mechanism. Envelopes with windows or cutouts have an interlocking design.

internal print job. A print job originated on the printer itself. Example: print samples, current attachment configuration print-out.

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

IPX. Internetwork Packet eXchange. A Novell, Inc. implementation of the XNS communication protocol that transports data packets between network devices. Delivery of the data packets is not guaranteed. Contrast with *SPX*.

ISO DL envelope. A standard international envelope size (110 x 220 mm).

ISO 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.

JIS. Japanese Industry Standards. Used in reference to paper standards for size.

job separation. (1) The hardware mechanism that uses the mark form sequence to distinguish jobs, which are consecutively stacked in the output stacker. (2) In the 3130, job offset stacking is used to indicate job termination. See also *offset stacking*.

K

key operator. A user assigned to perform routine maintenance and configuration of the printer.

L

laid finish. The ribbed appearance of paper that is produced by a roll on which the wires are laid parallel to each other instead of being woven.

landscape orientation. Text and images that are printed parallel to the longer side of the forms. 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 3130.

ledger-size paper. Paper that is 279 x 432 mm (11.0 x 17.0 in.).

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

letter-size paper. Paper that is 216 x 279 mm (8.5 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 prints a line of characters as a unit. Contrast with *page printer*.

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

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

lux. A unit of illumination equal to the direct illumination of a surface that is everywhere 1 meter

from a uniform point source of 1 candle intensity. Equal to 1 lumen per square meter.

M

medium access control. For local area networks, the method of determining which device has access to the transmission medium at any time.

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

microcode. In the 3130, refers to the microprogramming stored on the microcode diskette. Microcode is used by the control unit to manage the printer and its functions.

N

NetWare. A network operating system developed by Novell, Inc. NetWare runs on a server and provides several functions to the network and the applications running on it, including print spooling, file serving, and interprocess communications.

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. Contrast with *tumble duplex*.

O

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 surface 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. With the 3130 printer, an operator panel keyboard selection that causes the printer to accept and save any changed information.

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

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 3130 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*.

outboard recorder (OBR). A feature that records pertinent data on the system recorder file when an unrecoverable I/O exception occurs.

overlay. (1) 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. (2) The library member that contains the definition of an overlay. See also *electronic overlay* and *forms overlay*.

overrun condition. Loss of data because a receiving device is unable to accept data at the rate it is transmitted.

overstrike. The merging of two or more graphic characters in the same position on a sheet of paper.

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 buffer storage. Writable control storage in which data to be printed is stored. The data is stored one line at a time until a page is complete and ready to print.

page definition (PAGEDEF). A statement that specifies attributes of a logical page, such as the width of its margins and the orientation of text.

page printer. A device that prints one page at a time (for example, xerographic printer, cathode-ray-tube printer, film printer). 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.

page segment. (1) An object that can include text and images and that can be printed on any addressable point on a page or electronic overlay. It assumes the environment of the object in which it is included. (2) The library member which contains the definition of a page segment.

pallet. A portable platform for handling, storing, or moving materials.

paper curl. The curve or bend of the paper.

paper path. The entire route that forms travel while they are being processed. The paper path usually begins where the forms are loaded and ends at the stacker.

parallel channel. A channel having a System/360 and System/370 channel-to-control-unit I/O 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. Storage that contains the fonts and images used for printing the character data, overlays, and segments contained in the page buffer.

PC drum. A hollow cylinder that is covered with photoconductive material.

PC parallel. A standard interface between a personal computer and another device, such as a printer.

PCL. See Hewlett-Packard Printer Command Language.

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. The material that is used as the medium for transferring images to paper.

physical page. The form on which the printer is printing, such as an 8.5 x 11-inch sheet of paper. Contrast with *logical page*.

physical planner. The person in an organization who plans the environmental, electrical, and space requirements for your facility.

pitch. A unit of measurement for the width of a printed character. It identifies the number of graphic characters per inch; for example, 10-pitch has ten graphic characters per inch. Uniformly spaced fonts are measured in pitches. Contrast with *point*.

PJL. See Hewlett-Packard Printer Job Language.

planning coordinator. The person in your organization who is responsible for coordinating all the planning and installation activities for the 3130.

plant. A manufacturing location.

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

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*.

PostScript. (1) A page description language with interactive graphics capabilities that was developed by Adobe Systems, Inc. (2) An interpretive programming language that describes the appearance of text, graphical shapes, and sampled images on a printed page by defining a print file format that is the interface between document composition applications and raster printing devices.

power off. To remove power to the printer.

power on. To provide power to the printer.

preprinted form. A sheet of forms containing a preprinted design of constant data with which variable data can be combined. See also *forms* and *electronic overlay*.

Presentation Text Object Content Architecture (PTOCA). IPDS control sequences used to present text information on a page, page segment, or overlay.

printer. A device that writes output data from a system onto paper or other media.

Print-Error Marker (PEM). Small, black, rectangular marks that indicate incorrectly placed data in the valid printable area.

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.

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

Random-Access Memory (RAM). A storage device into which data is entered and from which data is retrieved in a nonsequential manner.

raster. (1) In computer graphics, a predetermined pattern of lines that provides uniform coverage of a display space. (2) The coordinate grid that divides the display area of a display device. (3) In the 3130, an on/off pattern of electrostatic images produced by the laser print head under control of the character generator.

raster pattern. A series of picture elements (pels) arranged in scan lines to form an image.

raster scan. A technique of generating or recording the elements of an image by a line-by-line sweep across the entire output medium.

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 3130 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 offline testing of the printer.

resource. (1) People, equipment, or material used to perform a task or a project. (2) Any facility of a computing system or operating system required by a job or task, including main storage, input/output devices, processing units, data sets, and controller processing programs; for example, page printers use resources such as form definitions, page definitions, and fonts.

reverse heading. A heading where each character is highlighted by reversing the color of the character with its background; for example, changing a black character on a white background to a white character on a black background.

S

scanner. A device that examines OCR, graphics, MICR, or bar-code patterns and generates electrical signals corresponding to the pattern. It sends the signals to a computing device for processing.

screen or screening. (1) In document printing, a sheet of material, usually film, carrying a regular pattern of small dots. When printing, ink adheres only to the dots, and many dots close together appear solid. This method prints large areas of ink on paper but uses much less ink than printing the same area with solid ink. (2) The viewing area of a workstation's display.

scrolling. Moving a display image vertically or horizontally in order to view data not otherwise visible within the boundaries of the display.

security paper. Specially formulated paper used for negotiable documents, such as checks, which improves the antifraud characteristics of the document.

sense byte. A byte that contains sense (exception) information.

sense data. Sense information used to indicate the causes of command-stream and device exceptions and to direct the host program to the appropriate exception-recovery actions.

service representative. The person responsible for installing and repairing the printer. Synonymous with *customer engineer*. See also *IBM customer engineer*.

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. Example: letterhead paper.

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

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 paper going through the paper path at a slight angle. This will cause the printing lines to not be aligned properly.

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. Items such as adhesive labels and preprinted paper that the 3130 can print on.

special-purpose materials. Printable items other than blank forms; for example, adhesive labels and preprinted forms.

SPX. Sequenced Packet eXchange. A Novell, Inc. communication protocol that monitors network transmissions to ensure successful delivery of data packets to the destination. Contrast with *IPX*.

SRC. System Reference Code.

stacker. A device used to hold paper or forms that have been printed; the output device of a printer.

stack lean. A measurable slope from the vertical of a stack of forms. Excessive stack lean can cause failures when feeding forms.

status mode. The operational mode in which information is received from the attached controlling computer system and printed output is produced. Contrast with *test mode* and *diagnostic 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.

Synchronous Data Link Control (SDLC). For managing synchronous, code-transparent, serial-by-bit, information transfer over a link connection.

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, such as a failing field-replaceable unit, for a customer engineer.

T

task. A basic unit of work to be accomplished by a device or an operator.

tensile strength. A measure of the force that the paper forms can withstand without tearing.

test mode. The operational mode in which the customer engineer runs diagnostic tests. Contrast with *status mode* and *diagnostic mode*.

text orientation. The position of text as a combination of print direction and baseline direction. 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) In a document-printing machine, image-forming material used in electrostatic processes. (2) A supply item for the printer. 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) In the 3130, a customer engineer analysis procedure.

trailing edge. The trailing edge of the paper is the edge of the paper that proceeds into the printer last as it is fed from one of the paper supplies.

tray. A device for holding paper forms used for printing. Contrast with *stacker*.

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. Contrast with *normal duplex*.

twinaxial. A cable consisting of two conductors, usually small copper tubes or wires insulated from each other, within and insulated from another conductor of larger diameter, usually copper tubing or copper braid.

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

V

value. A quantity assigned to a constant, a variable, a parameter, or a symbol.

variable data. The data that can vary; for example, 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*. Contrast with *raster pattern*.

void. (1) A missing part of the printed character. (2) A missing piece of a continuous form.

X

xerographic paper. A paper that is manufactured specifically for the xerographic process, in which key paper qualities are carefully controlled.

Index

Numerics

- 1 000-sheet dual top stacker 1-2
- 250-sheet cassette 1-2
- 500-sheet cassette 1-2

A

- accessing the keyboard 3-11
- accessories
 - optional 1-2
- adjusting print 4-16
- adjusting side stacker 5-21
- adjusting side tray 5-13
- adjusting top stackers 5-20
- all black print samples 7-14
- attachment configuration items 4-25
- attachments 1-2
 - configuring 4-23
 - enabling and disabling 4-23
 - printing configuration 4-25
 - setting configuration parameters 4-25
- Attention 3-14
- Attention status indicator 3-14
- autoswitch tray
 - selecting 4-5
- AVAILABLE SPOOL SPACE (MB) 4-22

B

- base stacker
 - adjusting 5-20
 - clearing paper from 7-4
 - function of 1-6
- basis weight
- BEEPER 3-17, 4-11
 - error 3-17
 - keys 3-17
- bottom door
 - clearing paper from 7-4
 - function of 1-6

C

- cable attachments 4-23
- Cancel Print key 3-3
- canceling print jobs 2-8, 5-5
- canceling your keyboard entry 3-14
- cartridge slot
 - toner cartridge slot function 1-7
- changing paper size assigned to a tray 4-4
- changing the form name 4-4

- changing the key operator password 4-17
- character
 - description of keyboard characters 3-11
- choosing forms 1-9
- cleaner unit
 - recommended replacement 6-2
 - replacing 6-18
- cleaning the printer 6-20
- clearing information messages 5-4
- clearing paper from
 - EP module 7-6
 - front trays 7-12
 - paper feed module area 7-8
 - side doors and top stackers 7-4
 - stackers A-1
- clearing paper jams 2-7, 7-3
- CODE LEVEL 4-22
- codes and messages A-1
- configuration items
 - setting 4-11
- configuration items table 4-11
- configuration parameters
 - setting 4-25
- configuring
 - input trays 4-2
 - stackers 4-7
 - the printer 4-10
- cover
 - front cover function 1-6
 - stacker cover function 1-6
 - toner supply cover function 1-6

D

- defaults for tray selection 4-4
- deleting a form 4-21
- developer mix
 - recommended replacement 6-2
 - replacing 6-7
- developer mix duct
 - function of 1-7
- display 1-2, 3-4
 - keyboard 3-11
- display messages and codes A-1
- display messages for supplies 6-4
- Display Modes 3-4
- door
 - bottom door function 1-6
- drum seal
 - cleaning 6-23
- drum unit
 - cleaning 6-23

- drum unit (*continued*)
 - function of 1-7
- drum unit handle
 - function of 1-7
- dual top stacker 1-2
- duct
 - See developer mix duct
- DUPLEX 4-11
- duplex (two-sided) form 4-18
- duplex mode
 - paper positioning 5-15, 5-16, 5-17
- duplex model
 - positioning paper 2-5
- duplex model features 1-4
- Duplex status indicator 3-15

E

- EC LEVEL 4-22
- editing keyboard entries 3-14
- editing operations 3-11
- enabling or disabling a stacker 4-8
- enabling or disabling a tray 4-3, 4-7
- ENGINE CODE LEVEL 4-22
- Enter key 3-3
- enter key operator password tutorial 3-17
- entering
 - a password to access menu items 3-6
 - menu mode 3-6
 - menu mode tutorial 3-17
- envelope feeder 1-2
 - function of 1-6
 - loading envelopes 5-18
- EP module
 - clearing paper from 7-6
 - function of 1-7
- EP module handle
 - function of 1-7
- error beeper 3-17
- error messages A-1
- exit menu mode 3-6
- exit menu mode tutorial 3-17
- external parts of the printer 1-5

F

- features
 - duplex model 1-4
 - high-capacity simplex model 1-3
 - simplex model 1-2
 - standard with 3130 printer 1-2
- final notification message 6-4
- form name 4-18
 - changing assigned name 4-4
- form size 4-18

- forms
 - adding to printer 4-18
 - assigning to a tray 4-4
 - changing form name for a tray 4-4
 - checking definition 4-21
 - defining to printer 4-18
 - deleting from printer 4-21
 - modifying 4-20
- front cover 1-6
 - function of 1-6
- front tray 1-2
- front trays
 - paper positioning (duplex) 5-15, 5-16
 - paper positioning for simplex models 2-5
- fuser unit
 - recommended replacement 6-2
 - replacing 6-16

G

- guidelines for supplies 6-3

H

- handle
 - drum unit handle function 1-7
- handling aborts and program checks 7-13
- handling messages 2-7
- hard abort 7-13
- high-capacity simplex model features 1-3
- how to restart the printer 5-3
- how to shut down the printer 5-3

I

- image transfer print samples 7-15
- impressions 1-2
- indicator
 - tray indicator function 1-6
- indicators
 - paper jam 7-2
- information messages A-1
- input keys 1-2
- input trays
 - assigning paper sizes 4-4
 - changing form name 4-4
 - configuring 4-2
 - enabling and disabling 4-3
 - names 4-2
 - PSF assigned numbers 4-6
- instruction 5-21
- instructions for entering password 3-17
- internal parts of printer 1-7
- interrupting printing 2-3, 5-5

J

Job/Processing status indicator 3-15

K

key operator
 changing password 4-17
 configuring attachments 4-23
 entering password tutorial 3-17
key operators
 configuring stackers 4-7
keyboard
 accessing 3-11
 characters 3-11
 display 3-11
 editing operations 3-11
 navigating 3-13
 order of submenu items 3-12
keyboard mode 3-11
keys 1-2
keys beeper 3-17

L

label parameters
 recommendations for 1-10
LANGUAGE 4-11
light print sample 7-14
loading a form 4-18
loading labels 5-17
loading paper 2-5, 5-6
 envelope feeder 5-18
 lower sub tray, upper sub tray, top front tray 5-9
 main tray 5-7
lower sub tray
 clearing paper from 7-12
 function of 1-6
 loading paper 5-9

M

main tray
 clearing paper from 7-12
 function of 1-6
making the printer ready 2-3
MANUFACTURING PLANT 4-22
MEMORY (KB) 4-22
menu items
 accessing with password 3-6
Menu Mode 3-5
 entering and exiting 3-6
 tutorial 3-17
Menu/Exit key 3-3
messages
 clearing from display 5-4
 scrollable status messages 6-4

messages (*continued*)
 status messages 5-4
messages and codes A-1
mode
 print mode description 3-5
models of 3130 printer 1-2
modifying a form 4-20
module
 EP module function 1-7
 paper feed module function 1-7
module lever
 paper feed module lever function 1-7

N

navigating through menu tutorial 3-17
navigating through the keyboard 3-13
navigating through the menu 3-6
NetWare 4-24
NOT READY status message 2-2, 5-4

O

offset stacking 4-8
On Line status indicator 3-15
operation precautions 1-9
operator panel 1-2
 function of 1-6
optional accessories 1-2
optional side stacker 5-19
ordering supplies 6-2
OS LEVEL 4-22

P

Page Eject key 3-3
panel
 See operator panel
paper 4-7
 and stock supported 1-9
 clearances for prepunched paper 1-13
 feed module 1-7
 function of 1-7
 guide roller
 cleaning 6-23
 input receptacles 4-3
 jam indicator lights 7-2
 jams 7-2
 output receptacles 4-7
 output stackers 5-19
 parameters 1-9
 recommendations for 1-9, 1-11
paper feed module area
 clearing paper from 7-8
paper feed module lever
 function of 1-7

- parameters
 - label parameter recommendations 1-10
 - paper parameter recommendations 1-9, 1-10
- parts of display 3-12
- password
 - changing for key operator 4-17
 - entering 3-6
 - tutorial 3-17
- photoconductor belt
 - recommended replacement 6-2
 - replacing 6-10
- positioning 5-15
- power off procedure 5-2
- Power status indicator 3-15
- power switch
 - function of 1-6
- power-off sequence 5-2
- power-on sequence 5-2
- powering on and off the printer 5-2
- precautions 1-8, 1-9
- preprinted forms
 - positioning in input trays 5-15, 5-17
- preprinted paper 1-12
- prepunched paper 1-13
 - positioning in input trays 5-16, 5-17
- PRINT COUNT (IMPRESSIONS) 4-22
- print jobs
 - canceling 5-5
 - interrupting printing 5-5
 - starting 5-5
- Print Mode 3-5
- print quality problems 7-14
- print samples 7-14
- print skew print samples 7-15
- printer 1-2
 - accessories 1-2
 - adjusting print 4-14
 - cleaning 6-20
 - configuring 4-10
 - customizing 4-1
 - label parameter recommendations 1-10
 - machine information 4-22
 - maintaining 6-1
 - models of 1-2
 - paper parameters for 1-9, 1-10
 - powering off 5-2
 - powering on 5-2
 - relocating kit 1-8
 - restart procedure 5-3
 - shutdown procedure 5-3
 - standard features 1-2
 - standard paper sizes for 1-9
- printer cabinet
 - cleaning 6-21
- printer cover interior
 - cleaning 6-21
- PRINTER TYPE 4-22
- printing a help page 2-2
- PRINTING status message 2-2, 5-4
- printing the attachment configuration 4-25
- printing the printer configuration 4-12
- priority of input trays 4-4
- procedures
 - adding a form 4-18
 - adjusting print 4-14, 4-16
 - adjusting side stacker 5-21
 - adjusting side tray 5-13
 - adjusting top stackers 5-20
 - canceling print jobs 5-5
 - changing form names/paper size assigned to tray 4-4
 - changing key operator password 4-17
 - checking form definitions 4-21
 - clearing paper from EP module 7-6
 - clearing paper from front trays 7-12
 - clearing paper from paper feed module area 7-8
 - clearing paper from side doors and top stackers 7-4
 - clearing paper from stackers 7-13
 - clearing paper jams 7-3
 - configuring for offset stacking 4-8
 - configuring stackers 4-7
 - deleting a form 4-21
 - determining when to adjust print 4-15
 - enabling and disabling attachments 4-23, 4-24
 - enabling and disabling stackers 4-8
 - enabling or disabling a tray 4-3
 - entering passwords 3-17
 - hard abort 7-13
 - interrupting printing 5-5
 - loading envelopes into envelope feeder 5-18
 - loading paper into main tray 5-7
 - loading paper into side tray 5-13
 - loading paper into trays 5-9
 - modifying a form 4-20
 - positioning paper in front trays 2-5, 5-7, 5-9, 5-15—5-17
 - positioning paper in side tray 2-5, 5-13, 5-15—5-17
 - power on 5-2
 - powering off 5-2
 - program check 7-13
 - replacing cleaner unit 6-18
 - replacing developer unit 6-7
 - replacing fuser unit 6-16
 - replacing photoconductor belt 6-10
 - replacing toner cartridge 6-5
 - replacing transfer belt unit 6-12
 - restarting 5-3
 - selecting an autoswitch tray 4-5
 - setting configuration parameters 4-25
 - setting printer configuration items 4-11
 - shutdown 5-3
 - starting print jobs 5-5

procedures (*continued*)
viewing machine information 4-22
procedures running print samples 4-13, 4-14
PSF/tray name correspondence 4-6

R

READY status message 2-2, 5-4
RECEIVING status message 2-2, 5-4
recovery actions for messages A-1
registration 4-15
relocating the printer 1-8
relocation kit 1-8
replacing developer mix 6-7
replacing supplies 6-2
replacing the cleaner unit 6-18
replacing the fuser unit 6-16
replacing the photoconductor belt 6-10
replacing the toner cartridge 6-5
replacing the transfer belt unit 6-12
resolution of printer 1-2
restarting the printer 2-4, 5-3
running a print test 4-15

S

safety precautions 1-8
saving keyboard entries 3-13
Scroll Down key 3-2
Scroll Up key 3-2
scrollable status messages 6-4
selecting a keyboard character 3-13
selecting an autoswitch tray 4-5
selecting and saving your keyboard entry 3-13
selecting menu items tutorial 3-17
selecting settings and actions 3-7
SERIAL NUMBER 4-22
setting configuration items 4-11
setting configuration parameters 4-25
sheet capacity of input trays 5-7
shutting down the printer 2-4
side stacker 1-2
adjusting 5-21
function of 1-6
side tray 1-2
adjusting 5-13
function of 1-6
loading paper 5-13
paper positioning (duplex) 5-15—5-17
paper positioning (simplex) 5-15—5-17
simplex model
features of 1-2
simplex models
paper positioning 2-5
size
assigning to a tray 4-4

sizes for input trays 5-7
SLEEP TIME (MINUTES) 4-11
SLEEPING status message 2-3, 5-4
stacker
base stacker function 1-6
side stacker function 1-6
upper stacker function 1-6
stacker cover
function of 1-6
stacker names 4-7
stacker selection defaults 4-8
stackers
clearing paper from 7-13
enabling or disabling 4-8
names 4-7
standard envelope sizes 1-9
standard features 1-2
standard paper sizes 1-9
Start key 3-4
starting print jobs 2-3, 5-5
status indicators
operator panel 3-14
status messages 2-2, 5-4
Stop key 3-4
supplies
display messages 6-4
general guidelines 6-3
how to order 6-2
status messages 6-4
when to replace 6-2
switch
power switch 1-6

T

table of configuration items 4-11
testing print quality 4-13
toner cartridge
recommended replacement 6-2
replacing 6-5
toner cartridge slot
function of 1-7
toner does not adhere to paper print sample 7-14
toner supply cover
function of 1-6
top auto-eject door
clearing paper from 7-6
function of 1-6
top front tray
clearing paper from 7-4, 7-12
function of 1-6
loading paper 5-9
top stacker 1-2
top stackers 5-19
TRACING status message 2-3, 5-4

- transfer belt unit
 - recommended replacing 6-2
 - replacing 6-12
- tray
 - lower sub tray function 1-6
 - main tray function 1-6
 - side tray function 1-6
 - top front tray function 1-6
 - upper sub tray function 1-6
- tray indicator
 - function of 1-6
- tray names 4-2
- tray selection defaults 4-5
- tray window
 - function of 1-6
- trays
 - sheet capacity and paper sizes 5-7
- trays and rollers
 - cleaning 6-21
- tutorial 3-17

U

- understanding status messages 2-2
- unwanted lines or stripes print samples 7-15
- upper stacker
 - adjusting 5-20
 - clearing paper from 7-4
 - function of 1-6
- upper sub tray
 - clearing paper from 7-12
 - function of 1-6
 - loading paper 5-9
- user actions for status messages 2-2
- using the keyboard 3-11
- using the keyboard tutorial 3-17
- using the menu 3-11

V

- viewing machine information 4-22

W

- WARMING UP status message 2-3, 5-4
- when to replace supplies 6-2
- white spots print sample 7-14
- white voids print samples 7-15
- window
 - See tray window

Readers' Comments — We'd Like to Hear from You

3130 Advanced Function Printer User's Guide

Publication No. S544-5337-02

Use this form to provide comments about this publication, its organization, or subject matter. Understand that IBM may use the information any way it believes appropriate, without incurring any obligation to you. Your comments will be sent to the author's department for the appropriate action. Comments may be written in your language.

Note: IBM publications are not stocked at the location to which this form is addressed. Direct requests for publications or for assistance in using your IBM system, to your IBM representative or local IBM branch office.

	Yes	No
• Does the publication meet your needs?	_____	_____
• Did you find the information:		
Accurate?	_____	_____
Easy to read and understand?	_____	_____
Easy to retrieve?	_____	_____
Organized for convenient use?	_____	_____
Legible?	_____	_____
Complete?	_____	_____
Well illustrated?	_____	_____
Written for your technical level?	_____	_____
• Do you use this publication:		
As an introduction to the subject?	_____	_____
As a reference manual?	_____	_____
As an instructor in class?	_____	_____
As a student in class?	_____	_____
• What is your occupation?	_____	_____

Thank you for your input and cooperation.

Note: You may either send your comments by fax to 1-800-524-1519, or mail your comments. If mailed in the U.S.A., no postage stamp is necessary. For residents outside the U.S.A., your local IBM office or representative will forward your comments.

Comments:

Name

Address

Company or Organization

Phone No.



Cut or Fold
Along Line

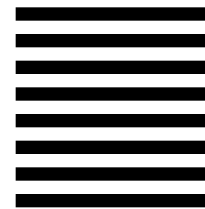
Fold and Tape

Please do not staple

Fold and Tape



NO POSTAGE
NECESSARY
IF MAILED IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

Information Development
The IBM Printing Systems Company
Department H7FE Building 003G
P O Box 1900
BOULDER CO 80301-9817



Fold and Tape

Please do not staple

Fold and Tape

Cut or Fold
Along Line



Part Number: 52H1248
File Number: S370/4300/9370-15



Printed in the United States of America
on recycled paper containing 10%
recovered post-consumer fiber.

S544-5337-02



52H1248

