



## Laser Printer HL-800/1000 Series

# Quick Setup Guide

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Read this guidebook first to set up your printer and prepare your computer for the printer. Save all packing materials and outer carton. They are useful when shipping the printer.

**Keep this manual in a convenient place for quick and easy reference at all times. Refer to the On-Line manual by installing the CD-ROM into Windows.**

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## (For USA & CANADA Only)

### For technical and operational assistance, please call:

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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

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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.

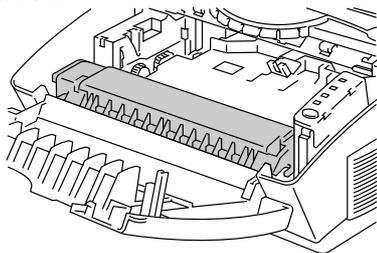
### Note

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

## To Use the Printer Safely

### Warning

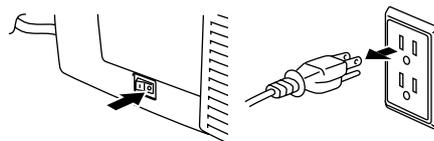
After you have just used the printer, some internal parts are extremely hot. When you open the printer top cover, never touch the shaded parts shown in the following illustration.



 **High Temperature**  
Inside the Printer

### Warning

There are high voltage electrodes inside the printer. Before cleaning the printer, make sure you turn off the power switch and unplug the power cord from the power outlet.



Turning off the Switch and Unplugging the Printer

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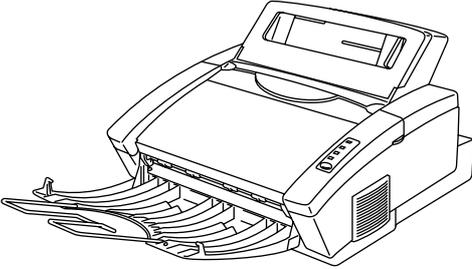
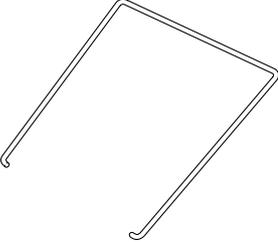
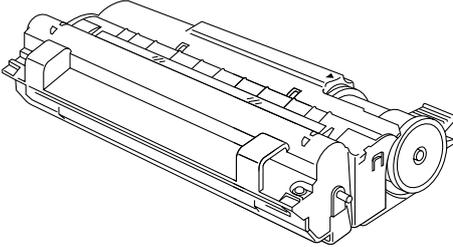
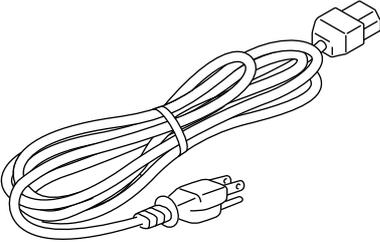
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## Action 1: Check the Supplied Items

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After taking the printer out of the carton and removing the packing materials, make sure that the following items are not damaged and none are missing:

<ul style="list-style-type: none"><li>• Printer</li></ul> 	<ul style="list-style-type: none"><li>• Paper support</li></ul> 
<ul style="list-style-type: none"><li>• Drum unit assembly (with Toner cartridge included)</li></ul> 	<ul style="list-style-type: none"><li>• AC Cord</li></ul> 

- 3.5" floppy disks for Windows® printer driver and fonts
- Quick setup guide (this guidebook)
- Plastic Bag
- CD-ROM

### **NOTE**

The 3.5" floppy disks for the Macintosh printer driver may be included for some countries. You will need to purchase an interface cable that matches the bi-directional IEEE 1284 compliant interface of your computer. If you do not know what cable you need, consult your dealer.

## Action 2: Place the printer

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Please take note of the following before using the printer.

### Power Supply

- Use the printer within the specified power range.
  - AC power:  $\pm 10\%$  of the rated power voltage in your country
  - Frequency: 50 Hz (220 V– 240 V) or 50/60 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 an isolation 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 32.5°C (50°F to 90.5°F)
  - Ambient humidity: 20% to 80% (without condensation)
- The printer should be used in a well ventilation room.
- 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 the ventilation hole of the printer is blocked.
- 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.
- Keep the printer horizontal when carrying.
- Do not cover the slots in the top cover.

### System Requirements for the Brother Printing Solution for Windows

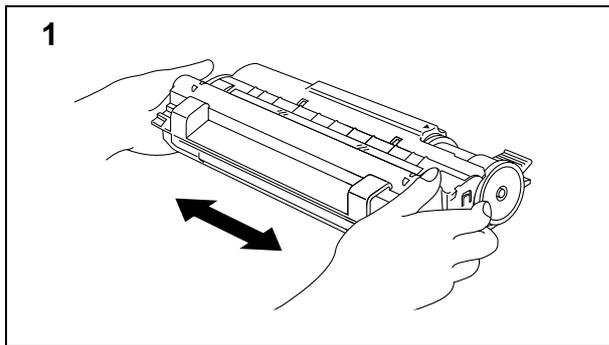
Check the following system requirements to setup and operate the printer in Brother Printing Solution for Windows:

- IBM PC or compatible with 80486 SX or higher microprocessor
- Parallel interface (or printer port)
- 4 MB or more of memory (8 MB recommended)
- 10 MB of space available on your hard disk for the printer driver and all fonts
- Microsoft Windows 95/98, 3.1/3.11 or Windows NT 4.0

### Caution

The HL-820/1020 printer has been designed specifically for Windows 95/98, 3.1/3.11 and Windows NT4.0. It cannot work in a DOS environment such as MS-DOS.

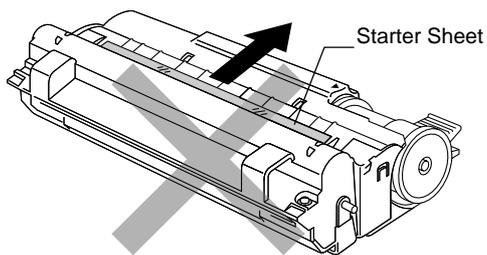
## Action 3: Install the Toner Cartridge/Drum Unit



Unpack the drum unit assembly with the toner cartridge included. Gently shake it from side to side five or six times.

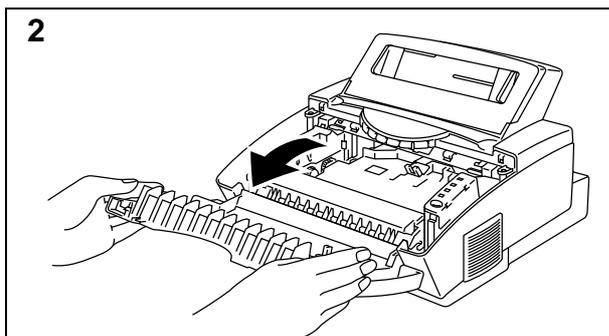
**CAUTION**

Do not expose the drum unit to light for longer than a few minutes, as this will damage the drum.

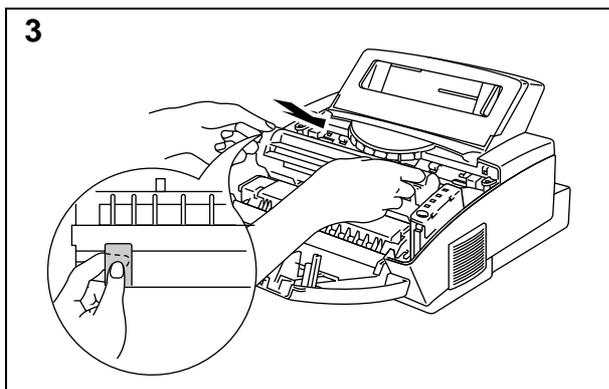


**CAUTION**

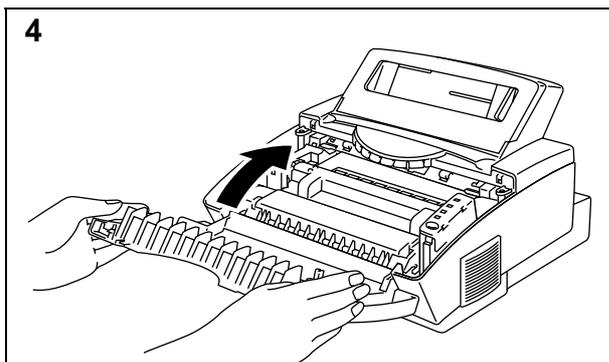
Do not remove the starter sheet. This sheet will be ejected while the printer is warming-up after installing a new drum unit. (See Action 5 Illustration 4)



Open the top cover of the printer by holding both sides of it.



Holding the drum by its handles, install it into the printer.



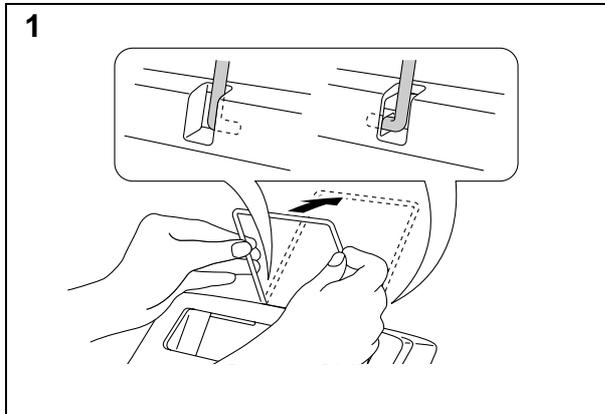
Close the top cover.

See "CHAPTER 5 MAINTENANCE" in the On-line User's Guide for more information about replacement of the toner cartridge.

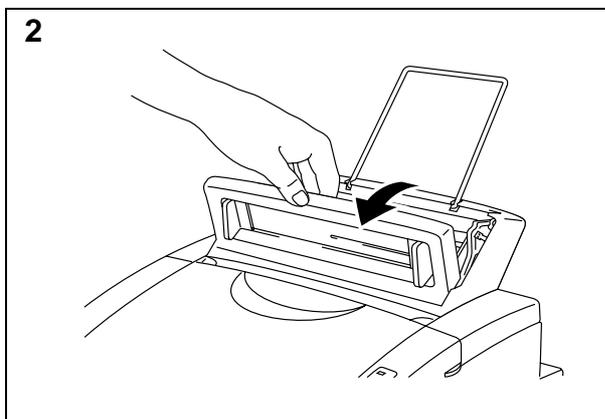
## Action 4: Load Paper into Your Printer

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Before loading paper, make sure that the paper meets the specification [described in the On-line User's Guide Chapter 2](#). Using unsuitable paper might reduce the print quality.



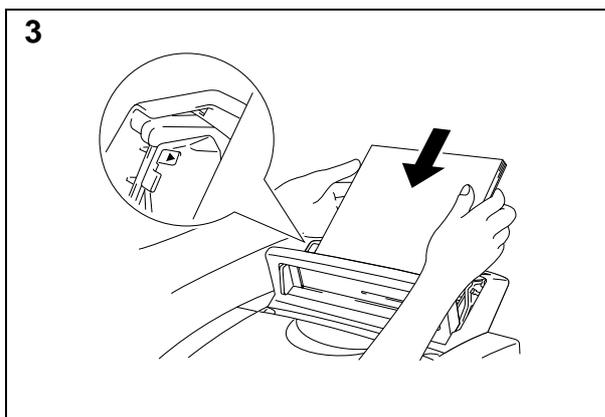
Install the paper support onto the multi-purpose sheet feeder.



Open the multi-purpose sheet feeder cover.

**! CAUTION**

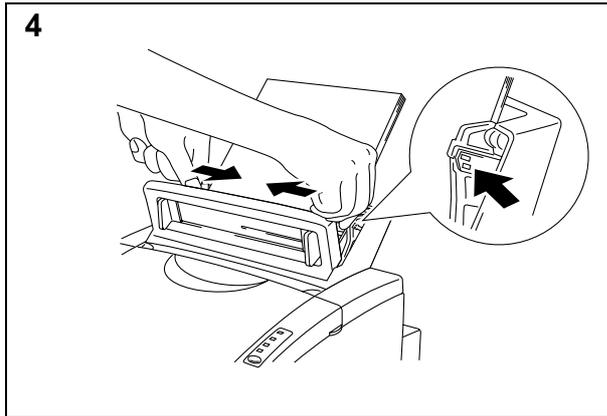
Be sure to open the sheet feeder cover whenever you insert paper into the sheet feeder otherwise you may get paper mis-feeding or paper jam errors.



Load paper in the multi-purpose sheet feeder.

**✍ NOTE**

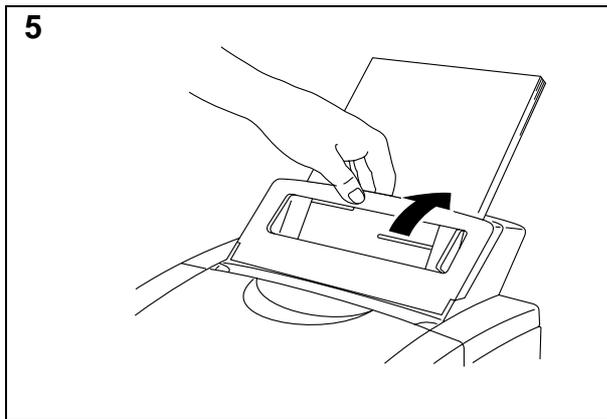
The feeder can hold up to 200 sheets of plain paper or up to 10 envelopes. Excessive sheets may cause paper jams. Make sure that the paper is stacked below the ▲ mark.



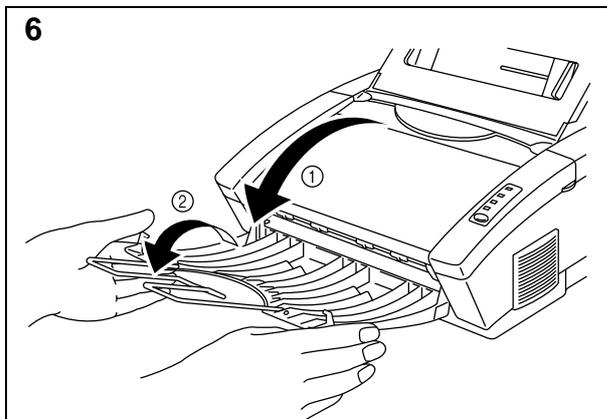
Hold the tab of the right hand paper guide and press the catch to release the guide lock. Move the paper guide to fit the paper width.

**! CAUTION**

Failure to set the paper guide to the paper width may cause paper skew and jam.



Close the multi-purpose sheet feeder cover.



Open the output tray. ( ① )  
Extend the extension support wire. ( ② )

The printer can handle paper within the following specifications:

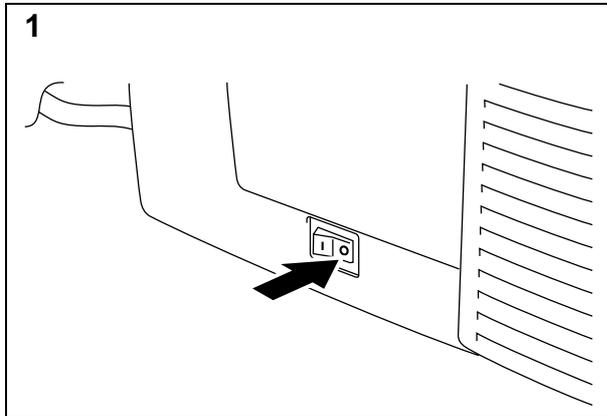
Paper Type	Paper Size
Cut sheets	A4, Letter, Legal, B5(JIS/ISO), A5, A6, 3"x 5", Executive, Custom size (70-216 x 127-356 mm)
Envelopes	DL, C5, COM-10, Monarch, 9" x 12"
Organizer	Day-Timer® J, K, L, 70-216 x 127-356 mm
Labels and Transparencies	A4, Letter 70-216 x 127-356 mm

See "CHAPTER 2 PAPER HANDLING" in the On-line User's Guide for more information.

## Action 5-1: Connect Your Printer to Your Computers parallel interface

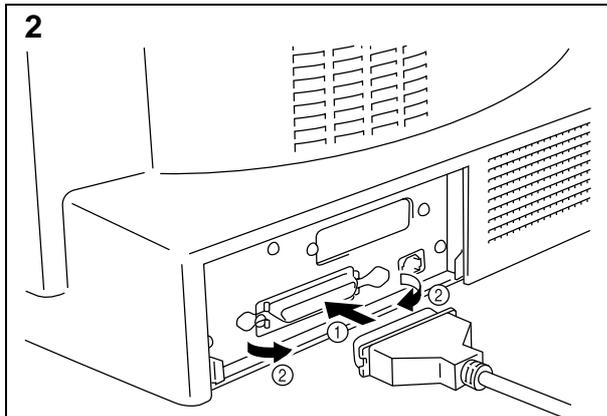
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You must connect the printer to your computer with a suitable interface cable. In most cases, a bi-directional IEEE 1284 compliant parallel cable is used for this connection.



Make sure that the printer **power** switch is off before connecting or disconnecting the interface cable.

Also, make sure that the computer is turned off.



Connect the parallel interface cable to the parallel interface port of the printer. ( ① )

Secure the connection with the wire clips. ( ② )

Connect the interface cable to the printer port of the computer.

### NOTE

The HL-1040/1050 printer can also operate with an RS-232C/RS-422A serial interface by installing the optional serial interface board. In some countries it might be pre-installed. For more information, see “CHAPTER 4 OPTIONS” in the On-line User’s Guide.

For the location of your computers parallel (or serial, if you are using the optional interface board) printer port, refer to the User’s Guide of your computer.

## Action 5-2: Connect Your Printer to Your Computers using the USB interface ( Only for HL-1050 with Windows 98 )

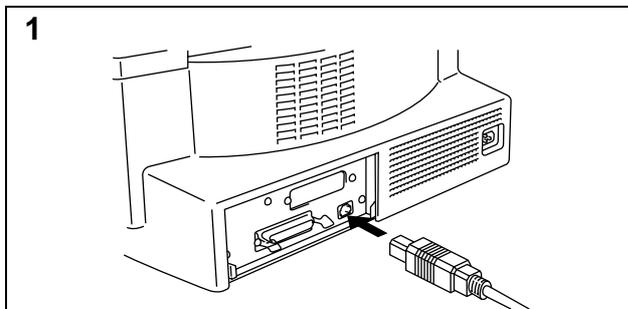
The Universal Serial Bus is an interface which allows the printer to be connected to multiple peripheral devices. If your PC has a USB port, you can connect the printer to your PC by using the USB interface as described in the following procedure.

### NOTE

- We recommend that you use the USB interface with this printer on Microsoft Windows<sup>®</sup> 98. Although Microsoft Windows<sup>®</sup> 95 OSR2.1 supports the USB interface, some PCs do not work correctly with the USB interface.
- Only one Brother printer can be used in the same chain of the USB connection. If more than one Brother printer exists in the same chain of the USB connection, only one printer can be used.
- To obtain the latest driver, refer to the following page on our web site:

<http://www.brother.com/>

**[Software]**



Turn the printer power off.

Connect your PC and HL-1050 with the USB interface cable.



Turn the printer **power** on.

The dialog shown above will appear on your PC.

Click the **Next** button.



Select “*Search for the best driver for your device.*”

Click the **Next** button.



Insert the supplied CD-ROM into the drive of your PC.

Select “*CD-ROM drive.*”

Click the **Next** button



Click the **Next** button.

The USB driver is installed.



When the dialog shown above appears on your PC, click the **Finish** button.

**Be sure to restart Windows 98 so that the installed USB driver will be effective.**

When the installation of the USB driver is complete, install the printer driver.

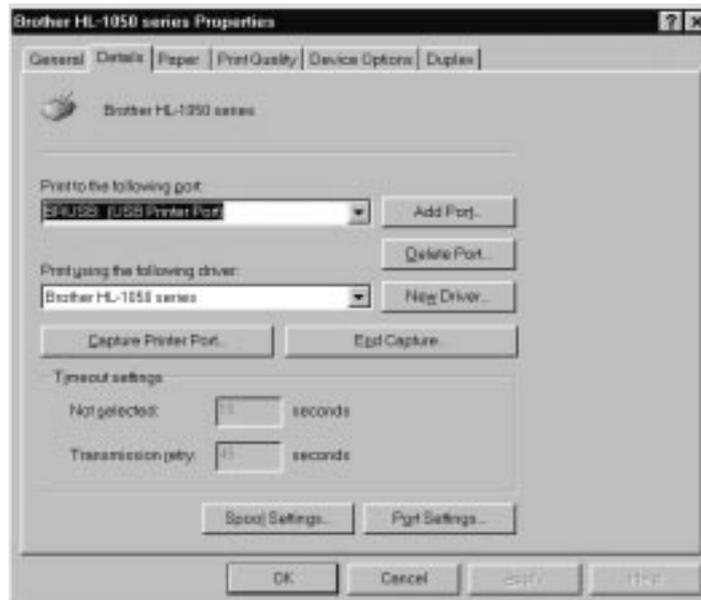
From CD-ROM: Run the CD-ROM program and go to the ‘Install driver’ menu.

From Floppy disk: Refer to the Software Quick Setup Guide.

### Set the printer port to USB

After installing the USB driver and printer driver, the printer port has to be set to ‘USB port’.

1. Click the **Start** button and select **Printers in Settings**.
2. Select the HL-1050 icon in printers so that the HL-1050 icon is highlighted.
3. Select **Properties** from **File** menu.
4. Click **Details** tab.
5. Select **BRUSB:(USB Printer Port)** in the box for “Print to the following port”.
6. Click **OK** to close the properties dialog box.

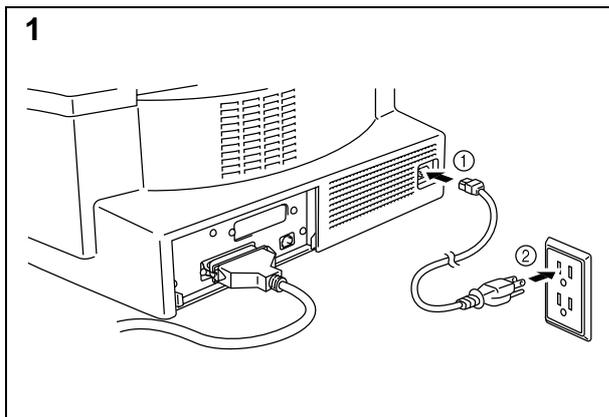


## Troubleshooting

If the printer does not print from the USB port, try reinstalling the USB driver as follows;

1. Double-click the file 'DeinsUSB.exe' in the USB directory of the CD-ROM.
2. Turn the printer off and on again.
3. "Add New Hardware Wizard" is launched again, follow the instructions in the Wizard.

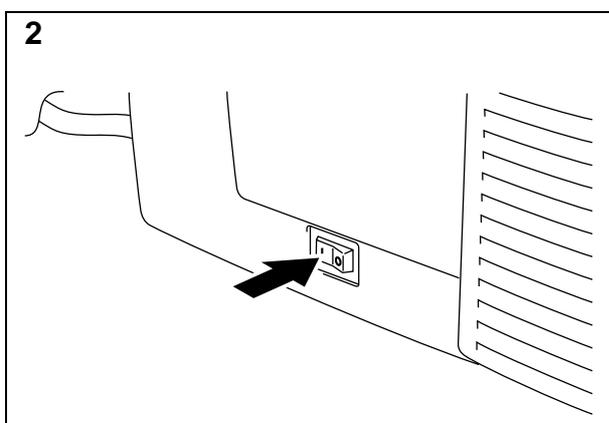
## Action 6: Plug in and Turn on Your Printer



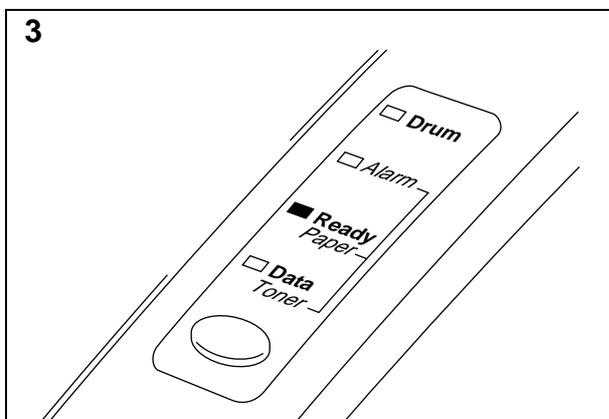
Plug the power cord into the AC power outlet and the printer power inlet.

### NOTE

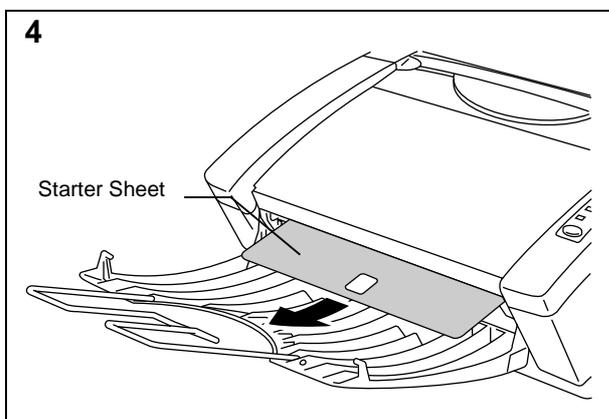
The shape of the power cord varies according to the country of destination.



Turn on the **power** switch that is located on the left side of your printer.



Make sure that the **READY** lamp is lit after the printer has warmed up (approximately 30 seconds).



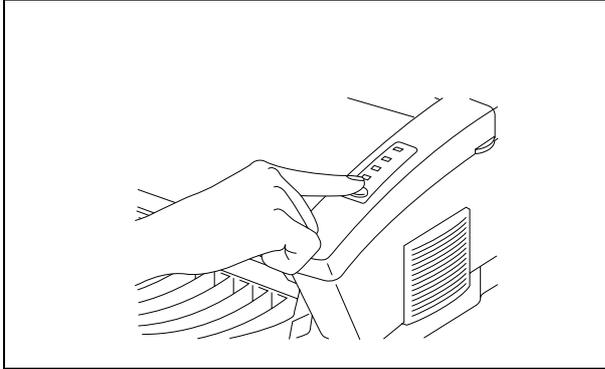
Make sure that the printer automatically ejects the starter sheet while the printer is warming-up immediately after installing a new drum unit.

## Printing a Test Sample Page

We recommend that you print a test page. Refer to the instructions below.

### NOTE

- The following test page operation will be invalid after the printer has received any data from your computer.



Press the control panel **switch**.  
The printer will start printing a test sample page.

### NOTE

- If you have already sent data from your computer to the printer, you can print a self test using the following steps.
  1. Make sure the top cover is closed.
  2. Hold down the **switch** and turn on the power switch. Keep the **switch** depressed until the **Drum** lamp comes on.
  3. Press the switch again to execute the test print.The HL-1040/1050 printer can also print settings, fonts, and hexadecimal values of received data. For more information, see [“Test Print Mode” in Chapter 3](#) of the On-line User’s Guide.
- If the printer does not print a test sample page, see [“CHAPTER 6 TROUBLESHOOTING, Q & A”](#) of the On-line User’s Guide. If you are still unable to print a test sample page after reviewing the information in the User’s Guide, consult your dealer or Brother representative for support.
- **This Setup guide, the User’s Guide and an instructional video are available on the CD-ROM. You can view the On-Line guides with the Adobe Acrobat reader software included on the CD-ROM.**

After printing the test sample page, you are ready to prepare your computer to work with the printer. The software setup varies depending upon your computer and operating system. Refer to the relevant following section:

Action 7-1: Installation from CD-ROM

Action 7-2: Prepare Windows 95/98 for the Printer from floppy disk

Action 7-3: Prepare Windows 3.1 for the Printer from floppy disk

Action 7-4: Prepare DOS for the Printer (Only for HL-1040/1050 Users) from floppy disk

Action 7-5: Prepare Macintosh for the Printer (Only for HL-1040/1050 Users)

## Action 7-1: Installation from CD-ROM

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The supplied CD-ROM contains the following materials.

- **Printer Driver & TrueType fonts -**  
You need to configure your PC for the printer by installing the printer driver and TrueType-compatible fonts. Printer driver & TrueType fonts can be installed either from the CD-ROM or the floppy disks.
- **Soft PCL 5e ( Only for HL-820/1020/1040 ) -**  
To print the document at 600 dpi from the Windows DOS box you need to install this utility.
- **Other useful utilities -**  
Several other useful utility software programs are available on the CD-ROM.
- **Documentation -**  
This Setup guide, the User's Guide and an instructional video are available on the CD-ROM. You can view the On-Line guides with the Adobe Acrobat reader software included on the CD-ROM. The instruction video shows how to replace the consumables etc.

If your PC does not have a CD-ROM drive, you can install the printer driver or RPC from the supplied floppy disks. For the other software that is supplied on the CD-ROM, it is possible to make disk sets from the CD-ROM if you can get access temporarily to a PC with CD-ROM and Floppy disk drives.

### For Windows 95/98/NT 4.0

1. Close all the applications running on your PC.
2. Insert the supplied compact disc into the CD-ROM drive.

#### **NOTE**

Depending on the computer configuration, the installation program may automatically start. In this case, skip the following steps 3 to 5.

3. Click **Start**.
4. Choose **Run**.
5. Type D:\START32 (or the appropriate drive directory letter) in the command line box and click **OK**.

After the installer starts, simply follow the instructions that appear on the screen.

### For Windows 3.1/3.11

1. Close all the applications running on your PC.
2. Insert the supplied compact disc into the CD-ROM drive.
3. In the **Windows Program Manager** screen, click the **File** menu.
4. Choose **Run**.
5. Type D:\START16 (or the appropriate drive directory letter) in the command line box and click **OK**.

After the installer starts, simply follow the instructions that appear on the screen.

## **Action 7-2: Prepare Windows 95/98 for the Printer from floppy disks**

You need to configure Windows 95/98 for the printer by installing the printer driver and TrueType™-compatible fonts from the supplied disk into Windows 95/98.

1. Insert the supplied floppy disk labeled “disk1” into your floppy disk drive.
2. Click the **Start** button and select **Settings**.
3. Select **Printers** and double click the **Add Printer** icon.



4. Follow the instructions in Windows™ 95/98.

## Action 7-3: Prepare Windows 3.1 for the Printer

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You need to configure Windows 3.1 for the printer by installing the printer driver and TrueType™-compatible fonts from the supplied disk into Windows 3.1.

Because the supplied printer driver and fonts are compressed on the disk, be sure to use the supplied installer program to install them. These instructions assume you will install the driver and fonts from the disk drive A.

1. Start Windows 3.1.
2. Insert the supplied disk for Windows into your floppy disk drive.
3. Choose **Run** from the **File** menu in the *Program Manager*.
4. Type the drive name where you inserted the supplied disk and “SETUP” in the box: for example, A:\SETUP. Click the **OK** button or press the **Enter** key.



5. The installer program will begin. Follow the instructions on the computer screen. (Be sure to restart Windows when the installation process is completed.)

### NOTE

- The installer automatically updates your SYSTEM.INI Windows file by adding DEVICE=bi-di.386 under the [386Enh] section. If any bi-directional parallel communications device driver has previously been installed, it will be deactivated by this new driver. If you want to use the driver that was previously installed, you should re-install your previous driver. However, re-installing the previous driver will make the HL-800/1000 series driver inactive.
- The installer makes the installed printer driver the Windows default.
- The installer automatically sets the printer port to the parallel interface, LPT1.
- During this installation, changes have been made to the SYSTEM.INI file. It is necessary to restart Windows so that the changes become effective and the installed bi-directional parallel communications device driver can take effect.

## Action 7-4: Prepare DOS for the Printer (Only for HL-1040/1050 Users)

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### How to Use the Printer in Your DOS Application Software (without using the Windows system)

Before working with application software that runs in DOS, if you do not already have a suitable driver installed, you will need to install a printer driver that matches one of the following supported emulations:

HL-1040 : HP LaserJet IIP, EPSON FX-850, or IBM Proprinter XL printers

HL-1050 : HP LaserJet 6P, EPSON FX-850, or IBM Proprinter XL printers

The following table shows combinations of printer drivers and printer emulation mode. To get the most out of this printer, you should install an HP printer driver in your application software.

Printer Model	Printer driver supported in your application software	Emulation mode to be selected with the remote printer console program
<b>HL-1040</b>	<b>HP LaserJet IIP™</b> HP LaserJet II™	HP LaserJet IIP emulation mode Auto emulation selection
<b>HL-1050</b>	<b>HP LaserJet 6L/6P™</b> HP LaserJet 5L/5P™ HP LaserJet 4/4L/4P™ HP LaserJet III/IIIP™	HP LaserJet 6L/6P emulation mode Auto emulation selection
<b>HL-1040/1050</b>	<b>Epson® FX-850™</b> Epson FX-80™	Epson FX-850 emulation mode Auto emulation selection
<b>HL-1040/1050</b>	<b>IBM® Proprinter® XL</b> IBM Proprinter	IBM Proprinter XL emulation mode Auto emulation selection

#### NOTE

- The best or recommended printer driver is indicated in bold.
- Be sure to choose the correct printer driver in your application software. Failure to do so may cause poor or inconsistent results.
- Ensure that the printing resolution of the HL-1040 is set to 300 dpi in your DOS application software.

## What Does Remote Printer Console Do?

The Remote Printer Console (RPC) is a utility program which runs in the DOS environment and comprises the following two programs:

### ❑ Remote Printer Console Main Program

This program allows you to change various printer settings such as emulation, print quality, fonts, page setup and so on from your computer screen. Since most DOS applications have a printer settings menu which overrides the settings made by the RPC, you may not need to use this utility program. This utility program is useful for application software which does not control the printer's settings and features.

### ❑ Printer Status Monitor Program

This utility program can monitor your printer's status using bi-directional parallel communications. If your printer has no paper, this utility program displays "*Paper Empty*" error status and instructions for corrective action on your computer screen. This utility program stays resident in your computer memory (Terminate-and-Stay Resident program) and runs in the background.

## Installing the Remote Printer Console

Before you install the program, make sure that you have the following hardware and software:

DOS	Version 3.3 or later
Monitor	EGA/VGA or compatible
Option	Mouse; the mouse driver must be installed. (You can also operate the program with the keyboard.)

Follow these steps to install the remote printer console program:

1. Make sure your printer is connected to your computer and is ready (On-line).
2. Start your computer. If you are in Windows, exit and return to the DOS prompt. You must be in the DOS prompt to proceed with installation.
3. Insert the supplied disk into your floppy disk drive (A: or B:).
4. Select drive A or B to be used by typing A: or B: after the DOS prompt and pressing the **Enter** key. 

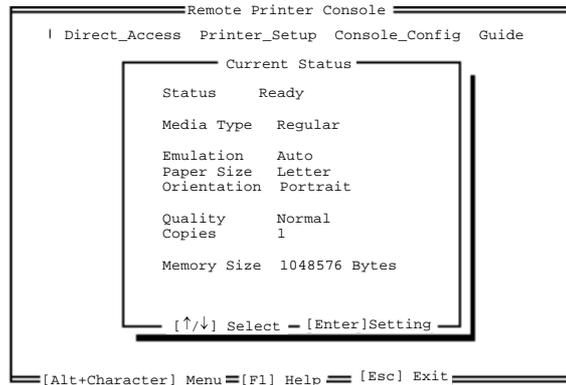
C:\>A:
5. Type RPCSETUP and press the **Enter** key. 

A:\>RPCSETUP
6. Follow the instructions on the screen.

## Using the Remote Printer Console Main Program

Type `C:\RPCX>RPCX` and press the **Enter** key to start the Remote Printer Console main program.

The Main Screen will appear on your computer screen as shown on the right.



The RPC gets the current settings information from your printer when it starts if bi-directional communication is enabled between your computer and printer. Otherwise, RPC shows its default settings. If you want to change settings, move the cursor to the desired item and select the desired setting by using the **Enter** and **cursor** keys. Then, press the **Enter** key to make the selected setting valid. If you use a mouse, click the desired item to change the setting.

Additionally, there are four sub-menus as shown in the table below. Select a sub-menu by clicking the desired sub-menu with the mouse, by using the **cursor** key and the **Enter** key, or by using the keys shown below to switch the screen to the sub menus.

Menu	Press the keys	Functions
Direct Access	Alt + D	You can directly control printer functions such as Print Form, Self Print, Reset Printer, Sleep Control.
Printer Setup	Alt + P	You can enter the setting mode to change further printer settings, such as, margin settings, continue mode, reprint function, font, and sleep mode.
Console Config	Alt + C	You can change the environment settings for the RPC program: color, Status Monitor configuration, etc.
Guide	Alt + G	You can get into the Guide mode.
Help	F1	You can get On-Line help about the current highlighted item by pressing F1.

## Using the Printer Status Monitor Program

Type `C:\RPCX>STMX` and press the **Enter** key to make the Printer Status Monitor Program stay resident in your computer memory. If there are any changes to the printer status, it displays a message on your computer screen.

If the printer status monitor program stays resident in your computer, you can monitor the printer status on your computer screen immediately using the hot-key sequence (**Ctrl+Alt+R**).

To remove the Printer Status Monitor program from your computer memory, type `C:\RPCX>STMX/R` and press the **Enter** key.

- The RPC works in the environment where your printer is directly connected to your computer. If you are using any printer buffer switches which do not support bi-directional communication between the printer and computer, the program works only in the PC to printer direction and cannot receive printer status information.
- The program does not work with printers on a network.
- If the RPC conflicts with some application software, exit your application software and then run the RPC.
- The RPC may work in the DOS-compatible box screen mode of Windows, however, it is recommended that you completely exit from Windows to the DOS prompt before using the RPC.
- The Printer Status Monitor and some other Terminate-and-Stay programs cannot coexist in the computer's memory. If they do not work properly together, use them one at a time. You can suspend the Printer Status monitor with any of the following methods or commands.
  - Type `C:\RPCX>STMX/R` and press the **Enter** key.
  - Hold the space bar down while executing the `AUTOEXEC.BAT` file at DOS startup to prevent the status monitor being loaded as a TSR program.

## Action 7-5: Prepare Macintosh for the Printer (Only for HL-1040/1050 Users)

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You need to configure your computer for the printer by installing the printer driver and TrueType™-compatible fonts into the System Folder of your Macintosh computer, and select your printer.

### **NOTE**

You must have Macintosh System software version 6.0.7 or above to use this printer driver. This printer driver only supports the 300 dpi mode when used with a Macintosh computer. When setting up the printer to work with your Macintosh computer, you will need to use the RS-422A serial interface. The serial interface board is an option, but comes standard in some countries. For information on options, consult your dealer or refer to the User's Guide for this printer.

A supplied high density floppy disk contains the printer driver and TrueType™-compatible fonts necessary for this printer to work with Macintosh computers.

Be sure to follow the steps below to install the printer driver by using the installer software:

1. Start your Macintosh computer.
2. Insert the supplied disk for the Macintosh computer into the disk drive. If your computer does not support high density 1.4 MB diskettes, please contact your dealer or Brother Printer Support.
3. Double-click the disk icons to open your hard disk and the inserted disk.
4. Double-click the Installer icon.
5. The installer starts running. Follow the instructions on the computer screen.

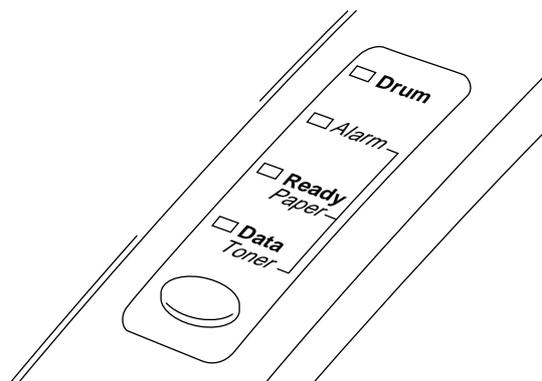
### **NOTE**

After you have installed the printer driver, you need to select your printer with the Chooser (which is located under the Apple menu) on the Macintosh computer.

## LAMPS AND SWITCH

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This section refers to the following lamps and switch on the printer control panel.



### Note

When the **power** switch is off or the printer is in sleep mode, all lamps including the **Ready** lamp are off.

### Ready (Paper) Lamp

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

Lamp	Printer status
Off ○	The <b>power</b> switch is off or the printer is in sleep mode. If the printer is in sleep mode, it will wake up automatically when it receives data or you press the control panel switch.
Blinking ○↔●	The printer is warming up. (Blinking at 1 second intervals)
Blinking ○↔●	The printer is cooling down and has stopped printing until the printers internal temperature lowers. (Blinking at 2 seconds intervals)
On ●	The printer is ready to print.

This lamp also works as the **Paper** lamp with the **Alarm** lamp. They blink simultaneously to indicate a paper error. See “Operator Calls” section of this manual.

### Data (Toner) Lamp

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

Lamp	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 <b>Data</b> lamp is on for a long period of time and nothing has printed, you need to press the switch to print the remaining data.

This lamp also works as the **Toner** lamp with the **Alarm** lamp. They blink simultaneously to indicate a toner error. See “REPLACING THE TONER CARTRIDGE” and “Operator Calls” section in this manual.

## Drum Lamp

The **Drum** lamp indicates the drum unit is nearly at the end of its life.

Lamp	Printer status
Off ○	The drum unit can be used.
On ●	The drum unit is nearly at the end of its life. Installing a new drum unit turns off this lamp. See “REPLACING THE DRUM UNIT”.

## Alarm Lamp

The **Alarm** lamp blinks to indicate a printer error status such as “Cover Open” and “Memory Full.” If any other error occurs, the printer indicates the error by blinking the **Alarm** lamp with another lamp or by printing an error report.

### Note

The **Ready**, **Data** and **Drum** lamps are used to indicate printer errors with the **Alarm** lamp. See “ALARM INDICATIONS AT A GLANCE” in this manual and take corrective action for the error.

## Switch

This switch will be used for the following purposes depending on the situation.

### **Cancel printing**

If you press the **switch** during printing, the printer immediately stops printing and ejects the paper.

### **Wake-up**

If the printer is in sleep mode, pressing the **switch** wakes it up into the ready state.

### **Form Feed**

If the **Data** lamp is on, press the **switch**. The printer prints any data remaining in the printer memory: this operation is called “Form Feed.”

### **Error Recovery**

If an error occurs, the printer will recover from some errors automatically. If the error does not clear automatically, press the **switch** to clear the error and continue printer operation.

## Other Control Features

### Sleep Mode

When the printer does not receive data for a certain period of time (time-out), it enters sleep mode. Sleep mode acts as though the printer was turned off. The default time-out is 5 minutes. While the printer is in sleep mode, all the **lamps** are off and it is as if it was turned off, but the printer can still receive data from the computer. Receiving a print file or document automatically wakes up the printer to start printing. Pressing the **switch** also wakes up the printer.

### Note

- When the printer goes into sleep mode, the fan will not stop until the printer engine has cooled down.
- Sleep mode allows the print engine to cool, so the temperature of your room and how long the printer has been in sleep mode affects the warm-up time. This warm-up time can take up to 30 seconds. The **Ready** lamp blinks to indicate that the printer is warming up.
- You can change the time out for the sleep mode with the supplied printer driver (all models) or Remote Printer Console program (HL-1040/1050 only). Refer to the Help section in the printer driver or RPC program for more information about the sleep mode setting.

### Test Print Mode

The printer has the following test print mode. Follow these steps:

1. Make sure that the top cover is closed.
2. Hold down the switch and turn on the **power** switch. Keep the switch depressed until the **Drum** lamp comes on.  
The **Drum** lamp lights to indicate that the printer is in the test print mode.
3. Press the switch again to execute the test print or hold down the switch to select another option and release the switch to execute the selected option.  
The test print mode varies depending upon the printer model as follows:

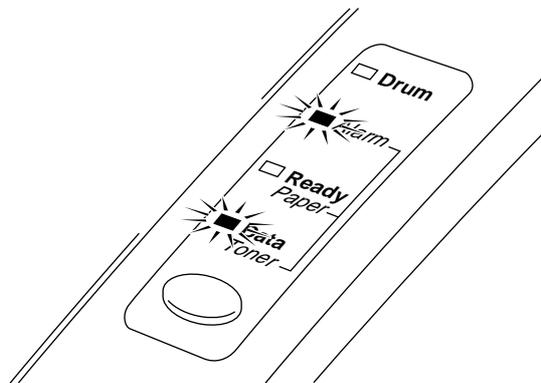
Lamp Lit	Choice	Function
<b>Drum</b>	Test sample page	The printer prints a test sample page. The printer returns to the ready status after printing.
<b>Alarm</b>	Print Config & Print Fonts I	The printer prints the current configuration of the printer and a list of the internal fonts. The printer returns to the ready status after printing.(HL-1040/1050 only)
<b>Ready</b>	Factory Reset	The printer is restored to the factory setting and permanent fonts and macros are cleared. The printer returns to the ready status after printing.(HL-1040/1050 only)
<b>Data</b>	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, you have to turn off the printer. (HL-1040/1050 only)

## REPLACING THE TONER CARTRIDGE

The printer can print approximately 2,400 pages (5% coverage: A4/Letter) with one toner cartridge. When the toner cartridge is running low, the **Alarm** and **Data** (Toner) lamps blink once every 5 seconds to indicate toner low. **Initially, some models are supplied with a starter toner cartridge which must be replaced after 1,000 pages.**

### Note

- Actual page count will vary depending on your average document type. (i.e.: standard letter, detailed graphics, etc.)
- It is recommended that you always keep a new toner cartridge ready for use for when you get the toner low warning.
- Discard the used toner cartridge according to local regulations. If you are not sure of them, consult your local dealer. Be sure to seal up the toner cartridge tightly so that toner powder does not spill out of the cartridge. Do not discard used toner cartridges together with domestic rubbish.
- It is recommended that you clean the printer when you replace the toner cartridge.

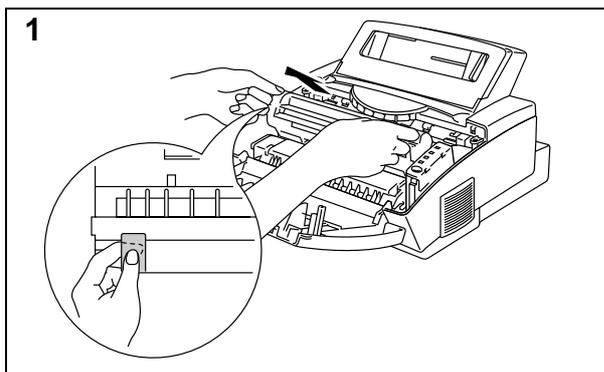


Toner Low and Empty Indication

### Caution

- You may print approximately 100 pages after the first toner low indication. Both **Alarm** and **Data** (Toner) lamps will blink continuously to indicate that the toner is empty. Once this indication appears, your printer cannot resume printing until you have installed a new toner cartridge.
- **Keep the drum unit level after removing the toner cartridge, to avoid possible toner spill or scatter.**

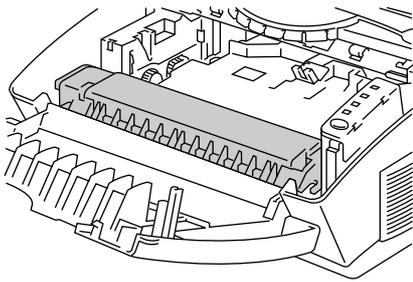
Follow these steps to replace the toner cartridge:



Open the top cover towards you. Remove the drum unit by holding each side of the drum and gently lifting the drum forwards towards you.

### Note

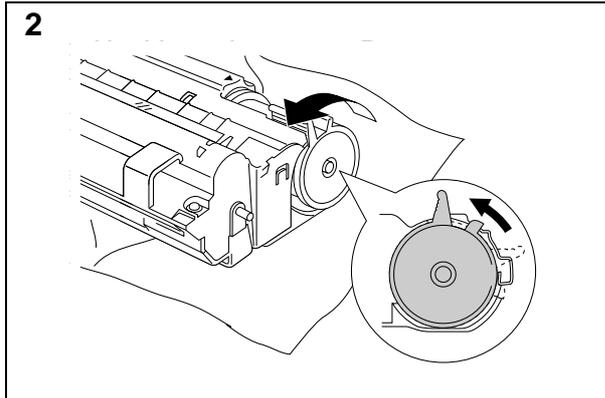
It is recommended to put the drum unit on a piece of disposable paper or cloth in case of accidental toner spill or scatter.



 **High Temperature**

 **Warning**

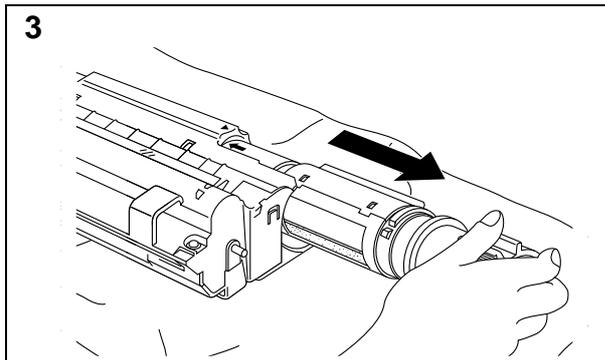
After you have just used the printer, some internal parts of the printer are extremely hot. When you open the top cover of the printer, never touch the shaded parts shown in the following illustration.



Gently turn the lever on the toner cartridge forward until it stops.

 **Note**

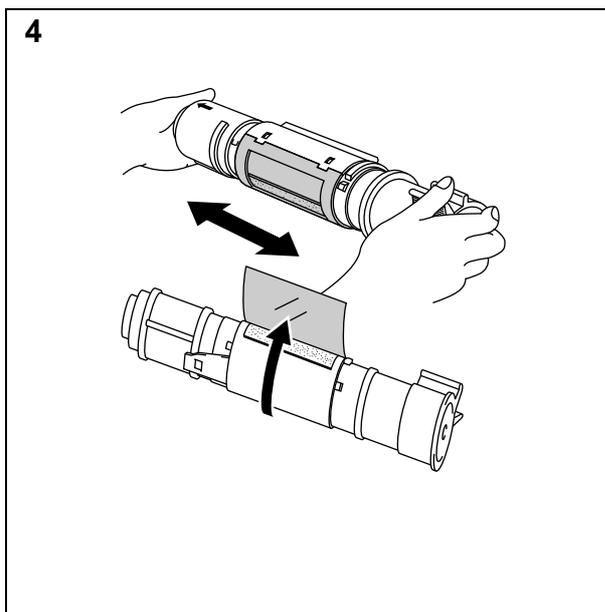
The toner cartridge cannot be removed unless the shutter is completely closed by turning the lever fully to the front.



Remove the old toner cartridge from the drum unit by pulling it out gently.

 **Caution**

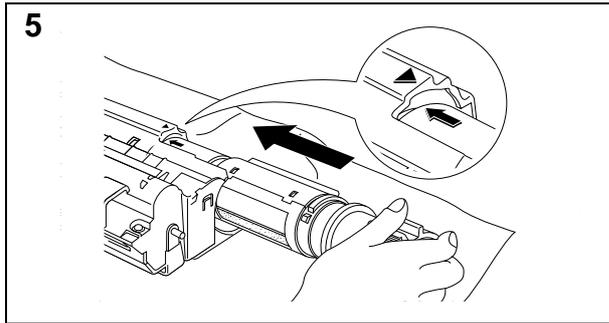
Handle the toner cartridge carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water immediately.



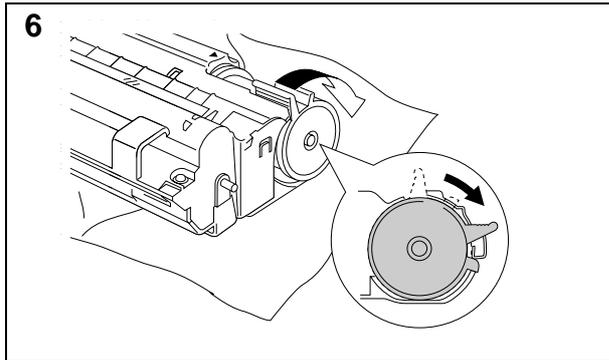
Unpack the new toner cartridge, gently shake it five or six times and then remove the protective part.

 **Caution**

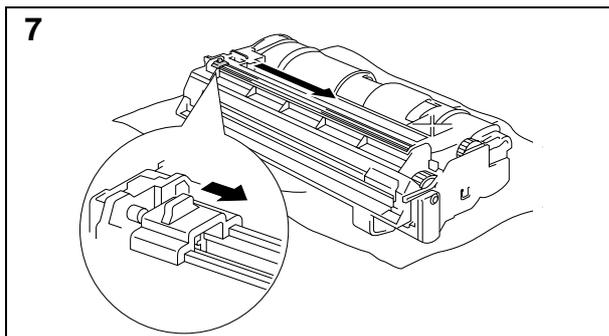
- Only unpack the toner cartridge immediately before installing it into the printer. If toner cartridges are left unpacked for a long period of time, the toner life is shortened.
- **You can only use a Brother genuine toner cartridge (TN-300 series) which is specially formulated to ensure top print quality. Using another brand of toner cartridge could void your printer's warranty.**



5 Install the new toner cartridge into the right hand side of the drum unit. Make sure that the toner cartridge guide bar is exactly aligned with the guide slot in the drum unit and pushed fully home into the drum unit to ensure that the toner cartridge and the drum unit fit together correctly.

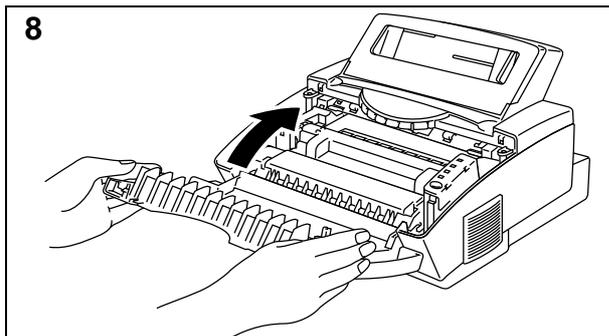


6 Gently turn the lever on the toner cartridge backward until it stops.



7 Turn the drum unit upside down gently.

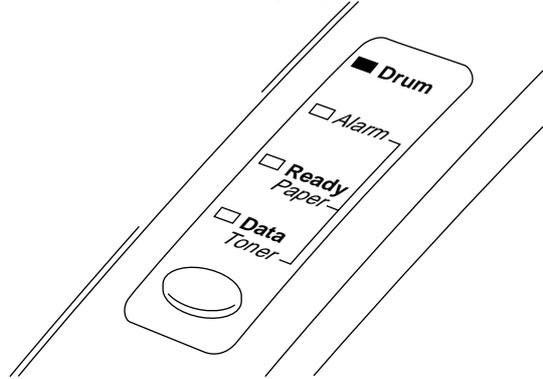
Clean the primary corona wire inside the drum unit by gently sliding the blue tab to the right and left several times.



8 Re-install the drum unit into the printer and close the top cover.

## REPLACING THE DRUM UNIT

The printer uses a drum unit to create the print images on paper. If the **Drum** lamp is on, it indicates the drum unit is nearly at the end of its life. We recommend you prepare a new drum unit to replace the current one. Even if the **Drum** lamp is on, you may be able to continue to print without replacing the drum unit for a while. If there is a noticeable deterioration in the output print quality even before the **Drum** lamp lights, then the drum unit should be replaced.



### ⚠ Caution

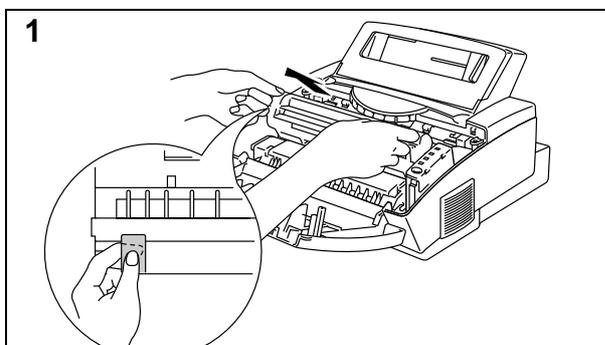
- When removing the drum unit, handle it carefully as it may contain toner.
- You should clean the printer when you replace the drum unit.

### 🔧 Note

The drum unit is a consumable, and it is necessary to replace it periodically. There are many factors that determine the actual drum life, such as temperature, humidity, type of paper and toner that you use, the number of pages per print job, etc.. The drum life is estimated at approximately 20,000 pages at 20 pages per job and 8,000 pages at 1 page per job. The actual number of pages that your drum will print may be significantly less than these estimates. Because we have no control over the many factors that determine the actual drum life, we cannot guarantee a minimum number of pages that will be printed by your drum.

For best performance, use only genuine Brother toner, and the product should only be used in a clean, dust-free environment with adequate ventilation.

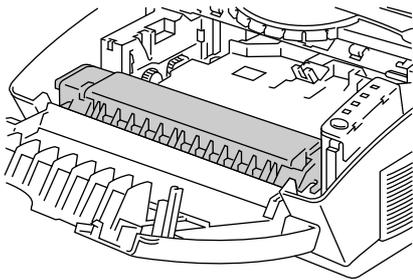
Follow these steps to replace the drum unit:



Open the top cover towards you. Remove the drum unit by holding each side of the drum and gently lifting the drum forwards towards you.

### 🔧 Note

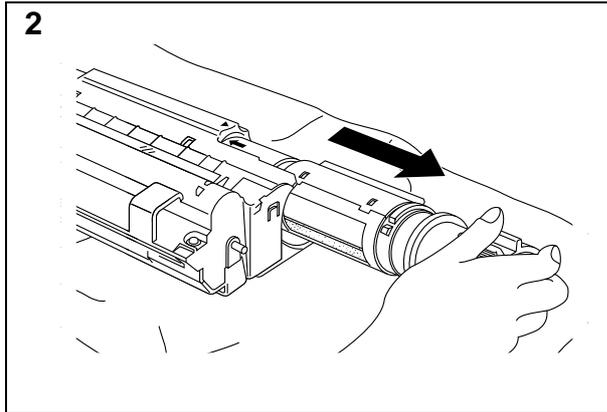
It is recommended to put the drum unit on a piece of disposable paper or cloth in case of accidental toner spill or scatter.



**⚠ High Temperature**

**⚠ Warning**

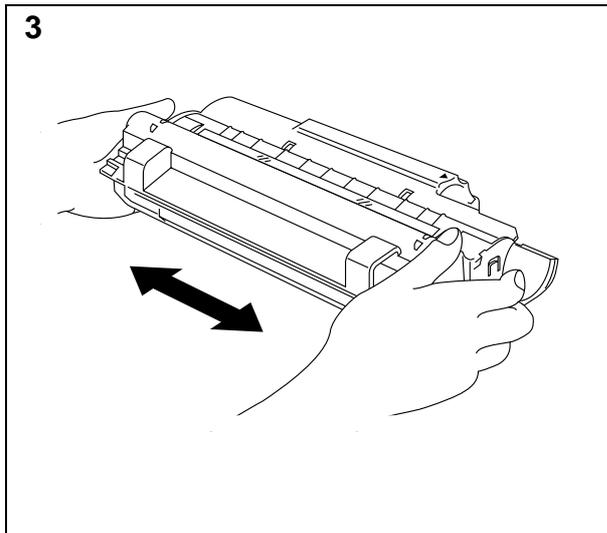
After you have just used the printer, some internal parts of the printer are extremely hot. When you open the top cover of the printer, never touch the shaded parts shown in the following illustration.



Remove the toner cartridge from the drum unit and keep it in a safe place.

**✍ Note**

- Discard the used drum unit according to local regulations. If you are not sure of them, consult your local dealer/retailer. Be sure to seal up the drum unit tightly so that toner powder does not spill out of the unit. Do not discard used drum units together with domestic rubbish.
- It is recommended to put the drum unit on a piece of disposable paper or cloth in case of accidental toner spill or scatter.



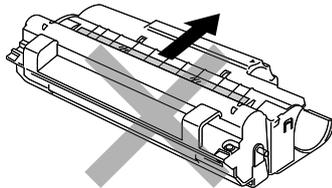
Unpack the drum unit and gently shake it five or six times horizontally.

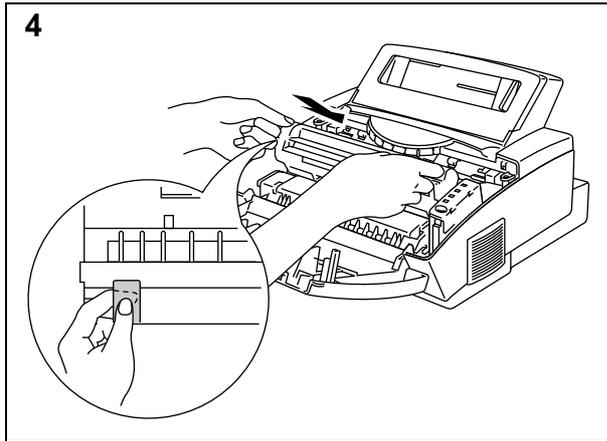
**⚠ Caution**

- Only unpack a drum unit immediately before installing it into the printer. If an unpacked drum unit is subjected to excessive direct sunlight or room light, the unit may be damaged.
- Handle the toner cartridge and the drum unit carefully as it contains toner. If toner scatters and your hands or clothes get dirty, wipe or wash it off with cold water immediately.

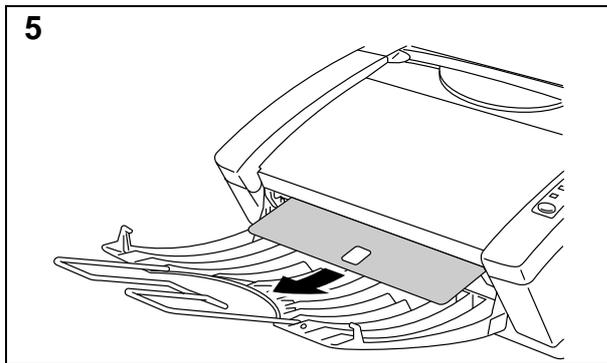
**⚠ Caution**

**Do not remove the starter sheet.**





Install the toner cartridge into the new drum unit.  
Install the new drum unit into the printer.



Close the top cover.  
The printer automatically ejects the starter sheet. Ejecting this sheet resets the drum life alarm.

## ALARM INDICATIONS AT A GLANCE

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### Operator Calls

If a recoverable error occurs, the printer indicates an ‘operator call’ by blinking the **Alarm** lamp and any of the following lamps.

Find the error and take the proper action to correct it. The printer automatically recovers from most errors, but you may need to reset the printer with the panel switch as described below.

Blinking Lamp	Error	Action
<b>Paper</b> ○↔● <b>Alarm</b> ○↔●	Paper jam	Clear the paper jam referring to the next section “PAPER JAMS” and press the panel <b>switch</b> if the printer does not automatically resume printing.
	Paper empty	Load paper in the printer <a href="#">referring to the On-Line user’s guide Chapter 2</a> and press the panel <b>switch</b> .
	Misfeed	Reinstall the paper and press the panel <b>switch</b> .
<b>Toner</b> ○↔● <b>Alarm</b> ○↔● (every 5 seconds)	Toner low	Indicates that the printer has approximately 100 pages of printing left before the toner cartridge is empty. Prepare a new toner cartridge.
<b>Toner</b> ○↔● <b>Alarm</b> ○↔● (Fast blinking)	Toner Empty	Replace the toner cartridge with a new one <a href="#">referring to the On-line user’s guide Chapter 5</a> .

For errors shown below, the printer indicates an operator call by blinking the **Alarm** lamp. If you use the printer with the supplied Windows driver, the status monitor will appear to indicate the error on your computer screen. The HL-1040/1050 printer also prints some error messages on paper.

Error	Action
Cover Open	Close the top cover of the printer.
Print Overrun	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to print the data remaining in the printer.</li> <li>• If you use the supplied Windows driver, try again after turning on Error Recovery in the PRINT menu of your application software, (Refer to Help section in Windows printer driver for the details.)</li> <li>• <b>(For HL-1050 only)</b> Expand the printer memory with an optional memory board and set page protection to ON by using the supplied Windows driver or RPC program.</li> <li>• <b>(For HL-1050 only)</b> Change the following settings in the supplied Windows driver and try again. The best combination of the settings below will vary depending on your document. Graphics Mode TrueType mode Use Printer TrueType Fonts</li> <li>• If this does not clear the error, reduce the complexity of your document or reduce the print resolution.</li> </ul>
Memory Full <b>(For HL-1040/1050 Only)</b> This error can occur only when using DOS or Macintosh.	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to print the data remaining in the printer.</li> <li>• Reduce the print resolution or reduce the complexity of your document.</li> <li>• <b>(For HL-1050 only)</b> Expand the printer memory by adding a commercially available SIMM.</li> </ul>
Parallel Interface Line Error	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to resume printing.</li> <li>• Check that the connection between your computer and printer is secure and correct, and check the interface cable.</li> </ul>
Serial Interface Framing Error <b>(For HL-1040/1050 Only)</b>	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to resume printing.</li> <li>• Check the communication parameters such as baud rate and stop bit settings on both your computer and printer.</li> </ul>
Serial Interface Parity Error <b>(For HL-1040/1050 Only)</b>	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to resume printing.</li> <li>• Check the communication parameters such as bit length and parity settings on both your computer and printer.</li> </ul>
Serial Interface Overrun Error <b>(For HL-1040/1050 Only)</b>	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to resume printing.</li> <li>• The interface hardware may be damaged. Consult your dealer.</li> </ul>

Error	Action
Serial Interface Input Buffer Overflow (For HL-1040/1050 Only)	<ul style="list-style-type: none"> <li>• Press the panel <b>switch</b> to resume printing.</li> <li>• Check the communication parameters such as the handshake protocols on both your computer and printer.</li> <li>• If the error occurs again, the interface hardware may be damaged. Consult your dealer.</li> </ul>

### NOTE

If the printer does not operate as you expect it to, it is recommended that you turn off the power switch, wait a few seconds and then turn it 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 lamps and then the following combination of lamps alternately:

Service Call	Fuser malfunction	Laser BD malfunction	Scanner malfunction	ROM error	D-RAM error
<b>Drum</b>	●	○	●	○	●
<b>Alarm</b>	○	●	●	○	○
<b>Ready</b>	○	○	○	●	●
<b>Data</b>	○	○	○	○	○

Service Call	Service A	Service B	Service C	Service D	Service E0
<b>Drum</b>	○	●	○	●	○
<b>Alarm</b>	●	●	○	○	●
<b>Ready</b>	●	●	○	○	○
<b>Data</b>	○	○	●	●	●

Service Call	Service E1	Service P	NV-RAM error	CPU runtime error	
<b>Drum</b>	●	○	●	●	
<b>Alarm</b>	●	○	○	●	
<b>Ready</b>	○	●	●	●	○ OFF
<b>Data</b>	●	●	●	●	● ON

If you see any of these service call indications, turn off the power switch, wait a few seconds and then turn it on again and try to print again.

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

### NOTE

Be sure that the top cover and the main controller board are firmly installed.

### NOTE

If you have any problems other than described in this section, see [“CHAPTER 6 TROUBLESHOOTING, Q & A” of the On-line User’s Guide](#). If you are still unable to clear the problem after reviewing the information in the User’s Guide, consult your dealer.

## Additional Memory (HL-1050 Only)

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The **HL-820/1020/1040** printers have 2 Mbytes of standard memory and additional memory cannot be fitted.

The **HL-1050** printer has 4 Mbytes of standard memory and a slot for optional additional memory. The memory can be expanded up to 36 Mbytes total by installing a commercially available single in-line memory module (SIMM).

### **Note**

The HL-820/1020/1040 machine memory cannot be expanded.

Additional memory is useful and may be necessary if you are using the Page Protection function.

### Minimum Memory Recommendation (including resident memory)

Page Protect = AUTO or Off			Page Protect = Letter, A4, or Legal		
	300dpi	600dpi		300dpi	600dpi
Letter/A4	2 MB	2 MB	Letter/A4	2MB	6 MB
Legal	2 MB	2 MB	Legal	3 MB	6 MB

The following types of SIMM are recommended and can be installed:

- 1 Mbyte HITACHI HB56D25632B-6A, -7A
- 2 Mbytes HITACHI HB56D51232B-6A, -7A
- 4 Mbytes HITACHI HB56A132BV-7A, -7AL, -7B, -7BL
- 8 Mbytes HITACHI HB56A232BT-7A, -7AL, -7B, -7BL
- 16 Mbytes HITACHI HB56A432BR-6A, -7A
- 32 Mbytes HITACHI HB56A832BS-6A, -7A

This printer can accept memory SIMMS with the following specifications:

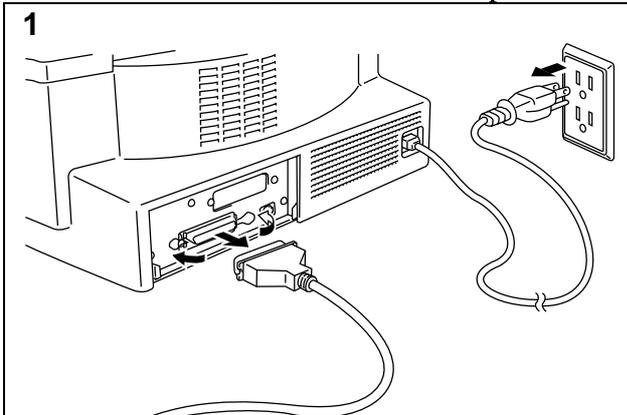
Speed	60 nsec - 80 nsec
Pin Type	72 pin
Height	35.00 mm (1.38") or less
Output	32 bit or 36 bit

### **Note**

- The HL-1050 can also support DIB graphics with a resolution of 1200 x 600 dpi under Windows 95/98/Windows 3.1 with the supplied printer driver. We recommend to expand the printer memory to avoid any memory full errors.
- The printer has only one slot for a SIMM upgrade. If you want to increase your printer memory again after you have already installed a SIMM module into the slot, you will need to remove the previously installed SIMM first. For example if you had previously increased the printer memory from the standard 4MB to 12MB by adding an 8MB SIMM and you wish to increase your total memory to 20 MB, you need to remove the installed 8MB SIMM and install a new 16MB SIMM into the printer.

## Installing the SIMM

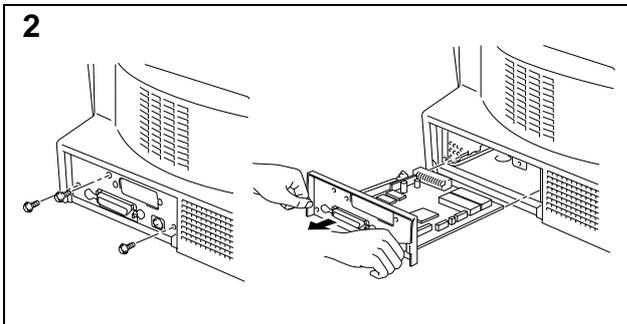
To install the SIMM, follow these steps:



Turn off the **power** switch and unplug the power cord from the AC outlet. Disconnect the interface cable (printer cable) from the printer.

### ⚠ Caution

Be sure to turn off the **power** switch and unplug the power cord to the printer before installing or removing the SIMM to/from the main controller board.

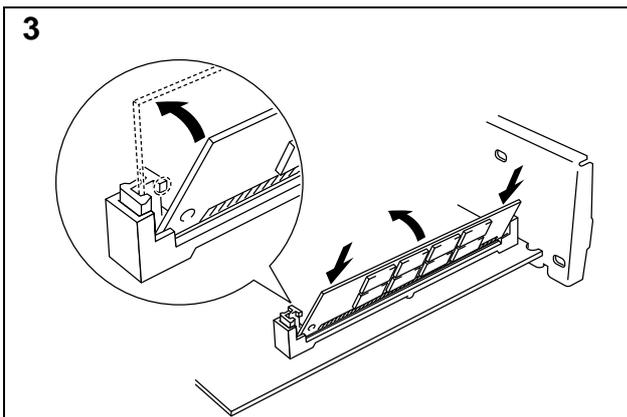


Unscrew the screws securing the rear plate of the main controller board to the printer and pull out the main controller board.

Unpack the SIMM and hold it by its edge.

### ⚠ Caution

SIMM boards may be damaged by even a small amount of static electricity. Do not touch the memory chips or the board surface. When handling the board and before installing or removing it, wear an antistatic wrist strap, or frequently touch the surface of the antistatic package or bare metal on the printer.



Install the SIMM into the slot and push it gently towards the vertical until it clicks into place.

4. Install the main controller board into the printer by sliding it into the guide rails.
5. Secure the main controller board with the four screws.
6. Reconnect the interface cable (printer cable) from your computer. Plug the power cord into the AC outlet and turn on the power switch.
7. To check that the SIMM is installed correctly, you may perform a Test Print "Print Configuration" which will print the current total memory size.

## PRINTER SPECIFICATIONS

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### Printing

Print Method	Electrophotography by semiconductor laser beam scanning
Laser	Wavelength: 780 nm / Output: 5 mW max.
Resolution	HL-820 600 dots/inch (under Brother Printing Solution for /1020 Windows) HL-1040 600 dots/inch (under Brother Printing Solution for Windows / under Brother Software PCL5e for DOS box in Windows ) 300 dots/inch (under DOS, Apple Macintosh and other operating system) HL-1050 1200 (H) x 600 (V) dots/inch (for Windows DIB graphics) 600 x 600 dots/inch (for Windows and DOS) 300 x 300 dots/inch (using Apple Macintosh with the optional RS-100M)
Print Quality	Normal printing mode Economy printing mode (up to 25% and 50% toner saving)
Print Speed	HL-820 : Up to 8 pages/minutes HL-1020/1040/1050: Up to 10 pages/minute (when loading A4 or letter-size paper from the multi-purpose sheet feeder) <b>NOTE:</b> Maximum print speed is obtained by printing several copies of the same page. Print speed may vary depending on interface type, emulation, processing power of the computer, memory allocated to the print job, paper size and graphic quality.
Warm-Up	Max. 30 seconds at 23°C (73.4°F) (The warm up time depends on the ambient temperature and humidity.)
First Print	15 seconds (when loading A4 or letter-size paper from the multi-purpose sheet feeder)
Print Media	Toner cartridge: Life Expectancy: 2,400 pages/new toner cartridge 1,000 pages/starter toner cartridge (when printing A4- or letter-size paper at 5% print coverage) <b>NOTE:</b> Toner life expectancy will vary depending on the type of average print job printed.  Drum Unit: Life Expectancy: 20,000 pages at 20 pages per job 8,000 pages at 1 page per job  <b>NOTE:</b> There are many factors that determine the actual drum life, such as temperature, humidity, type of paper and toner that you use, the number of pages per print job, etc..

## Functions

TrueType Fonts on disks	TrueType-compatible soft-fonts for Windows on the supplied disk
Emulation	HL-820/1020:Brother Printing Solution for Windows HL-1040: Brother Printing Solution for Windows / Automatic emulation selection among HP LaserJet IIP (PCL level 4), EPSON FX-850, or IBM Proprinter XL HL-1050: Brother Printing Solution for Windows / Automatic emulation selection among HP LaserJet 6P (PCL level 6), EPSON FX-850, or IBM Proprinter XL
Printer Driver	Windows 3.1/3.11, Windows 95/98 and Windows NT 4.0 driver, supporting Brother Native Compression mode and bi-directional capability Optional Macintosh driver available for System 6.0.7 or higher (For HL-1040/1050 Only)
Interface	Bi-directional parallel USB interface (HL-1050 only) RS-422A/RS-232C serial interface (RS-100M) is optionally available. (For HL-1040/1050 only)
Memory	HL-820/1020/1040 : 2 MB HL-1050: 4 MB (Expandable up to 36 MB by installing an industry standard SIMM)
Diagnostics	Self-diagnostic program

## Electrical and Mechanical

Power Source	U.S.A. and Canada:AC 110 to 120 V, 50 / 60 Hz Europe and Australia:AC 220 to 240 V, 50 /60 Hz
Power Consumption	Printing: 280 W or less Stand-by: 60 W or less Sleep: 13 W or less
Noise	Printing: 49 dB A or less Sleep: 33 dB A or less
Temperature	Operating: 10 to 32.5°C (50 to 90.5°F) Storage: 0 to 40°C (38 to 104°F)
Humidity	Operating: 20 to 80% (without condensation) Storage: 20 to 80% (without condensation)
Dimensions (W x H x D)	390 x 245 x 365 mm (14.4 x 9.8 x 13.9 inches) (when the output tray is closed.)
Weight	Approx. 7.2 kg (14.3 lb.) including the drum unit

# REGULATIONS

## Federal Communications Commission(FCC) Declaration of Conformity (For USA Only)

Responsible Party : Brother International Corporation  
100 Somerset Corporate Boulevard  
Bridgewater, NJ 08807-0911, USA  
TEL : (908) 704-1700

declares, that the products

Product Name :Brother Laser Printer HL-820, HL-1020,  
HL-1040, HL-1040DX, HL-1050, HL-1050DX  
Model Numbers :HL-8L, HL-8h  
Product Options :ALL

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

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.

### FDA Regulations (For 110-120 V Model Only)

U.S. Food and Drug Administration (FDA) has implemented regulations for laser products manufactured on and after August 2, 1976. Compliance is mandatory for products marketed in the United States. One of the following labels on the back of the printer indicates compliance with the FDA regulations and must be attached to laser products marketed in the United States.

MANUFACTURED:  
Brother Corporation (Asia) Ltd. Brother Buji Nan Ling Factory  
Gold Garden Ind., Nan Ling Village, Buji, Rong Gang, Shenzhen,  
CHINA  
This product complies with FDA radiation performance standards, 21  
CFR Subchapter J

MANUFACTURED:  
BROTHER INDUSTRIES (USA) INC.  
2950 Brother Blvd., Bartlett, TN 38133, U.S.A.  
This product complies with FDA radiation performance standards, 21  
CFR Subchapter J

MANUFACTURED:  
BROTHER INDUSTRIES LTD.  
15-1 Naeshiro-cho Mizuho-ku Nagoya, 467 Japan  
This product complies with FDA radiation performance standards, 21  
CFR Subchapter J

## 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 Règlement sur la matériel brouilleur du Canada.

## International Energy Star Compliance Statement

The purpose of the International Energy Star Program is to promote the development and popularization of energy-efficient office equipments, which includes computers, monitors, printers, facsimile receivers and copy machines world-wide.

As an International Energy Star partner, Brother Industries, Ltd. has decided that this product meets the guideline of the program.



### Laser Safety (For 110–120 V Model Only)

This printer is certified as a Class I laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. This means that the printer does not produce hazardous laser radiation.

Since radiation emitted inside the printer is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.

### Radio Interference (220-240 V Model Only)

This printer complies with EN55022(CISPR Publication 22)/Class B.

Before this product is used, ensure that you use a double-shielded interface cable with twisted-pair conductors and that it is marked "IEEE 1284 compliant". The cable must not exceed 1.8 metres in length.

### Caution

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

## 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 correctly 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 power outlet in order to shut off power completely.

## IMPORTANT - Wiring Information (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.

**This product is designed for use in a professional environment.**

## Declaration of Conformity (For 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, EN 60825

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

## IEC 825 Specification (For 220–240 V Model Only)

This printer is a Class 1 laser product as defined in IEC 825 specifications. The label shown below is attached in countries where required.



This printer has a Class 3B Laser Diode which emits invisible laser radiation in the Scanner Unit. The Scanner Unit should not be opened under any circumstances.

## Caution

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

The following caution label is attached near the scanner unit.

<b>CAUTION</b>	INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. AVOID DIRECT EXPOSURE TO BEAM. CLASS 3B LASER PRODUCT.
<b>ADVARSEL</b>	USYNLIG LASER STRÅLING NÅR KABINETLAGET STÅR ÅBENT. UNNGÅ DIREKTE UDSÆTTELSE FOR STRÅLING. KLASSE 3B LASER.
<b>VARNING</b>	OSYNLIG LASERSTRÅLNING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRRAR ÄR URKOPPLADE. STRÅLEN ÄR FARLIG. KLASSE 3B LASER APPARAT.
<b>VARO!</b>	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN LUOKAN 3B LASERLAITE.
<b>ADVARSEL</b>	USYNLIG LASERSTRÅLING UNNGÅ DIREKTE KONTAKT MED LASERENHETEN NÅR TOPPDEKSELET ER ÅPENT. KLASSE 3B LASERPRODUKT.
<b>ATTENTION</b>	RADIATIONS LASER INVISIBLES QUAND OUVERT ET VERROUILLAGE ENLEVÉ. ÉVITER EXPOSITIONS DIRECTES AU FAISCEAU. PRODUIT LASER CLASSE 3B.
<b>VORSICHT</b>	UNSICHTBARE LASERSTRÄHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN. SICHERHEITSKLASSE 3B.
<b>ATENCIÓN</b>	RADIACIÓN LASER INVISIBLE CUANDO SE ABRE LA TAPA Y EL INTERRUPTOR INTERNO ESTÁ ATASCADO. EVITE LA EXPOSICIÓN DIRECTA DE LOS OJOS. PRODUCTO LASER CLASE 3B.

## For Finland and Sweden

### LUOKAN 1 LASERLAITE KLASS 1 LASER APPARAT

Varoitus! Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle. Varning – Om apparaten används på annat sätt än i denna Bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

## Geräuschemission / Acoustic Noise Emission (For Germany Only)

Lpa < 70 dB (A) DIN 45635-19-01-KL2

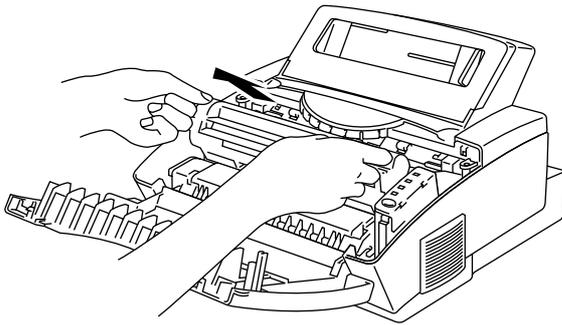
## Shipment of the Printer

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.

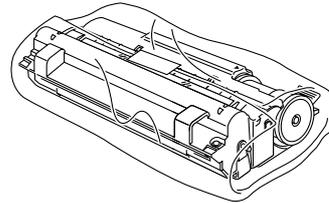
### Warning

When shipping the Printer, the DRUM UNIT assembly including the TONER CARTRIDGE must be removed from the Printer and placed in the plastic bag. **Failure to remove and place it in the plastic bag during shipping will cause severe damage to the Printer and will VOID THE WARRANTY.**

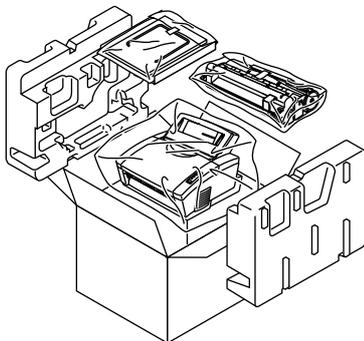
1 Remove the drum unit.



2 Place it in the plastic bag and seal the bag completely.



3 Remove the AC cord and the paper tray extension wire from the printer.  
Re-pack the printer.



**brother**<sup>®</sup>