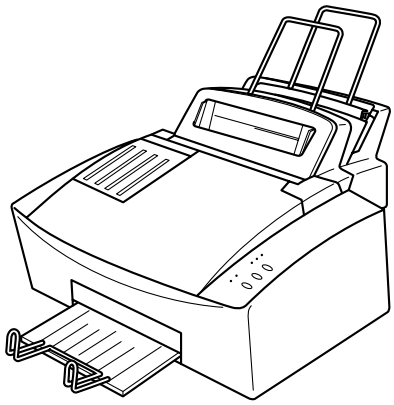
Please read this manual thoroughly before using the printer.

Brother Color Printer

HS-5000/5300

User's Guide



Keep this manual in a convenient place for quick and easy reference at all times.

SHIPMENT OF THE PRINTER

If for any reason you must ship your Printer, carefully package the Printer to avoid any damage during transit. It is recommended that you save and use the original packaging. The Printer should also be adequately insured with the carrier.

Warning

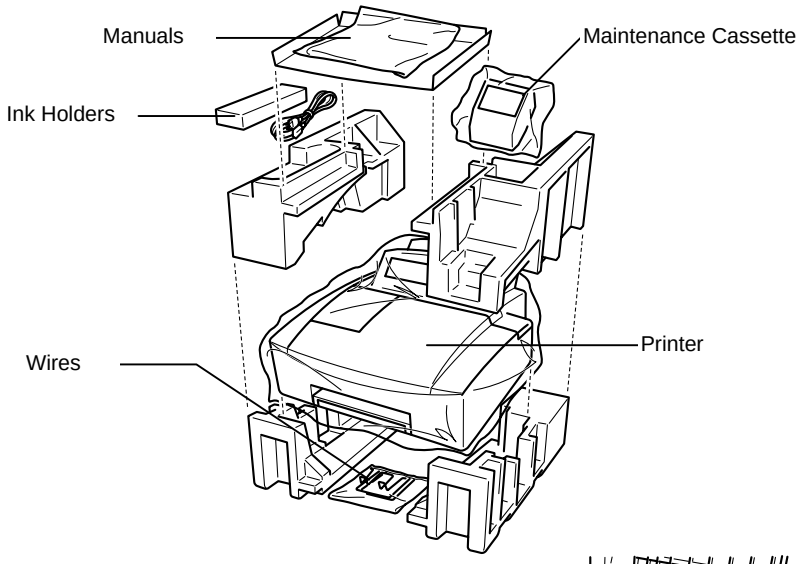
When shipping the printer, re-pack it after waiting **30 minutes** with the power off which will allow the printer to cool down and the ink to solidify. **Moving the printer with ink melted will cause severe damage to the Printer and will VOID THE WARRANTY.**

REPACKING THE PRINTER

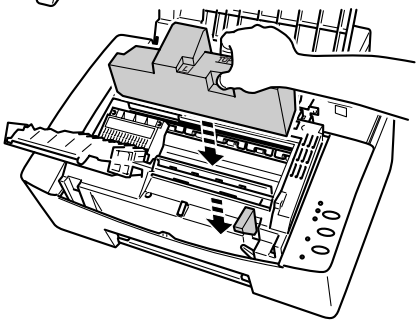
1 Turn the printer Off. Wait 30 minutes until the printer cools down.

2 Re-pack the printer.

See "REPACKING THE PRINTER" in Chapter 6.



Inside the printer, please retain the print head in position with the attached styrofoam as shown (Refer to Chapter 6, page 13.):



(For USA & CANADA Only)

For technical and operational assistance, please call:

In USA	1-800-276-7746	(outside California)
	714-859-9700 Ext. 329	(within California)
In CANADA	1-800-853-6660	
	514-685-6464	(within Montreal)

If you have comments or suggestions, please write us at:

In USA	Printer Customer Support Brother International Corporation 15 Musick Irvine, CA 92718
In CANADA	Brother International Corporation (Canada), Ltd. - Marketing Dept. 1, rue Hôtel de Ville Dollard-des-Ormeaux, PQ, Canada H9B 3H6

BBS
For downloading drivers from our Bulletin Board Service, call:

In USA	1-888-298-3616
In CANADA	1-514-685-2040

Please log on to our BBS with your first name, last name and four digit number for your password. Our BBS supports modem speeds up to 14,400, 8 bits no parity, 1 stop bit.

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For the name of an authorized dealer or service center, call 1-800-284-4357.

SERVICE CENTERS (Canada only)
For service center addresses in Canada, call 1-800-853-6660

INTERNET ADDRESS
For technical questions and downloading drivers:
http://www.brother.com

USER'S GUIDE

UD4653001
Printed in Japan

brother

Color Printer
HS-5000/5300 User's Guide

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The contents of this manual and the specifications of this product are subject to change without notice.

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Definitions of Warnings, Cautions, and Notes

The following conventions are used in this User's Guide:

⚠ Warning
Indicates warnings that must be observed to prevent possible personal injury.

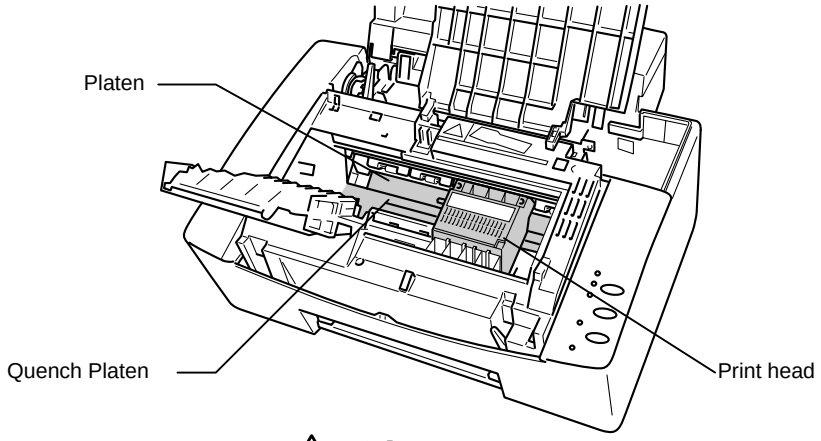
Caution
Indicates cautions that must be observed to use the printer properly or prevent damage to the printer.

Note
Indicates notes and useful tips to remember when using the printer.

To Use the Printer Safely

⚠ Warning

After you have just used the printer, some internal parts of the printer are extremely hot. Do not open the inside cover unnecessarily and never touch the shaded parts (Quench Platen, Platen, and Print Head) shown in the following illustration.

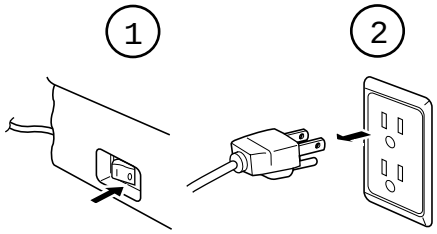


⚠ High Temperature

Inside the Printer

⚠ Warning

There are high voltages inside the printer. Before cleaning the printer, be sure to turn the power off and unplug the power cord from the power outlet.



Turning off the Switch and Unplugging the Printer

⚠ Warning

Keep the ink cartridge away from children. If ink is swallowed, drink plenty of water. The ink contains no harmful substances, but if you are concerned you should consult a doctor.

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION 1-1

ABOUT THE GUIDEBOOKS 1-1
FINDING OUT HOW TO USE THE PRINTER 1-1
ABOUT YOUR PRINTER 1-2
PRINTER OVERVIEW 1-2
SYSTEM REQUIREMENTS 1-3
FEATURES 1-3
OPERATING AND STORAGE ENVIRONMENT 1-4
POWER SUPPLY 1-4
ENVIRONMENT 1-4

CHAPTER 2 PAPER HANDLING 2-1

PAPER SPECIFICATIONS 2-1
ABOUT BROTHER SPECIAL PAPERS 2-4
ABOUT BROTHER SPECIAL TRANSPARENCIES 2-4
SHEET FEEDER 2-5
ADJUST THE HEAD GAP BY PAPER THICKNESS 2-5
LOADING THE PAPER 2-6
MANUAL FEED SLOT 2-8
OUTPUT TRAY 2-9

CHAPTER 3 PRINTER DRIVER 3-1

PAPER 3-2
MEDIA SELECTION 3-2
PAPER SOURCE 3-3
COPY/PAGE ORDER 3-3
SCALING 3-3
QUALITY AND COLOR 3-4
QUALITY 3-4
COLOR CONTROL 3-5
DOCUMENT TYPE 3-5
COLOR/MONO 3-5
CONTROL AND MAINTENANCE 3-6
SHOW PRINTER STATUS 3-6
PRINTER CONTROL 3-6
POWER SAVE MODE 3-7
MAINTENANCE 3-7
COLOR ADJUSTMENT 3-7

CHAPTER 4 CONTROL PANEL 4-1

LEDS AND BUTTONS 4-1
POWER LED 4-1
READY LED 4-1

DATA LED 4-2
MANUAL LED 4-2
ALARM LED 4-2
ONLINE BUTTON 4-3
RESET BUTTON 4-3
FF/CONT BUTTON 4-3
SHIFT + TEST BUTTON 4-4
SHIFT + CLEAN BUTTON 4-4
TEST PRINT MODE 4-5
RESET AND HEX DUMP PRINT MODE 4-6
OTHER CONTROL FEATURES 4-7

CHAPTER 5 OPTIONS 5-1

MODULAR I/O CARD 5-1
MEMORY EXPANSION 5-2
BR-SCRIPT 2 ROM BOARD BR-3000C 5-5

CHAPTER 6 MAINTENANCE 6-1

REPLACING THE MAINTENANCE PAPER CASSETTE 6-1
ADDING INK 6-7
CLEANING THE PRINTER INTERIOR 6-9
RE-PACKING THE PRINTER 6-13

CHAPTER 7 TROUBLESHOOTING 7-1

ALARM INDICATIONS AT A GLANCE 7-1
OPERATOR CALLS 7-1
SERVICE CALLS 7-2
PRINT QUALITY PROBLEMS 7-3
PAPER JAMS 7-4
Q & A 7-8
SETTING UP THE PRINTER HARDWARE 7-8
SETTING UP THE PRINTER FOR WINDOWS 7-8
SETTING UP THE PRINTER FOR DOS 7-9
PAPER HANDLING 7-10
PRINTING 7-11
PRINT QUALITY 7-12

CHAPTER 8 APPENDIX 8-1

PRINTER SPECIFICATIONS 8-1
PRINTING 8-1
FUNCTIONS 8-1
ELECTRICAL AND MECHANICAL 8-2
PARALLEL INTERFACE SPECIFICATIONS 8-3
RESIDENT FONTS 8-4
SYMBOL SETS/CHARACTER SETS 8-5

REGULATIONS

Federal Communications Commission Compliance Notice (For USA Only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- ❏ Reorient or relocate the receiving antenna.
- ❏ Increase the separation between the equipment and receiver.
- ❏ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ❏ Consult the dealer or an experienced radio/TV technician for help.

Important
A shielded interface cable should be used in order to ensure compliance with the limits for a Class B digital device. Changes or modifications not expressly approved by Brother Industries, Ltd. could void the user's authority to operate the equipment.

Industry Canada Compliance Statement (For Canada Only)

This class B digital apparatus meets all requirements of the Canadian Interference Causing Equipment Regulations

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur la matériel brouilleur du Canada.

DECLARATION OF CONFORMITY (EUROPE)

We, Brother International Europe Ltd.,
Brother House, 1 Tame Street, Guide Bridge, Audenshaw, Manchester M34 5JE, UK.

declare that this product is in conformity with the following normative documents.

Safety:	EN 60950,	
EMC:	EN 55022 Class B,	EN 50082-1

following the provisions of the Low Voltage Directive 73/23/EEC and the Electromagnetic Compatibility Directive 89/336/EEC (as amended by 91/263/EEC and 92/31/EEC).
Issued by:
Brother International Europe Ltd.
European Technical Services Division

Radio Interference (220-240 V Model Only)

This printer complies with EN55022 (CISPR Publication22) / Class B.

Before the product is used, ensure that you use a double-shielded cable with twisted-pair conductors and that it is marked "IEEE1284 compliant." The cable must not exceed 1.8 metres in length.

IMPORTANT - For Your Safety

To ensure safe operation the three-pin electrical plug supplied must be inserted only into a standard three-pin power point which is properly grounded through normal household wiring.

Extension cords used with the equipment must be three-pin plug type and corruptly wired to provide proper grounding. Incorrectly wired extension cords may cause personal injury and equipment damage.

The fact that the equipment operates satisfactorily does not imply that the power is grounded and that the installation is completely safe. For your safety, if in any doubt about the effective grounding of the power, consult a qualified electrician.

Disconnect device

This printer must be installed near a power outlet, which is easily accessible. In case of emergencies, you must disconnect the power cord from the outlet in order to shut off power completely.

Geräuschemission / Acoustic Noise Emission (For Germany Only)

Lpa < 70 dB (A) DIN 45635 - 10 - 01 - KL2

IMPORTANT (For U.K. only)

If the power cord supplied with this printer is not suitable for your electrical outlet, remove the plug from the mains cord and fit an appropriate three pin plug. If the replacement plug is intended to take a fuse then fit the same fuse as the original.

If a moulded plug is severed from the power cord then it should be destroyed because a plug with cut wires is dangerous if plugged into a live socket outlet. Do not leave it where a child might find it.

In the event of replacing the plug fuse, fit a fuse approved by ASTA to BS1362 with the same rating as the original fuse.

Always replace the fuse cover. Never use a plug with the cover omitted.

WARNING - THIS PRINTER MUST BE PROPERLY EARTHED.

The wires in the mains cord are coloured in accordance with the following code:

Green and yellow:	Ground
Blue:	Neutral
Brown:	Live

The colours of the wiring in the power lead of this printer may not correspond with the markings which identify the terminals in your plug. If you need to fit a different plug, proceed as follows.

Remove a length of the cord outer sheath, taking care not to damage the coloured insulation of the wires inside.

Cut each of the three wires to the appropriate length. If the construction of the plug permits, leave the green and yellow wire longer than the others so that, in the event that the cord is pulled out of the plug, the green and yellow wire will be the last to disconnect.

Remove a short section of the coloured insulation to expose the wires.

The wire which is coloured green and yellow must be connected to the terminal in the plug which is marked with the letter "E" or by the earth symbol or coloured green or green and yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter "N" or coloured black or blue.

The wire which is coloured brown must be connected to the terminal which is marked with the letter "L" or coloured red or brown.

The outer sheath of the cord must be secured inside the plug. The coloured wires should not hang out of the plug.

Chapter 1 INTRODUCTION

ABOUT THE GUIDEBOOKS

Finding Out How to Use the Printer

You have two guidebooks for this printer. Read each guidebook in the following order:

1. Read the Quick Setup Guide to set up your printer and connect it to your computer. It also contains information on how to set up your computer for your printer by installing the printer driver and fonts.

2. Read the User's Guide to get information about the following.

- Features and operating environment requirements of the printer – Chapter 1
- Paper Handling – Chapter 2
- Printer Driver – Chapter 3
- Control Panel – Chapter 4
- Options – Chapter 5
- Maintenance – Chapter 6
- Troubleshooting – Chapter 7
- Specifications – Appendices-Chapter 8
- Index-Chapter 9

ABOUT YOUR PRINTER

Printer Overview

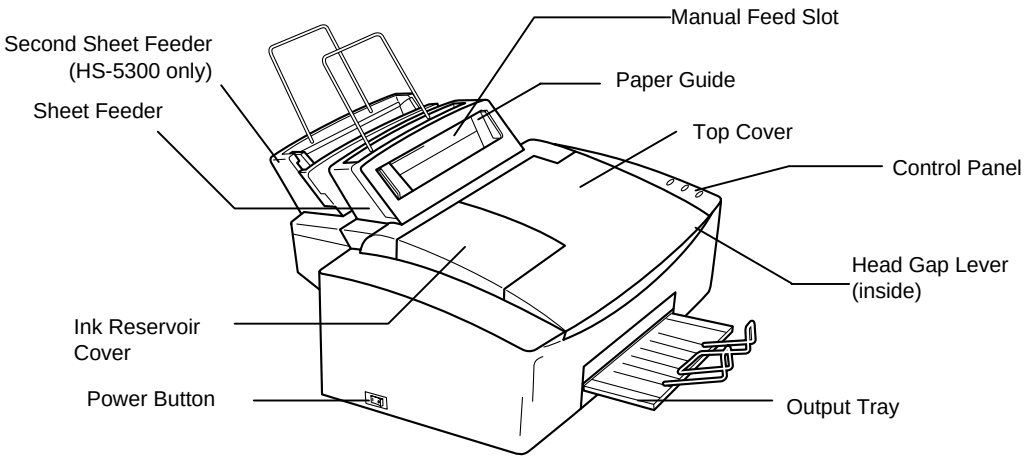


Fig. 1-1 Front View

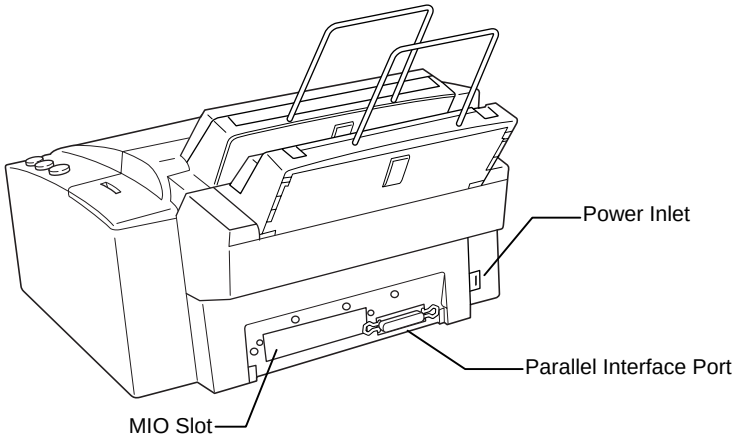


Fig. 1-2 Rear View

System Requirements

Check the following system requirements to setup and operate the printer:

- IBM PC or compatible with 80486 or higher microprocessor
- Parallel interface port (To use ECP mode, please see p.7-8, Q & A.)
- 4 MB or more of memory (8 MB or more recommended) for Windows 3.1x/95/98
- 12 MB or more of memory (16 MB or more recommended) for Windows NT 4.0
- 10 MB of space available on your hard disk for installing the printer driver and all fonts
- MS-DOS™ or PC-DOS

Features

This printer has the following features:

❑ **High Resolution and fast Printing Speed**
Fine mode printing quality at 600 dots per inch (dpi) resolution and normal output at 300 dpi resolution. Fast print speed of up to 4.5 pages per minute (ppm) in normal Mono mode and up to 4 ppm in normal color mode (Letter paper).

❑ **High print quality**
The ink is solid and water-proof so that you can get fine print quality even on plain paper without having to use special coated paper. Solid ink provides you with a professional print quality with sharp text and vivid color.

❑ **User-Friendly Operation for Windows®**
The dedicated printer driver and TrueType™-compatible fonts for Microsoft® Windows 3.1/95/98/NT 4.0 are available on the floppy disk supplied with your printer. You can easily install them into your Windows system using our installer program.

❑ **Color Matching**
The Brother original color matching system which is included in the printer driver enables color matching between the monitor and printer and it offers control of various color effects. It helps you to get fine color outputs. This printer also supports the Windows 95/98 Image Color Matching (ICM) system.

❑ **Environment-Friendly**
This printer has two power saving modes. Printers consume power to keep some parts of the printer at operating (high) temperature, but this feature will save electricity when the printer is ON but not being used. The factory setting of Power Save mode 1 and mode 2 are both OFF, however, for reduced power consumption, you can turn Power Save Mode 1 and 2 to ON. The default time-out of each mode is one hour. This meets Energy Star power save requirements.

OPERATING AND STORAGE ENVIRONMENT

Please take note of the following information before using the printer.

Power Supply

Use the printer within the specified power range.

AC power: ±10% of the rated power voltage in your district
Frequency: 50 Hz (220 V– 240 V) or 60 Hz (110–120 V)

The power cord, including extensions, should not exceed 5 meters (16.5 feet).

Do not share the same power circuit with other high-power appliances, particularly an air conditioner, copier, shredder and so on. If it is unavoidable that you must use the printer with these appliances, it is recommended that you use a voltage transformer or a high-frequency noise filter.

Use a voltage regulator if the power source is not stable.

Environment

The printer should be installed near a power outlet which is easily accessible.

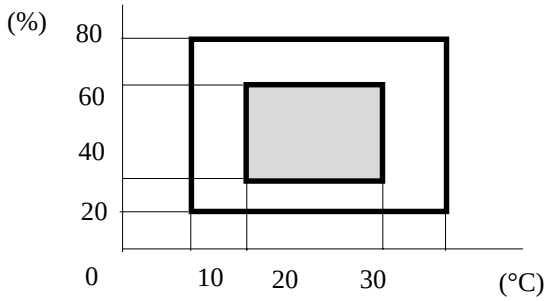
Use the printer only within the following ranges of temperature and humidity.

Ambient temperature: 10°C to 35°C (50°F to 95°F)
Ambient humidity: 20% to 80% (without condensation)

For optimum image quality it is recommended to use this printer within the range:

Temperature: 15°C to 30°C (59°F to 86°F)
Humidity: 30% to 60%

Because the ink on printouts might flake off when rubbed or the print might appear to be a lighter color if you use the printer out of this range, for optimum print quality use the printer within the shaded range shown in the following diagram.



Ventilate the room where you use the printer.

Place the printer on a flat, horizontal surface.

Keep the printer clean. Do not place the printer in a dusty place.

Do not place the printer where it is exposed to direct sunlight. Use a blind or a heavy curtain to protect the printer from direct sunlight when the printer is unavoidably set up near a window.

Do not place the printer near devices that contain magnets or generate magnetic fields.

Do not subject the printer to strong physical shocks or vibrations.

Do not expose the printer to open flames or salty or corrosive gasses.

Do not place objects on top of the printer.

Do not place the printer near an air conditioner.

Do not move the printer within 30 minutes of turning the power Off.

Chapter 2 PAPER HANDLING

PAPER SPECIFICATIONS

The printer can handle paper that has the following specifications.

Feeder	Paper Size	Capacity
Manual Feed	**Paper:**A4, Letter, Legal, Custom size, **Envelope:** DL, COM-10, C5, **Transparencies:** A4, Letter (70-229 x 127-356 mm, 2.75-9 x 5-14 inches, 60 - 157 g/m^2, 16 - 42 lbs)	sheet by sheet
First sheet feeder	**Paper:** A4, Letter, Legal, Custom size, **Envelope:** DL, COM-10, C5, **Transparencies:** A4, Letter (70-229 x 127-356 mm, 2.75-9 x 5-14 inches, 60 - 157 g/m^2, 16 - 42 lbs)	22 mm (0.87 inch) **A4 / letter** :200 sheets of 80g/ m^2 (20 lb.) **Legal** :100 sheets **Envelopes** :10 **Transparencies** :50
Second sheet feeder (HS-5300 only)	**Paper ONLY:** A4, Letter, Legal, Custom size (70-229 x 250-356 mm, 9.8-16 x 7-14 inches, 60 - 135 g/m^2, 16 - 36 lbs)	22 mm (0.87 inch) **A4 / letter** :200 sheets of 80g/ m^2 (20 lb.) **Legal** :100 sheets

	Cut Sheet	Envelope
Caliper	±0.03 - ±0.08 in. (0.09 - 0.2 mm)	0.0033 to 0.0058 in. (0.084 to 0.14 mm) single thickness
Moisture	4% to 6% by weight	4% to 6% by weight
Smoothness	100 to 250 (Sheffield)	100 to 250 (Sheffield)

Remarks

We recommend you to use these types of paper for plain paper as follows;

- Hammermill Copy Plus (USA)-20lb
- Xerox Premier (Europe)-80g/m^2

Do not use any labels.

Do not use ordinary transparencies designed for photocopiers or laser printers. Use Brother original transparencies which are designed for the HS-5000/5300 printers.
Before printing on transparencies, the printer needs to adjust its temperature for transparencies. It may take around 1 minute.

If the paper does not load from the sheet feeder, use the manual feed slot and try again.

When using media with holes, such as pre-punched organizer sheets, be careful not to print on the hole. The inside of the printer will be stained with ink and it may damage the printer.

Before using any paper, make sure that it is not curled. Feeding curled paper can cause paper jams and misfeeds.

Some paper may become curled by the printers heat during printing. You can prevent the paper from curling by having a top margin of 12.7 mm or more.
Do not use paper pre-printed by a laser or inkjet printer. Do not print on both sides of the paper. The printer heat will make pre-printed laser toner / ink melt again.

Prior to loading paper, check the type of media and select the appropriate position of the head gap lever. Refer to "SHEET FEEDER" in this Chapter for more information.

The following types of envelopes are not recommended for use.

- Damaged, curled, wrinkled, or irregularly shaped envelopes
- Extremely shiny or highly textured envelopes
- Envelopes with clasps
- Envelopes of baggy construction
- Envelopes not sharply creased
- Embossed envelopes
- Envelopes already printed with a laser printer
- Envelopes pre-printed on the inside
- Envelopes that cannot be arranged uniformly when placed in a pile

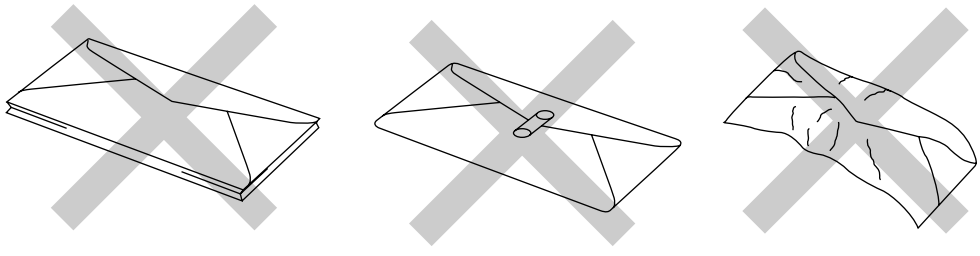


Fig. 2-1 Envelopes

Printable Area

The figure below shows the physical printable area.

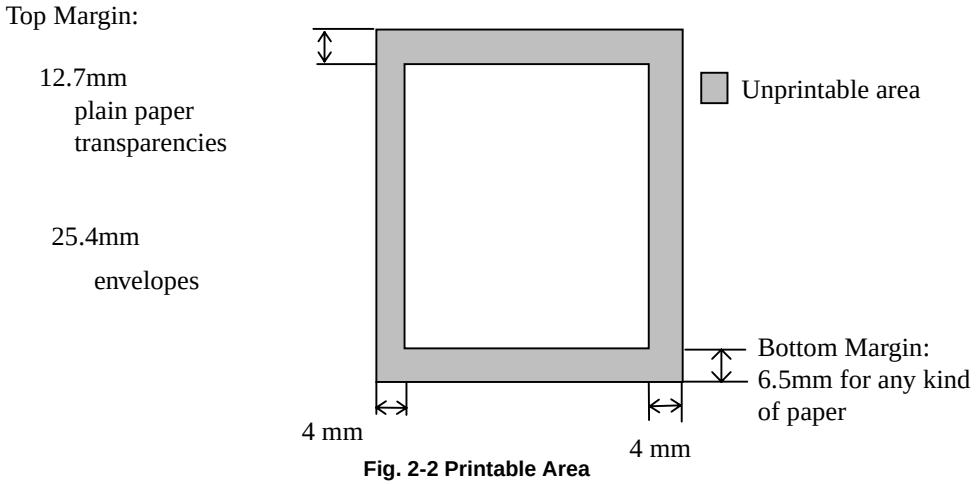


Fig. 2-2 Printable Area

The default setting of the top margin is 12.7mm for paper and transparencies, and 25.4 mm for envelopes for optimum print quality. However, if a file you want to print does not match the printable area, you might need to select Recommended Paper in the printer driver (Refer to Chapter 3) and adjust the page margins in your software to match the printable area.

ABOUT BROTHER SPECIAL PAPERS

About Brother Special Transparencies

Be sure to use Brother special transparencies to avoid jamming problems. The following transparencies are manufactured especially for this printer.

Brother special transparencies (letter size)	No. HSTRL
Brother special transparencies (A4 size)	No. HSTRA

- Select the 'Envelope and Transparency' position of the head gap lever.
- Do not touch the surface of the transparencies. Hold the edge of the transparencies when you handle them.
- Be sure to select the paper type in the printer driver to 'Transparency' when you print on transparencies.
- After finishing printing a page, remove each transparency immediately and place it face up on a flat surface until it is completely dry. Do not put anything on the printed side of the transparency.
- When storing the transparencies, keep them sealed in the original plastic bag to protect them from moisture.
- Store the transparencies flat.
- Keep the transparencies away from the direct rays of the sun.

Note

- Do not use commercially available transparencies, especially those intended for liquid-inkjet or laser printers. The transparencies you can use for this printer are Brother special transparencies only.
- In the printer driver, set the Media selection to Transparency. The printer alters the printing method for each media type so that an incorrect media selection may cause poor print quality. Refer to Chapter 3.

SHEET FEEDER

The printer has a sheet feeder that can feed plain paper, envelopes and transparencies. The HS-5300 has two sheet feeders, the second one can feed plain paper only.

Adjust the head gap for paper thickness.

There are 3 positions for the head gap lever; a 'Regular' position for plain paper, a 'Thick Paper' position for thick paper, and an 'Envelope and Transparency' position for envelopes and transparencies. Prior to setting the media you want to use, open the top cover and set the head gap lever to the appropriate position.

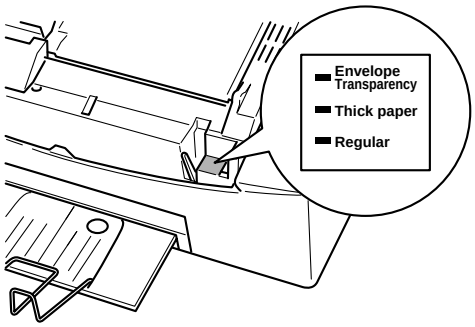


Fig. 2-3 Adjusting the head gap lever

Loading Paper into the Feeder

To load paper into the feeder, follow these steps.

1. Pull the cover of the sheet feeder forward.
2. Load paper into the sheet feeder with the printing surface face up.

Caution

- The feeder can hold up to 200 sheets of 80 g/m^2 (20 lb.) plain paper. If you load too many sheets, paper jams could occur.
- Make sure that the paper is stacked below the ▼ mark.
- If there is still some paper left in the feeder, you must first remove it, put it together with the new paper and then insert the stack into the feeder.

Note

- When you load envelopes in the feeder, make sure they are inserted in the direction shown below. The Stamp corner at the lower right hand corner of the envelope should face the front of the printer.
- The first feeder can hold up to 10 sheets of envelopes and you can load an envelope sheet by sheet into a manual feed slot.
- Set the head gap lever to the 'Envelope and Transparency' position.

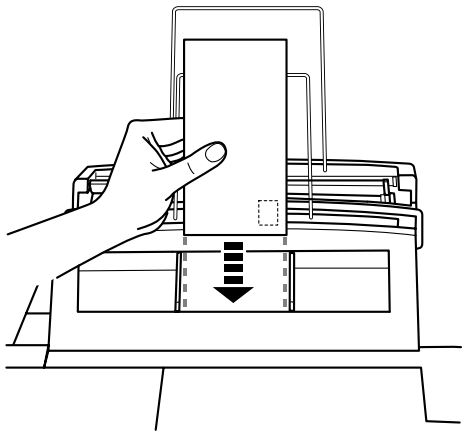


Fig. 2-4 Loading Envelopes in the Feeder

3. Move the paper guide to the paper width. (①)
4. Close the cover of the sheet feeder. (②)

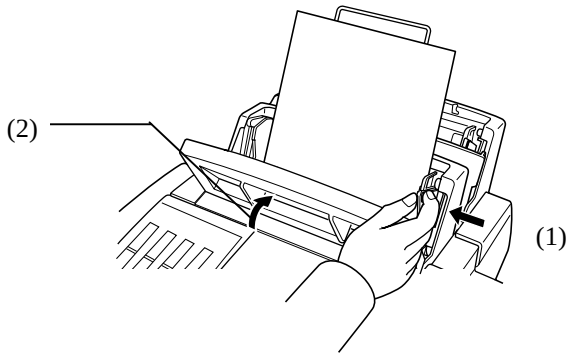


Fig. 2-5 Moving the Paper Guide and Closing the Feeder

> **Note**
> If the sheet feeder runs out of paper, the **Alarm** and **Paper** LEDs blink to alert you to a paper empty error. You have to load paper and push the **FF/Cont** button to cancel the alarm and continue printing. If paper jams in the printer, the **Alarm** and **Paper** LEDs also blink. In that case, clear it referring to "PAPER JAMS" in Chapter 7.

> **Note**
> - You have to select the proper paper source, paper size, and orientation in your application software.
> - If your application software does not support your custom paper size, select the next larger paper size to the custom size, then adjust the print area by changing the margins in your application software.

MANUAL FEED SLOT

The sheet feeder also has a manual feed slot. You can manually load paper sheet by sheet into this slot. You do not need to remove paper from the sheet feeder when using the manual feed slot.
Refer to "Paper Source" in Chapter 3 for information about settings in the printer driver.

- ❏ **When you want to load one sheet of paper manually:**
  You do not need to choose manual feed in the printer driver. Place the side of the paper you wish to print on face up into the manual feed slot. Align the paper to the center of the manual feed slot, and be sure to insert it fully. Move the paper guide of the manual feed slot to the paper width you are using. (Figure 2-6)

- ❏ **When you want to load more than one sheet of paper manually:**
  Choose Manual Feed in the Paper Source section of your printer driver or application. Follow the instructions above to load the first page. After the first page is printed, the printer stops and alerts you to load the next sheet into the manual feed slot by blinking the Manual LED. Load another sheet and choose OK (on your computer screen) to resume printing. Repeat these steps until you have finished printing all the pages of your document.

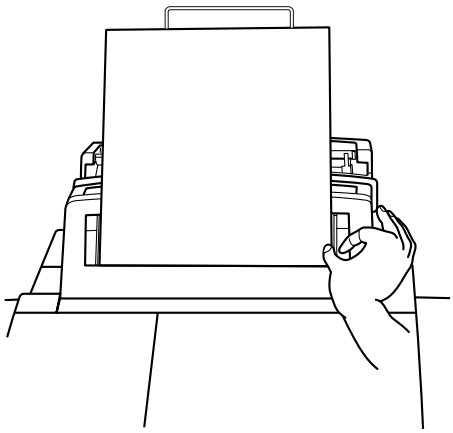


Fig. 2-6 Moving the Paper Guide

Note
- Insert paper firmly into the manual feed slot.
- Only load paper one sheet at a time when using the manual feed slot.

OUTPUT TRAY

The printer ejects paper with the printed surface face up into the output tray at the front of the printer.

Follow these steps to set the output tray:

1. Pull the tray out from the bottom of the printer.
2. Set the Output Tray wire referring to below figures.

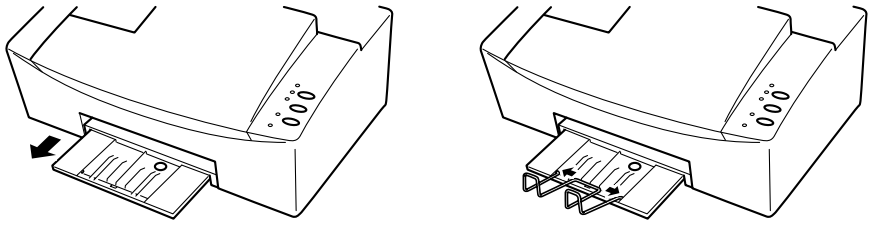


Fig. 2-7 Set the Output Tray

You can stack up to 100 sheets of 80 g/m^2 (20 lb.) paper in the output tray.

❏ When you have loaded the paper you want to print on, pull out the Output Tray and adjust the tray position for the loaded paper as follows otherwise paper jams might occur:

LGL: Legal Paper
A4: A4 size Paper
LTR: Letter Paper

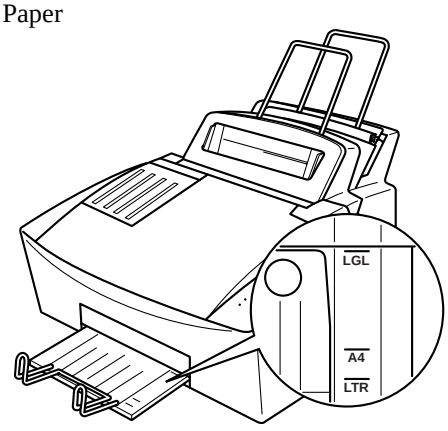


Figure 2-8 Adjust the Out put Tray position

Chapter 3 PRINTER DRIVER

The HS-5000/5300 printer driver has three settings tabs from which you can select your printing settings for optimum print quality. The three tabs are for Paper, Quality/Color and Control/Maintenance.

You can use this printer with all your Windows 3.1/95/98/NT 4.0 applications. Select Options in Print Setup available from the File menu.

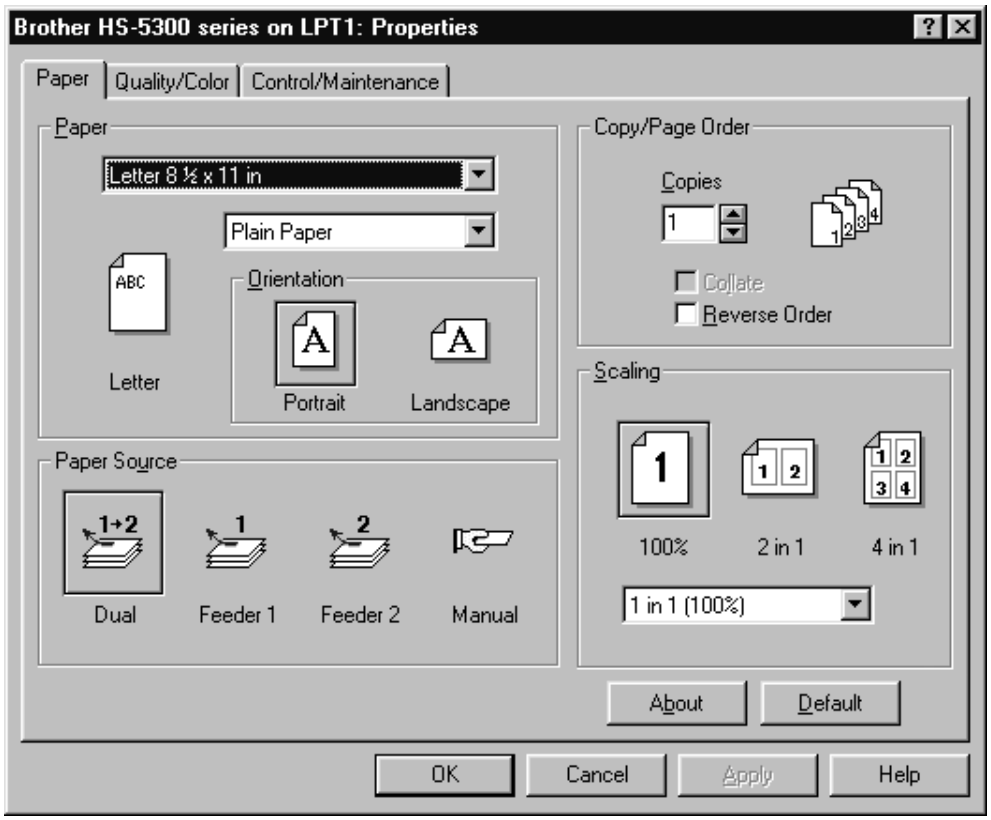
The following list details the settings available in each tab

Paper	Paper: Media Selection, Orientation, and Size
	Paper Source
	Scaling
	Copy/Page Order
Quality/Color	Quality
	Color Control
	Document Type
Control/Maintenance	Showing Printer Status
	Power Save
	Printer Control
	Maintenance
	Color Adjustment

The printer driver might be updated without notice. To upgrade the printer driver, please download it from Brother internet address: http://www.brother.com

PAPER

This tab allows you to specify the paper size, type of print media, page orientation, paper source, copy control, page order and scaling.



Media Selection

Select the media to print on in the Paper Size section. The printer changes the way it places dots depending on the selected media type. To get good print output, make sure you select the correct media type.

Use only Brother original Transparencies to get good print quality. Non-Brother transparencies may have problems on printouts.

When the print image does not match the printing area, you may need to select the Recommended Paper setting to get a wider printing area in Windows 3.1x/95/98. Also, you may need to adjust the page margins in your application software to match the printable area.

Paper Source

If your paper has difficulty feeding from the sheet feeder we recommend using the **Manual paper feed** method. When using this method, you have to load paper sheet by sheet.

When **Dual** is selected (HS-5300 only), the printer feeds paper from Feeder 1 first and when paper in Feeder 1 runs out the paper source is automatically switched to Feeder 2.
The paper source will be switched back to Feeder 1 again when the printer is turned off and on again or the paper runs out in Feeder 2.

Copy/Page Order

Collate In multiple page jobs that are **collated**, for example, printing 2 copies of a 3 page document, the printer prints Page 1, Page 2, Page 3, then Page 1, Page 2, Page 3 in order.
In multiple page jobs that are **uncollated**, for example, for 2 copies of a 3 page document, the printer prints Page1, Page1, Page 2, Page 2, Page 3, Page 3 in order.
When **Collate** is selected, the printer starts printing after processing all the print data so that it takes a longer time for collated printing than uncollated copies.

Reverse Order When you want to get printouts in the correct order, use this function. The printer spools all the job in your computer and sends the data starting from the the last page to be printed. Since the printer prints from the last page forwards, the printouts are stacked in the correct orderPage 1, 2, 3, ...Page 5. Please note that this function takes more time.

Scaling

You can select the scalings as follows:

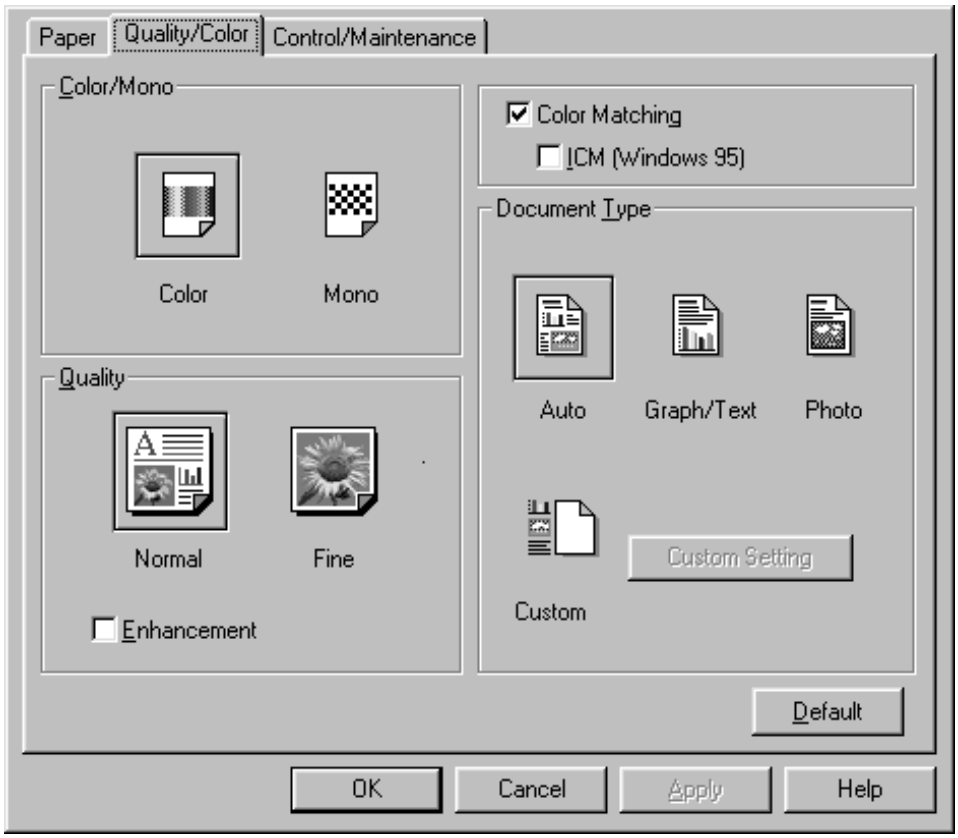
- **1 in 1/Free**
  You can reduce your document by 25%, 50%, and 75%.
  Also, you can define the scaling from 25 to 100 % after selecting "Free."
- **2 in 1** or **4 in 1**
  2 or 4 pages are printed on one sheet at a reduced size. You cannot specify the scaling percentage manually.

- **1 in n**
  You can enlarge your document by the provided scalings.

> **Note**
> - If your application software contains a similar function to these, both settings will be effective.

QUALITY AND COLOR

This tab allows you to set up print quality, media, color and document type you want to print.



Quality

Normal 300 x 300 dpi. Recommended mode for ordinary printouts. Good print quality with reasonable print speed. This mode is the default setting.

Fine 600 x 600 dpi. The finest print mode. Use this mode to print precise images such as photographs. Since the print data is much larger than in normal mode, processing time, data transfer time and printing time will be longer.

Enhancement Use this mode for printing photographs or business graphics. Enhancement mode optimizes color image printing as this mode reduces the horizontal lines or banding that is sometimes visible on Enhancement OFF. Printing Enhancement mode is slower than doing the mode OFF.

Color Control

Color Matching To get an accurate color matched output between the monitor and printer, the color data should be adjusted for this printer before printing. When you are using a software application which has its own color matching engine, turn this setting off. The color matching system from the application is then valid.

ICM Windows 95 has a color matching engine called ICM - Image Color Matching - in its Operating System. ICM uses a profile of each device (monitor, scanner, printer...) to know the characteristics of individual devices and correct the difference between device characteristics.
When this is set to OFF, the printer driver will do the color adjustment.

Document Type

The printer driver will select the most suitable color matching method depending on your document type. Generally, text and business graphics are printed vividly and photographic images are printed softly.

This is the recommended mode for each type of your file:

File	Quality	Enhancement	Document Type
Text only	Normal	OFF	Auto
Text with charts	Normal	ON	Auto
Business Graphics	Normal	ON	Graph/Text
Presentation Sheet* Computer Graphics	Fine	ON	Graph/Text
Photo Images	Fine	ON	Photo

*If you want to print your Presentation file on transparencies, make sure that you set your media selection of your printer driver to Transparency and adjust the head gap lever to Envelop and Transparency position. For details, please refer to page 2-4.

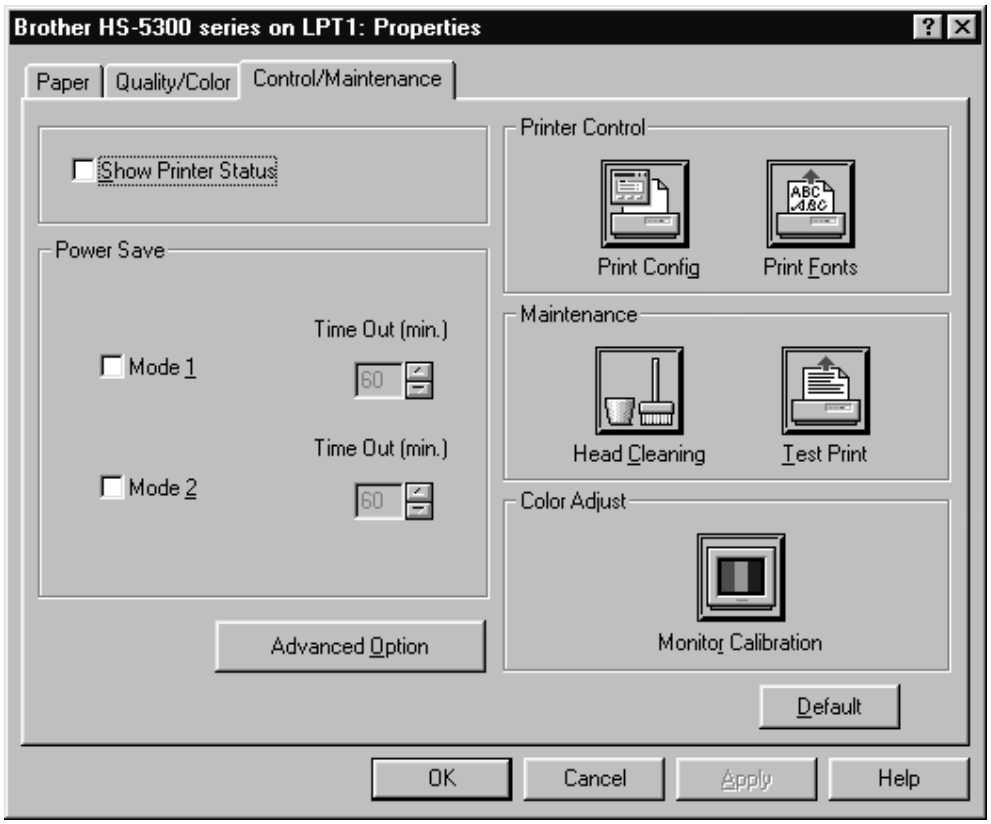
> **Note**
> If you want to select the color matching method and halftone method manually, select this by pressing the Custom setting button to access further settings such as Halftone setting, Color Matching Method setting and Effect of Color setting.

Color / Mono

Color You can select color printing with this mode.
Mono You can print the color document in Black and White with high speed such as 4.5 ppm.

CONTROL AND MAINTENANCE

This tab allows you to control other printer menus such as, Maintenance, Color Adjustment and Power Save.



Show Printer Status

The number of printed pa1axges and the status of the printer would be shown in this mode, when using the parallel port. To see them you need to restart your PC after selecting this option.

> **Note**
> For this mode to work correctly, your PC must support be-directional transfer, and be using an IEEE-1284 compliant shielded parallel cable.

Printer Control

The printer will print the related information by clicking each menu button.

Print Config Printer default settings are printed.
Print Fonts Printer resident fonts samples are printed.

Power Save Mode

The printer goes into power save mode automatically when the printer has not received any data or there has not been any key operation for a specified time.

There are two power save modes:

Mode 1 In this mode, the printer keeps the minimum temperature (115°C) at which the printer ink does not become solid. Power consumption is higher than Mode 2, but warm-up time is shorter (2 minutes).

Mode 2 In this mode, the printer cools down and power consumption is almost at the same level as power off. In mode 2, it requires up to 9.5 minutes to warm up.

The factory setting of the Power Save Modes is OFF, but once you turn the Power Save Mode ON, the default time-out of each mode is set to one hour which meets the Energy Star power conservation requirements.

Receiving a print file or document or pressing any button automatically wakes up the printer to start printing.

In this mode setting box, you can set the time-out value from 3 to 99 minutes.

Maintenance

Enter this mode by clicking a menu button and the printer starts head cleaning or printng the test page.

Color Adjustment

If you want to get the closest color match to your monitor on the printouts, calibrate the printer for your monitor by clicking this button.

The method used to express color is different between Monitors and Printers. The monitor uses the 3 primary colors - Red, Green, Blue - to create full colors and the printer uses 4 colors - Cyan, Magenta, Yellow, and Black to create full colors.

To use this mode, please click the Monitor Calibration button and follow the instruction. In the first step, you need to select the Advanced mode not the default Standard mode if you want to adjust each Cyan, Magenta, and Yellow color.

Chapter 4 CONTROL PANEL

LEDS AND BUTTONS

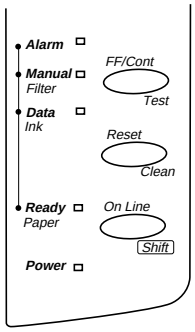


Fig. 4-1 LEDs and Buttons on the Control Panel

Power LED

The **Power** LED indicates whether the printer is turned ON or OFF.

LED	Printer status
Off ❍	The printer is turned Off.
On ●	The printer is turned On.

Ready LED

The **Ready** LED indicates the current status of the printer.

LED	Printer status
Off ❍	The printer is off-line. The printer cannot receive any print data.
Blinking ❍↔●	The printer is warming up or cleaning the print head.
On ●	The printer is ready to print.

This LED blinks with the **Alarm** LED to indicate a paper error. See "Operator Calls" in Chapter 7.

Data LED

The **Data** LED indicates the current status of the print data process.

LED	Printer status
Off ❍	The printer has no print data.
Blinking ❍↔●	The printer is receiving data from the computer or the printer is processing data in memory.
On ●	Print data remains in the printer memory. If the **Data** LED is on for a long period of time and nothing has printed, you need to press the **FF/Cont** button to print the remaining data.

This LED blinks with the **Alarm** LED to indicate an ink empty error. See "Adding Ink" in Chapter 6 and "Operator Calls" in Chapter 7.

Manual LED

The **Manual** LED indicates the current paper source.

LED	Printer status
Off ❍	Sheet Feeder mode
Blinking ❍↔●	The printer is waiting for paper to be loaded in the manual feed slot.
On ●	Manual feed mode

This LED blinks with the **Alarm** LED to indicate a Maintenance paper empty or no Maintenance cassette error. See "Maintenance paper" in Chapter 6 and "Operator Calls" in Chapter 7.

Alarm LED

The **Alarm** LED blinks to indicate a printer error such as cover open, memory full or interface error etc. Also, the following combination of LEDs indicate errors.

Alarm + **Paper**	Paper empty or Paper Jam	Add paper or Clear paper jam, and then press the **FF/Cont** button.
Alarm + **Ink**	Ink empty	Add ink into the ink reservoir and then press the **FF/Cont** button.
Alarm + **Filter**	Maintenance paper empty or No maintenance cassette	Replace Maintenance paper with a new one or re-install the maintenance cassette correctly.

Online Button

The **Online** button alternately turns the printer on-line and off-line.

If you press this button during printing, the printer immediately stops printing and ejects the paper. Pressing this button again prints the rest of the print data. If you want to cancel printing, cancel the print job in your application first and then reset the printer.

When the printer becomes off-line because of an error, the printer can recover from some errors and return to on-line by pressing this button.

When performing cleaning or resetting, the printer must be set to off-line first.

Reset Button

The **Reset** button is valid only in the off-line mode.
The printer is reset and restored to the user default settings.

> **Note**
> Remember that the **Reset** button clears data from the printer memory.

FF/Cont Button

This button is valid only in the off-line mode.

If the **Data** LED is on, pressing the **FF/Cont** button prints any data remaining in the printer after turning the printer off-line.

When you select manual feed in your application, the printer alerts you to load paper in the manual feed slot by blinking the **Manual** LED. Press this button to start feeding the paper.

If a recoverable error occurs, press the **FF/Cont** button to recover from the error and return to the on-line state.

Shift + Test Button

Set the printer to off-line by pushing the Online Button first.
Pressing the **Test** button while holding down the **Shift** button starts the test print. Check the printed test page and if you find any printing problems, perform the print head cleaning as described below.

Release the two buttons immediately after pressing the **Test** button and the DATA LED will start to blink. If it does not, the buttons were held down for too long and you will need to start the test selection again.

> **Note**
> Press the buttons gently. Do not press with too much force or hold the buttons down for a long time. If you do the operation might now start.

Shift + Clean Button

Set the printer to off-line by pushing the Online Button first.
Pressing the **Clean** button while holding down the **Shift** button starts head cleaning. If you see any problems on printouts, clean the print head and try again.

Release the two buttons immediately after pressing the **Test** button and the DATA LED will start to blink. If it does not, the buttons were held down for too long and you will need to start the test selection again.

> **Note**
> - Do not open the top cover during the head cleaning operation.
> - Press the buttons gently. Do not press with too much force or hold the buttons down for a long time. If you do the operation might now start.

Test Print Mode

The printer has the following test print modes.

1. Keep the **Online** button depressed until all four LEDs light. Then, release the button.

   The printer enters test print mode. The **Alarm** LED blinks to indicate that the first choice, Print Config, is selected. See the table below.

2. Press the **Online** button to select another test.

   Every time you press the button, the blinking LED changes to select another choice. See the table below.

3. Press the **FF/Cont** button to perform the selected choice.

LED	Choice	Function
Alarm	Print Config	The printer prints the current printer settings.
Manual	Print Fonts I	The printer prints a list of the printer resident fonts.
Data	Print Fonts P	The printer prints a list of the permanent download fonts.
Ready	Test Print	The printer prints a test page.

4. The printer returns to the ready status after printing.

> **Note**
> Press the buttons gently. Do not press with too much force or hold the buttons down for a long time. If you do the operation might now start.

Reset and Hex Dump print mode

The printer has the following Reset and Hex Dump print modes.

1. Keep the **FF/Cont** button depressed until all four LEDs light. Then, release the button.

   The printer enters the reset/hex dump mode. The **Alarm** LED blinks to indicate that the first choice, User Reset, is selected. See the table below.

2. Press the **Online** button to select another choice.

   Every time you press the button, the blinking LED changes to indicate another choice. See the table below.

3. Press the **FF/Cont** button to perform the selected choice.

LED	Choice	Function
Alarm	User Reset	The printer is restored to the user default settings without clearing permanent fonts and macros.
Manual	Factory Reset	The printer is restored to the factory settings and permanent fonts and macros are cleared.
Data	Hex Dump print	The printer can print data as hexadecimal values, so that you can check data errors and problems. To exit from this mode, press the Reset button or turn the printer off.

4. The printer returns to the ready status after printing

Other Control Features

Power Save Mode

The printer goes into power save mode automatically when the printer has not received any data or there has not been any switch panel key operation for a specified time.

There are two power save modes.

Mode 1 In this mode, the printer keeps the minimum temperature (115°C) at which the printer ink does not become solid. Power consumption is larger, but warm-up time is shorter (2 minutes) than mode2.
Mode 2 In this mode, the printer cools down and power consumption is almost at the same level as power off. In this mode, it requires up to 9.5 minutes to warm up.

The factory setting of the Power Save Mode is OFF, but once you turn the Power Save Mode ON, the default time-out of each mode is set to one hour which meets the Energy Star power conservation requirements.

Receiving a print file or document, or pressing any button automatically wakes up the printer to start printing.

Note
- The print head cools down in the Power Save mode. When the printer wakes up, the temperature of your room and how long the printer has been in sleep mode affects the warm-up time.
- You can change the time out for this mode with the supplied printer driver.

Chapter 5 OPTIONS

MODULAR I/O CARD

This printer has a modular input/output (MIO) interface slot on the rear panel. This slot allows you to install a commercial MIO-compatible sharing/network card.

For more information about MIO cards, consult the dealer where you purchased this printer.

When you want to install an MIO card, follow these steps:

1. Turn off the printer and unplug the power cord from the wall socket.

> **Note**
> Be sure to turn off the power to the printer before installing or removing the MIO card.

2. Remove the two screws and cover plate from the MIO interface slot.

3. Unpack the MIO card and hold it by the edge of the card.

> **Note**
> Do not touch the card surface. If static electricity collects, it can damage the card.

4. Insert the card until it is securely seated.

5 Secure the MIO card with the two captive screws on the card.

6. Retain the cover plate and two screws removed in 2 in case you want to remove the MIO card later.

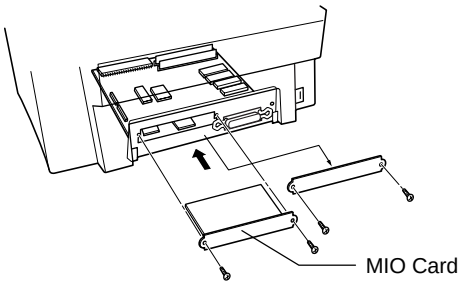


Fig. 5-1 Installing the MIO Card

MEMORY EXPANSION

Both of the the HS-5000 and HS-5300 have 24Mbytes, 8Mbytes on the board and 16Mbytes in the one of the memroy expansion slots. There are 2 slots for optional memory and the memory can be expanded up to a total of 72 Mbytes. You need to install commercially available single in-line memory modules (SIMMs) in those slots to expand the memory.

In general, the SIMM you install must have the following specifications:

Type:	72 pin and 32 bit or 36 bit output
Access Time:	80 nsec. or less
Capacity:	1, 2, 4 ,8, 16, or 32 Mbyte
Height:	38 mm (1.5 inches) or less

The following capacity of a SIMM for installing is recommended;:

- 1 Mbyte HITACHI HB56D25632B-6A, -7A,
  MITSUBISHI MH25632BJ-7
- 2 Mbyte HITACHI HB56D51232B-6A, -7A
  MITSUBISHI MH51232BJ-7
- 4 Mbyte HITACHI HB56A132BV-7A, -7AL, -7B, -7BL
  MITSUBISHI MH1M32ADJ-7
- 8 Mbyte HITACHI HB56A232BT-7A, -7AL, -7B, -7BL
  MITSUBISHI MH2M32EJ-7, MH2M32DJ-7
- 16 Mbyte TOSHIBA THM324000BSG-60,-70,-80
- 32 Mbyte TOSHIBA THM328020BSG-60,-70,-80

There are available 40 bit output SIMMs for workstations. Such SIMMs do not fit this printer.
For supply of SIMMs, consult the dealer where you purchased the printer.

Installation of SIMMs

When you install SIMMs, follow these steps:

1. Turn off the printer and unplug the power cord from the wall socket.

> **Note**
> Be sure to turn the printer off before installing or removing the SIMMs.

2. Remove the five Δ marked screws holding the main controller board.

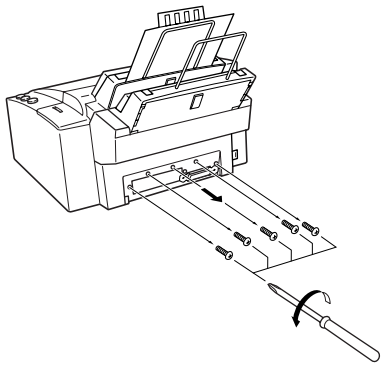


Fig. 5-2 Remove the main controller board

3. Unpack a SIMM and hold it by its edge.

> **Note**
> Do not touch the memory chips or the board surface. If static electricity collects, it can damage the memory.

4. Install as many SIMMs as you need.

   • Set the SIMM into the slot at an angle.
   • Push the top of the SIMM gently towards the vertical until it clicks into place.

Notes

- When installing SIMMs, be sure to install them in the order slot 1 then slot 2.
- When you install different capacities of SIMMs, be sure to install the larger capacity SIMM in slot 1 and the smaller capacity SIMM in slot 2.

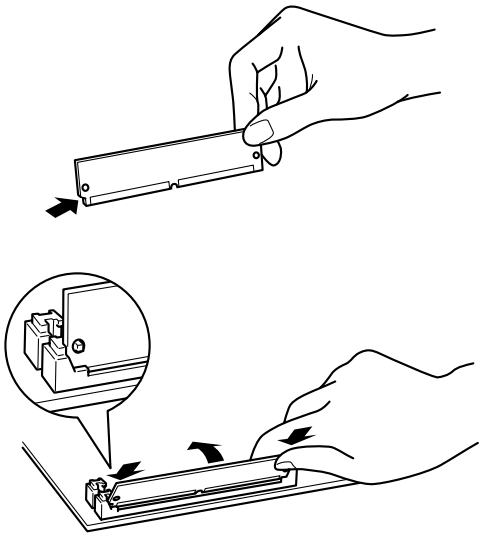


Fig. 5-3 Installing the SIMMs

5. Refit the main controller board and secure it with the 5 screws.

6. Plug in the power cord and turn on the printer.

If you have installed the SIMMs incorrectly, the printer prints a report to alert you.

BR-SCRIPT 2 ROM BR-3000C

The BR-Script 2 ROM board provides a Post Script Level 2 language emulation. Installing this ROM board in your printer allows your printer to print PostScript data.

With a BR-Script 2 ROM board installed, the automatic emulation switching function will work among PCL5c and BR-Script 2.

> **Caution**
> Although Brother supplies two types of ROM boards, BR-3000 and BR-3000C, this printer supports only the BR-3000C option. You cannot use the BR-3000 option with this printer.

Chapter 6 MAINTENANCE

REPLACING THE MAINTENANCE PAPER CASSETTE

The maintenance paper is used to wipe ink from the print head. This operation will be done automatically as necessary. When the maintenance paper runs out, the **Alarm** and **Filter(Manual)** LEDs blink once every 5 seconds.
You can replace the whole maintenance cassette including the paper roll or only replace the maintenance paper roll with a new one.
The following types of options are available for replacement;

MR5 (1 maintenance cassette and 5 paper rolls)
MR1 (1 maintenance cassette with 1 paper roll)

Note

- It is recommended that you always keep a new maintenance paper roll ready for replacement.
- There is an indicator on the right hand side of the sheet feeder which shows how much maintenance paper is remaining.

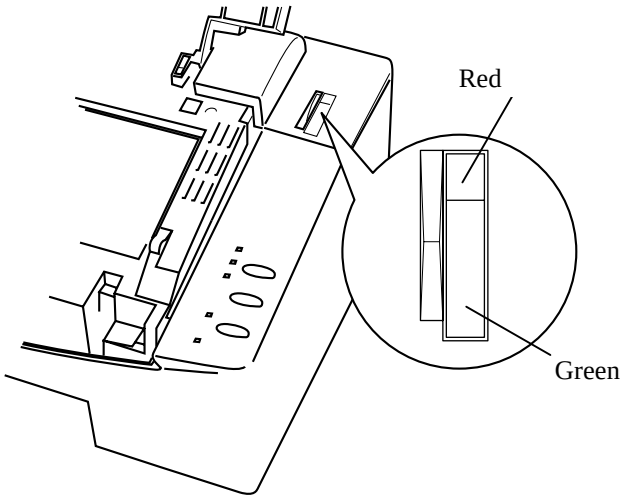


Fig. 6-1 Maintenance paper indicator

Replacing the maintenance paper cassette

1. Remove the first sheet feeder from the printer.

2. Pull the maintenance paper cassette out of the printer. (If you replace the maintenance paper and cassette together, skip steps 3 - 9.)

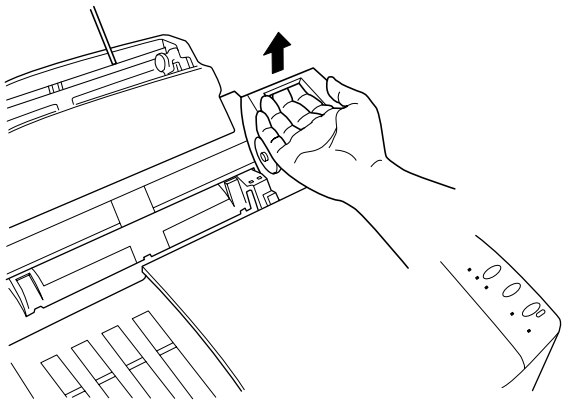


Fig. 6-2 Remove the maintenance paper cassette

> **Caution**
> Do not put your hands inside the printer. Some parts may be extremely hot and may cause burns.

3. Open the maintenance paper cassette.

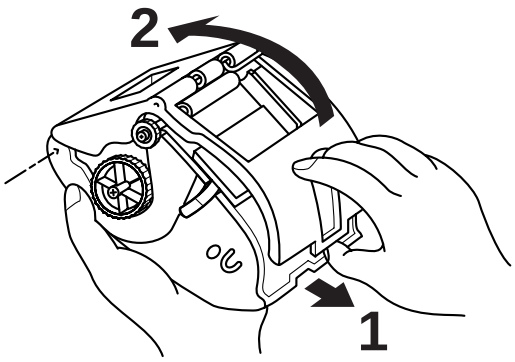


Fig. 6-3 Open the maintenance cassette

4. Remove the geared wheel with the old maintenance paper roll from the cassette.

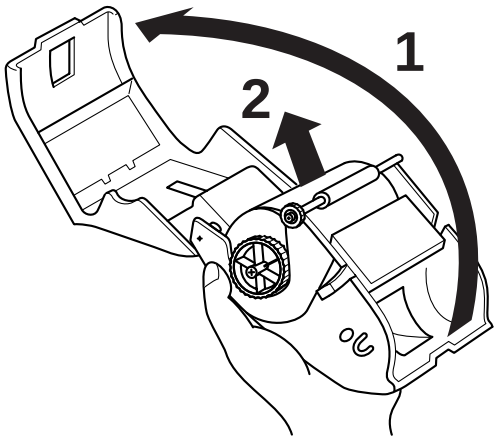


Figure 6-4 Remove the geared wheel

5. Pull the wheel out from the old mainteance paper roll.

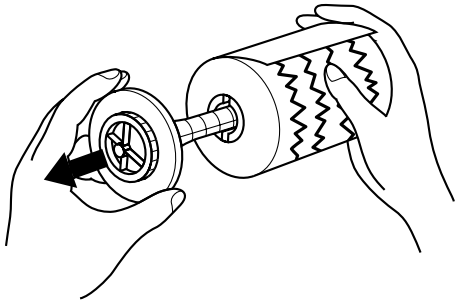


Figure 6-5 Pull the wheel out

6. Peel the seal from a new maintenance paper roll.

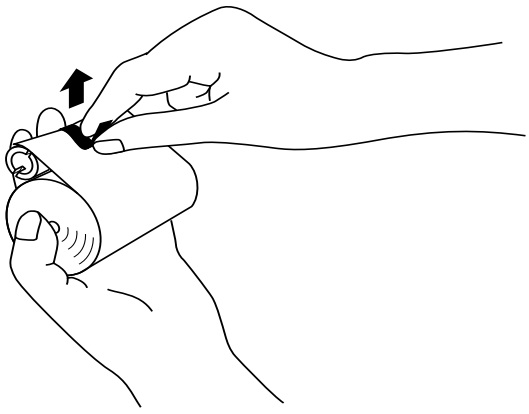


Fig. 6-6Remove the tape by holding the paper roll

7. Insert the geared wheel into the cardboard core center, ensuring that the cutouts in the cardboard core center locates onto the pegs on the geared wheel.

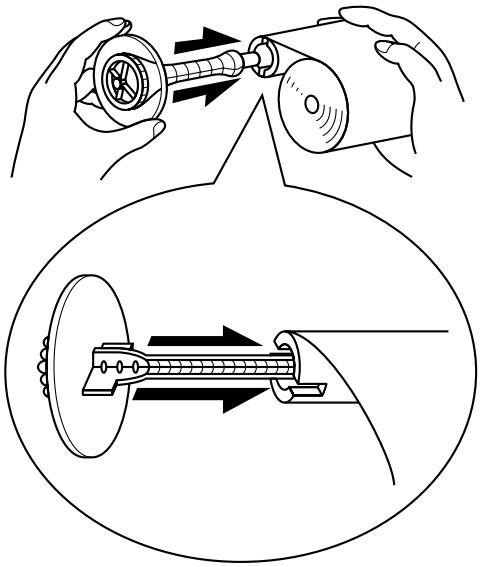


Fig. 6-7 Insert geared wheel into the cardboard core

8 Set the new maintenance paper roll with the wheel into the cassette.

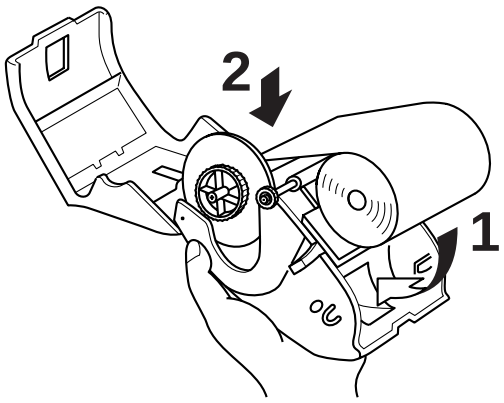


Figure 6-8 Set the new maintenance paper roll

9. Close the cassette.

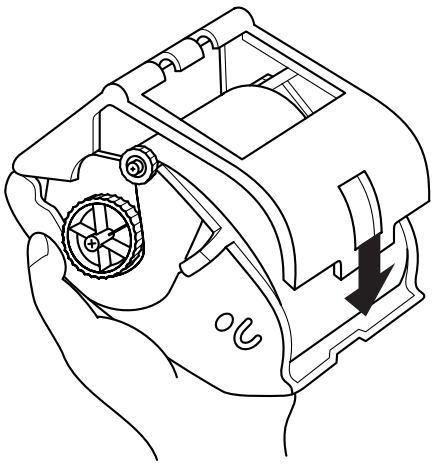


Fig. 6-9 Replace shaft into the maintenance cassette

10. Turn the paper roll shaft on the right hand side of the cassette and ensure that the maintenance paper inside the cassette correctly moves in the direction of the arrow as shown.

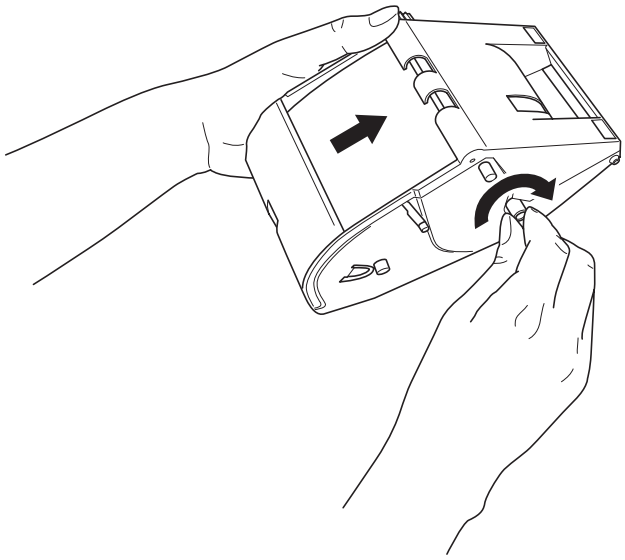


Fig. 6-10 Turn the paper roll

11. Insert the maintenance cassette into the printer and push it into the printer until it clicks into place and the **Alarm** and **Filter** LEDs turn off.

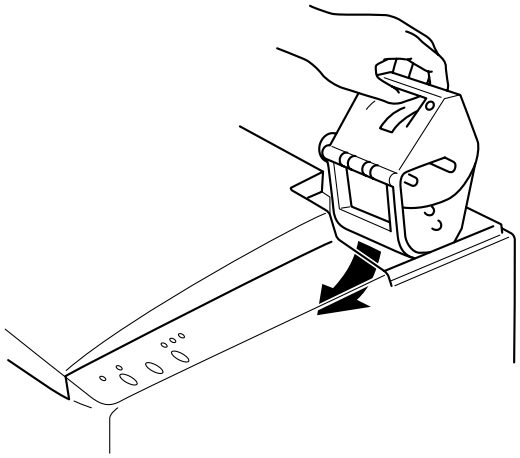


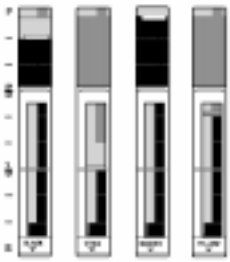
Figure 6-11 Insert the Maintenance cassette

> **Note**
> The life of a maintenance cassette is 5 paper rolls. Replace the cassette with a new one after using 5 paper rolls.

ADDING INK

The expected ink life is 460 pages at 5% coverage on letter paper for each ink cartridge (3 blocks of ink).

The printer has ink reservoirs for each color and each reservoir can hold 10 blocks of ink. You can see the amount of ink remaining through the ink reservoir cover. An ink holder contains 3 blocks of ink so that you can add ink when the remaining ink is lower than the scale marked 2/3.



Y: Yellow
M: Magenta
C: Cyan
K: Black

Fig. 6-12 Ink Reservoir

Use only Brother genuine inks.
The following options are avilable.

HS5K	5 holders of Black ink
HS5C	5 holders of Cyan ink
HS5M	5 holders of Magenta ink
HS5Y	5 holders of Yellow ink
HS5S	2 holders of Black ink and 1 holder each of Cyan, Magenta and Yellow ink

Note
- Do not touch the surface of the ink blocks.
- Do not put ink blocks into your mouth.

If an Ink empty error occurs, check the ink reservoir and add ink to the empty ink reservoir. After adding the ink, press the **FF/Cont** button to recover from the printer error.

Follow these steps to add ink blocks:

1. Open the ink reservoir cover at the left hand side of the printer.

2. Unpack an ink holder from the pack.

3. Hold the side of the ink holder and place the ink holder onto the top of the ink reservoir. Be sure to add the correct color ink cartridge to the correct reservoir. The ink holders are keyed to prevent incorrect insertion of the ink holder. Do not force the ink holder into the top of the ink reservoir.

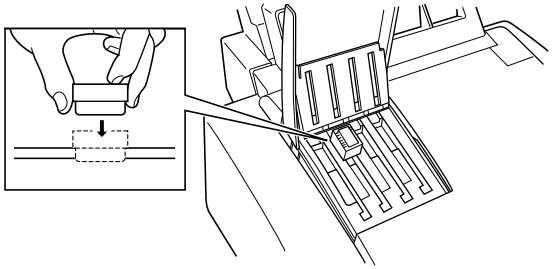


Fig. 6-13 Using the ink holder

> **Note**
> - Add ink to the printer by using the ink holder. Do not remove ink blocks from the holder.

4. Push the center of the ink holder. The ink blocks are dropped into the ink reservoir.

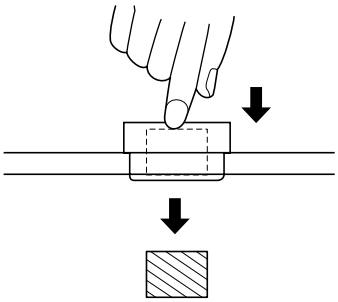


Fig. 6-14 Adding the ink blocks

> **Note**
> When you want to add two or more holders of ink, close the ink reservoir cover after adding each holder of ink (3 blocks). Closing the cover pushes the added ink blocks down, so that you can add the next holder full of ink blocks. Open the cover each time you add the next holder of ink blocks. Then close the reservoir.

5. Close the ink reservoir cover.

CLEANING THE PRINTER INTERIOR

The following cleaning kit is supplied with the printer.

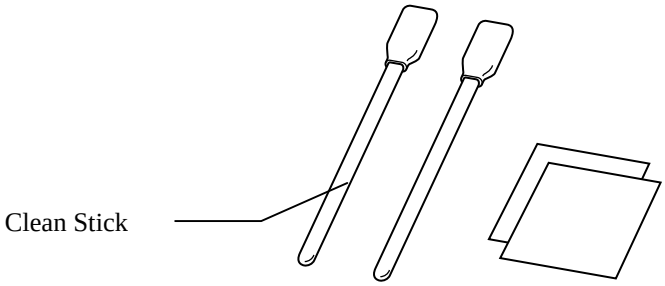


Fig. 6-15 Cleaning Kit

Clean the printer interior when the platen or rollers are stained by ink due to some problem such as a paper jam.
You will need to clean out the spilt ink and remove any small pieces of paper remaining inside the printer.

1. Turn the printer power off.

2. Wait around 30 minutes after power off to allow the printer to cool down.

3. Open the top cover. Then open the inside cover.

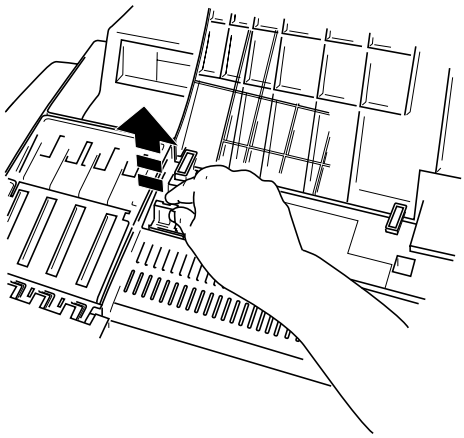


Fig. 6-16 Open the inside cover 1

(3. Open the inside cover.)

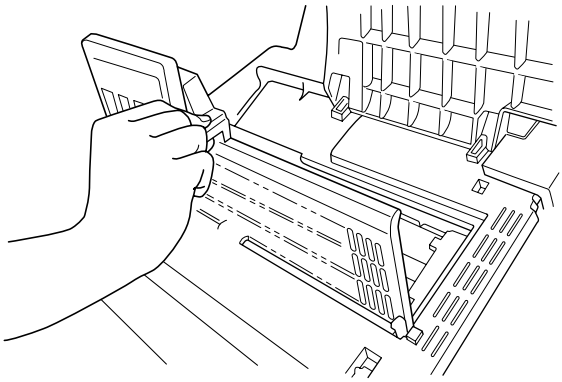


Fig. 6-17 Opening the inside cover 2

4. Dampen the cleaning stick or wipers with the IPA(Isopropyl Alcohol, concentration is 90% or higher) or Denatured Alcohol.

5. Move the print head to the right by hand until you can see the part of the platen and rollers that you want to clean.

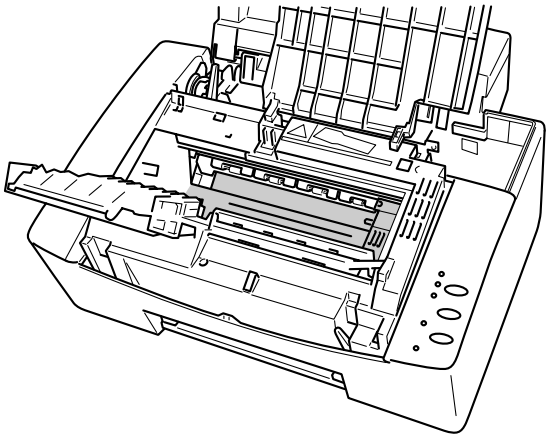


Figure 6-18 Move the print head to the right

6. Wipe up the spilt ink in the printer interior with a cleaning stick or wiper in the shaded area in the figure below.

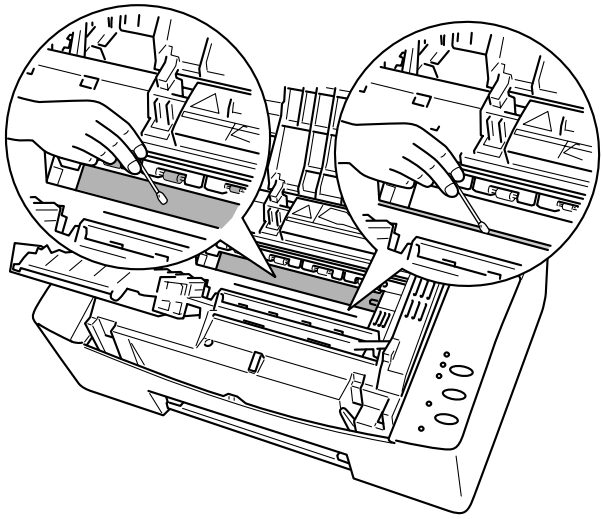


Fig. 6-19 Wiping up the ink

7. Remove any small pieces of paper remaining in the printer interior.

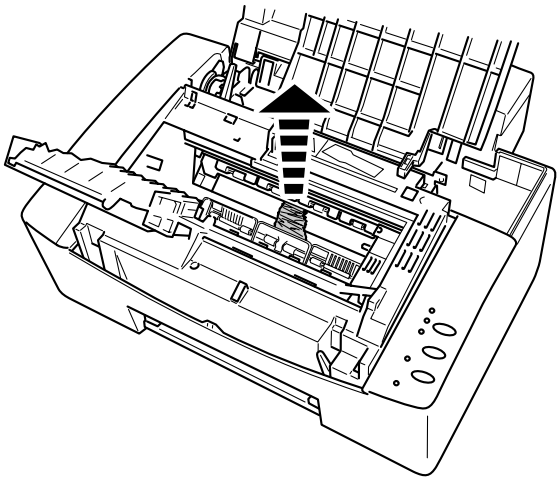


Figure 6-20 Remove small pieces of paper

8. To clean the rollers, wipe them with a cleaning stick. The rollers can be freed from the printer for cleaning by pulling the holders toward you.

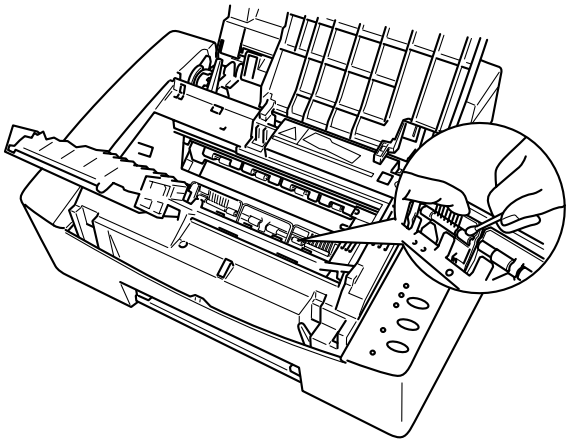


Figure 6-21 Cleaning the rollers

> ⚠ **Warning**
> **NEVER touch the interior of the printer without waiting 30 minutes after power off before commencing cleaning. This is because some parts of the interior are extremely hot after you have used the printer.**

RE-PACKING THE PRINTER

> **Caution**
> Whenever you transport the printer, use the packing materials which are provided with your printer. Also, follow the steps below to re-pack the printer, or the printer may be damaged.

Before Re-Packing the printer

Before your starting to re-pack the printer, you need to support the print head and head gap lever with the Styrofoam block as shown below.

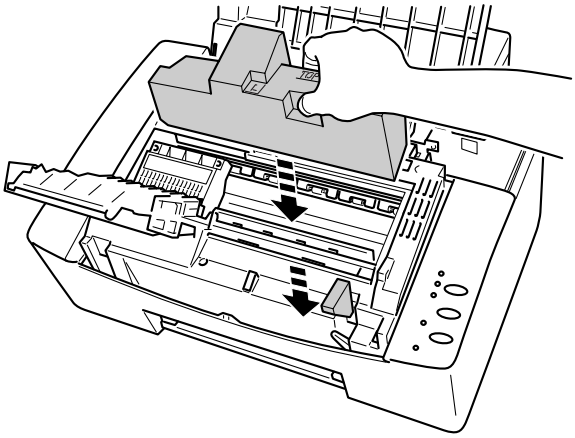
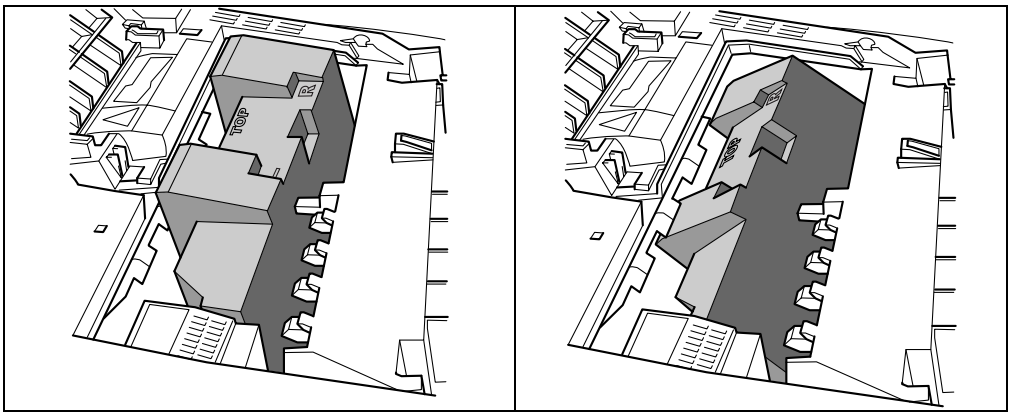


Figure 6-22 Insert the Styrofoam blocks

> Note
> - You need to move the print head to the left by hand until it stops.
> - Do not insert the Styrofoam in the wrong direction as shown below.

GOOD **BAD**



Re-packing the printer

1. Pull the maintenance cassette out of the printer.

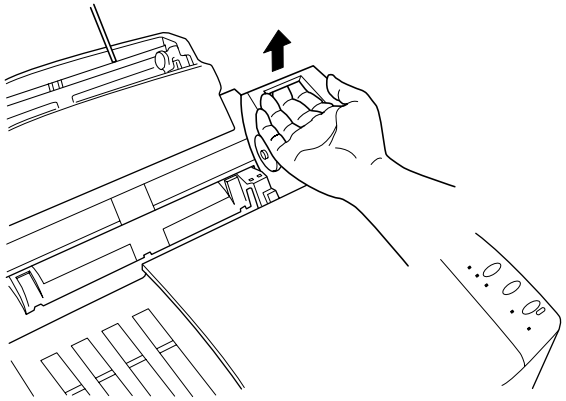


Figure 6-23 Remove the maintenance cassette

2. Turn off the power button and unplug the printer from the AC outlet.

3. Wait at least 30 minutes for the printer to cool down. After that, pack the printer as illustrated below.

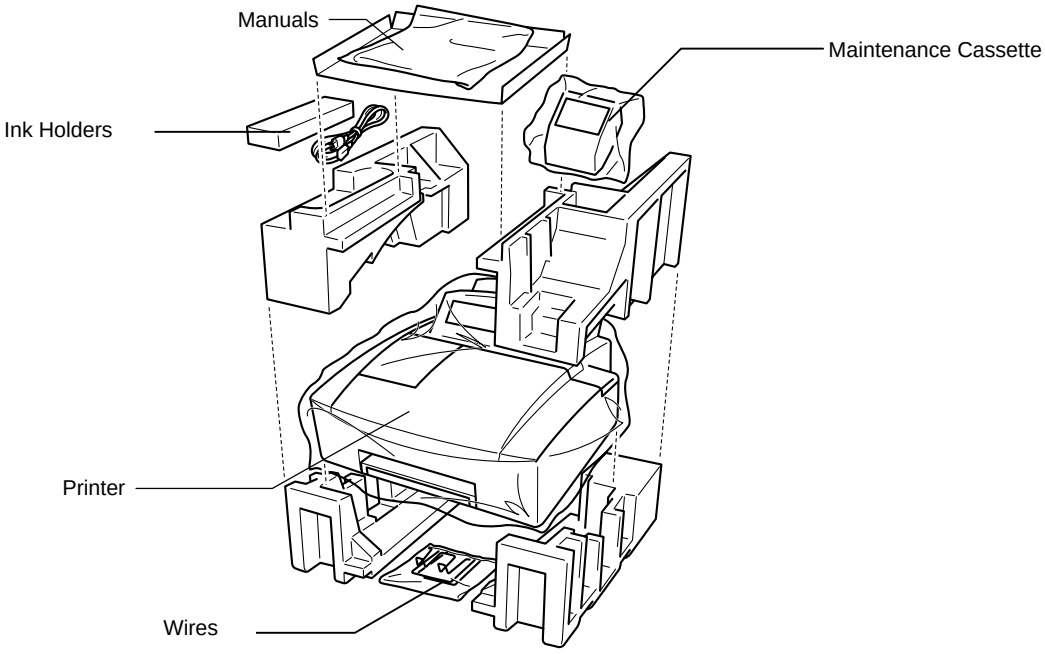


Fig. 6-24 Repacking the Printer

Chapter 7 TROUBLESHOOTING

ALARM INDICATIONS AT A GLANCE

Operator Calls

If a recoverable error occurs, the printer indicates an 'operator call' by blinking the **Alarm** LED and any of the following LEDs. Clear the error as described below and press the **FF/Cont** button to resume printing.

Blinking LED	Error	Action
Alarm❍↔●	Cover Open	Close the top cover of the printer.
Paper ❍↔● **Alarm**❍↔●	Paper jam	Clear the paper jam referring to the next section "PAPER JAMS" and press the **FF/Cont** button if the printer does not automatically resume printing.
	Paper empty	Load paper in the printer referring to Chapter 2 and press the **FF/Cont** button.
	Misfeed	Reinstall the paper and press the **FF/Cont** button.
Ink ❍↔● **Alarm**❍↔●	Ink Empty	Ink is empty. Add ink blocks into the printer and press the **FF/Cont** button.
Filter ❍↔● **Alarm**❍↔●	No Maintenance cassette or Maintenance paper empty	Maintenance paper is empty or Maintenance cassette is not installed correctly. Replace the maintenance cassette or re-install the cassette.

If the following errors occur, the printer indicates the error by blinking the **Alarm** LED and printing the error message.

Error	Action
Memory Full	• Press the **FF/Cont** button to print the data remaining in the printer. • Reduce the resolution or reduce the complexity of your document. • Expand the printer memory by fitting a SIMM module.
SIMM error	Check that the optional SIMM is correctly installed.

> **Note**
> If the printer does not operate as you expect it to, it is recommended to reset the printer or turn the printer off and then on again. If you still have problems, consult your dealer or our authorized service representative.

Service Calls

If an unrecoverable error occurs, the printer indicates the need for a service call by lighting all the LEDs and then the following combination of LEDs alternately:

Service Call	Alarm	Manual	Data	Ready	Power
Main ROM error	●	❍	❍	❍	❍
Main RAM error	❍	●	❍	❍	❍
NV-RAM error	●	●	❍	❍	❍
Controller service error	❍	❍	●	❍	❍
Engine ROM error	❍	❍	❍	●	❍
Engine RAM error	●	❍	❍	●	❍
Engine program error	❍	●	❍	●	❍
Communication error	●	●	❍	●	❍
Paper width sensor error	❍	❍	●	●	❍
Paper width level error	●	❍	●	●	❍
Paper dust error	❍	●	●	●	❍
Refill CAM position error	●	●	●	●	❍
CR Position error/PWM error	●	❍	❍	❍	●
CR Lock error	❍	●	❍	❍	●
CR Initialize error	●	●	❍	❍	●
Thermistor error	●	❍	●	❍	●
Heater overheat error	❍	●	●	❍	●
Heater break error	●	●	●	❍	●
AC heater error	❍	❍	❍	●	●
Quench platen error	●	❍	❍	●	●
Encode error	❍	❍	●	❍	●
LOIS error	❍	❍	❍	❍	●

● ON ❍ OFF

If you see any of these service call indications, reset the printer in either of the following ways:

- Reset the printer using the control panel button and try to print again.
- Turn off and on the power button and then try to print again.

If you cannot clear the error and see the same service call indication after resetting the printer, consult your dealer or our authorized service representative. Report the error status and situation referring to the above table.

Print Quality Problems

> **Note**
> Press the buttons gently. Release the two buttons immediately after pressing the **Test** button and the DATA LED will start to blink. If it does not, the buttons were held down for too long and you will need to start the test selection again.

❑ Printing a test page

Set the printer to off-line first by pushing the **Online** Button once.
Make sure that A4 or Letter size paper is loaded in the feeder.
Print a test page by pushing the **Test** button while holding down the **Shift** button.

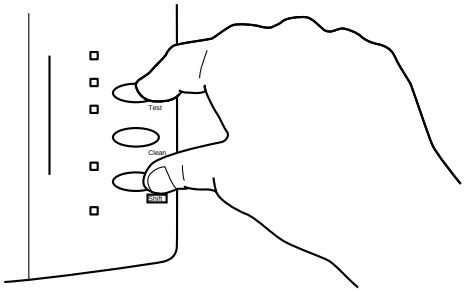
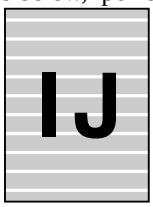


Fig. 7-1 Test page

❑ Cleaning the print head

If you see some horizontal lines as below, perform head cleaning.



Set the printer to offline first by pushing the **Online** Button once.
Push the **Clean** button while holding down the **Shift** button.
The printer cleans the surface of the print head. During cleaning, the **Online** LED is off. Print a test page again after the printer returns to the Online state and check that there are no dots missing.

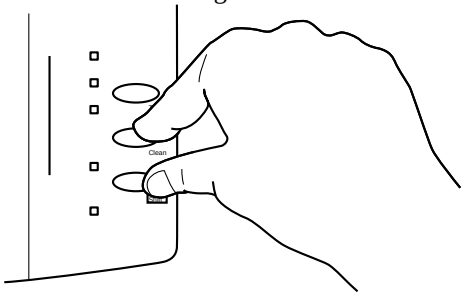


Fig. 7-2 Cleaning the print head

PAPER JAMS

Before you can clear a paper jam error, you need to find the location of the paper jam. Locate the position referring to the following figure. The below figure is the route of madia going through the printer.

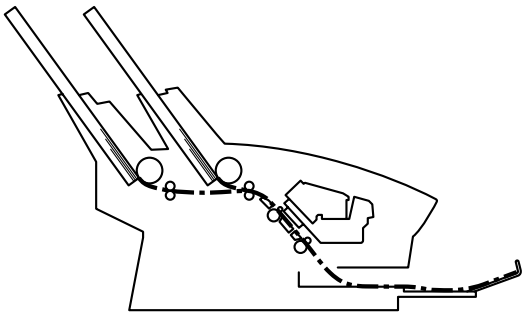


Fig. 7-3 Route of paper in the printer

After locating the position, clear the jammed paper referring to the following descriptions. If the jammed paper is removed completely, the printer may resume printing. If the printer does not resume printing, press the **FF/Cont** button.

⚠ Warning

After you have used the printer, some internal parts of the printer are extremely hot. When you open the inside cover of the printer, NEVER touch the shaded parts shown in the following diagram. After turning the printer Off, wait 30 minutes before attempting to remove the jammed paper.

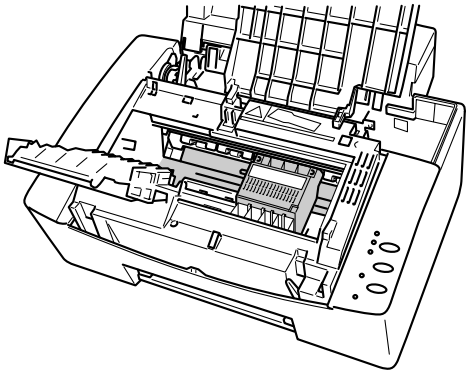


Fig. 7-4 Inside the printer

❑ Paper Jam in the Sheet Feeder

If a paper jam has occurred inside the sheet feeder, open the feeder to pull the jammed paper upward out of the feeder; then close the sheet feeder. Also, open the top cover and check that a torn piece of paper is not left inside the printer, refer to the next section.

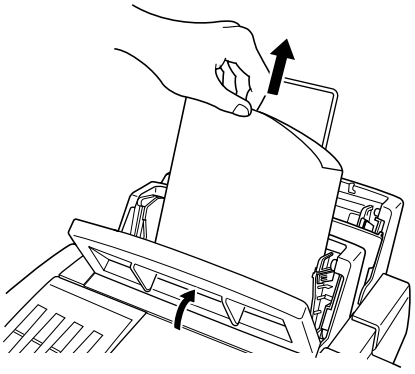


Fig. 7-5 Paper Jam in the Feeder

If the jammed paper cannot be pulled up, remove the sheet feeder from the printer. Turn the paper release lever forward so that the jammed paper is released.

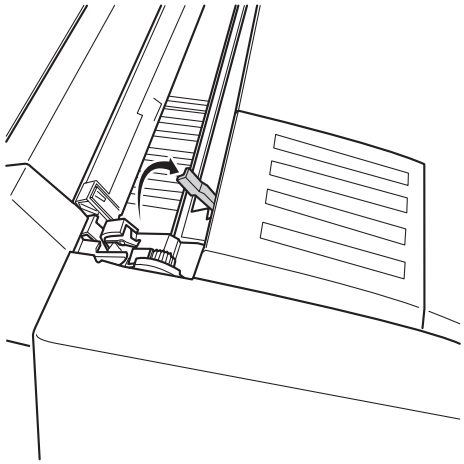


Fig. 7-6 Turning the paper release lever forward

❑ Paper Jam at the Output Tray

Remove all printouts in the output tray and pull the jammed paper out from the printer gently. Do not pull the paper hard to avoid tearing the jammed paper inside the printer.

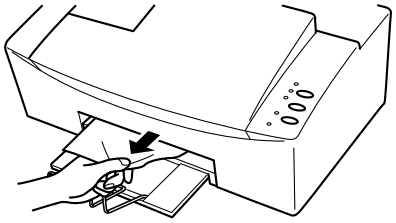


Fig. 7-7 Paper Jam at the Paper Output Tray

If the jammed paper cannot be pulled out, remove the output tray as in the following procedure to access the jammed paper.

1. Extend the output tray.
2. Lift it up so that the hooks are released.
3. Remove the output tray.

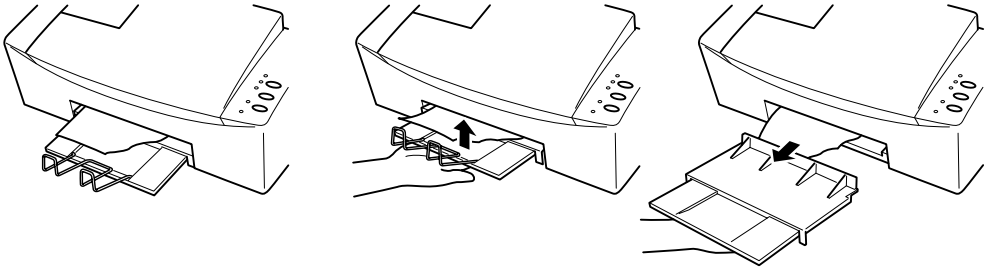


Fig. 7-8 Removing the output tray

❑ Paper Jam inside the printer

If a torn piece of paper remains inside the printer, first turn the printer off and unplug the power cord from the power outlet. Wait for 30 minutes before attempting to remove the paper because some parts inside the printer are extremely hot immediately after printing. Open the top cover and remove the piece of paper carefully.

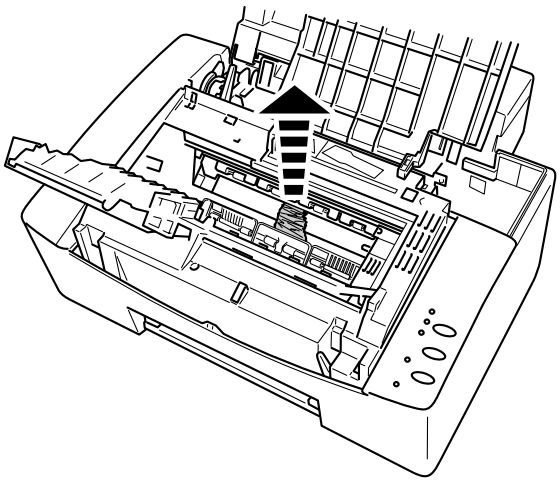


Fig. 7-9 Paper Jam inside the printer

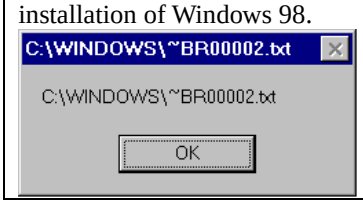
Q & A

This section contains questions and answers for using your printer. If you have encountered a problem, find the question relating to your problem and take the steps recommended to correct the problem.

Setting Up the Printer Hardware

Question	Recommendation
The printer does not work. All LEDs are off.	Check to see if the printer is plugged into a live power source and the power button is on.
The printer does not print.	Check the following: • The printer is turned on. • All of the protective parts have been removed. • The interface cable is securely connected between the printer and computer. • Check to see if the **Alarm** LED is blinking. If the LED is blinking, refer to the Operator Call section of this chapter.
The printer does not work in ECP mode of your PC.	The mode in the Parallel Port setting of your PC might not be ECP mode. You might need to change a setting in the BIOS of your PC to use ECP mode. Please set up ECP mode in the Parallel Port setting of your PC. For details, refer to your PC manual.

Setting Up the Printer for Windows

Question	Recommendation
I cannot print from my application software.	• Make sure that no color ink has run out. • Make sure the supplied Windows printer driver is installed and selected with your application software. • Make sure the printer port is correctly selected.
Sometimes I get a Memory Full error when printing certain documents from Windows.	• Expand the printer memory by adding SIMMs. • Reduce the print resolution or reduce the complexity of your document and try again.
With the following error dialog, you fail to install its printer driver from Plug & Play installation of Windows 98. 	Reinstall the printer driver by clicking the 'Add Printer' icon on the Settings-Printer dialog.

Setting Up the Printer for DOS

Question	Recommendation
I cannot print from my application software.	• Check if the DOS application software interface settings match that of your printer: for example, if you are using a parallel printer cable, you would most likely set your DOS software printer port to LPT1. • Check if the printer has any printer alarms active.
The printer prints, but it prints incorrect information. Sometimes it prints a couple of characters and then ejects the page, etc.	This is an indication that your application printer emulation setting and the printer's emulation do not match. Check in your application software which printer you have selected to make sure the printer is set up correctly. Select the HP DeskJet 1600C or Monochrome LaserJet driver.
The printer prints in Monochrome	When you set the printer selection to HP LaserJet xxx, it supports only monochrome printing. To get color printing, select the HP DeskJet 1600 series.
The printer does not print when I press the Print Screen Key. (**Data** LED On)	Turn the printer offline with the **Online** button and press the **FF/Cont** button. Data has been sent to the printer but the printer did not receive a Page Eject command; print screens do not send this command.
The printer prints the first part of my document but does not print the last page. (**Data** LED On)	This was a common problem with database software and spreadsheet software when not correctly set up. The data has been sent to the printer but the printer did not receive the Page Eject command. Turn the printer offline with the **Online** button and press the **FF/Cont** button to eject the page. Then check with your software supplier on how to add a Page Eject (or Form Feed) command to the end of your print job.
How can I change the User settings or default settings of the printer?	Use the remote printer console (RPC) program. Refer to Quick Setup Guide.

Paper Handling

Question	Recommendation
The printer does not load paper.	• Check to see if the "Paper Empty" message appears on your computer screen or the **Alarm** and **Paper** LEDs are blinking on the printer control panel. If so, the sheet feeder may be out of paper or not properly installed. If it is empty, load a new stack of paper into the feeder. • Remove all printouts in the output tray. • If there is paper in the sheet feeder, make sure it is straight. If the paper is curled, you should straighten it before printing. Sometimes it is helpful to remove the paper, turn the stack over and replace it in the paper tray. • Reduce the stack of paper in the sheet feeder, then try again. • The maintenance cassette paper may have run out. Check and see if there is enough maintenance paper, replace with a new roll of paper if necessary. Refer to "Replacing the Maintenance Paper Cassette" in Chapter 6. • You may not have fitted the maintenance cassette correctly. Please remove the cassette and then replace it until it clickes fully into position. Refer to the Quick Setup guide. .
The printer does not load paper from the manual feed slot.	Re-insert the paper firmly, one sheet at a time.
How can I load envelopes?	You can load envelopes from either the sheet feeder or the manual feed slot. Select the 'Envelope and Transparency' position of the head gap lever. Your application software must be set up correctly to print on the envelope size you are using. This is usually done in the page setup or document setup menu of your software. Refer to your application manual. (For the HS-5300, do not load envelopes in the second feeder)
What paper can I use?	You can use plain paper, envelopes and special transparencies. Refer to "Paper Handling" in Chapter 2.
The Automatic Document Feeder(ADF) of a copying machine has paper jam problems when you load the printouts of this printer in the copying machine.	Do not load the printouts of this Inkjet printer into other copying machines and ADFs. It may cause paper jams when trying to load the inkjet printed paper through them.
How can I clear paper jams?	See "PAPER JAMS" in this chapter.

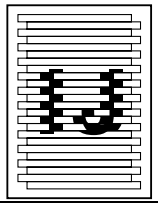
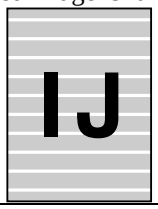
Printing

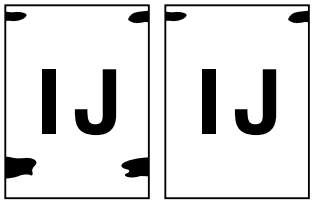
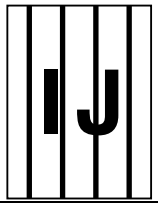
Question	Recommendation
The printer prints unexpectedly or it prints garbage.	• Reset the printer by pressing the **Reset** button after turning the printer off-line. • Make sure your application software is correctly set up to use this printer and check the printer driver settings or printer settings in your application software.
The printer cannot print full pages of a document. A "Memory Full" error message occurs.	• Expand the printer memory by installing SIMMs. • Reduce the printer resolution. • Reduce the complexity of your document and try again.
You want to print on both sides of the paper.	You should NEVER try to print on both sides of the paper. If you did, contact your dealer or our authorized service representative.
My headers or footers appear when I view my document on screen but do not show up when I print them.	Most inkjet printers have a restricted area that cannot be printed on. Usually the first two lines and last two lines of text cannot print. Adjust the top and bottom margins in your document to allow for this.

⚠ Warning

After you have used the printer, some internal parts of the printer are extremely hot. When you open the inside cover of the printer just after using the printer, NEVER touch the interior of the printer. You need to WAIT 30 MINUTES for it to cool down.

Print Quality

Question	Recommendation
Printouts are too dark or light.	You can adjust the brightness in Custom setting of your printer driver. Refer to the printer driver HELP.
The printouts are not solid.	After setting the printer offline by pushing the **Online** Button once, execute head cleaning by pushing the **Clean** button while holding the **Shift** button. You may also need to clean the printer interior. (Refer to "Cleaning the Printer Interior" in Chapter 6) When you want to perform interior cleaning, **WAIT 30 minutes** after turning off the printer before starting the cleaning.
Poor Transparency print quality.	• Use only Brother Special Transparencies for this printer. • Select the appropriate 'Envelope and Transparency' position of the head gap lever.
The ink on printouts flakes off. Some colors might be lighter than expected.	• You may be using thick paper. Check the type of media in the printer driver and select the 'Thick paper' position of the head gap lever. • You may be using the printer out of the environment range shown in Chapter 1.
Vertical lines are not straight. 	Adjust the position of the head gap lever.
White horizontal lines exist or the printed image is faint. 	• After setting the printer offline by pushing the **Online** Button once, execute head cleaning by pushing the **Clean** button while holding the **Shift** button. • Set the Enhancement mode ON in the Quality/Color tab of your printer driver.
The print image does not match the printing area.	• Select the Recommended Paper setting of the printer driver to get a wider printing area in Windows 3.1x/95/98. • You may need to adjust the margins in your software to match the printable area.

Printouts are stained with ink. 	• You may have used this printer in an environment that is out of the specified range. Refer to "Operating and Storage Environment" in Chapter 1. • You may have fed crumpled paper, curled paper or folded paper. You need to replace the paper. • Select the appropriate position of the head gap lever and select the correct media in the supplied driver. • Clean the roller and interior of the printer. Refer to "Cleaning the Printer Interior" in Chapter 6. When you want to perform interior cleaning, **WAIT 30 minutes** after turning off the printer before starting the cleaning. • Be sure to select the Recommended Paper setting in the printer driver.
Black vertical lines exists. 	You need to clean the printer interior. (Refer to "Cleaning the Printer Interior" in Chapter 6) When you want to perform interior cleaning, **WAIT 30 minutes** after turning off the printer before starting the cleaning.
The printed color is different from the displayed color.	• Make sure that your monitor supports and is set to full color mode (32.000 color or higher) in Control Panel of your computer. • Set the Monitor Calibration in your printer driver referring to "Control and Maintenance" in Chapter 3. However, the printer may not be able to express exactly some colors on your monitor.

If your printouts are not what you expected,, please see the below diagram.
This is the recommended mode for each type of your file:

File	**Quality**	**Enhancement**	**Document Type**
Text only	Normal	OFF	Auto
Text with charts	Normal	ON	Auto
Business Graphics	Normal	ON	Graph/Text
Presentation Sheet* Computer Graphics	Fine	ON	Graph/Text
Photo Images	Fine	ON	Photo

*If you want to print your Presentation file on transparencies, make sure that you set your media selection of your printer driver to Transparency and adjust the head gap lever to Envelop and Transparency position. For details, please refer to page 2-4.

Chapter 8 Appendix

PRINTER SPECIFICATIONS

Printing

Print Method	Piezo Electronic Hot Melt Ink Jet
Head nozzle	512 nozzles (128 nozzles / color)
Resolution	300 and 600 dots/inch
Print Quality	Fine / Normal mode
Print Speed	Up to 4 pages/minute (when loading letter-size paper from the sheet feeder and in normal color print mode : 5% coverage)
Warm-Up	Max. 9.5 minutes at 25°C (73.4°F)
Ink	Black, Cyan, Magenta, Yellow Each 3 cc x 3 blocks =9cc(1 cartridge) Life Expectancy: 460 pages/ 9cc (when printing letter-size paper at 5% print coverage)
TrueType Fonts on disks	TrueType-compatible soft-fonts for Windows on the supplied disk

Functions

Printer Driver	Windows 3.1/95/98 NT 4.0 driver, supporting Brother Native Compression mode and bi-directional capability
Emulation	PCL5c and PCL5e with standard BR-script Level 2 for option
Interface	Bi-directional parallel
Memory	Expandable up to 72 MB with SIMMs (HS-5000/5300)
Diagnostics	Self-diagnostic program

Electrical and Mechanical

Power Source	U.S.A. and Canada:	AC 110 to 120 V, 60 Hz
	Europe and Australia:	AC 220 to 240 V, 50 Hz
Power Consumption	Printing:	170W or less
	Stand-by/Power Save 1:	100W or less
	Power Save 2:	20 W or less (without optional card / ROM / SIMM installed)
	Warming up	480W or less
Noise	Printing:	55 dB A or less
	Stand-by:	40 dB A or less
Temperature	Operating:	10 to 35°C (50 to 90.5°F)
	Storage:	0 to 35°C (32 to 104°F)
	for optimum quality:	15 to 30°C (59 to 86°F)
Humidity	Operating:	20 to 80% (without condensation)
	Storage:	10 to 85% (without condensation)
	for optimum quality:	30 to 60 %
Dimensions (W x D x H)	HS-5000 : 490 x 410 x 310 mm (19.3 x 16.2 x 12.2 inches) HS-5300 : 490 x 510 x 310 mm (19.3 x 20 x 12.2 inches) (when the output tray is closed.)	
Weight	HS-5000 : Approx. 12 kg (27 lb.) HS-5300 : Approx. 13 kg (28.6 lb.)	

PARALLEL INTERFACE SPECIFICATIONS

Interface Connector

Printer Side: Amphenol FCN-685J036-L/X or equivalent
An IEEE-1284 compliant shielded cable should be used to enable all the functions of the bi-directional interface.

Pin Assignment

Pin No.	Signal	Direction	Pin No.	Signal	Direction
1	$\overline{\text{DATA STROBE}}$	Input	19	0V (S.G.)	–
2	DATA 1	Input	20	0V (S.G.)	–
3	DATA 2	Input	21	0V (S.G.)	–
4	DATA 3	Input	22	0V (S.G.)	–
5	DATA 4	Input	23	0V (S.G.)	–
6	DATA 5	Input	24	0V (S.G.)	–
7	DATA 6	Input	25	0V (S.G.)	–
8	DATA 7	Input	26	0V (S.G.)	–
9	DATA 8	Input	27	0V (S.G.)	–
10	$\overline{\text{ACKNLG}}$	Output	28	0V (S.G.)	–
11	BUSY	Output	29	0V (S.G.)	–
12	PE	Output	30	0V (S.G.)	–
13	SLCT	Output	31	$\overline{\text{INPUT PRIME}}$	Input
14	$\overline{\text{AUTO FEED}}$	Input	32	$\overline{\text{FAULT}}$	Output
15	N.C.	–	33	N.C.	–
16	0V (S.G.)	–	34	N.C.	–
17	0V (S.G.)	–	35	N.C.	–
18	+5V	–	36	$\overline{\text{SLCT IN}}$	Input

Note
To use bi-directional communication, the interface cable which has the pin connection above should be used.

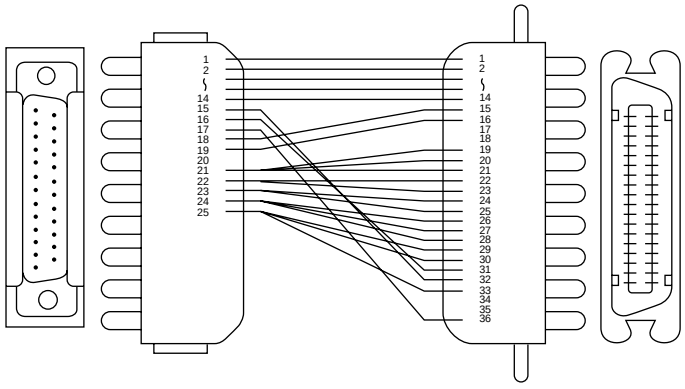


Fig. 8-1 Parallel interface cable

RESIDENT FONTS

Intellifont Compatible Fonts:

- Alaska, Extrabold
- Antique Oakland, Oblique, Bold
- Brougham, Oblique, Bold, BoldOblique
- Cleveland Condensed
- Connecticut
- Guatemala Antique, Italic, Bold, BoldItalic
- Letter Gothic, Oblique, Bold
- Maryland
- Oklahoma, Oblique, Bold, BoldOblique
- PC Brussels Light, LightItalic, Demi, DemiItalic
- PC Tennessee Roman, Italic, Bold, BoldItalic
- Utah, Oblique, Bold, BoldOblique
- Utah Condensed, Oblique, Bold, BoldOblique

Microsoft® Windows® 3.1 / 95 / 98 TrueType™ Compatible Fonts:

- BR Symbol
- Helsinki, Oblique, Bold, BoldOblique
- Tennessee Roman, Italic, Bold, BoldItalic
- W Dingbats

Type 1 Font Compatible Fonts:

- Atlanta Book, BookOblique, Demi, DemiOblique
- Calgary MediumItalic
- Copenhagen Roman, Italic, Bold, BoldItalic
- Portugal Roman, Italic, Bold, BoldItalic

Brother Original Fonts:

- Bermuda Script
- Germany
- San Diego
- US Roman

Bitmapped Fonts (Portrait and Landscape):

- LetterGothic16.66 Medium, Italic, Bold, BoldItalic
- OCR-A
- OCR-B

Bar Codes :

- Code 39
- UPC-E
- Interleaved 2 of 5
- Codabar
- EAN-8
- US-PostNet
- EAN-13
- ISBN
- UPC-A
- Code 128
- EAN-128

SYMBOL SETS/CHARACTER SETS

ISO14 JIS ASCII	ISO84 Portuguese	ISO25 French
ISO57 Chinese	ISO85 Spanish	ISO69 French
ISO11 Swedish	PC-8	HP German
HP Spanish	PC-8 D/N	ISO21 German
ISO17 Spanish	PC-8 Turkish	ISO15 Italian
ISO10 Swedish	PC-850	ISO6 ASCII
ISO16 Portuguese	PC-852	Legal
Roman 8	ISO60 Norwegian 1	ISO2 IRV
ISO Latin 1 (ECMA-94)	ISO61 Norwegian 2	ISO4 UK

Note
If you want to know what characters are in each symbol/character set, print CHARSETS.PRN file from "Print form" option in Direct Access Menu of the Remote Printer Console Program.

Chapter 9 INDEX

—A—

Alarm LED, 4–2, 7–1

—B—

BR-Script 2 ROM Board, 5-5

—C—

character set, 8–5
Clean button, 4–4,7-3
cleaning kit, 6–9
Cleaning the printer, 6–9
Color Adjustment, 3–7
Color Matching, 1–3, 3–5
Control Panel, 1–2, 4–1
Custom Setting, 3-5, 7-12

—D—

Data LED, 4–2
Document Type, 3-5
DOS, 7–9
dpi, 1–3

—E—

Energy Star, 1–3, 3–7, 4–7
Emulation, 8-1
envelopes, 2–2, 2–6
Environment, 1–4
error
  recoverable, 7–1
  unrecoverable, 7–2

—F—

factory reset, 4–6
FF/Cont Button, **4–3**
Filter LED, 6–1
FONTS, 8–4

—H—

Hardware, 7–8
head cleaning, 3–7, 4–4, 7-3
Head Gap Lever, 1–2, 2–5
hex dump print, 4–6

—I—

ICM, **3–5**
ink, 6–7, 8–1
  empty, 7–1
Ink Reservoir, 6–6
Ink Reservoir cover, 1–2
interface, 8–1
  error, 7–1

—J—

jammed paper, 7–4

—M—

maintenance paper, 6–1
  empty, 7-1
Manual Feed slot, 1–2, 2–8
Manual LED, 4–2
manual paper feed, 2–8, 3–3
Media Selection, 2–4, 3–2
memory, 8–1
  expansion, 5-2
  full, 7–1
MIO Slot, 1–2, 5-1
misfeed, 7–1
modular input/output (MIO) interface, 5–1

—N—

network card, 5–1
Nozzle, 8–1

—O—

Online button, 4–3
operator call, 7–1
optional memory, 5–2
orientation, 3-2
output tray, 2–9
Overview, 1–2

—P—

Page Order, 3–3
paper
  empty, 7–1
  Guide, 1–2
  jam, 7–1, 7–4
  release lever, 7–5
  size, 2–1
  thickness, 2–5
parallel interface, 8-3
  pin assignment, 8–3
  port, 1–2
Power Button, 1–2
Power Inlet, 1–2
Power LED, 4–1
Power Save Mode, 1–3, 3–7, 4–7
ppm, 1–3
print
  Config, **3–6**, 4–5
  Fonts, 3-6, 4–5
  method, 8–1
  quality, 8–1
  resident font lists, 4–5, 8-4
  speed, 8–1
printable area, 2–3
printer driver, 1–3, 3–1
  CONTROL AND MAINTENANCE, 3–6
  PAPER, 3–2
  QUALITY AND COLOR, 3–4

—Q—

questions and answers, 7–8
Quick Setup Guide, 1–1

—R—

Ready LED, 4–1
RE-PACKING, 6–13
reset and hex dump mode, 4–6
Reset button, 4–3
resolution, 1–3, 8–1

—S—

Scaling, 3–3
service call, 7–2
Sheet Feeder, 1–2, 2–1, 2–5
Show Printer Status, 3-6
SIMM, 5–2
specifications
  Electrical and Mechanical, 8–2
  Functions, 8–1
  interface cable, 8–3
  paper, 2–1
  Printing, 8–1
symbol set, 8–5
System Requirements, 1–3

—T—

Test button, 4–4
test page, 3–7, 4–4, 7–3
test print mode, 4–5
time-out, 3–7, 4–7
Top Cover, 1–2
transparencies, 2–2, 2–4
transport, 6–13
Troubleshooting
  Paper Handling, 7–10
  Print Quality, 7–12
  Printing, 7–11
  Set up
    DOS, 7–9
    Hardware, 7–8
    Windows, 7–8

—U—

user reset, 4–5

—W—

warm up, 3–7, 4–7, 8–1
Warnings, iii
Windows, 7–8