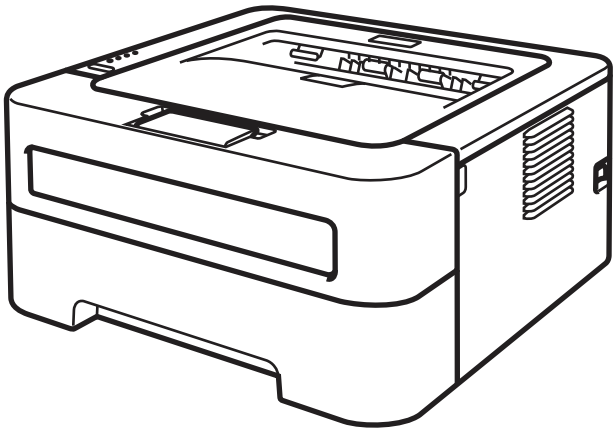
Brother Laser Printer

USER'S GUIDE



HL-2130
HL-2132
HL-2220
HL-2230
HL-2240
HL-2240D
HL-2242D
HL-2250DN
HL-2270DW
HL-2275DW

For visually-impaired users

You can read this manual with Screen Reader 'text-to-speech' software.

You must set up the hardware and install the driver before you can use the machine.

Please use the *Quick Setup Guide* to set up the machine. You can find a printed copy in the box.

Please read this *User's Guide* thoroughly before you use the machine.

Please visit us at http://solutions.brother.com/ where you can get product support, the latest driver updates and utilities, and answers to frequently asked questions (FAQs) and technical questions.

Note: Not all models are available in all countries.

Version C

USA/CAN

Using this guide

Symbols used in this guide

The following symbols and conventions are used throughout the documentation.

WARNING	WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injuries.
CAUTION	CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injuries.
IMPORTANT	IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.
	Hot Surface icons warn you not to touch machine parts that are hot.
Note	Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

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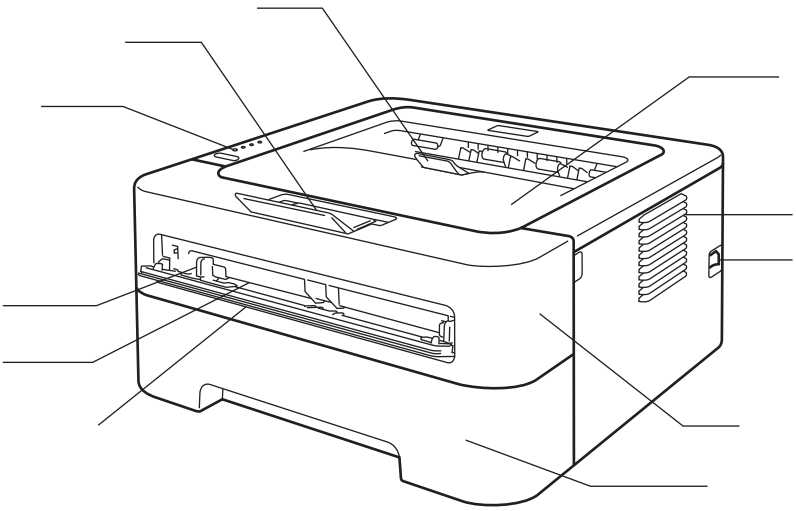
1 Printing Methods

About this machine

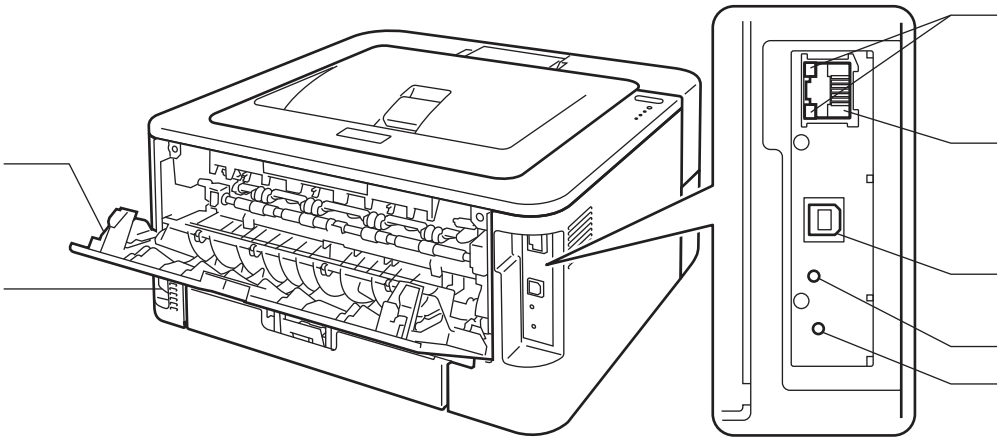
Front view and Back view



1 Face-down output tray support flap 2 (support flap 2)
2 Face-down output tray support flap 1 (support flap 1)
3 Control panel
4 Manual feed paper guide
5 Manual feed slot
6 Manual feed slot cover (Not available for HL-2130 / HL-2132 / HL-2220)
7 Paper tray
8 Front cover
9 Power switch
10 Ventilation hole
11 Face-down output tray

Note

The illustrations in this guide show the HL-2270DW / HL-2275DW.



1 **Back cover (Face-up output tray when open)**
2 **AC power connector**
3 **HL-2270DW / HL-2275DW: Wireless setup button**
4 **HL-2270DW / HL-2275DW: Wireless Activity LED**
5 **USB interface connector**
6 **HL-2250DN / HL-2270DW / HL-2275DW: 10BASE-T/100BASE-TX port**
7 **HL-2250DN / HL-2270DW / HL-2275DW: Network status LEDs**

Acceptable paper and other print media

Print quality may vary according to the type of paper you are using.

You can use the following types of print media: thin paper, plain paper, thick paper, bond paper, recycled paper, labels or envelopes.

For best results, follow the instructions below:

- DO NOT put different types of paper in the paper tray at the same time because it may cause paper jams or misfeeds.
- For proper printing, you must choose the same paper size from your software application as the paper in the tray.
- Avoid touching the printed surface of the paper immediately after printing.
- Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.

Recommended paper and print media

	Europe	USA
Plain paper	Xerox Premier TCF 80 g/m^2 Xerox Business 80 g/m^2	Xerox 4200 20 lb Hammermill Laser Print 24 lb (90g/m^2)
Recycled paper	Xerox Recycled Supreme 80 g/m^2	(No specific brand recommended)
Labels	Avery laser label L7163	Avery laser labels white #5160
Envelopes	Antalis River series (DL)	(No specific brand recommended)

Type and size of paper

The machine feeds paper from the installed paper tray or the manual feed slot.

The names for the paper trays in the printer driver and this guide are as follows:

Paper tray	Tray 1
Manual feed slot	Manual
Duplex tray for automatic duplex printing (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)	DX

When looking at this page, you can jump to the page for each printing method by clicking ⓘ in the table.

Media type	Tray 1	Manual	DX	Choose the media type from the printer driver
Plain paper 75 to 105 g/m^2 (20 to 28 lb)	ⓘ	ⓘ	ⓘ	**Plain Paper**
Recycled paper	ⓘ	ⓘ	ⓘ	**Recycled Paper**
Bond paper Rough paper– 60 to 163 g/m^2 (16 to 43 lb)		ⓘ		**Bond Paper**
Thin paper 60 to 75 g/m^2(16 to 20 lb)	ⓘ	ⓘ	ⓘ	**Thin Paper**
Thick paper 105 to 163 g/m^2(28 to 43 lb)		ⓘ		**Thick Paper** or **Thicker Paper**
Labels		ⓘ A4 or Letter		**Label**
Envelopes		ⓘ		**Envelopes** **Env. Thin** **Env. Thick**

	Tray 1	Manual	DX
Paper size	A4, Letter, B5 (ISO/JIS), A5, A5 (Long Edge), B6 (ISO), A6, Executive, Legal [1], Folio [1]	Width: 76.2 to 216 mm (3 to 8.5 in.) Length: 116 to 406.4 mm (4.6 to 16 in.)	Letter, Legal [1], Folio [1]
Number of sheets (80 g/m^2 / 20 lb)	250 sheets	Single sheet	

[1] Legal or Folio size paper is not available in some regions outside the USA and Canada.

Recommended paper specifications

The following paper specifications are suitable for this machine.

Basis weight	75-90 g/m^2 (20-24 lb)
Thickness	80-110 μm
Roughness	Higher than 20 sec.
Stiffness	90-150 cm^3/100
Grain direction	Long grain
Volume resistivity	$10e^9$-$10e^{11}$ ohm
Surface resistivity	$10e^9$-$10e^{12}$ ohm-cm
Filler	$CaCO_3$ (Neutral)
Ash content	Below 23 wt%
Brightness	Higher than 80%
Opacity	Higher than 85%

- Use paper that is made for plain-paper copying.
- Use paper that is 75 to 90 g/m^2 (20 to 24 lb).
- Use long grain paper with a neutral Ph value, and a moisture content of approx. 5%.
- This machine can use recycled paper that meets DIN 19309 specifications.

(To help you choose which paper to use with this machine, see *Important information for choosing your paper* on page 128.)

Handling and using special paper

The machine is designed to work well with most types of xerographic and bond paper. However, some paper variables may have an effect on print quality or handling reliability. Always test samples of paper before purchasing to ensure desirable performance. Store paper in its original packaging and keep it sealed. Keep the paper flat and away from moisture, direct sunlight and heat.

Some important guidelines when selecting paper are:

- DO NOT use inkjet paper because it may cause a paper jam or damage your machine.
- Preprinted paper must use ink that can withstand the temperature of the machine's fusing process 200 degrees centigrade (392 degrees Fahrenheit).
- If you use bond paper, paper having a rough surface or paper that is wrinkled or creased, the paper may exhibit degraded performance.

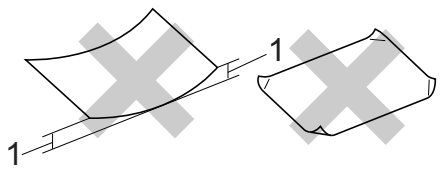
Types of paper to avoid

IMPORTANT

Some types of paper may not perform well or may cause damage to your machine.

DO NOT use paper:

- that is highly textured
- that is extremely smooth or shiny
- that is curled or warped



1 A curl of 2 mm (0.08 in.) or greater may cause jams to occur.

- that is coated or has a chemical finish
- that is damaged, creased or folded
- that exceeds the recommended weight specification in this guide
- with tabs and staples
- with letterheads using low temperature dyes or thermography
- that is multipart or carbonless
- that is designed for inkjet printing

If you use any of the types of paper listed above, they may damage your machine. This damage is not covered under any Brother warranty or service agreement.

Envelopes

Most envelopes designed for laser printers will be suitable for your machine. However, some envelopes may have feed and print-quality problems because of the way they have been made. A suitable envelope should have edges with straight, well-creased folds and the leading edge should not be thicker than two sheets of paper. The envelope should lie flat and not be of baggy or flimsy construction. You should buy quality envelopes from a supplier who understands that you will be using the envelopes in a laser machine.

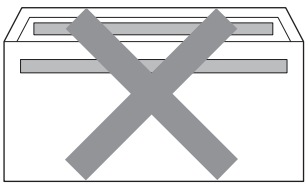
We recommend that you print a test envelope to make sure the print results are what you want.

Types of envelopes to avoid

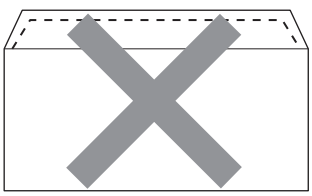
IMPORTANT

DO NOT use envelopes:

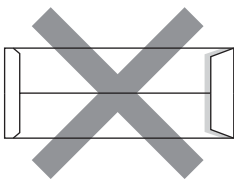
- that are damaged, curled, wrinkled, irregularly shaped, extremely shiny or textured envelopes.
- with clasps, staples, snaps, tie strings, self-adhesive components, windows, holes, cutouts or perforations.
- that are of a baggy construction, not sharply creased, embossed (have raised writing on them) or preprinted on the inside.
- that were previously printed by a laser / LED printer.
- that cannot be arranged when put in a pile.
- that are made of paper that weighs more than the paper weight specifications for the machine.
- with edges that are not straight or consistently square.
- with glue on surface as shown in figure below



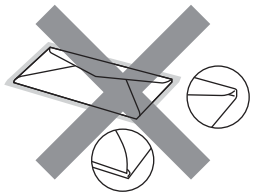
- with double flaps as shown in figure below



- with sealing flaps that are not folded down when purchased
- with sealing flaps as shown in figure below



- with each side folded as shown in figure below



If you use any of the types of envelopes listed above, they may damage your machine. This damage may not be covered under any Brother warranty or service agreement.

Labels

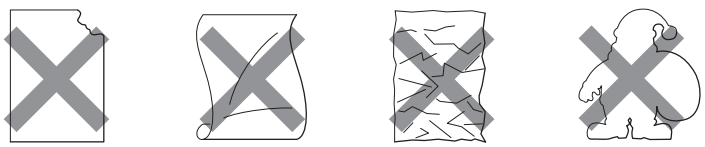
The machine will print on most types of labels designed for use with a laser printer. Labels should have an adhesive that is acrylic-based since this material is more stable at the high temperatures in the fuser unit. Adhesives should not come in contact with any part of the machine, because the label stock may stick to the drum unit or rollers and cause jams and print quality problems. No adhesive should be exposed between the labels. Labels should be arranged so that they cover the entire length and width of the sheet. Using labels with spaces may result in labels peeling off and causing serious jams or print problems.

All labels used in this machine must be able to withstand a temperature of 200 degrees centigrade (392 degrees Fahrenheit) for a period of 0.1 seconds.

Do not feed a label sheet through the machine more than one time.

Types of labels to avoid

Do not use labels that are damaged, curled, wrinkled or an unusual shape.



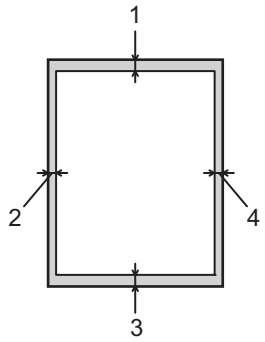
IMPORTANT

- Avoid feeding labels with the carrier sheet exposed because your machine will be damaged.
- Label sheets should not exceed the paper weight specifications described in this *User's Guide*. Labels exceeding this specification may not feed or print properly and may cause damage to your machine.

Unprintable area

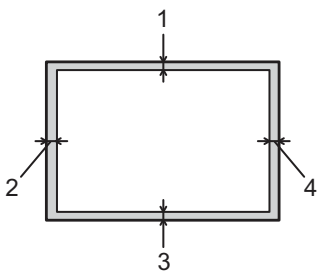
The area of the paper that cannot be printed on is shown in the table below:

Portrait



	A4	Letter	Legal	B5 (ISO)	Executive	A5	A6	B6 (ISO)
1	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)
2	6.01 mm (0.24 in.)	6.35 mm (0.25 in.)	6.35 mm (0.25 in.)	6.01 mm (0.24 in.)	6.35 mm (0.25 in.)	6.01 mm (0.24 in.)	6.01 mm (0.24 in.)	6.01 mm (0.24 in.)
3	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)
4	6.01 mm (0.24 in.)	6.35 mm (0.25 in.)	6.35 mm (0.25 in.)	6.01 mm (0.24 in.)	6.35 mm (0.25 in.)	6.01 mm (0.24 in.)	6.01 mm (0.24 in.)	6.01 mm (0.24 in.)

Landscape



	A4	Letter	Legal	B5 (ISO)	Executive	A5	A6	B6 (ISO)
1	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)
2	5.0 mm (0.19 in.)	5.08 mm (0.2 in.)	5.08 mm (0.2 in.)	5.0 mm (0.19 in.)	5.08 mm (0.2 in.)	5.0 mm (0.19 in.)	5.0 mm (0.19 in.)	5.0 mm (0.19 in.)
3	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)	4.23 mm (0.16 in.)
4	5.0 mm (0.19 in.)	5.08 mm (0.2 in.)	5.08 mm (0.2 in.)	5.0 mm (0.19 in.)	5.08 mm (0.2 in.)	5.0 mm (0.19 in.)	5.0 mm (0.19 in.)	5.0 mm (0.19 in.)

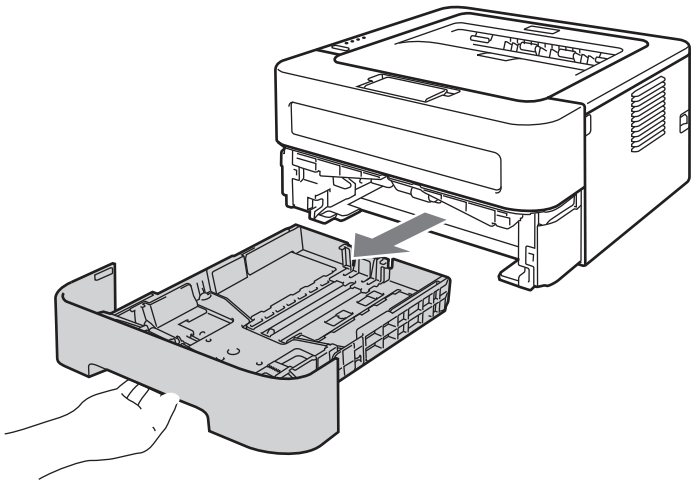
Printing methods

Printing on plain paper, recycled paper, bond paper, thin paper or thick paper

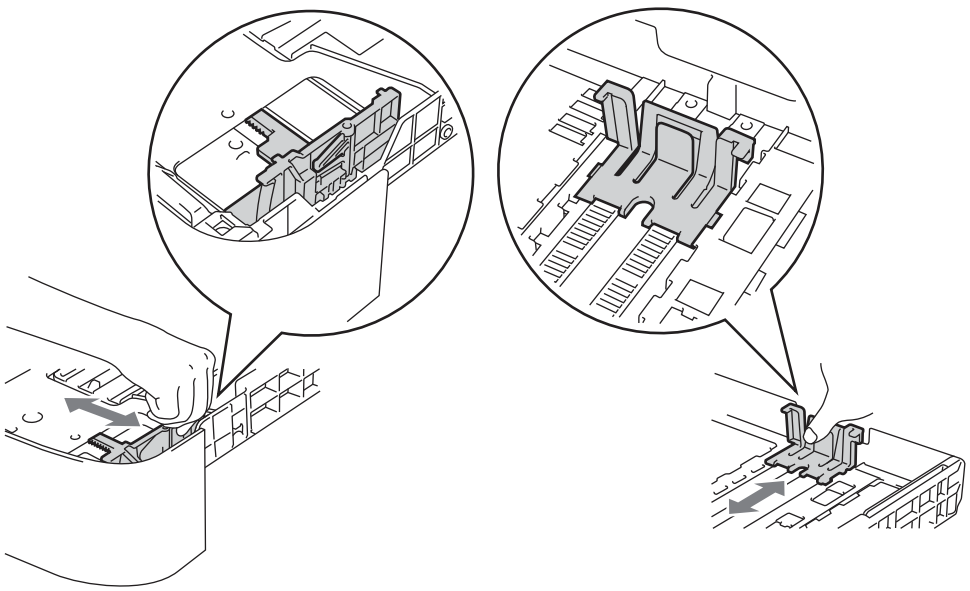
Printing from the paper tray (plain paper, recycled paper and thin paper only)

(For the recommended paper to use, see *Type and size of paper* on page 4.)

1. Pull the paper tray completely out of the machine.

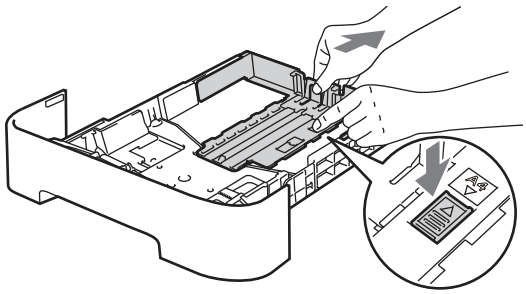


2. While pressing the green paper-guide release lever, slide the paper guides to fit the paper size. Make sure that the guides are firmly in the slots.



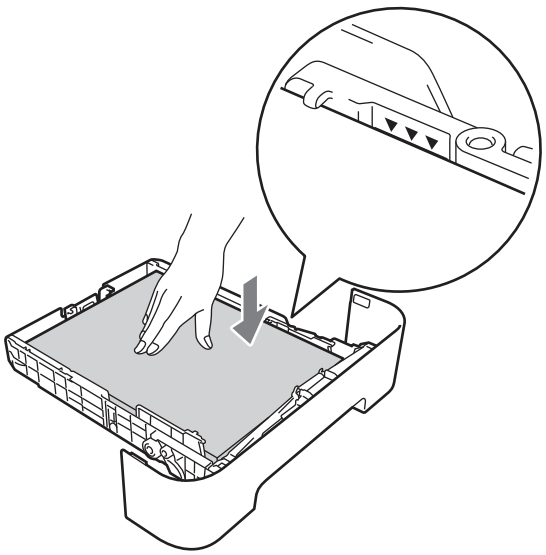
Note

For Legal or Folio size paper, press the release button in the bottom of the paper tray and then pull out the back of the paper tray. (Legal or Folio size paper is not available in some regions.)



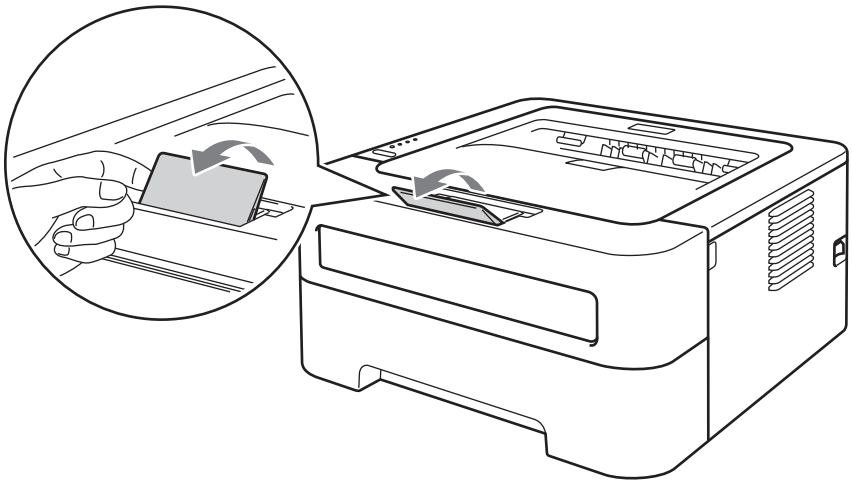
3 Put paper in the tray and make sure:

- The paper is below the maximum paper mark (▼▼▼).
  Over filling the paper tray will cause paper jams.
- The side to be printed on must be face down.
- The paper guides touch the sides of the paper so it will feed properly.



4 Put the paper tray firmly back in the machine. Make sure that it is completely inserted into the machine.

5 Lift up the support flap 1 to prevent paper from sliding off the face-down output tray, or remove each page as soon as it comes out of the machine.



6 Choose the following from each drop-down list of the printer driver.

■ **Paper Size**

A4	**Letter**	**Legal** [1]	**Executive**	**A5**	**B5**
B6	**A6**	**Folio** [1]	**JIS B5**	**A5 Long Edge**	

[1] Legal or Folio size paper is not available in some regions outside the USA and Canada.

■ **Media Type**

Plain Paper **Thin Paper** **Recycled Paper**

■ **Paper Source**

Tray 1

For any other settings, see *Driver and Software* in Chapter 2.

7 Send the print data to the machine.

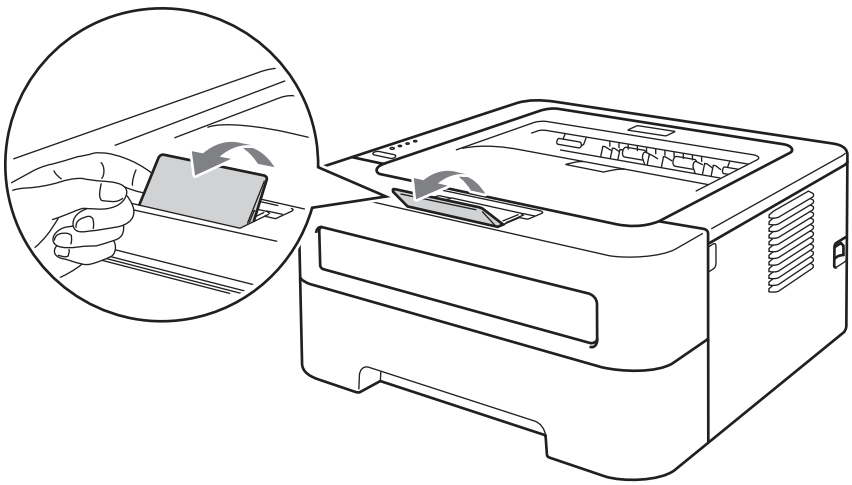
Printing from the Manual feed slot

(For the recommended paper to use, see *Type and size of paper* on page 4.)

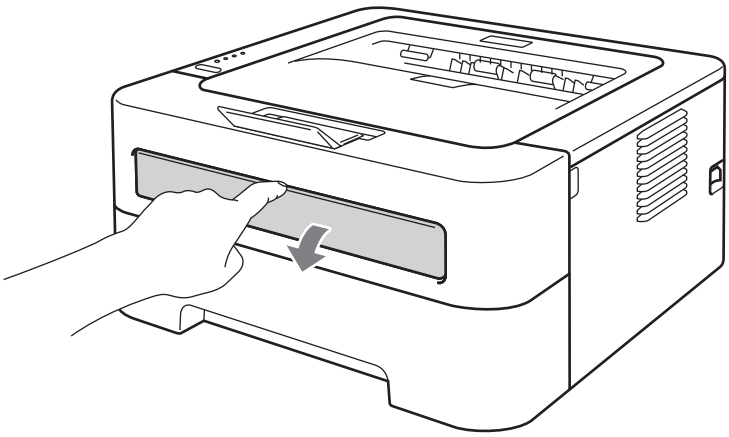
Note

The machine automatically turns on the Manual Feed mode when you put paper in the manual feed slot.

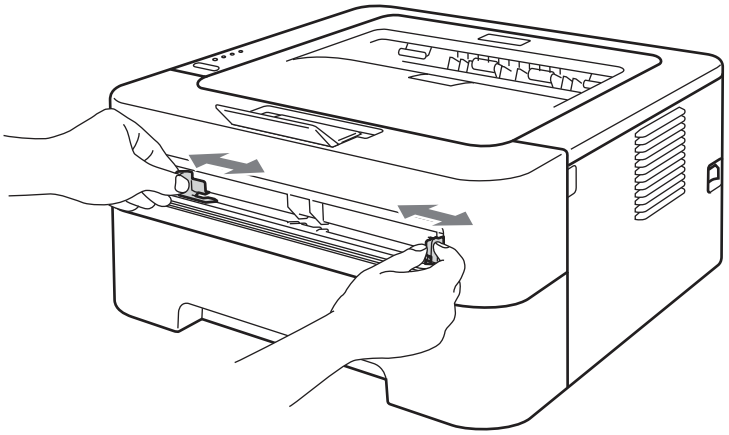
1. Lift up the support flap 1 to prevent paper from sliding off the face-down output tray, or remove each page as soon as it comes out of the machine.



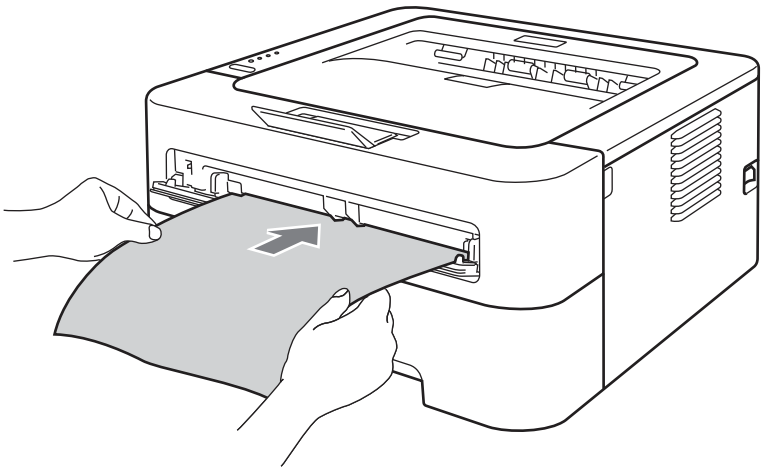
2. Open the manual feed slot cover. (Not available for HL-2130 / HL-2132 / HL-2220)



3 Using both hands, slide the manual feed paper guides to the width of the paper that you are going to use.



4 Using both hands, put one piece of paper in the manual feed slot until the front edge of the paper touches the paper feed roller. When you feel the machine pull in the paper, let go.



Note

- Put the paper into the manual feed slot with the side to be printed face up.
- Make sure that the paper is straight and in the correct position on the manual feed slot. If it is not, the paper may not be fed properly, resulting in a skewed printout or a paper jam.
- DO NOT put more than one piece of paper in the manual feed slot at any one time, as it may cause a jam.
- If you put any media in the manual feed slot before the machine is in Ready mode, the media may be ejected without being printed on.

5 Choose the following from each drop-down list of the printer driver.

■ **Paper Size**

Width:	76.2 to 216 mm (3 to 8.5 in.)
Length:	116 to 406.4 mm (4.6 to 16 in.)

You can use all paper sizes specified for the tray which you use.

■ **Media Type**

Plain Paper **Thin Paper** **Thick Paper** **Thicker Paper** **Bond Paper** **Recycled Paper**

■ **Paper Source**

Manual

For any other settings, see *Driver and Software* in Chapter 2.

6 Send the print data to the machine.

7 After the printed page comes out of the machine, put in the next sheet of paper as in Step ❹ above. Repeat for each page that you want to print.

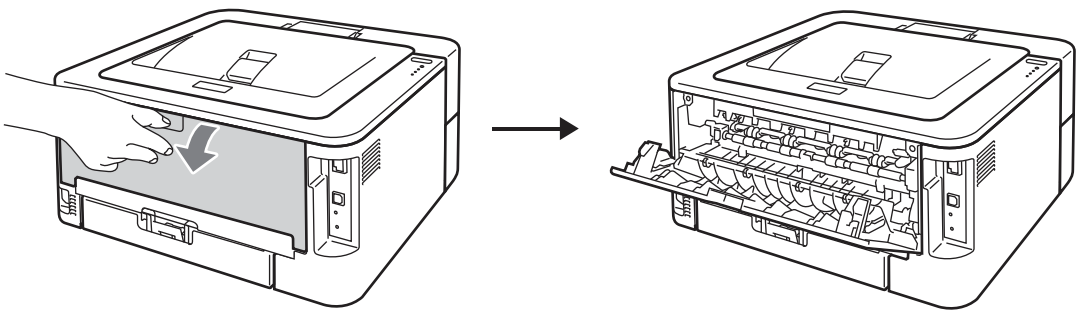
Printing on labels or envelopes

When the face-up output tray is pulled down, the machine has a straight paper path from the manual feed slot through to the back of the machine. Use this paper feed and output method when you want to print on labels or envelopes. (For the recommended paper to use, see *Acceptable paper and other print media* on page 3 and *Types of envelopes to avoid* on page 7.)

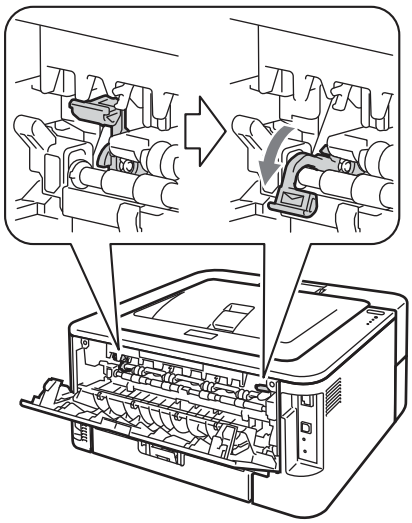
Note

The machine automatically turns on the Manual Feed mode when you put paper in the manual feed slot.

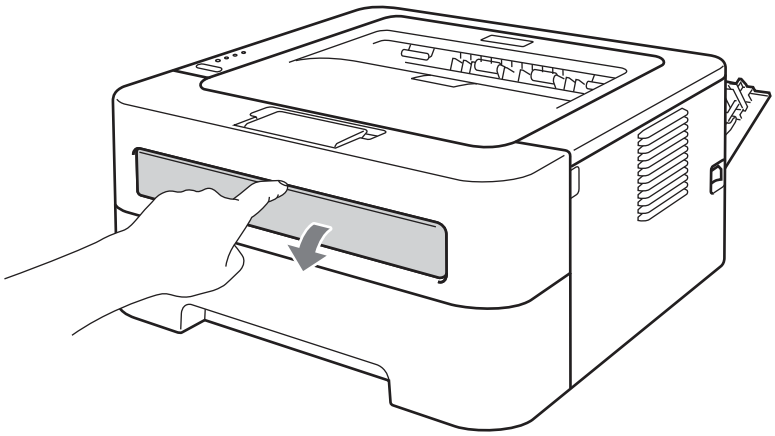
1 Open the back cover (face-up output tray).



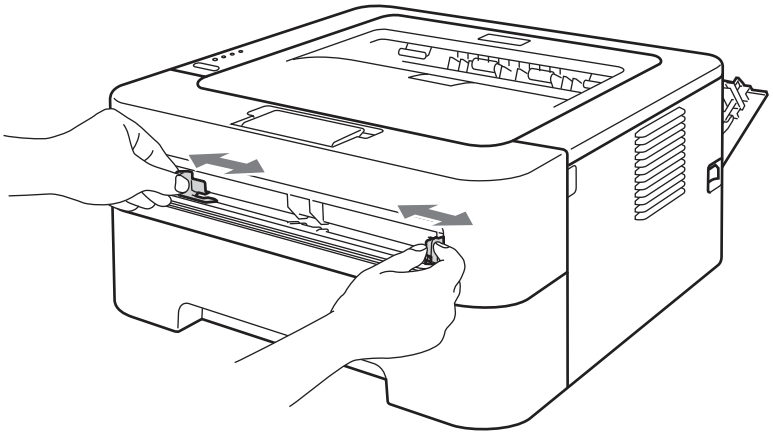
2 <For printing envelopes only> Pull down the two green levers, one on the left-hand side and one on the right-hand side, as shown in the illustration below.



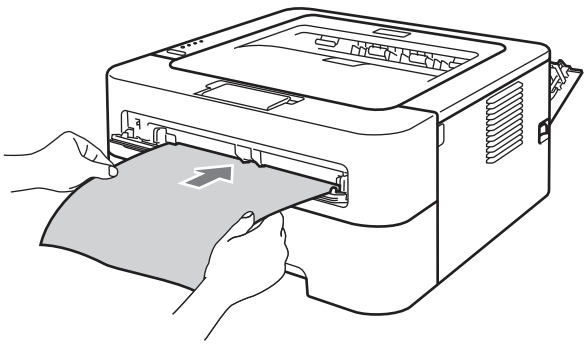
3 Open the manual feed slot cover. (Not available for HL-2130 / HL-2132 / HL-2220)

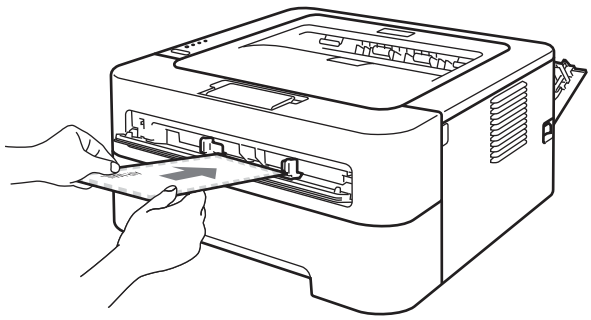


4 Using both hands, slide the manual feed paper guides to the width of the paper that you are going to use.



5 Using both hands, put one full sheet of labels or one envelope in the manual feed slot until the front edge touches the paper feed roller. When you feel the machine pull it in, let go.





Note

- Put one full sheet of labels or one envelope into the manual feed slot with the side to be printed face up.
- Make sure that the full sheet of labels or the envelope is straight and in the proper position on the manual feed slot. If it is not, it may not be fed properly, resulting in a skewed printout or a paper jam.
- DO NOT put more than one full sheet of labels or one envelope in the manual feed slot at any one time, as it may cause a jam.
- DO NOT insert a labels sheet that has previously been used or is missing any labels.
- If you put any Media (paper, envelope and so on) in the manual feed slot before the machine is in Ready mode, the media may be ejected without being printed on.

6 Choose the following from each drop-down list menu of the printer driver.

■ **Paper Size**

Envelopes

Com-10 **DL** **C5** **Monarch** **DL Long Edge**

Customized paper size [1]

[1] You can define your original paper size by choosing **User Defined...** in Windows® printer driver or **Manage Custom Sizes...** in Macintosh printer drivers.

Label

A4 **Letter**

■ **Media Type**

Envelopes **Env. Thin** **Env. Thick** **Label**

■ **Paper Source**

Manual

Note

- When you use Envelope #10, choose **Com-10** for the **Paper Size**.
- For other envelopes that are not listed in the printer driver, such as Envelope #9 or Envelope C6, choose **User Defined...** (for Windows® printer driver) or **Manage Custom Sizes...** (for Macintosh printer driver). For more information on envelope sizes, see *Paper size* on page 130.

7 Send the print data to the machine.

8 After the printed page comes out of the machine, put in the next full sheet of labels or envelope as shown in Step ❺. Repeat for each page that you want to print.

9 <For printing envelopes only>When you have finished printing, reset the two green levers that were pulled down in step ❷ back to their original positions.

Note

- Remove each sheet of labels or envelope as soon as it has been printed. Stacking them may cause the paper to jam or curl.
- If an envelope is creased after they are printed, see *Improving the print quality* on page 112.
- If envelopes get smudged during printing set the **Media Type** to **Env. Thick**.
- (For Windows® users) If the DL size double flap envelopes are creased after printing, choose **DL Long Edge** in **Paper Size**, from the **Basic** tab. Put a new DL size double-flap envelope in the manual feed slot with the longest edge of the envelope in first, then print again.
- Envelope joints that are sealed by the manufacturer should be secure.
- All sides of the envelope should be properly folded without wrinkles or creases.

Duplex printing

The supplied printer drivers for Windows® 2000 or greater and Mac OS X 10.4.11 or greater all enable duplex printing. For more information about how to choose the settings, see the **Help** text in the printer driver.

Guidelines for printing on both sides of the paper

- If the paper is thin, it may wrinkle.
- If paper is curled, straighten it and then put it back in the paper tray or the manual feed slot. If the paper continues to curl, replace the paper.
- If the paper is not feeding properly, it may be curled. Remove the paper and straighten it. If the paper continues to curl, replace the paper.
- When you use the manual duplex function, it is possible that there may be paper jams or poor print quality. (If there is a paper jam, see *Paper jams and how to clear them* on page 105. If you have a print quality problem, see *Improving the print quality* on page 112.)

Note

- Make sure that the paper tray is completely inserted to the machine.
- You should use plain paper, recycled paper or thin paper. Do not use bond paper.

Automatic duplex printing (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)

If you are using the Macintosh Printer Driver, see *Automatic Duplex Printing (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)* on page 48.

1. Choose the following settings from each menu of the printer driver.

   ■ **Paper Size**

   Letter **Legal** [1] **Folio** [1]

   [1] Legal or Folio size paper is not available in some regions outside the USA and Canada.

   ■ **Media Type**

   Plain Paper **Thin Paper** **Recycled Paper**

   ■ **Paper Source**

   Tray 1 **Manual**

   ■ **Duplex / Booklet**

   Duplex

   ■ **Duplex Type** in **Duplex Settings**

   There are four options for each orientation. (See *Duplex / Booklet* on page 28.)

   ■ **Binding Offset** in **Duplex Settings**

   You can specify the offset for binding. (See *Duplex / Booklet* on page 28.)

   For any other settings, see *Driver and Software* in Chapter 2.

2. Send the print data to the machine. The machine will print on both sides of the paper automatically.

Manual duplex printing

If you are using the Macintosh Printer Driver, see *Manual Duplex Printing* on page 47.

1. Choose the following settings from each drop-down list of the printer driver.
   - **Paper Size**

     You can use all the paper sizes specified for the tray you are using.
   - **Media Type**

     You can use all the media types specified for the tray you are using except media that has a specified print side, such as envelopes and labels.
   - **Paper Source**

     Tray 1 **Manual**
   - **Duplex / Booklet**

     Duplex (Manual)
   - **Duplex Type** in **Duplex Settings**

     There are four options for each orientation. (See *Duplex / Booklet* on page 28.)
   - **Binding Offset** in **Duplex Settings**

     You can specify the offset for binding. (See *Duplex / Booklet* on page 28.)

   For any other settings, see *Driver and Software* in Chapter 2.
2. Send the print data to the machine. The machine will print all the even-numbered pages on one side of the paper first. Then, the Windows® driver instructs you (with a pop-up message) to reinsert the paper to print the odd-numbered pages.

Note

Before reinserting the paper, straighten it well, or you may get a paper jam. Very thin or thick paper is not recommended.

2 Driver and Software

Printer driver

A printer driver is software that translates data from the format used by a computer to the format that a particular machine needs. Typically, this format is page description language (PDL).

The printer drivers for the supported versions of Windows® and Macintosh are on the CD-ROM we have supplied or on the Brother Solutions Center at http://solutions.brother.com/. Install the drivers by following the *Quick Setup Guide*. The latest printer driver can be downloaded from the Brother Solutions Center at http://solutions.brother.com/.

(If you want to uninstall the printer driver, see *Uninstalling the printer driver* on page 51.)

For Windows®

- Windows® printer driver

For Macintosh

- Macintosh printer driver

For Linux [1] [2]

- CUPS printer driver
- LPD / LPRng printer driver

[1] Download the printer driver for Linux from http://solutions.brother.com/ or a link on the supplied CD-ROM.

[2] Depending on Linux distributions, the driver may not be available.

Note

- For more information about Linux printer driver, visit us at http://solutions.brother.com/.
- The printer driver for Linux may be released after the initial release of this product.

You can change the following printer settings when you print from your computer:

- **Paper Size**
- **Orientation**
- **Copies**
- **Media Type**
- **Resolution**
- **Print Settings**
- **Multiple Page**
- **Duplex / Booklet** [1]
- **Paper Source**
- **Scaling**
- **Reverse Print**
- **Use Watermark** [1]
- **Header-Footer Print** [1]
- **Toner Save Mode**
- **Administrator** [1]
- **Use Reprint** [1]
- **Sleep Time**
- **Macro** [1] [2]
- **Density Adjustment** [1]
- **Error Message Printout** [1]
- **Improve Print Output**
- **Skip Blank Page**
- **Print Profiles** [1]

[1] These settings are not available with the Macintosh printer driver.

[2] These settings are only available for the HL-2250DN, HL-2270DW and HL-2275DW.

Features in the printer driver (for Windows®)

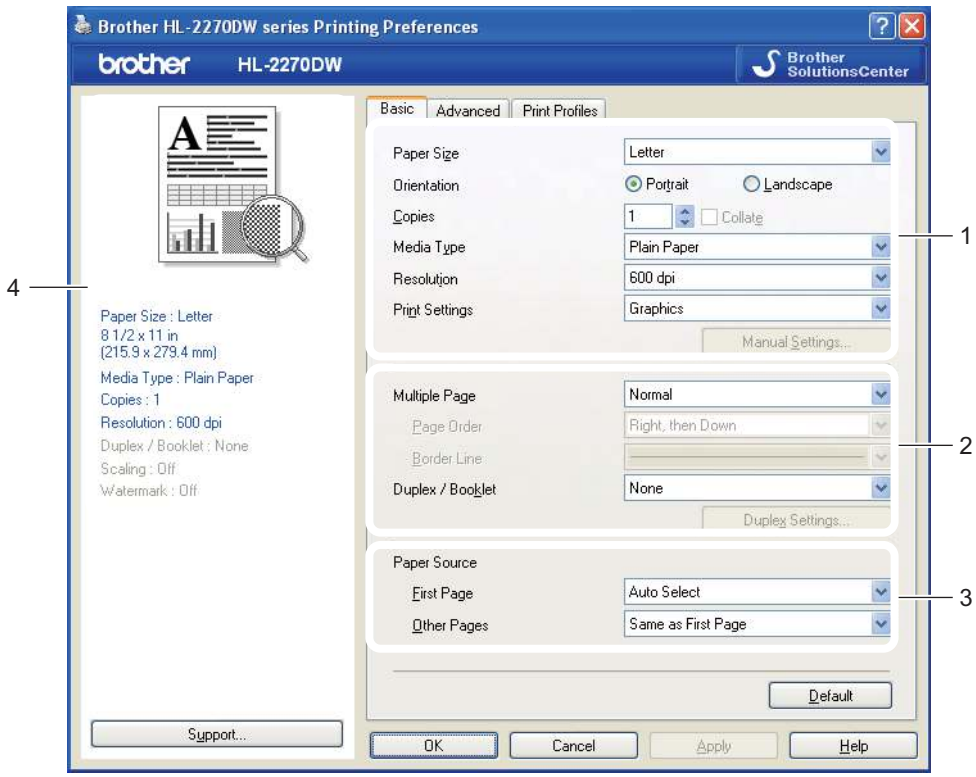
(For more information, see the **Help** text in the printer driver.)

Note

- The screens in this section are from Windows® XP. The screens on your computer will vary depending on your operating system.
- You can access the **Printing Preferences** dialog box by clicking **Printing Preferences...** in the General tab of the **Printer Properties** dialog box.

Basic tab

You can also change settings by clicking the illustration on the left side of the **Basic** tab.



1. Choose **Paper Size**, **Orientation**, **Copies**, **Media Type**, **Resolution** and **Print Settings** (1).
2. Choose **Multiple Page** and **Duplex / Booklet** setting (2).
3. Choose **Paper Source** (3).
4. Click **OK** to apply your chosen settings.
   To return to the default settings, click **Default**, then **OK**.

Note

This area (4) shows the current settings.

Paper Size

From the drop-down box choose the Paper Size you are using.

Orientation

Orientation selects the position of how your document will be printed (**Portrait** or **Landscape**).

Portrait

Landscape

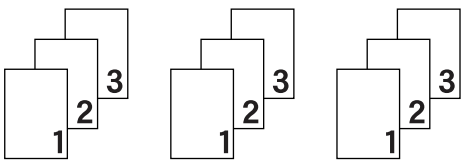
Copies

The copies selection sets the number of copies that will be printed.

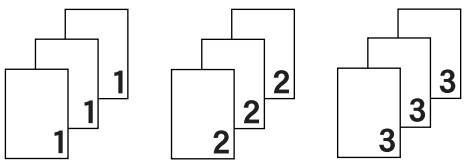
■ **Collate**

With the **Collate** check box selected, one complete copy of your document will be printed and then will be repeated for the number of copies you selected. If the **Collate** check box is not selected, then each page will be printed for all the copies selected before the next page of the document is printed.

Collate checked



Collate non-checked



Media Type

You can use the following types of media in your machine. For the best print quality, select the type of media that you wish to use.

Plain Paper	**Thin Paper**	**Thick Paper**	**Thicker Paper**	**Bond Paper**
Envelopes	**Env. Thick**	**Env. Thin**	**Recycled Paper**	**Label**

Note

- When using ordinary plain paper (75 to 105 g/m^2 (20 to 28 lb)) choose **Plain Paper**. When using heavier weight paper or rough paper choose **Thick Paper** or **Thicker Paper**. For bond paper, choose **Bond Paper**.
- When you use envelopes, choose **Envelopes**. If the toner is not fixed to the envelope correctly when **Envelopes** has been selected, choose **Env. Thick**. If the envelope is crumpled when **Envelopes** has been selected, choose **Env. Thin**.

Resolution

You can choose the resolution as follows.

- **300 dpi**
- **600 dpi**
- **HQ 1200**

Print Settings

You can manually change the print setting.

- **Graphics**

  This is the best mode for printing documents that contain graphics.

- **Text**

  This is the best mode for printing text documents.

- **Manual**

  You can change the settings manually by choosing **Manual** and clicking the **Manual Settings...** button.

  You can set brightness, contrast and other settings.

Multiple Page

The **Multiple Page** selection can reduce the image size of a page allowing multiple pages to be printed on one sheet of paper or can enlarge the image size for printing one page on multiple sheets of paper.

- **Page Order**

  When **N in 1** option is selected, the page order can be selected from the drop-down list.

- **Border Line**

  When printing multiple pages onto one sheet, with the **Multiple Page** feature, you can choose to have a solid border, dash border or no border around each page on the sheet.

■ **Print cut-out line**

When **1 in NxN pages** option is selected, the **Print cut-out line** option can be selected. This option allows you to print a faint cut-out line around the printable area.

Duplex / Booklet

When you want to print a booklet or do duplex printing, use this function.

■ **None**

Disable duplex printing.

■ **Duplex** / **Duplex (Manual)**

When you want to do duplex printing, use these options.

- **Duplex** (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)

  The machine prints on both sides of the paper automatically.

- **Duplex (Manual)**

  The machine prints all the even numbered pages first. Then the printer driver will stop and show the instructions required to re-install the paper. When you click **OK** the odd numbered pages will be printed.

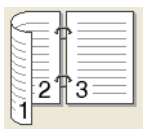
When you choose **Duplex** or **Duplex (Manual)**, the **Duplex Settings...** button becomes available to choose. You can set following settings in the **Duplex Settings** dialog box.

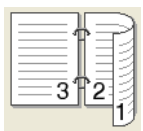
- **Duplex Type**

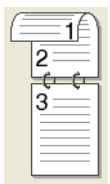
  There are four types of duplex binding direction available for each orientation.

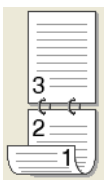
Portrait

Long Edge (Left) **Long Edge (Right)** **Short Edge (Top)** **Short Edge (Bottom)**



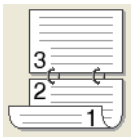


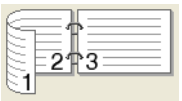


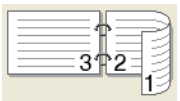


Landscape

Long Edge (Top) **Long Edge (Bottom)** **Short Edge (Left)** **Short Edge (Right)**







- **Binding Offset**

  When you check **Binding Offset**, you can also specify the offset for binding in inches or millimeters.

■ **Booklet / Booklet (Manual)**

Use this option to print a document in booklet format using duplex printing; it will arrange the document according to the correct page number and allows you to fold at the center of the print output without having to change the order of the page number.

- **Booklet** (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)

  The machine prints on both sides of the paper automatically.

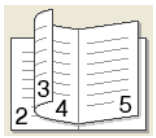
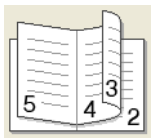
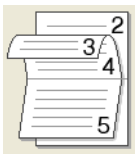
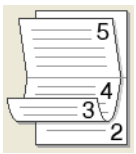
- **Booklet (Manual)**

  The machine prints all the even numbered sides first. Then the printer driver will stop and show the instructions required to re-install the paper. When you click **OK** the odd numbered sides will be printed.

When you choose **Booklet** or **Booklet (Manual)**, the **Duplex Settings...** button becomes available to choose. You can set following settings in the **Duplex Settings** dialog box.

- **Duplex Type**

  There are two types of duplex binding direction available for each orientation.

Portrait		**Landscape**	
Left Binding	**Right Binding**	**Top Binding**	**Bottom Binding**
			

- **Booklet Printing Method**

  When **Divide into Sets** is selected: This option allows you to print the whole booklet into smaller individual booklet sets, it still allows you to fold at the center of the smaller individual booklet sets without having to change the order of the page number. You can specify the number of sheets in each smaller booklet set, from 1 to 15. This option can help when folding the printed booklet that has a large number of pages.

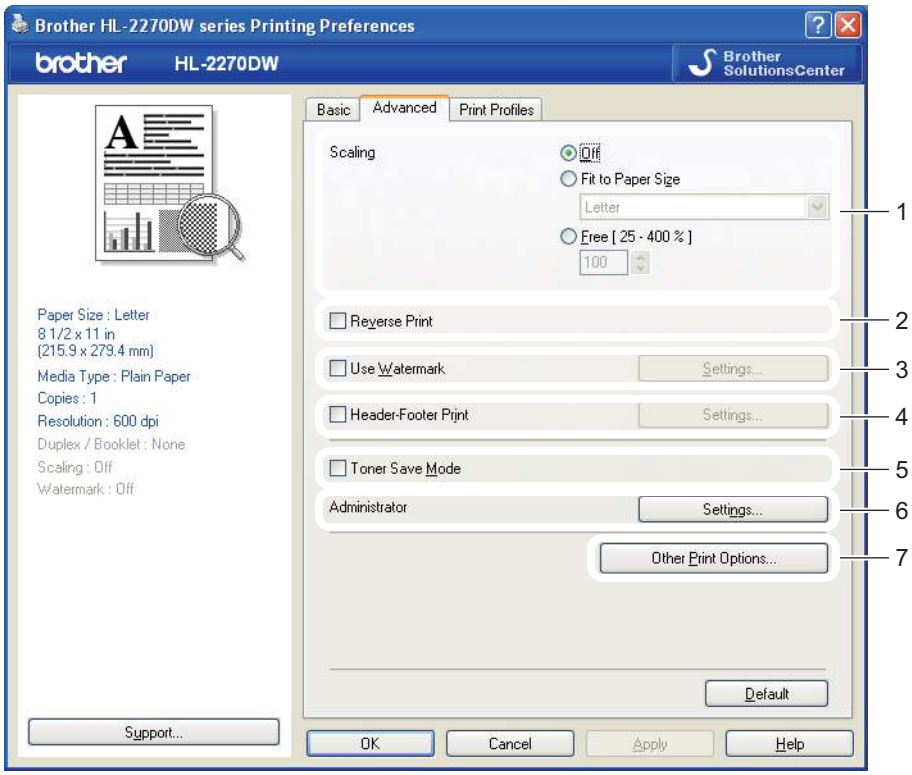
- **Binding Offset**

  When you check **Binding Offset**, you can also specify the offset for binding in inches or millimeters.

Paper Source

You can choose **Auto Select**, **Tray1**, **Manual** and specify separate trays for printing the first page and for printing from the second page onwards.

Advanced tab



Change the tab settings by clicking one of the following icons:

- **Scaling** (1)
- **Reverse Print** (2)
- **Use Watermark** (3)
- **Header-Footer Print** (4)
- **Toner Save Mode** (5)
- **Administrator** (6)
- **Other Print Options** (7)

Scaling

You can change the print image scaling.

Reverse Print

Check **Reverse Print** to rotate the print result by 180 degrees.

Use Watermark

You can put a logo or text into your documents as a watermark.

You can choose one of the preset watermarks, or you can use a bitmap file or text that you have created.

When you use a bitmap file as a watermark, you can change the size of the watermark and put it anywhere you like on the page.

When you use text as a watermark, you can change the **Text**, **Font**, **Style**, **Size** and **Darkness** settings.

Header-Footer Print

When this feature is enabled, it will print the date and time on your document from your computer's system clock and the PC login user name or the text you entered. By clicking **Settings...** you can customize the information.

- **ID Print**

  If you select **Login User Name**, your PC login user name will print. If you select **Custom** and enter the text in the **Custom** edit box, the text you entered will print.

Toner Save Mode

You can conserve toner use with this feature. When you set **Toner Save Mode** to **On**, print appears lighter. The default setting is **Off**.

Note

- We do not recommend **Toner Save Mode** for printing Photo or Gray Scale images.
- **Toner Save Mode** is not available for **HQ 1200** resolution.

Administrator

Administrators have the authority to limit access to functions such as scaling and watermark.

- **Password**

  Enter the password into this box.

- **Set Password...**

  Click here to change the password.

- **Set**

  Click here current password. Then you can change the settings.

- **Copies Lock**

  Lock the copy pages selection to prevent multiple copy printing.

- **Multiple Page & Scaling Lock**

  Lock the current settings of the **Multiple Page** and **Scaling** options to prevent changes being made.

- **Watermark Lock**

  Lock the current settings of the Watermark option to prevent changes being made.

■ **Header-Footer Print Lock**

Lock the current settings of the **Header-Footer Print** option to prevent changes being made.

Other Print Options...

You can set the following in Printer Function:

- **Use Reprint**
- **Sleep Time**
- **Macro** (HL-2250DN / HL-2270DW / HL-2275DW only)
- **Density Adjustment**
- **Error Message Printout**
- **Improve Print Output**
- **Skip Blank Page**

Use Reprint

The machine keeps the last print job sent to it in memory.

You can reprint the last job without sending the data again from your computer. For more information about the Reprint function, see *Go button* on page 60.

Note

If you want to prevent other people from printing your data using the reprint function, uncheck the **Use Reprint** check box.

Sleep Time

When the machine does not receive data for a certain period of time, it enters sleep mode. In sleep mode, the machine acts as though it were turned off. When you choose **Printer Default**, the timeout setting will be reset to the specific time set at the factory; this can be altered in the driver. Intelligent Sleep Mode automatically adjusts to the most suitable timeout setting depending on the frequency of your machine use.

While the machine is in sleep mode, the **Ready** LED is dimmed, but the machine can still receive data. Receiving a print file or document or pressing **Go** will automatically wake up the machine to start printing.

Macro (HL-2250DN / HL-2270DW / HL-2275DW only)

You can save a page of a document as a macro to machine memory. You can also execute the saved macro (you can use the saved macro as an overlay on any documents). This will save time and increase printing speed for often used information such as forms, company logos, letterhead formats or invoices.

Density Adjustment

Increase or decrease the print density.

Note

The **Density Adjustment** is not available when you set the **Resolution** to **HQ 1200**.

Error Message Printout

You can choose whether the machine reports problems by printing an error page.

Selections are **Printer Default**, **On** and **Off**.

Improve Print Output

This feature allows you to improve a print quality problem.

■ **Improvement Settings**

- **Reduce Paper Curl**

  If you choose this setting, the paper curl may be reduced. If you are printing only a few pages, you do not need to choose this setting. We recommend that you change the printer driver setting in **Media Type** to a thin setting.

- **Improve Toner Fixing**

  If you choose this setting, the toner fixing on paper may be improved. If this selection does not provide enough improvement, change the printer driver setting in **Media Type** to a thick setting.

■ **Reduce Ghosting**

If you are using the machine in a high humidity environment this setting may reduce ghosting on the paper. Do not use this setting if the humidity is below 30% or ghosting may increase.

Note

This feature may not reduce ghosting for all types of paper. Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.

Skip Blank Page

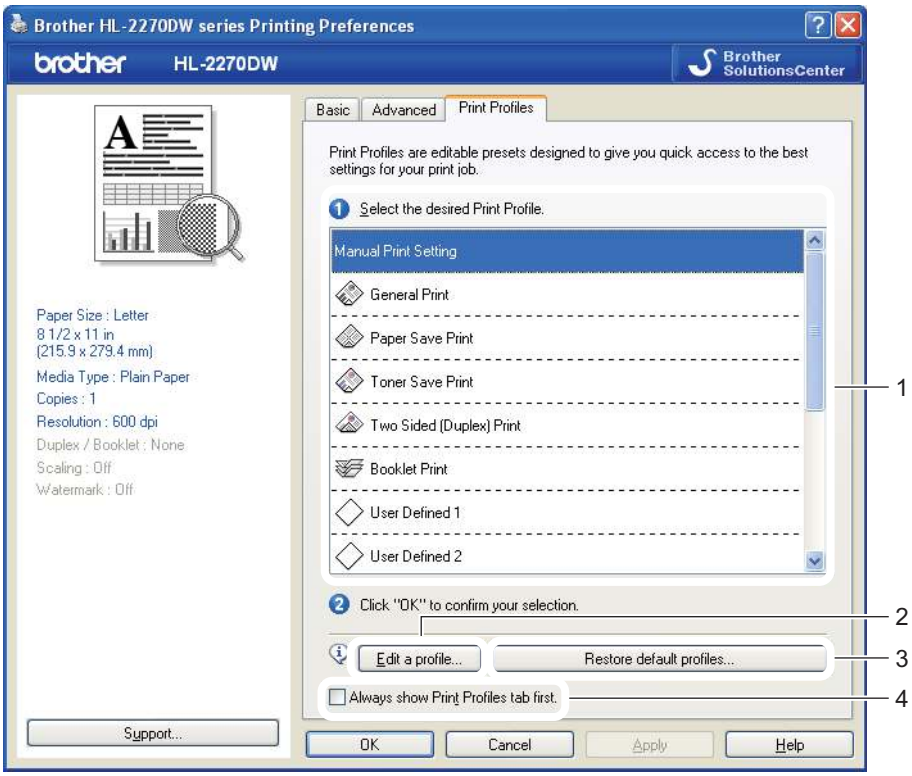
If **Skip Blank Page** is checked, the printer driver automatically detects blank pages and excludes them from printing.

Note

This feature does not work when you choose the following features:

- **Use Watermark**
- **Header-Footer Print**
- **N in 1** and **1 in NxN pages** in **Multiple Page**
- **Duplex (Manual)**, **Booklet**, **Booklet (Manual)** and **Duplex** with **Binding Offset** in **Duplex / Booklet**
- (HL-2240D only) **Duplex** with **HQ 1200** in **Resolution**

Print Profiles tab



- **Print Profiles** (1)

  The printer driver of the machine has the preset print profiles. Select the desired profile and click **OK** to configure the desirable print settings easily.

- **Edit a profile** (2)

  You can edit and save a new print profile.

- **Restore default profiles** (3)

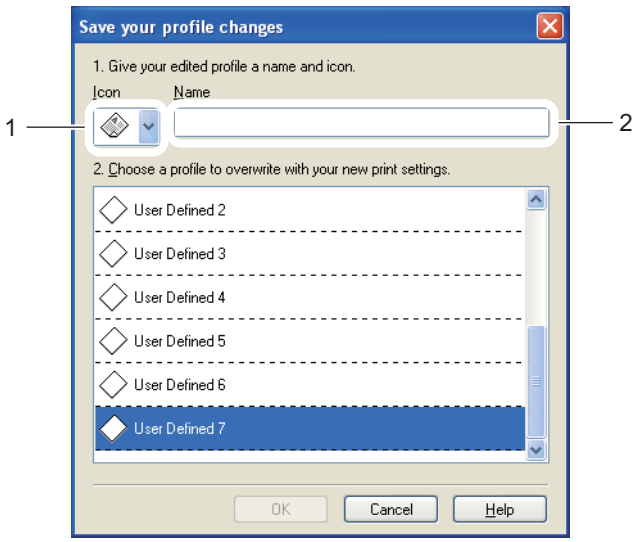
  Click to restore all the default print profiles.

- **Always show Print Profile tab first** (4)

  When you always want to show the **Print Profiles** tab first, select this check box.

Editing a print profile

1. Configure the print settings in the print driver. See *Basic tab* on page 25 and *Advanced tab* on page 30.
2. Click the **Print Profiles** tab.
3. Click the **Edit a profile** button.



4. Choose the icon from the drop-down list (1) and enter a profile name (2).
5. Choose the print profile you want to overwrite and click **OK**.

Note

You can overwrite the preset print profiles.

Support

Note

You can access the **Support** dialog box by clicking **Support...** in the **Printing Preferences** dialog box.

- **Brother Solutions Center** (1)

  The Brother Solutions Center (http://solutions.brother.com/) is a Website offering information about your Brother product including FAQs (Frequently Asked Questions), *User's Guides*, driver updates and tips for using your machine.

- **Genuine Supplies Website** (2)

  You can visit our Website for genuine Brother supplies by clicking this button.

- **Brother CreativeCenter** (3)

  You can visit our Website for a free and easy online solution for business and home uses by clicking this button.

- **Print Settings** (4)

  This will print the pages that show how the internal settings of the machine have been configured.

- **Check Setting...** (5)

  You can check the current driver settings.

- **About...** (6)

  This will show the list of the printer driver files and version information.

- **Print Fonts** (7) (HL-2250DN/HL-2270DW/HL-2275DW only)

  This will print the pages that show all the internal fonts of the machine.

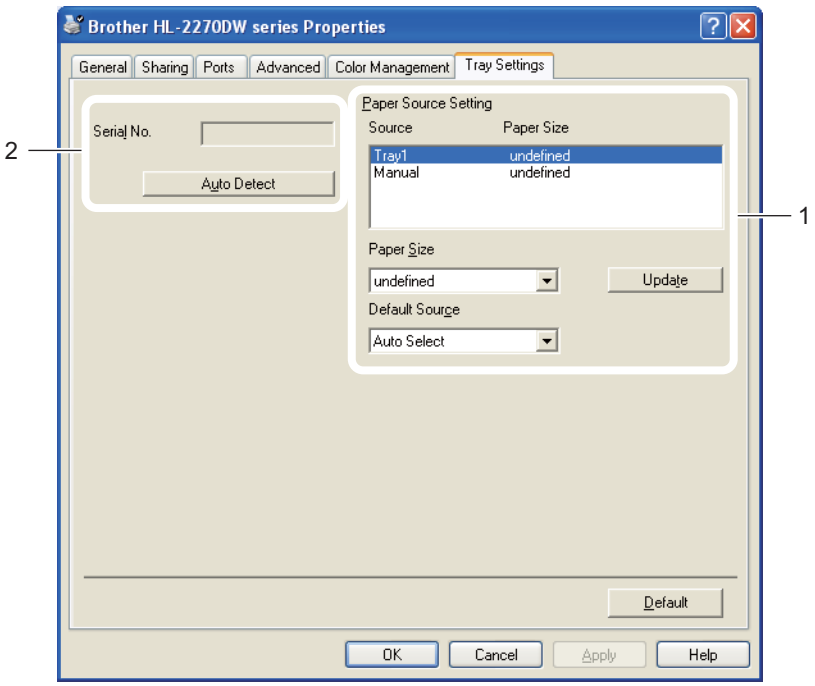
Tray Settings

Note

From the **Start** menu, select **Printers and Faxes** [1]. Right-click the **Brother HL-2130 / HL-2220 / HL-2230 / HL-2240 / HL-2240D / HL-2250DN / HL-2270DW series** icon and select **Properties** to access the **Tray Settings** tab.

[1] Select **Settings** and then **Printers** for Windows® 2000 users.

You can define the paper size for each paper tray and auto detect the serial number in the **Tray Settings** tab as follows.



■ **Paper Source Setting** (1)

This feature identifies the paper size defined for each paper tray.

- **Paper Size**

  This setting allows you to define which paper size is used for the tray and manual feed slot. Highlight the paper source you want to define and then choose the paper size from the drop-down list. Click **Update** to apply the setting to the tray.

- **Default Source**

  This setting allows you to choose the default paper source that your document will be printed from. Choose the **Default Source** from the drop-down list and click **Update** to save your setting. The **Auto Select** setting will automatically pull paper from any paper source (tray or manual feed slot) that has a defined paper size that matches your document.

■ **Serial No.** (2)

By clicking **Auto Detect**, the printer driver will query the machine and display its serial number. If it fails to receive the information, the screen will display "----------".

Note

The **Auto Detect** function is not available under the following machine conditions:

- The machine's power switch is off.
- The machine is in an error mode.
- The machine is in a network shared environment.
- The cable is not connected to the machine correctly.

Status Monitor

This reports the machine status (any errors that may happen with the machine) when printing. If you would like to turn the status monitor on, follow these steps:

Click the **Start** button, **All Programs** [1] , **Brother**, your machine (e.g. Brother HL-2270DW), and then **Status Monitor**.

[1] **Programs** for Windows® 2000 users

Features in the printer driver (for Macintosh)

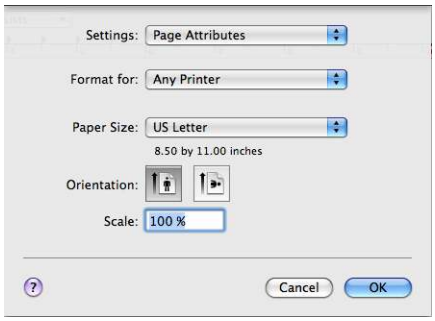
This machine supports Mac OS X 10.4.11, 10.5.x and 10.6.x.

Note

The screens in this section are based on Mac OS X 10.5.x. The screens on your Macintosh will vary depending on your operating system.

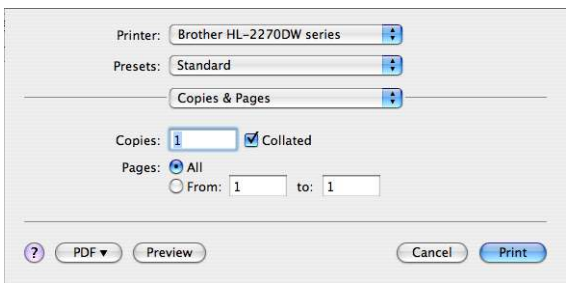
Choosing page setup options

1. From an application such as Apple TextEdit, click **File**, then **Page Setup**. Make sure HL-XXXX (where XXXX is your model name.) is chosen in the **Format for** pop-up menu. You can change the settings for **Paper Size**, **Orientation** and **Scale**, then click **OK**.



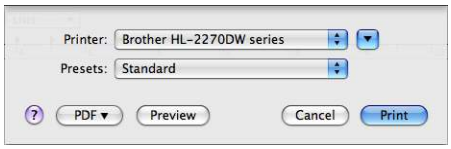
2. From an application such as Apple TextEdit, click **File**, then **Print** to start printing.

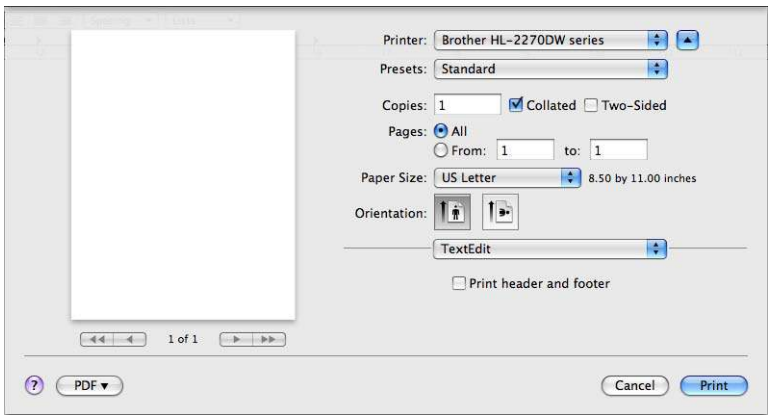
■ For Mac OS X 10.4.11



■ For Mac OS X 10.5.x and 10.6.x

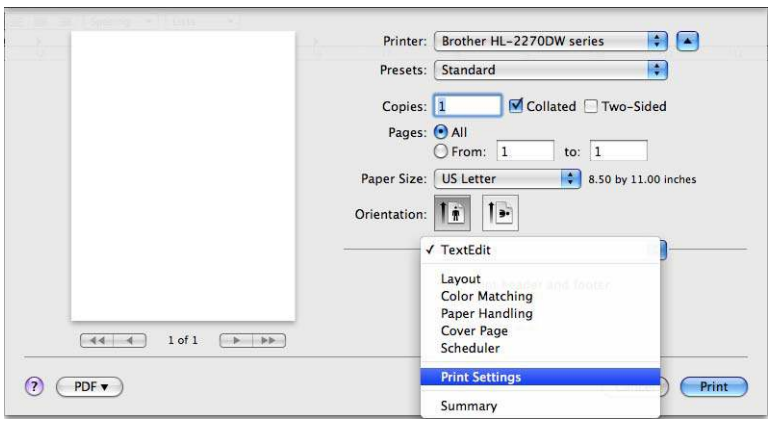
For more page setup options, click the disclosure triangle beside the Printer pop-up menu.





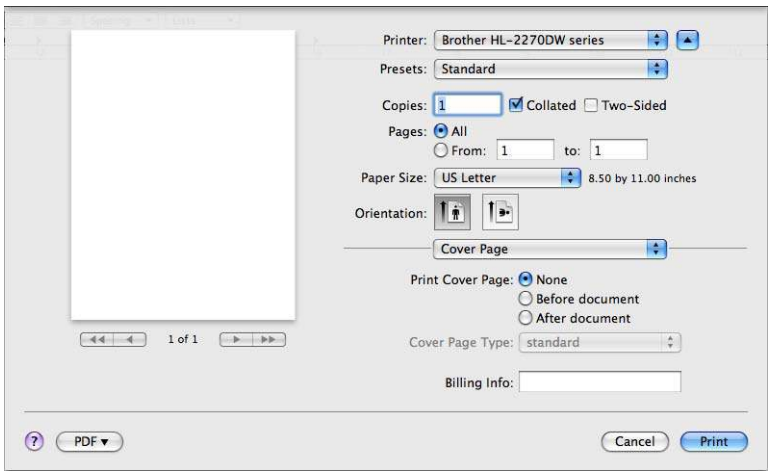
Choosing printing options

To control special printing features, choose the options in the Print dialog box. For the details of available options, see the following descriptions of each option.



Cover Page

You can make the following cover page settings:



- **Print Cover Page**

  If you want to add a cover page to your document, use this function.

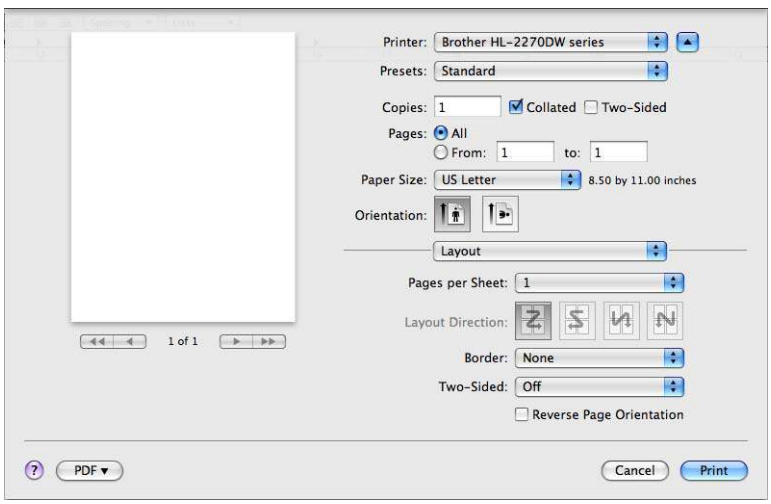
- **Cover Page Type**

  Choose a template for the cover page.

- **Billing Info**

  If you want to add the billing information to the cover page, enter text in the **Billing Info** box.

Layout



- **Pages per Sheet**

  Choose how many pages will appear on each side of the paper.

- **Layout Direction**

  When you specify the pages per sheet, you can also specify the direction of the layout.

- **Border**

  If you want to add a border, use this function.

- **Two-Sided**

  See *Automatic Duplex Printing (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)* on page 48.

- **Reverse Page Orientation** (Mac OS X 10.5.x and 10.6.x only)

  Check **Reverse Page Orientation** to reverse the data from up to down.

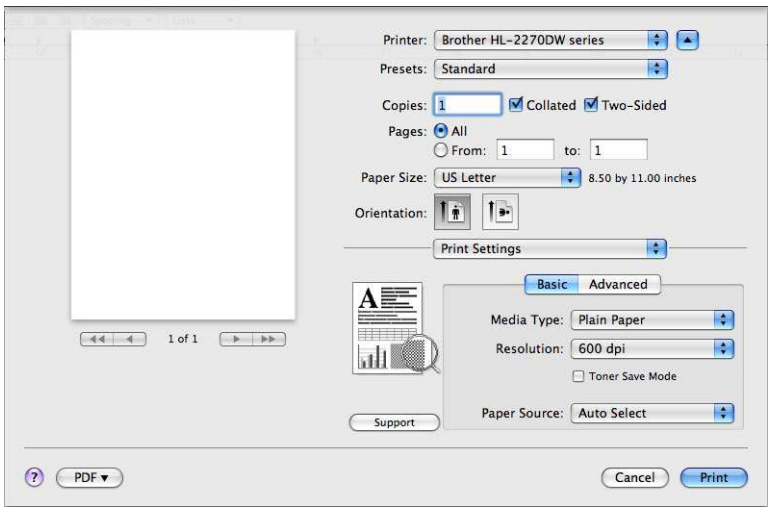
- **Flip Horizontally** (Mac OS X 10.6.x only)

  Check **Flip Horizontally** to print as a reflection flipped left-to-right.

Print Settings

You can change settings by choosing a setting in the **Print Settings** list:

Basic tab



■ Media Type

You can change the media type to one of the following:

- **Plain Paper**
- **Thin Paper**
- **Thick Paper**
- **Thicker Paper**
- **Bond Paper**
- **Envelopes**
- **Env. Thick**
- **Env. Thin**
- **Recycled Paper**
- **Label**

■ Resolution

You can change the resolution as follows:

- **300 dpi**
- **600 dpi**
- **HQ 1200**

■ **Toner Save Mode**

You can conserve toner using this feature. When you set **Toner Save Mode** to **On**, print appears lighter. The default setting is **Off**.

Note

- We do not recommend **Toner Save Mode** for printing Photo or Gray Scale images.
- **Toner Save Mode** is not available for **HQ 1200** resolution.

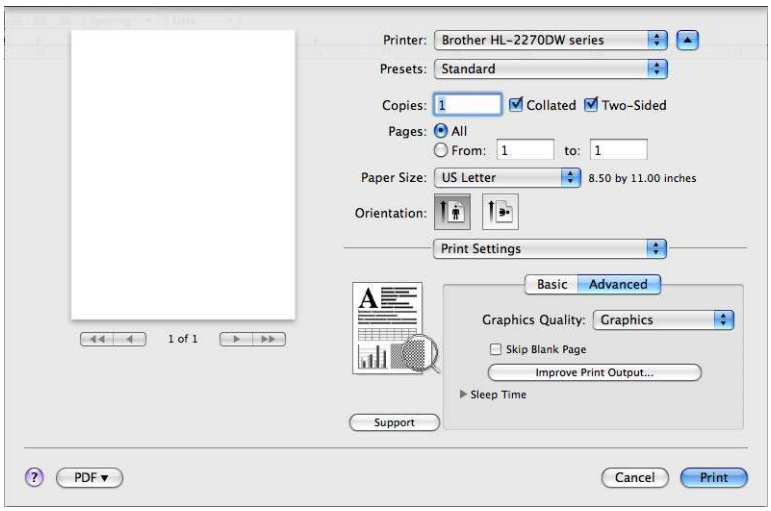
■ **Paper Source**

You can choose **Auto Select**, **Tray 1** or **Manual**.

■ **Reverse Print** (For Mac OS X 10.4.11 only)

Check **Reverse Print** to rotate the data by 180 degrees.

Advanced tab



■ **Graphics Quality**

You can change the print quality as follows:

- **Graphics**

  This is a graphics mode (contrast priority). Choose this setting for printing text and figures, such as business and presentation documents. You can represent sharp contrasts between shaded areas.

- **Text**

  This is the best mode for printing text documents.

■ **Skip Blank Page**

If **Skip Blank Page** is checked, the printer driver automatically detects blank pages and excludes them from printing.

Improve Print Output

This feature allows you to improve a print quality problem.

- **Reduce Paper Curl**

  If you choose this setting, the paper curl may be reduced. If you are printing only a few pages, you do not need to choose this setting. We recommend that you change the printer driver setting in **Media Type** to a thin setting.

- **Improve Toner Fixing**

  If you choose this setting, the toner fixing on paper may be improved. If this selection does not provide enough improvement, change the printer driver setting in **Media Type** to a thick setting.

- **Reduce Ghosting**

  If you are using the machine in a high humidity environment this setting may reduce ghosting on the paper. Do not use this setting if the humidity is below 30% or ghosting may increase.

Note

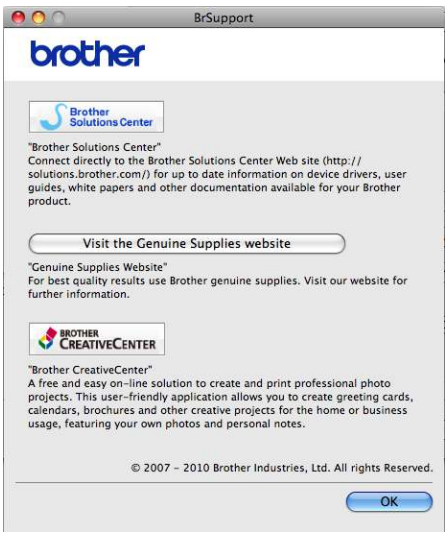
This feature may not reduce ghosting for all types of paper. Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.

Sleep Time

When the machine does not receive data for a certain period of time, it enters sleep mode. In sleep mode, the machine acts as though it were turned off. When you choose **Printer Default**, the timeout setting will be reset to the default time; this can be altered in the driver. If you want to change the sleep time, choose **Manual** and then enter the time in the text box on the driver.

While the machine is in sleep mode, the **Ready** LED is dimmed, but the machine can still receive data. Receiving a print file or document or pressing **Go** will automatically wake up the machine to start printing.

Support



- **Brother Solution Center**

  The Brother Solutions Center (http://solutions.brother.com/) is a Website offering information about your Brother product including FAQs (Frequently Asked Questions), *User's Guides*, driver updates and tips for using your machine.

- **Visit the Genuine Supplies website**

  You can visit our website for genuine Brother supplies by clicking this button.

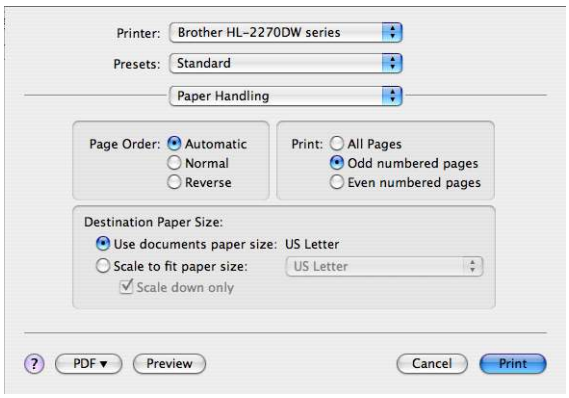
- **Brother CreativeCenter**

  You can visit our Website for a free and easy online solution for business and home uses by clicking this button.

Manual Duplex Printing

■ For Mac OS X 10.4.11

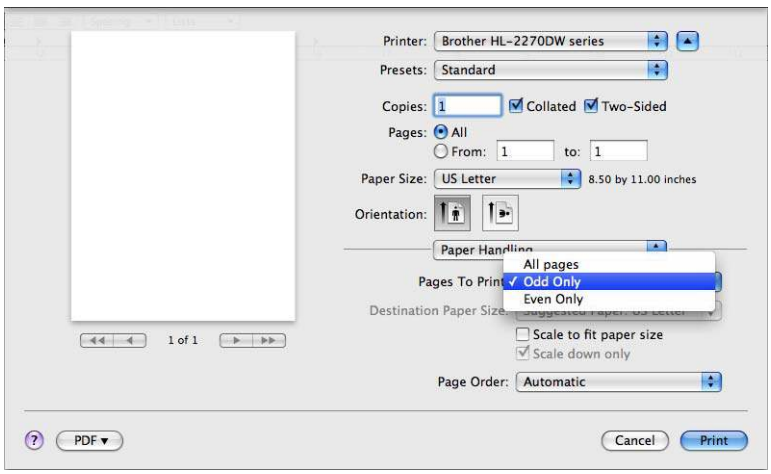
1. Select **Paper Handling**.
2. Choose **Odd numbered pages** and click **Print**.



3. Turn the paper over and reload it in the tray, and then choose **Even numbered pages** and click **Print**.

■ For Mac OS X 10.5.x and 10.6.x

1. Select **Paper Handling**.
2. Choose **Odd only** in **Pages To Print** and click **Print**.

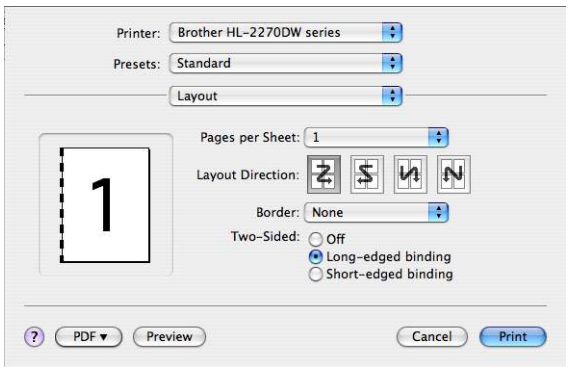


3. Turn the paper over and reload it in the tray, and then choose **Even only** in **Pages To Print** and click **Print**.

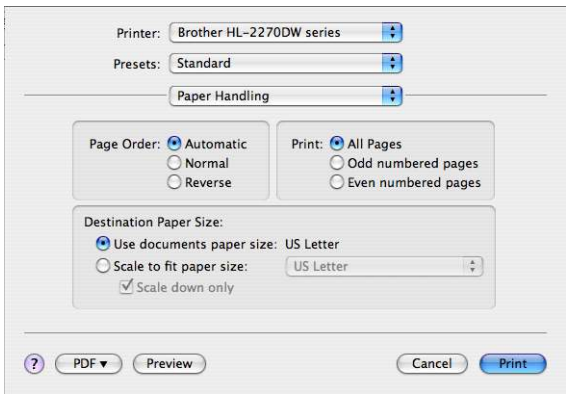
Automatic Duplex Printing (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only)

■ For Mac OS X 10.4.11

1. Select **Layout**.
2. Choose **Long-edged binding** or **Short-edged binding** in **Two-Sided**.

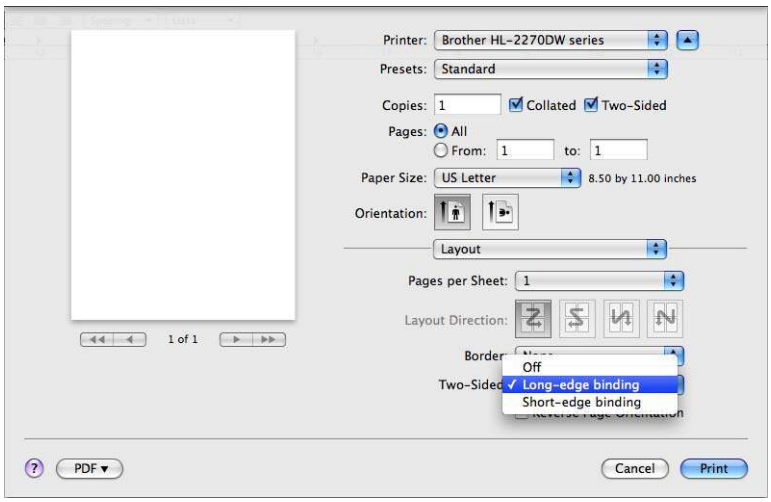


3. Select **Paper Handling**.
4. Choose **All pages** in **Print** and click **Print**. You can print pages on both sides of the paper.

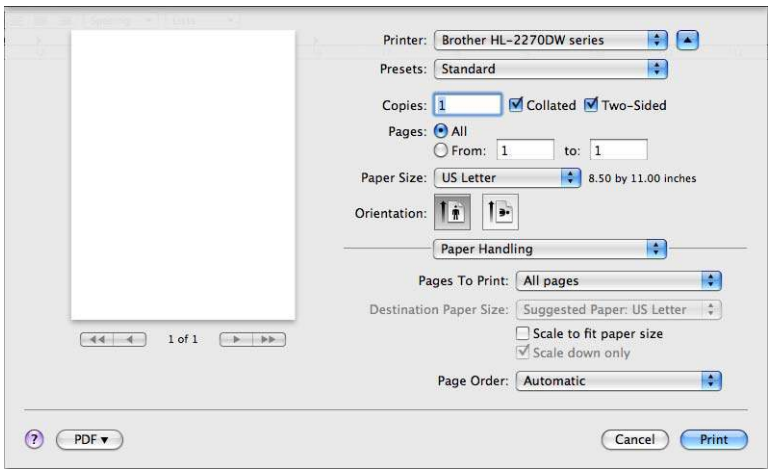


■ For Mac OS X 10.5.x and 10.6.x

1. Select **Layout**.
2. Choose **Long-edge binding** or **Short-edge binding** in **Two-Sided**. Automatically the **Two-Sided** check box is checked.



3. Select **Paper Handling**.
4. Choose **All pages** in **Pages To Print** and click **Print**. You can print pages on both sides of the paper.



Status Monitor

This reports the machine status (any errors that may happen with the machine) when printing. If you would like to turn the status monitor on, follow these steps:

- For Mac OS X 10.4.11

  1. Run the **Printer Setup Utility** (from the **Go** menu, choose **Applications**, **Utilities**), then choose the machine.
  2. Click the **Utility**, then the status monitor will start up.

- For Mac OS X 10.5.x

  1. Run the **System Preferences**, select **Print & Fax**, then choose the machine.
  2. Click the **Open Print Queue...**, then click **Utility**. The status monitor will start up.

- For Mac OS X 10.6.x

  1. Run the **System Preferences**, select **Print & Fax**, then choose the machine.
  2. Click the **Open Print Queue...**, then click **Printer Setup**. Select the **Utility** tab then click **Open Printer Utility**. The status monitor will start up.

Uninstalling the printer driver

You can uninstall the printer driver that you have installed with the following steps.

Note

- This is not available if you installed the printer driver from the Windows® **Add a printer** function.
- After uninstalling, we recommend that you restart your computer to remove files that were in use during the uninstall.

Printer driver for Windows®

1. Click the **Start** button, point to **All Programs** [1], **Brother**, and then to your machine name.
2. Click **UnInstall**.
3. Follow the instructions on the screen.

[1] **Programs** for Windows® 2000 users

Printer driver for Macintosh

For Mac OS X 10.4.11

1. Disconnect the USB cable between the Macintosh and your machine.
2. Log on as an 'Administrator'.
3. Run the **Printer Setup Utility** (from **Go** menu, choose **Applications**, **Utilities**), then choose the machine you want to remove and remove it by clicking the **Delete** button.

For Mac OS X 10.5.x and 10.6.x

1. Disconnect the USB cable between the Macintosh and your machine.
2. Log on as an 'Administrator'.
3. From the Apple menu, choose **System Preferences**. Click **Print & Fax**, then choose the machine you want to remove and remove it by clicking the - button.

Software

Software for networks (HL-2250DN / HL-2270DW / HL-2275DW only)

For the information about network utility software, see Chapter 1 of the *Network User's Guide*.

Remote Printer Console (For Windows® only)

Remote Printer Console is software to change many of the printer settings independently of your application. For example, you can change the settings for printer margin, sleep mode, character set and so on. These settings are then remembered and used by the machine. The application and printer driver settings will take priority over the Remote Printer Console settings.

How to use and install the Remote Printer Console software

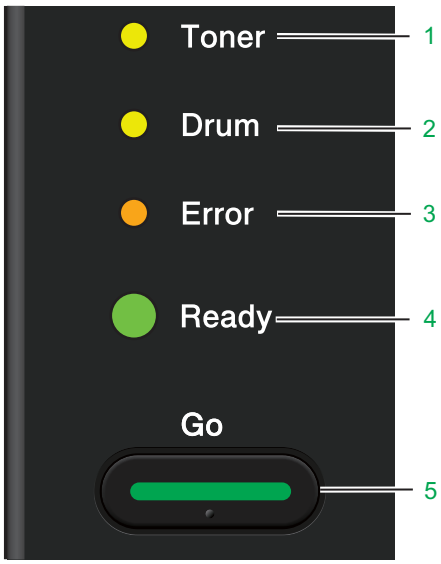
To use the Remote Printer Console software, follow the steps below.

1. Put the supplied installation CD-ROM into your CD-ROM drive and close the opening screen when it appears.
2. Open Windows® Explorer and choose the CD-ROM drive.
3. Double-click the **tools** folder.
4. Double-click the **RPC** folder.
5. Refer to the **RPC_User's_Guide.pdf** for how to install and use the Remote Printer Console.

3 Control Panel

LEDs (Light Emitting Diodes)

This section refers to four LEDs **Toner**, **Drum**, **Error**, **Ready** and **Go** button on the control panel.



1 **Toner LED**

The Toner LED indicates that the Toner is low.

2 **Drum LED**

The Drum LED indicates that the Drum will need to be replaced soon.

3 **Error LED**

The Error LED indicates when the machine is in one of the following states:

No paper / Paper jam / Cover open

4 **Ready LED**

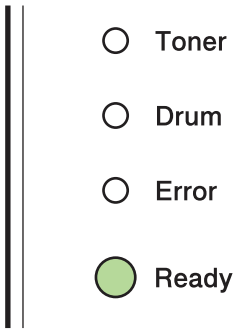
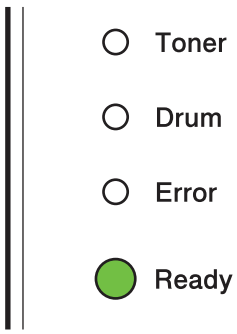
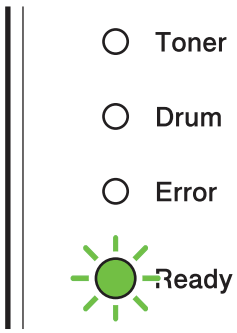
The Ready LED will flash depending on the machine status.

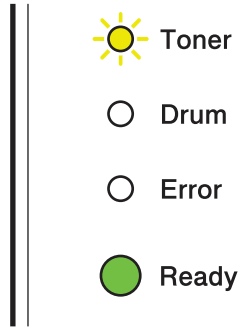
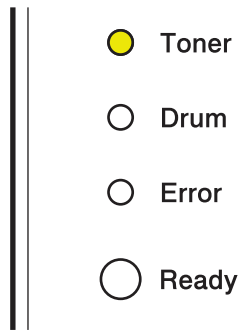
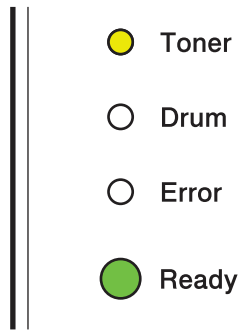
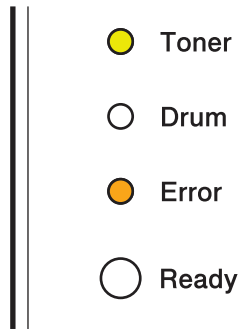
5 **Go button**

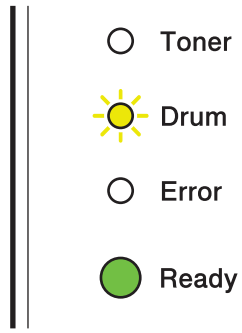
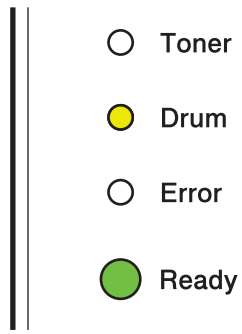
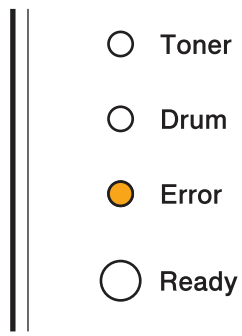
Wake-up / Error recovery / Form feed / Job Cancel / Reprint / Enable or Disable the wireless network (HL-2270DW / HL-2275DW only)

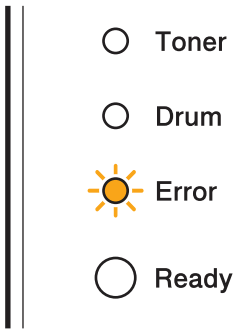
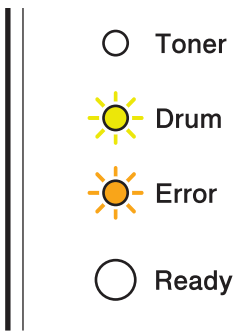
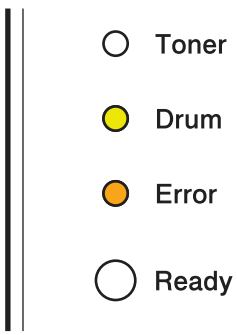
The LED indications shown in the table below are used in the illustrations in this chapter.

○	LED is off.
● or ● or ●	LED is on.
◔	The LED is dimmed.
☼ or ☼ or ☼	LED is flashing.

LEDs	Machine Status
	**SLEEP** The machine is in Sleep mode (Power Save mode). The machine acts as though it were turned off. Receiving data or pressing **Go** wakes up the machine from Sleep mode to Ready mode.
	DEEP SLEEP The machine is in Deep Sleep mode (reducing more power consumption than Sleep mode). The machine acts as though it were turned off. If the machine does not receive data for a certain length of time while it is in Sleep mode, it enters Deep Sleep mode automatically. Receiving data or pressing **Go** wakes up the machine from Deep Sleep mode to Ready mode. HL-2270DW / HL-2275DW only: If a wireless network is enabled, the machine does not enter Deep Sleep mode. To disable the wireless network, see chapter 5 of the *Network User's Guide*.
	**READY** The machine is ready to print.
	PRINTING The machine is printing.
	**WARMING UP** The machine is warming up.
	COOLING DOWN The machine is cooling down. Wait for a few seconds until the inside of the machine has cooled down.
	RECEIVING DATA The machine is either receiving data from the computer or processing data in the memory.
	DATA REMAINING There is remaining print data in the machine memory. If the **Ready** LED is flashing for a long time and nothing has printed, press **Go** to print the remaining data in the memory.

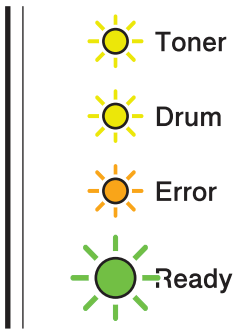
LEDs	Machine Status
	**TONER LOW** The toner cartridge will need to be replaced soon. Buy a new toner cartridge and have it ready for when **REPLACE TONER** is indicated. The **Toner** LED will turn on for 2 seconds and off for 3 seconds.
	**REPLACE TONER** (Stop mode) Replace the toner cartridge with a new one. See *REPLACE TONER* on page 71.
	CARTRIDGE ERROR The drum unit assembly is not installed correctly. Take the drum unit out of the machine and put it back in.
	NO TONER Open the front cover, install the toner cartridge. See *Toner cartridge* on page 70.
	**REPLACE TONER** (Continue mode) The machine continues printing until the LED indicates **TONER ENDED**.
	**TONER ENDED** Replace the toner cartridge with a new one. See *Replacing the toner cartridge* on page 71

LEDs	Machine Status
	**DRUM END SOON** The drum unit will need to be replaced soon. We recommend that you get a new drum unit to replace the current one. See *Replacing the drum unit* on page 79. The **Drum** LED will turn on for 2 seconds and off for 3 seconds.
	**REPLACE DRUM** Replace the drum with a new one. See *Replacing the drum unit* on page 79.
	**NO PAPER T1** Put paper in the paper tray. Then press **Go**. See *Printing on plain paper, recycled paper, bond paper, thin paper or thick paper* on page 10.
	MANUAL FEED Put paper in the manual feed slot. See *Printing on plain paper, recycled paper, bond paper, thin paper or thick paper* on page 10 or *Printing on labels or envelopes* on page 15.

LEDs	Machine Status
	**FRONT COVER OPEN** Close the front cover of the machine.
	FUSER COVER OPEN Close the fuser cover located behind the back cover of the machine.
	JAM TRAY 1 / **JAM INSIDE** / **JAM REAR** / **JAM DUPLEX** Clear the paper jam. See *Paper jams and how to clear them* on page 105. If the machine does not start printing, press **Go**.
	MEMORY FULL The machine memory is full and the machine cannot print full pages of a document. See *Solving print problems* on page 119.
	PRINT OVERRUN A print overrun occurred and the machine cannot print full pages of a document. See *Solving print problems* on page 119.
	SIZE ERROR DX (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only) Set the correct paper that you want to use, or load the same size paper that you selected in the current driver setting. Press **Go**. The paper size you can use for automatic duplex printing is A4, Letter, Legal or Folio.
	DUPLEX DISABLED (HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only) Put the duplex tray in the machine and close the back cover.
	**DRUM ERROR** The corona wire needs to be cleaned. See *Cleaning the corona wire* on page 85.
	**DRUM STOP** Replace the drum unit with a new one. See *Replacing the drum unit* on page 79.

Service call indications

If there is an error that cannot be cleared by the user, the machine will show that a service call is needed by lighting up all the LEDs as shown below.



If you see the service call indication shown above, turn off the power switch, and then turn it back on and try to print again.

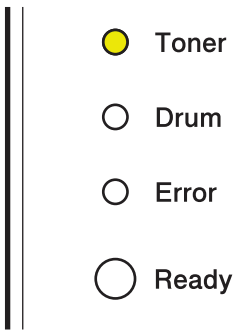
If the error is not cleared after turning the power switch off and then back on, press **Go**, the LEDs will light up as shown in the table below to identify the error.

LED error indication

LEDs	Main PCB failure	Fuser unit failure [1]	Laser unit failure	Main motor failure	High voltage failure	FAN Failure	Zero Cross Error
Toner	○	●	○	●	●	○	●
Drum	○	○	●	○	●	●	●
Error	●	○	○	●	○	●	●
Ready	○	○	○	○	○	○	○

[1] If this error occurs, turn off the machine's power switch, wait a few seconds, and then turn it on again. Leave the machine for approx.15 minutes with the power on. If the error occurs again, call your dealer or Brother Customer Service.

For example, the LED indication below shows a fuser unit failure.



Make a note of the indication, referring to the table on page 58, and report the error status to your dealer or Brother Customer Service.

Note

Make sure that the front cover is completely closed before you report a service call.

Go button

The **Go** button has the following functions:

- **Cancel printing**

  Cancel the current job being printed: While printing press **Go** for about 4 seconds until all the LEDs light up and then release it. The **Ready** and **Error** LEDs will flash as the job is being canceled.

  Cancel all the received jobs: To delete all jobs, press **Go** for about 4 seconds until all the LEDs light up and then release it. Press **Go** again. The **Ready** and **Error** LEDs will flash as the job(s) is being canceled.

- **Wake-up**

  If the machine is in sleep mode, press **Go** to wake the machine up and go to Ready mode.

- **Error recovery**

  If there is an error, the machine will recover automatically from some errors. If an error is not automatically cleared, press **Go** to clear the error, and then continue to use the machine.

- **Form feed**

  If the **Ready** LED flashes for a long time, press **Go**. The machine will print any data that is left in the machine's memory.

- **Reprint**

  To reprint the last document, press **Go** for about 4 seconds until all the LEDs light up and then release it. Within 2 seconds press **Go** the number of times you want to reprint. If you don't press **Go** within 2 seconds, a single copy will be printed.

  If you print with the Windows® printer driver we have supplied with the printer, the settings for Use Reprint in the printer driver will take priority over the settings made on the control panel. (For more information, see *Use Reprint* on page 32.)

- **Enable or Disable the wireless network (HL-2270DW / HL-2275DW only)**

  If you want to switch the wireless network to enabled/disabled (disabled is the default), hold down **Go** for 10 seconds in Ready mode. Then release **Go** when the machine prints a Network Configuration page that indicates the current network settings. (For more information, see Chapter 5 of the *Network User's Guide*.)

Print a test page

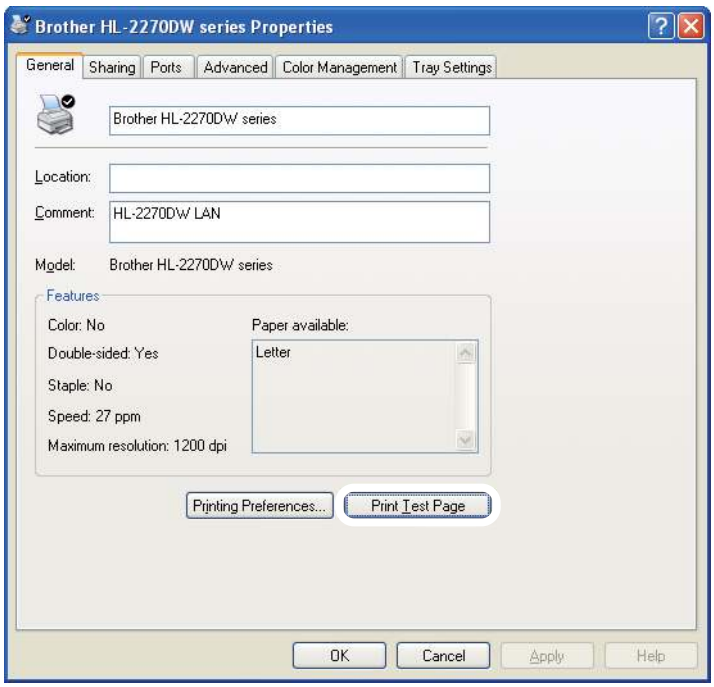
You can use **Go** or the printer driver to print a test page.

Using the Go button

1. Turn off the machine.
2. Make sure that the front cover is closed and the power cord is plugged in.
3. Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until the **Toner**, **Drum** and **Error** LEDs light up. Release **Go**. Make sure that the **Toner**, **Drum** and **Error** LEDs are off.
4. Press **Go** again. The machine will print a test page.

Using the printer driver

If you are using the Windows® printer driver, click the **Print Test Page** button in the **General** tab of the printer driver.



Print a Printer Settings page

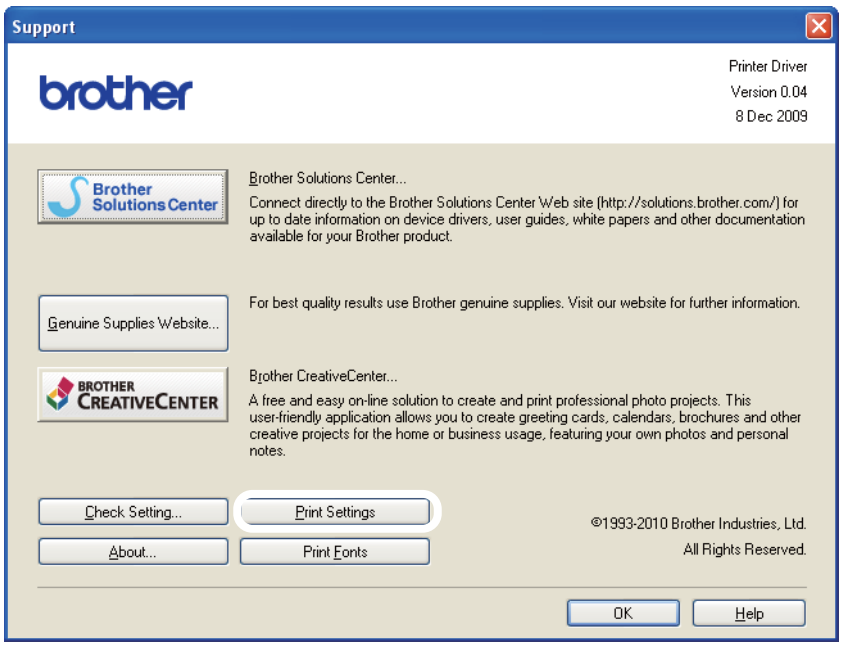
You can print the current settings using the control panel button or printer driver.

Using the Go button

1. Make sure that the front cover is closed and the power cord is plugged in.
2. Turn on the machine and wait until the machine is in Ready mode.
3. Press **Go** three times within 2 seconds. The machine will print the current printer settings page.

Using the printer driver

If you are using the Windows® printer driver, you can print the current printer settings page by clicking the **Print Settings** button in the **Support** dialog.



Print Fonts (HL-2250DN / HL-2270DW / HL-2275DW only)

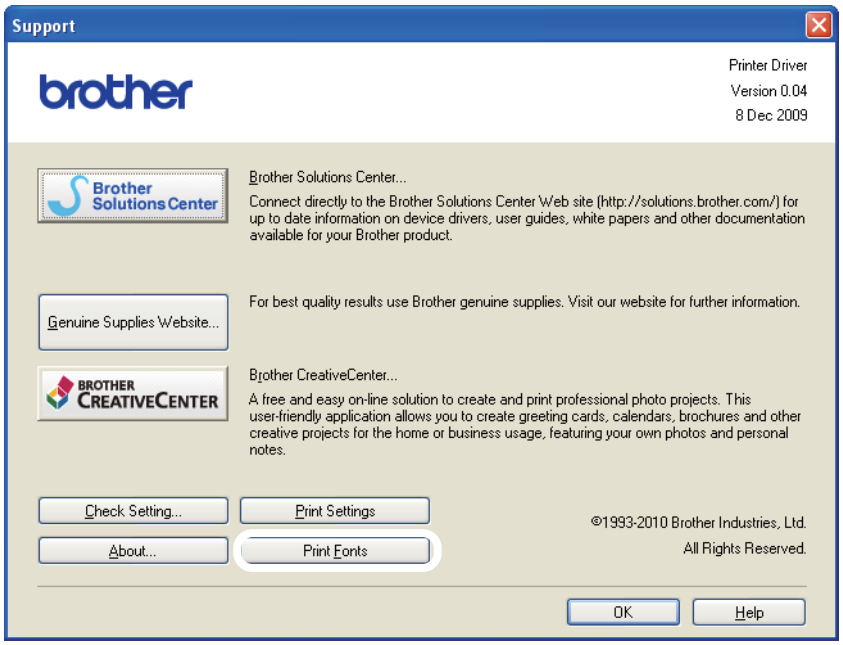
You can print a list of the internal fonts using the control panel button or printer driver.

Using the Go button

1. Turn off the machine.
2. Make sure that the front cover is closed and the power cord is plugged in.
3. Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until the **Toner**, **Drum** and **Error** LEDs light up. Release **Go**. Make sure that the **Toner**, **Drum** and **Error** LEDs are off.
4. Press **Go** twice. The machine will print a list of the internal fonts.

Using the printer driver

If you are using the Brother's Windows® printer driver, you can print a list of the internal fonts by clicking the **Print Fonts** button in the **Support** dialog.



Print a WLAN report (HL-2270DW / HL-2275DW only)

You can use **Go** to print machine's wireless status report. See chapter 5 of the *Network User's Guide*.

Default settings

The machine has three levels of default settings; the default settings have been set at the factory before shipment.

- Network default settings
- Factory reset
- Settings reset

Note

- You can not modify the preset default settings.
- Page counter can never be changed.

Network default settings (HL-2250DN / HL-2270DW / HL-2275DW only)

1. Turn off the machine.
2. Make sure that the front cover is closed and the power cord is plugged in.
3. Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until all the LEDs light up and the **Ready** LED turns off.
4. Release **Go**. Make sure that all the LEDs turn off.
5. Press **Go** six times. Make sure that all the LEDs light up to indicate the print server has been reset to its factory default settings. The machine will restart.

Factory Reset

You can partially reset the machine back to its default printer settings. The network settings will not be reset:

1. Turn off the machine.
2. Make sure that the front cover is closed and the power cord is plugged in.
3. Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until all the LEDs light up and the **Ready** LED turns off.
4. Release **Go**. Make sure that all the LEDs turn off.
5. Press **Go** eight times. Make sure that all the LEDs light up to indicate the machine has been reset to its factory default settings (except the network settings). The machine will restart.

Settings Reset

This operation will reset all the machine settings back to the settings that were set at the factory:

1. Turn off the machine.
2. Make sure that the front cover is closed and the power cord is plugged in.
3. Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until all the LEDs light up and the **Ready** LED turns off.
4. Release **Go**. Make sure that all the LEDs turn off.
5. Press **Go** ten times. The machine will automatically restart.

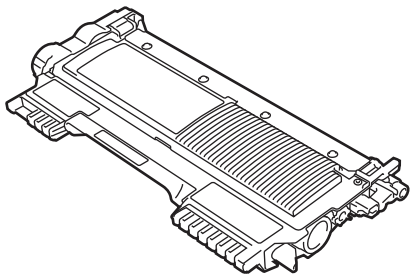
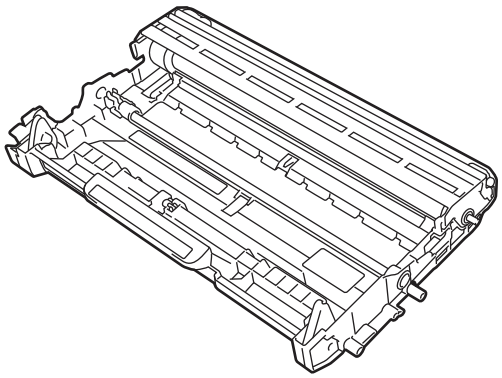
4 Routine Maintenance

You will need to clean the machine regularly and replace the consumable items.

Replacing consumable items

The machine will indicate when it is time to replace the consumable items. (See *LEDs (Light Emitting Diodes)* on page 53)

Consumables

Toner cartridge	Drum unit
See *Toner cartridge* on page 70 Order No.TN-410, TN-420, TN-450	See *Drum unit* on page 77. Order No.DR-420
	

Before replacing the consumable items

Please read the following instructions before replacing the consumable items.

⚠ WARNING

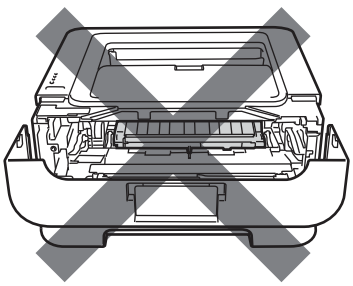
DO NOT put a toner cartridge into a fire. It could explode, resulting in injuries.

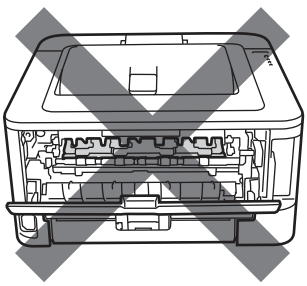
DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock. See *Cleaning* on page 83 for how to clean the machine.

Be careful not to inhale toner.

HOT SURFACE

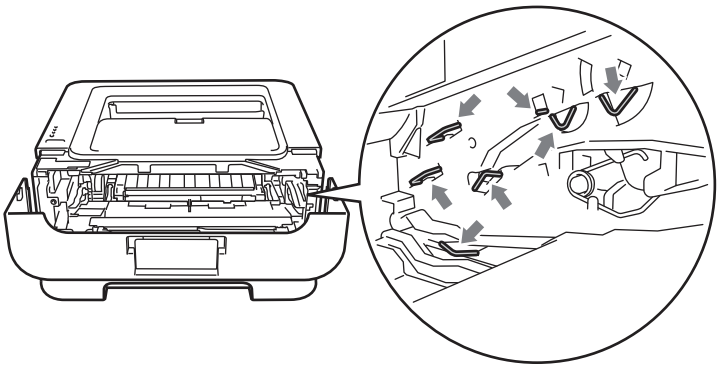
- After you have just used the printer, some internal parts will be extremely hot. Wait at least 10 minutes for the printer to cool down before continuing to the next step.
- To prevent any degradation to the print quality, DO NOT touch the shaded parts shown in the illustrations.



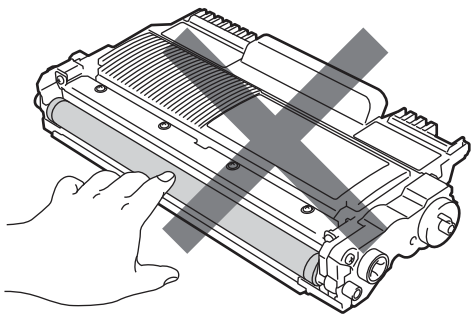


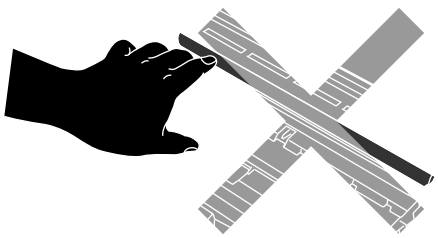
IMPORTANT

- Brother strongly recommends that you do not refill the toner cartridge provided with your machine. We also strongly recommend that you continue to use only genuine Brother brand replacement toner cartridges. Use or attempted use of potentially incompatible toner and/or cartridges in the Brother machine may cause damage to the machine and/or may result in unsatisfactory print quality. Our warranty coverage does not apply to any problem that is caused by the use of unauthorized third party toner and/or cartridges. To protect your investment and obtain premium performance from the Brother machine, we strongly recommend the use of genuine Brother supplies.
- We recommend that you place the drum unit and toner cartridge assembly on a clean, flat surface with a piece of disposable paper underneath it in case you accidentally spill or scatter toner.
- Handle the toner cartridge carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



- To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.





- We recommend that you clean the machine when you replace the consumables. See *Cleaning* on page 83.

- DO NOT unpack a spare toner cartridge until immediately before you put it into the machine. If toner cartridges are left unpacked for a long time the toner life may be shortened.
- DO NOT unpack a spare drum unit until immediately before you put it into the machine. If drum unit is exposed to sunlight or room light the unit may be damaged.
- While removing the drum unit, handle it carefully because it may contain toner.

Note

- Be sure to seal up the used toner cartridge tightly in a suitable bag so that toner powder does not spill out of the cartridge.
- Go to http://www.brother.com/original/index.html for instructions on how to return the used toner cartridge to the Brother collection program. If you choose not to return your used toner cartridge, please discard the used toner cartridge according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office.
- To ensure high quality printing, we recommend that you use only genuine Brother toner cartridges. When you want to buy toner cartridges, call your dealer.

Toner cartridge

The original toner cartridge that came with the machine may be either a starter, standard or a high yield toner cartridge [1], and depends on the model and country you bought the machine in.

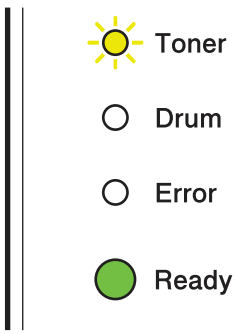
[1] For detailed information of toner yield, see *Supplies* on page 125.

Note

- The amount of toner used varies according to what is printed on the page and the print density setting.
- If you change the print density setting for lighter or darker printing, the amount of toner used will change.

TONER LOW

The **Toner** LED will turn on for 2 seconds and off for 3 seconds and repeats this pattern.



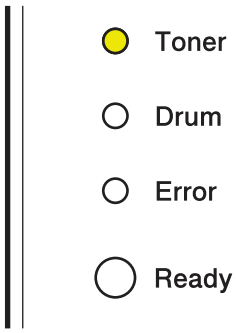
If the LEDs show this indication, the toner is low. Buy a new toner cartridge and have it ready before you get a Replace Toner indication. To replace the toner cartridge, see *Replacing the toner cartridge* on page 71.

Note

- The **Toner** LED will flash continuously if the toner is low.
- If the printout is faint, hold the drum unit and toner cartridge assembly level with both hands and gently shake it from side to side several times to spread the toner evenly inside the cartridge.

REPLACE TONER

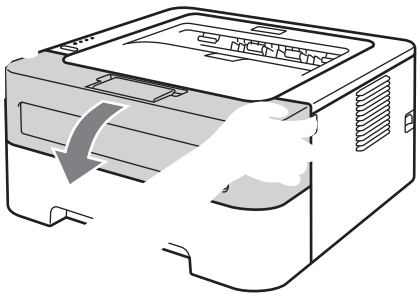
The machine will stop printing until you replace the toner cartridge. A new and unused genuine Brother toner cartridge will reset the REPLACE TONER mode.



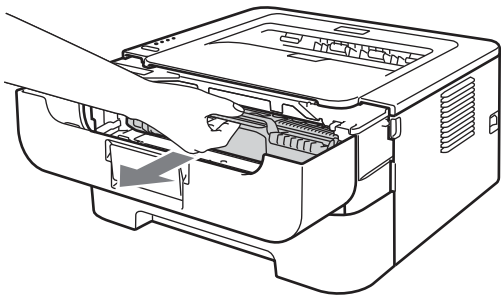
Replacing the toner cartridge

Before you replace the toner cartridges, see *Before replacing the consumable items* on page 67.

1. Make sure that the machine is turned on. Leave the machine for at least 10 minutes to cool down.
2. Open the front cover.

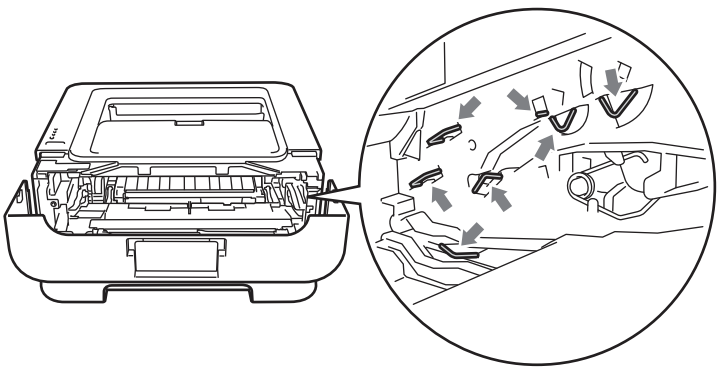


3 Take out the drum unit and toner cartridge assembly.

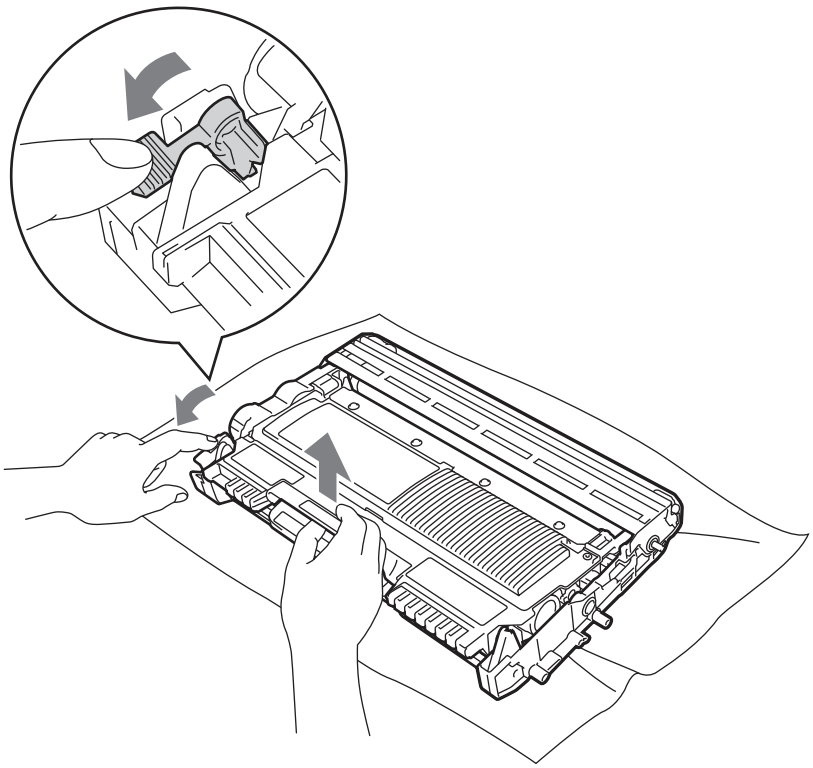


IMPORTANT

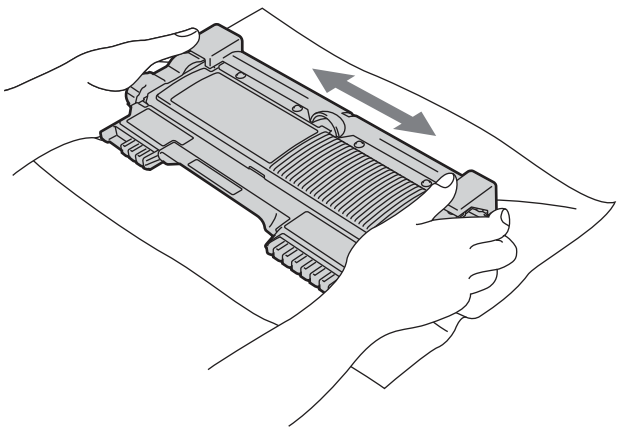
- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



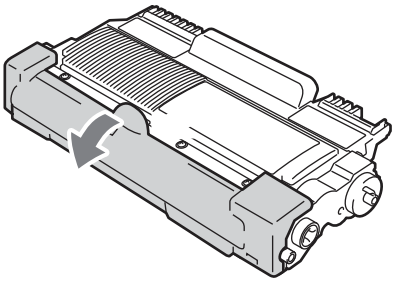
4 Push down the green lock lever and take the toner cartridge out of the drum unit.



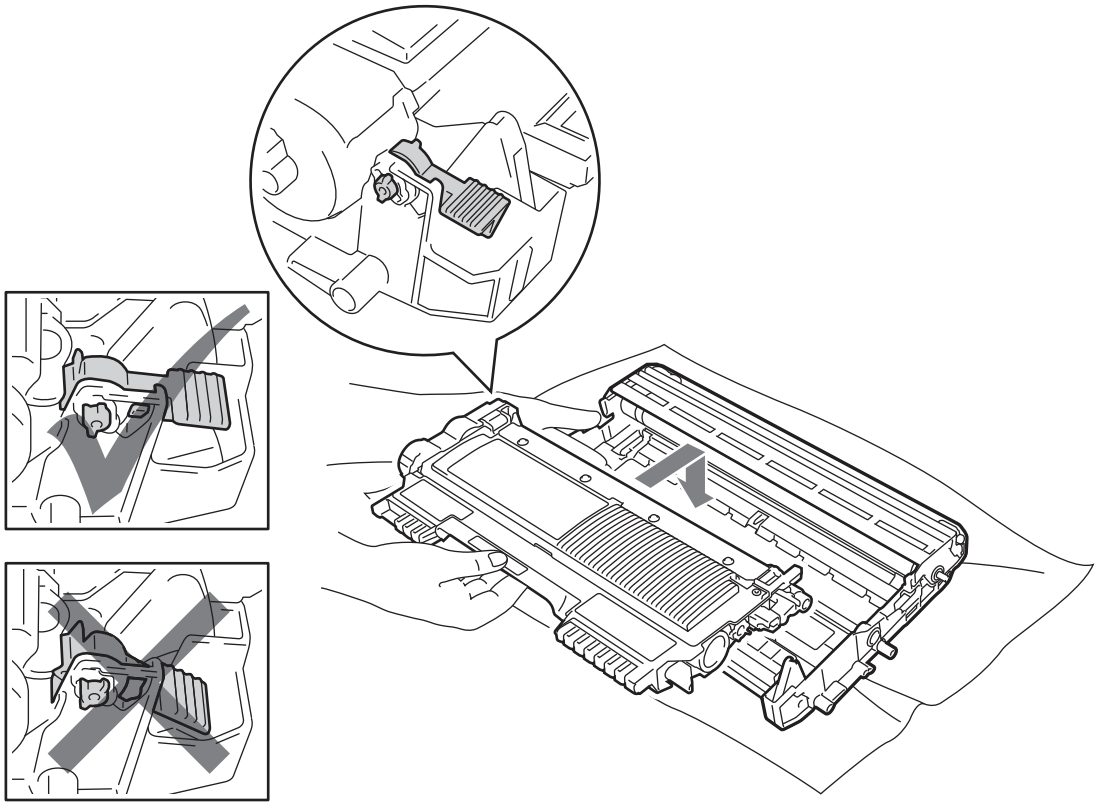
5 Unpack the new toner cartridge. Hold the cartridge level with both hands and gently shake it from side to side several times to spread the toner evenly inside the cartridge.



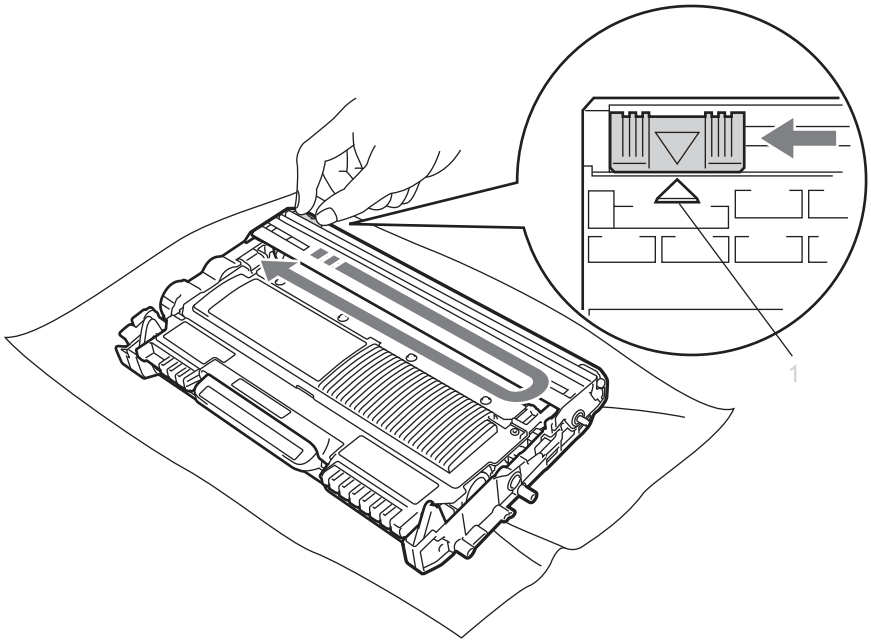
6 Pull off the protective cover.



7 Put the new toner cartridge firmly into the drum unit until you hear it lock into place. If you put it in properly, the green lock lever will lift automatically.



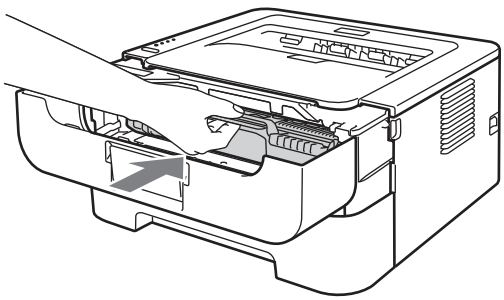
8 Clean the primary corona wire inside the drum unit by gently sliding the green tab from right to left and left to right several times.



Note

Be sure to return the tab to the home position (▲) (1). If you do not, printed pages may have a vertical stripe.

9 Put the drum unit and toner cartridge assembly back into the machine. Close the front cover.



Note

DO NOT turn off the machine's power switch or open the front cover until the **Ready** LED lights up.

The printing operation varies depending on the machine setting:

■ Default setting (Stop mode)

The machine will stop printing until you replace the toner cartridge with a new one when the LEDs indicate **REPLACE TONER**.

■ Continue mode

To force the machine to continue printing after the LEDs indicate **REPLACE TONER**, press **Go** seven times to enter Continue mode (all the LEDs flash twice, and then the **Ready** LED turns on). The machine will continue printing until the LEDs indicate **TONER ENDED**.

To return to the default setting (Stop mode), press **Go** seven times (all the LEDs flash once).

Note

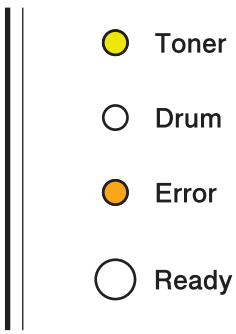
- Make sure that the front cover is closed before you change the mode.
- When the LEDs indicate an error mode, you cannot change the mode.
- If you continue printing in the Continue mode, we cannot guarantee the print quality.
- While using Continue mode the print may appear faint.

■ Ready mode

When you replace the toner cartridge with a new one, the machine returns to Ready mode.

TONER ENDED

The machine stops printing until you replace the toner cartridge with a new one. See *Replacing the toner cartridge* on page 71.



Drum unit

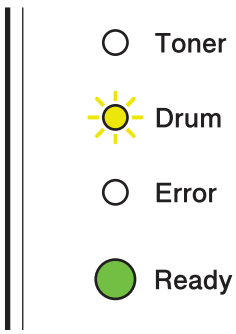
A new drum unit can print approximately 12,000 A4 or Letter size single-sided pages at 1 page / job.

Note

- There are many factors that determine the actual drum life, such as the temperature, humidity, type of paper, type of toner used, number of pages per print job and so on. Under ideal conditions, the average drum life is estimated at approximately 12,000 pages. The actual number of pages that your drum will print may be significantly less than this estimate. 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. The machine should be used only in a clean, dust-free environment with adequate ventilation.
- Printing with a non-Brother drum unit may reduce not only the print quality but also the quality and life of the machine itself. Warranty coverage does not apply to problems caused by the use of a non-Brother drum unit.

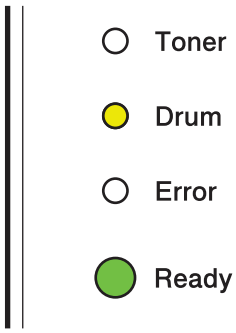
DRUM END SOON

If the Drum LED flashes, it means the drum unit will need to be replaced soon. We recommend that you replace the drum unit with a new one before there is a noticeable deterioration in the print quality.



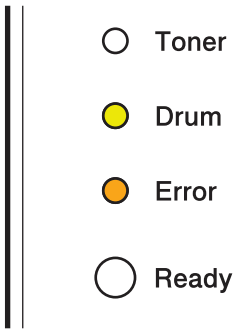
REPLACE DRUM

If the Drum LED is on, it means the drum unit should be replaced. Please replace it with a new Brother drum unit.



DRUM STOP

If the Drum and Error LEDs are on, it means the drum unit must be replaced. Replace it with a new Brother drum unit.

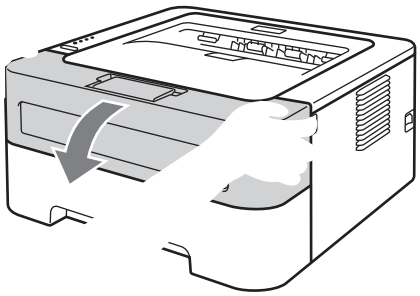


Replacing the drum unit

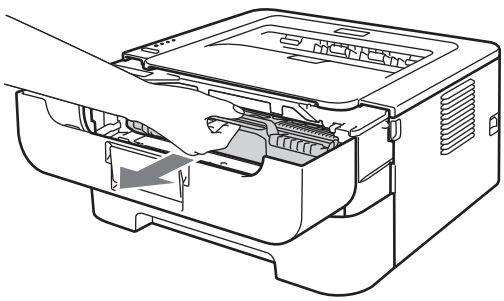
Before you replace the drum unit, see *Before replacing the consumable items* on page 67.

When you replace the drum unit with a new one, you need to reset the drum counter by completing the following steps:

1. Make sure that the machine is turned on and the **Drum** LED is flashing. Leave the machine for at least 10 minutes to cool down.
2. Open the front cover.

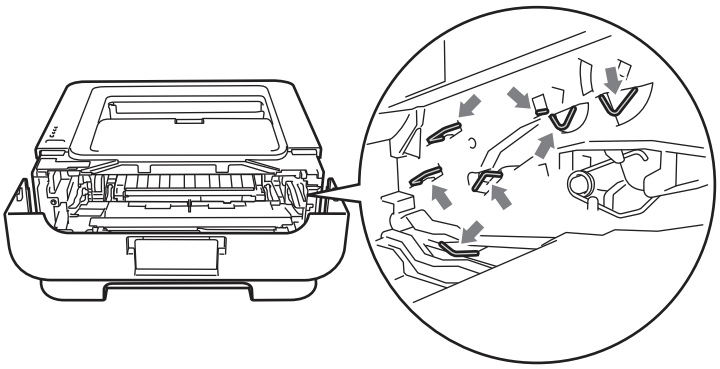


3. Take out the drum unit and toner cartridge assembly.

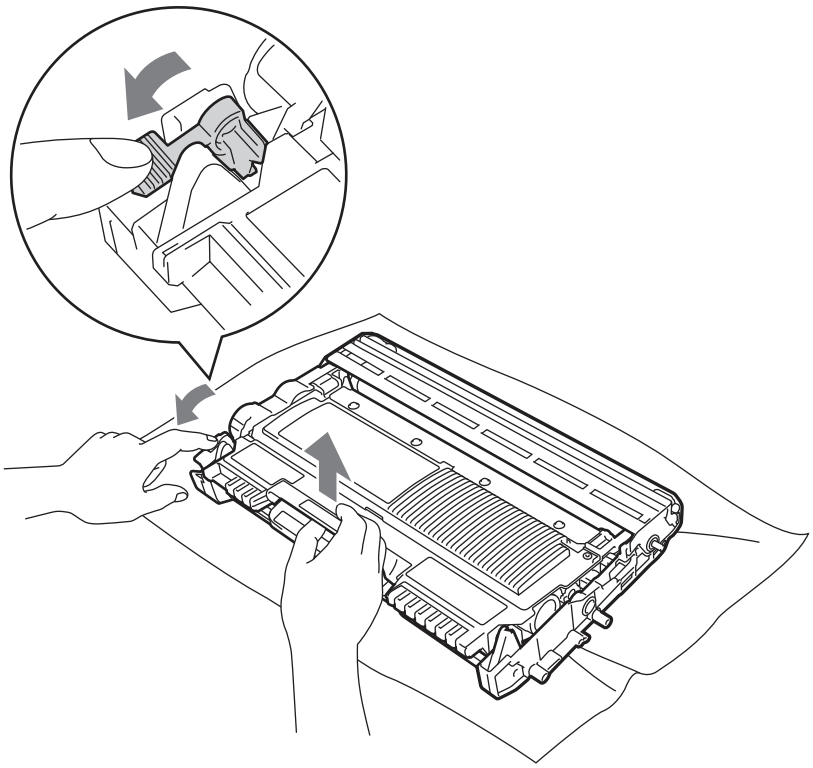


IMPORTANT

- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.

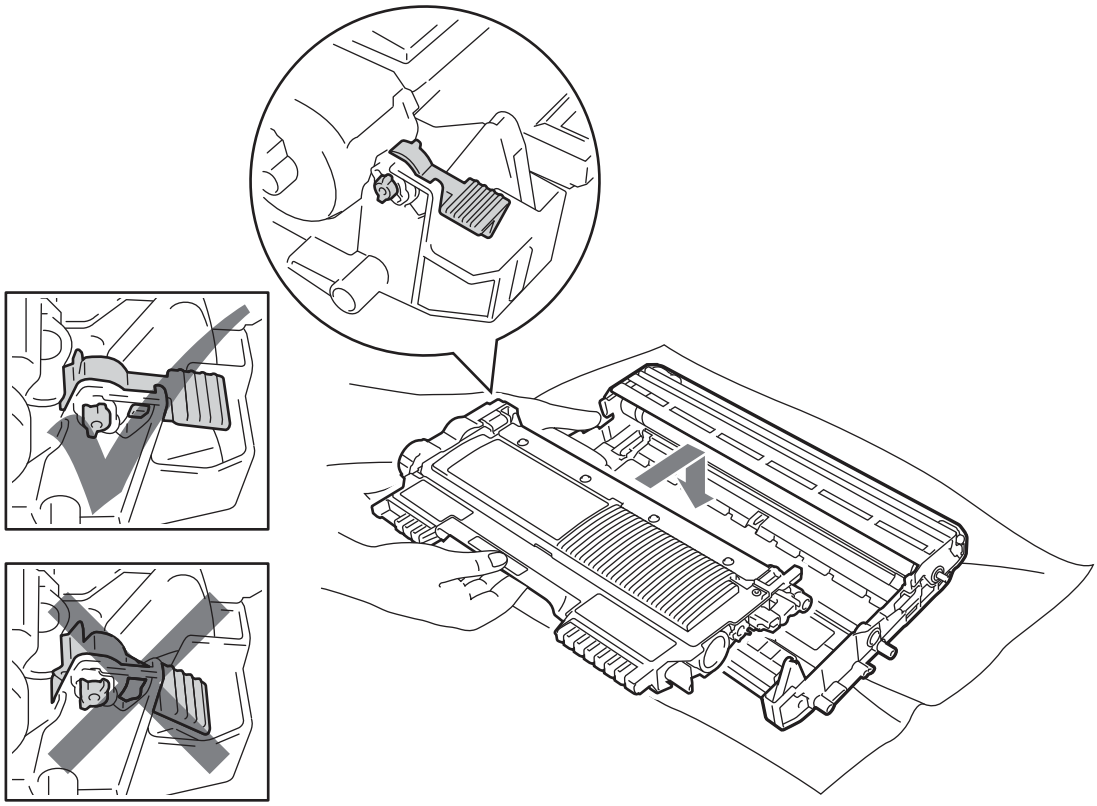


4 Push down the green lock lever and take the toner cartridge out of the drum unit.

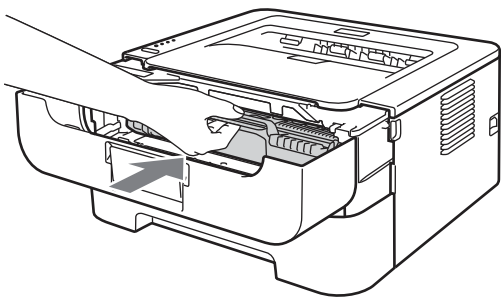


5 Unpack the new drum unit.

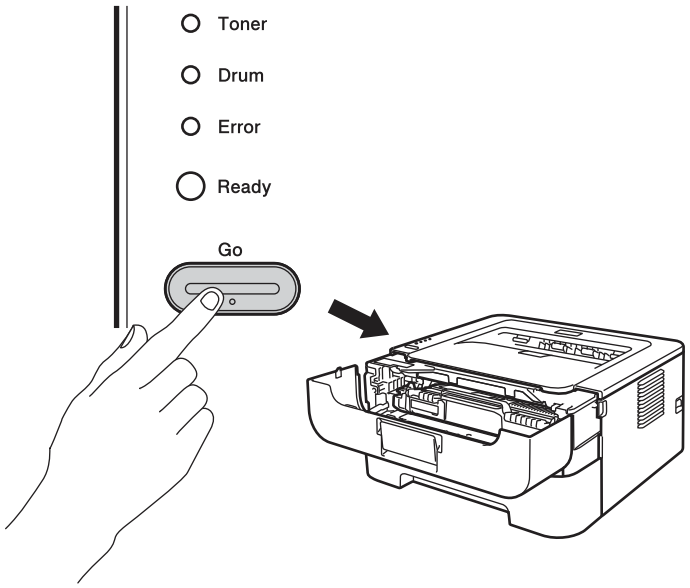
6 Put the toner cartridge firmly into the new drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever will lift automatically.



7 Put the drum unit and toner cartridge assembly back into the machine. Do not close the front cover yet.



8 Press and hold down **Go** for about 4 seconds until all the LEDs light up. Once all four LEDs are lit, release **Go**.



IMPORTANT

Do not reset the drum counter when you only replace the toner cartridge.

9 Close the front cover.

10 Make sure that the **Drum** LED is now off.

Cleaning

Clean the outside and inside of the machine regularly with a dry, lint-free cloth. When you replace the toner cartridge or the drum unit, make sure that you clean the inside of the machine. If printed pages are stained with toner, clean the inside of the machine with a dry, lint-free cloth.

WARNING

DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock.

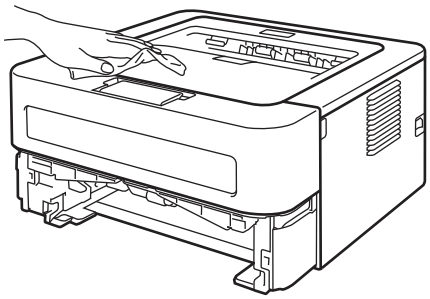
Be careful not to inhale toner.

IMPORTANT

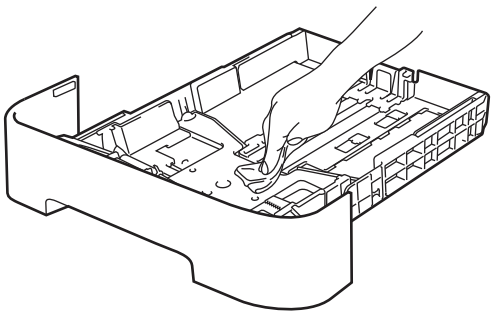
Use neutral detergents. Cleaning with volatile liquids such as thinner or benzine will damage the surface of the machine.

Cleaning the outside of the machine

1. Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the AC power outlet.
2. Pull the paper tray completely out of the machine.
3. Wipe the outside of the machine with a dry, lint-free cloth to remove dust.



4. Remove all the paper, and anything that is stuck inside, from the paper tray.
5. Wipe the inside of the paper tray with a dry, lint-free cloth to remove dust.

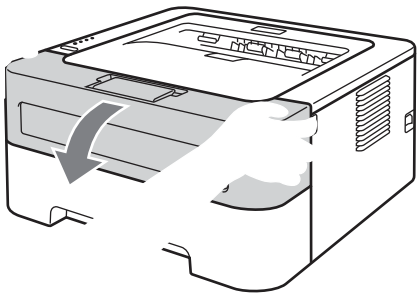


6. Put the paper back in the paper tray.
7. Put the paper tray back in the machine.
8. Plug the machine's power cord back into the AC power outlet first, and then reconnect all cables. Turn on the machine's power switch.

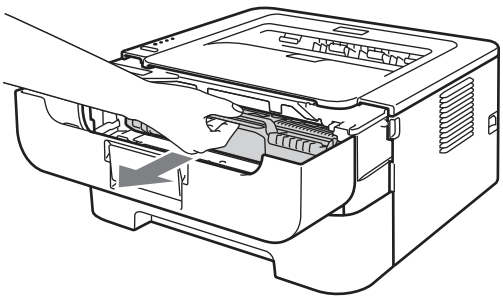
Cleaning the corona wire

If you have print quality problems, clean the corona wire as follows:

1. Open the front cover and leave the machine for at least 10 minutes to cool down.

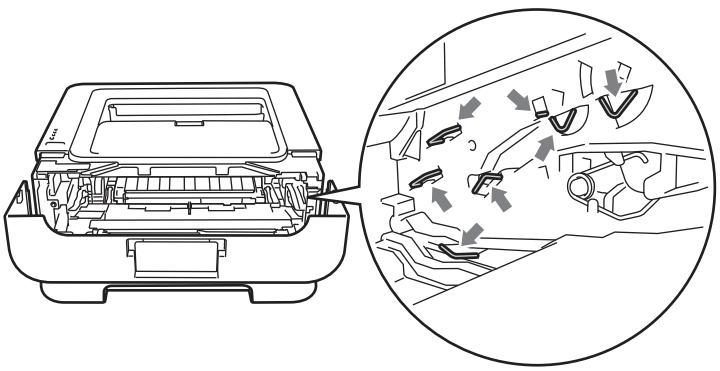


2. Take out the drum unit and toner cartridge assembly.

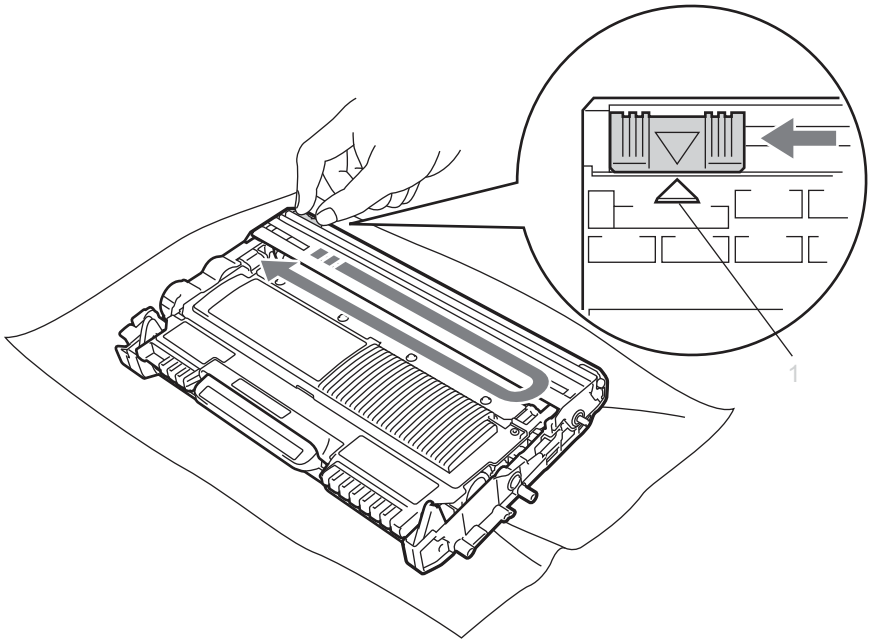


IMPORTANT

- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



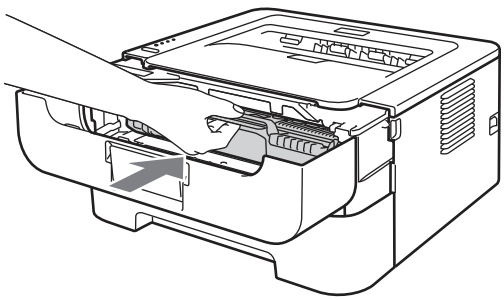
3 Clean the primary corona wire inside the drum unit by gently sliding the green tab from right to left and left to right several times.



Note

Be sure to return the tab to the home position (▲) (1). If you do not, printed pages may have a vertical stripe.

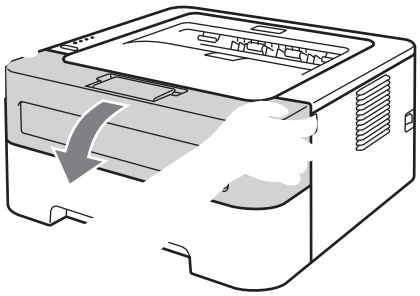
4 Put the drum unit and toner cartridge assembly back into the machine. Close the front cover.

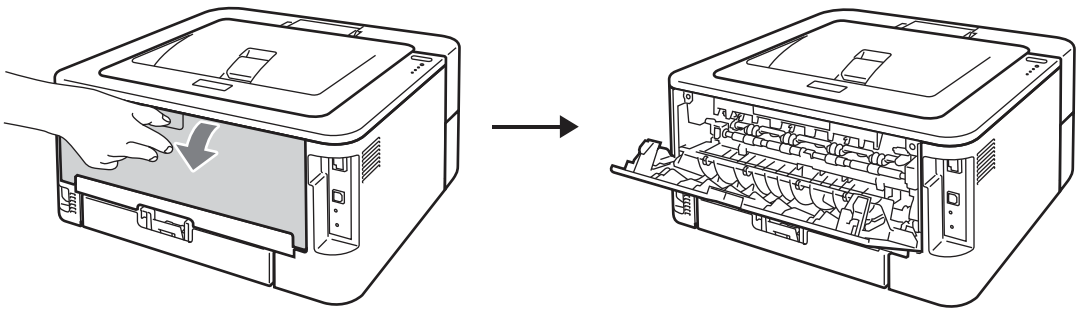


Cleaning the drum unit

If your printout has white or black spots at 94 mm (3.71 in.) intervals, follow the steps below to solve the problem.

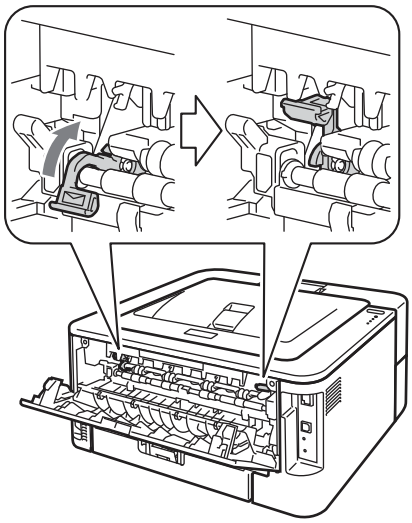
1. Prepare blank A4 or Letter size paper.
2. Make sure the machine is in Ready mode.
3. Open the front cover and the back cover (face-up output tray).



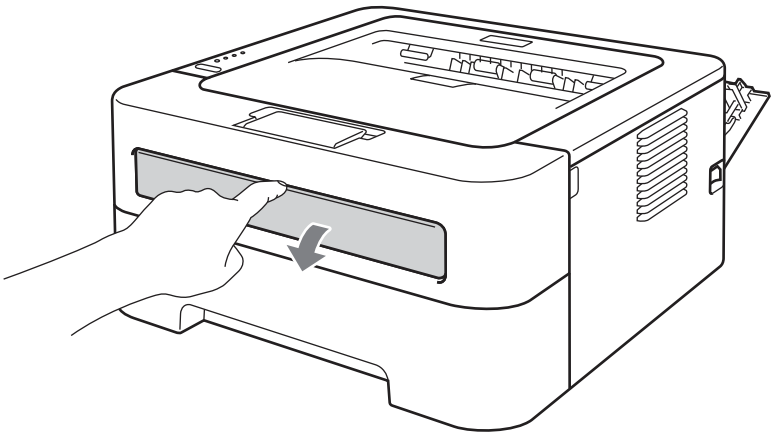


Note

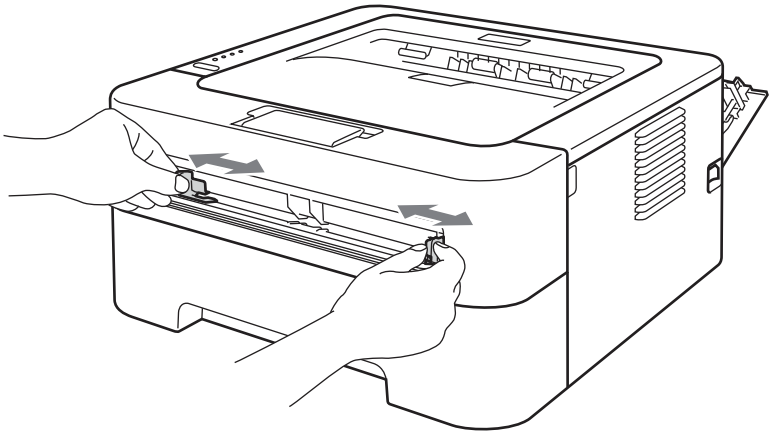
Make sure that the two green envelope levers on the left and right hand sides are in the up position.



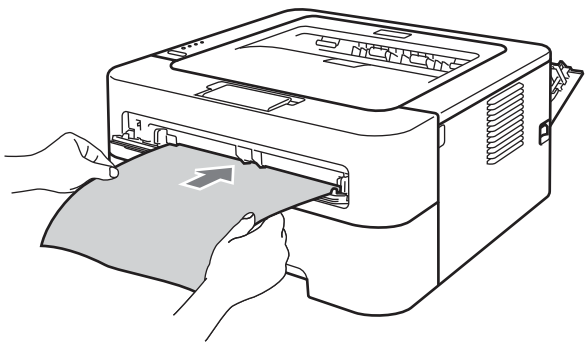
4. Press **Go** five times.
5. Close the front cover. The machine will prepare the Drum Cleaning process. When the machine is ready for the Drum Cleaning process, the **Ready** LED turns on.
6. Open the manual feed slot cover. (Not available for HL-2130 / HL-2132 / HL-2220)



7 Using both hands, slide the manual feed paper guides to the width of the paper that you are going to use.



8 Using both hands, put one piece of A4 or Letter size paper in the manual feed slot until the top edge of the paper touches the paper feed roller. When you feel the machine pull in the paper, let go. The machine will start the Drum Cleaning process. The **Ready** LED flashes during the Drum Cleaning process.



Note

- The machine makes a mechanical noise during the Drum Cleaning process because the machine rotates the OPC drum in reverse. This noise is not due to a malfunction of the machine.
- DO NOT put more than one sheet of paper in the manual feed slot at any one time, as it may cause a jam.
- If the paper in the manual feed slot is other than A4 or Letter size, the machine will stop the Drum Cleaning process and eject the paper.
- Make sure that the paper is straight and in the proper position on the manual feed slot. If it is not, it may not be fed properly, resulting in a skewed printout or a paper jam.
- DO NOT close the back cover (face-up output tray) during the Drum Cleaning process. The machine will stop the Drum Cleaning process and eject the paper. It may cause a jam.
- If the machine receives a print job before you put the sheet of paper in the manual feed slot, the machine will stop the Drum Cleaning process and print the print job.

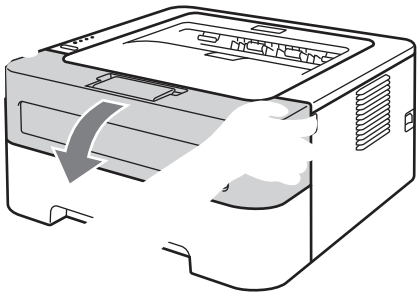
9 When the machine has finished cleaning it returns to Ready mode.

10 Repeat steps ❸ to ❾ two more times using a new blank sheet of paper each time. Upon completion please discard the used paper.

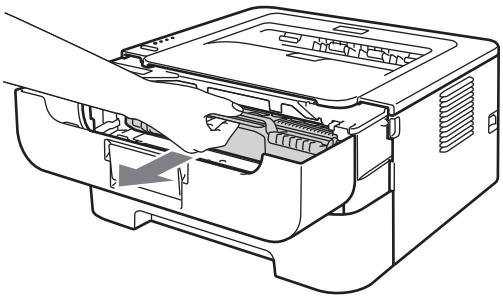
If the problem is not solved yet, follow the steps below:

1 Turn off the machine's power switch. Disconnect all the cables, and then unplug the power cord from the AC power outlet. Leave the machine turned off for at least 10 minutes to cool down.

2 Open the front cover.

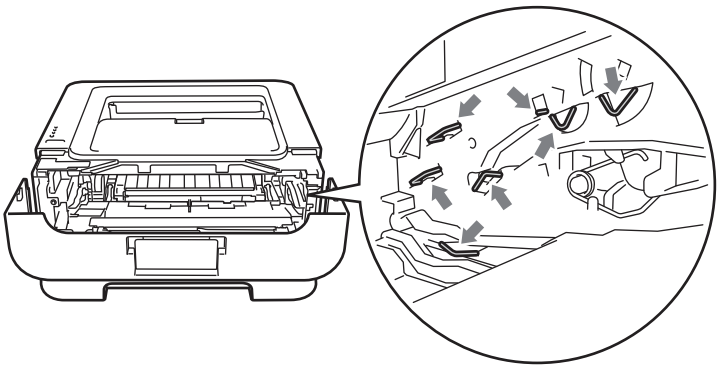


3 Take out the drum unit and toner cartridge assembly.

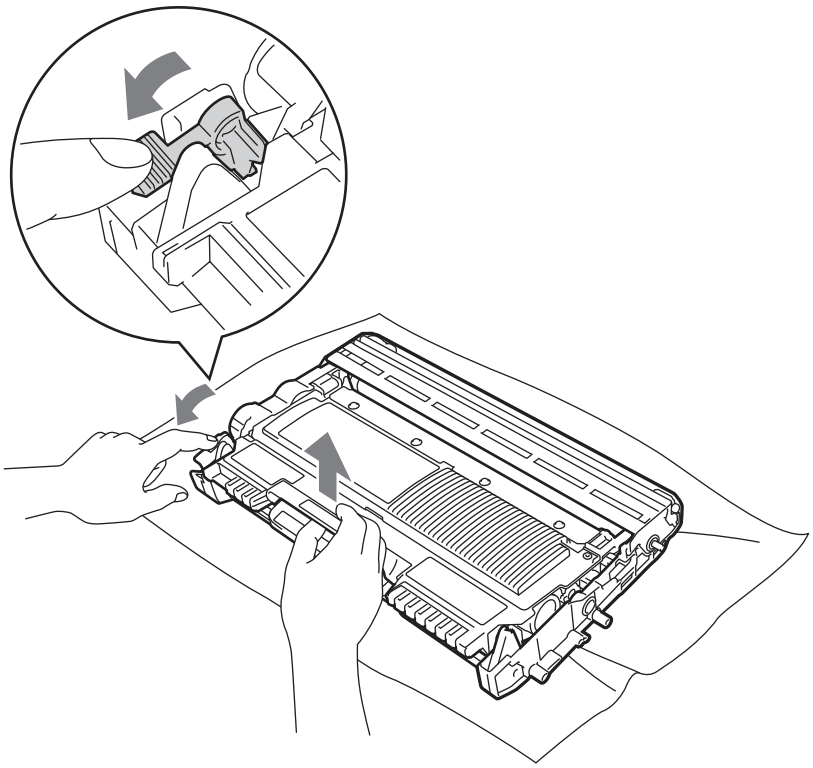


IMPORTANT

- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.

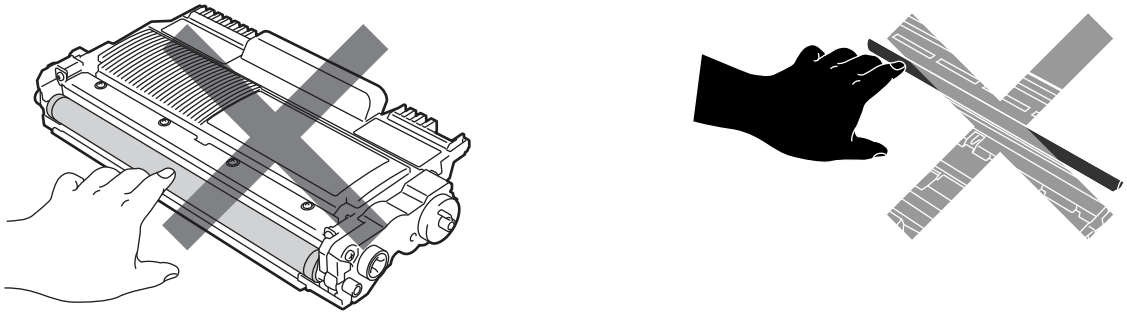


4 Push down the green lock lever and take the toner cartridge out of the drum unit.

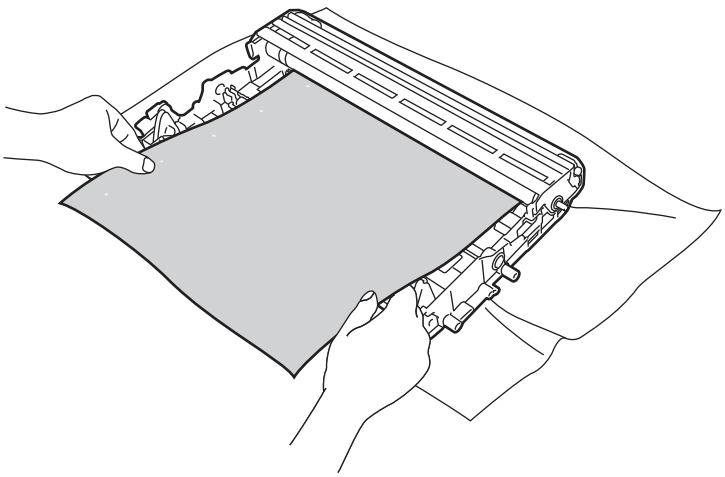


IMPORTANT

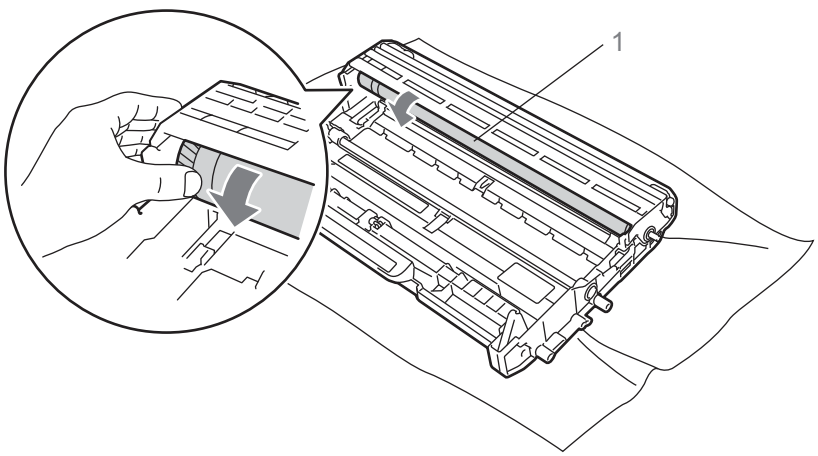
To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.



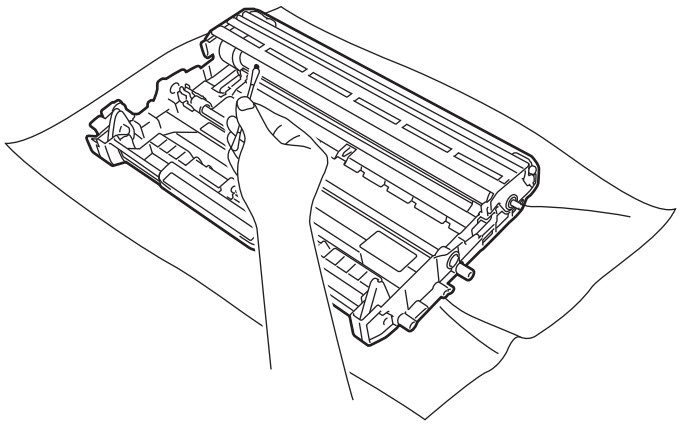
5 Put the print sample in front of the drum unit, and find the exact position of the poor print.



6 Turn the drum unit gear by hand while looking at the surface of the OPC drum (1).



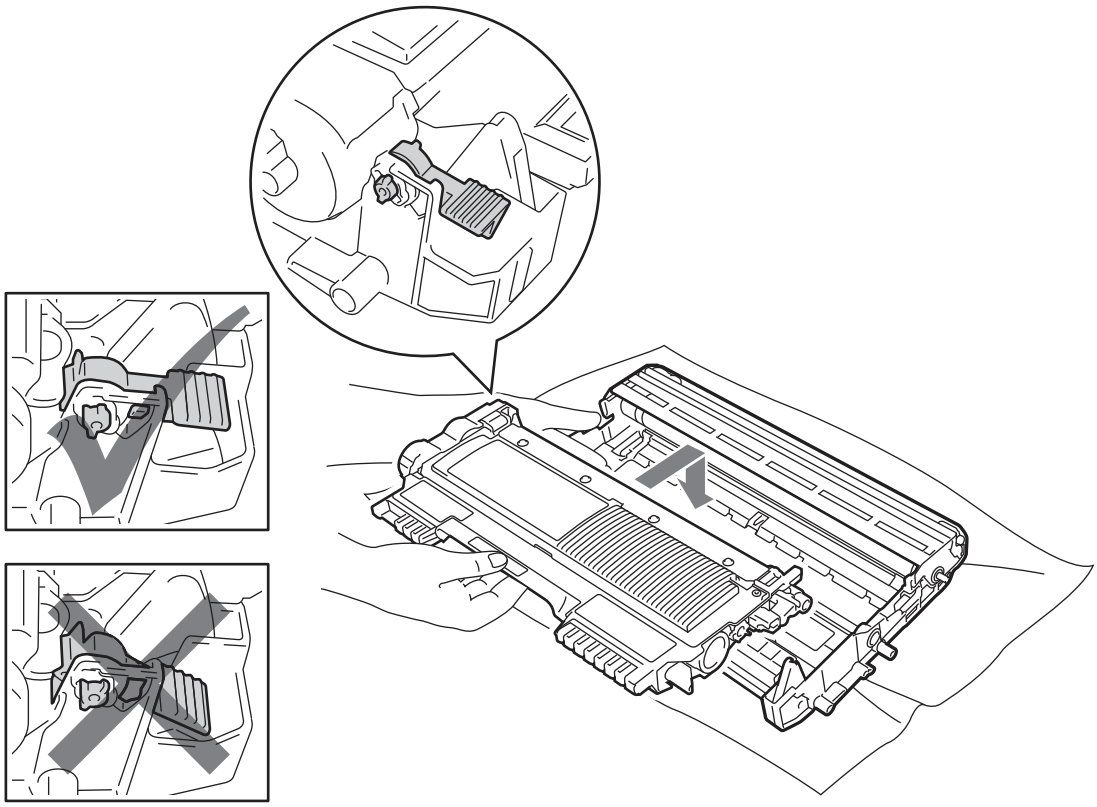
7 When you have found the mark on the drum that matches the print sample, wipe the surface of the OPC drum with a dry cotton swab until the dust or glue on the surface comes off.



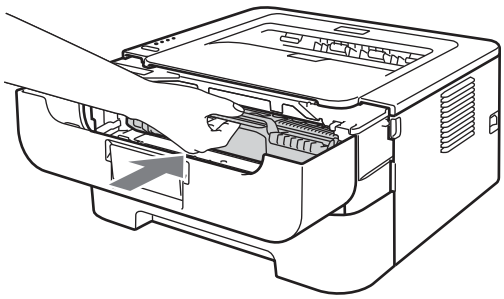
IMPORTANT

DO NOT clean the surface of the photosensitive drum with a sharp object.

8 Put the toner cartridge back into the drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever will lift automatically.



9 Open the front cover. Put the drum unit and toner cartridge assembly back into the machine.



10 Put the paper tray firmly back in the machine.

11 Close the front cover.

12 Plug the machine's power cord back into the AC power outlet first, and then reconnect all cables. Turn on the machine's power switch.

Cleaning the paper pick-up roller

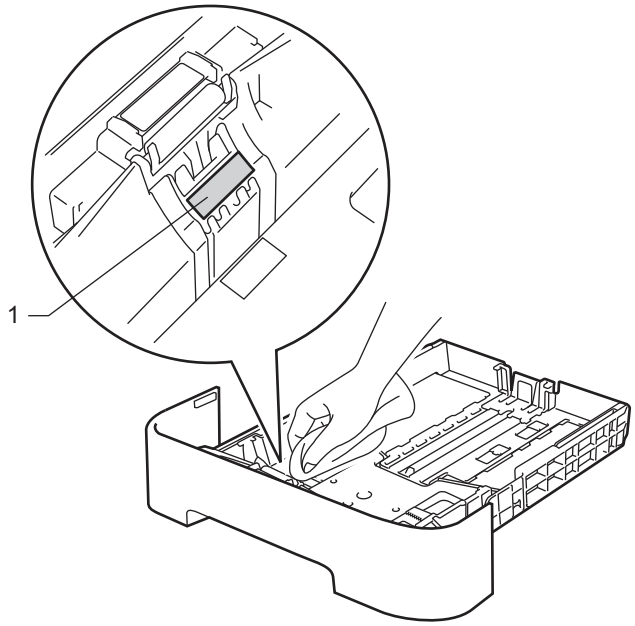
If the paper pick-up roller is dirty, the machine may not feed paper. In that case, clean the paper pick-up roller as follows:

1 Turn off the machine's power switch. Disconnect all cables, and then unplug the power cord from the AC power outlet.

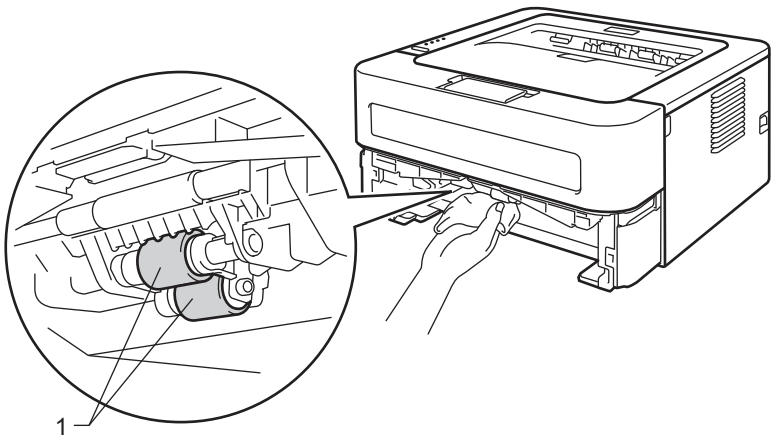
2 Pull the paper tray out of the machine.

3 Remove all the paper, and anything that is stuck inside, from the paper tray.

4 Tightly wring out a lint-free cloth soaked in lukewarm water, and then in the paper tray wipe the separator pad (1) to remove any dust.



5 Wipe the two paper pick-up rollers (1) inside the machine.



6 Put the paper back in the paper tray.

7 Put the paper tray back in the machine.

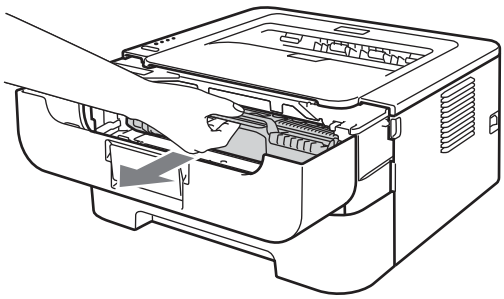
8 Plug the machine's power cord back into the AC power outlet first, and then reconnect all cables. Turn on the machine's power switch.

Packing and shipping the machine

Note

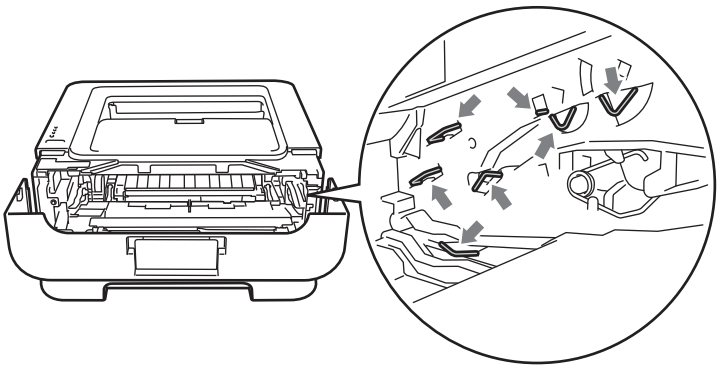
If for any reason you must ship your machine, carefully repack the machine in the original packaging to avoid any damage during transit. The machine should be adequately insured with the carrier.

1. Turn off the machine's power switch. Disconnect all the cables, and then unplug the power cord from the AC power outlet. Leave the machine turned off for at least 10 minutes to cool down.
2. Open the front cover.
3. Take out the drum unit and toner cartridge assembly.

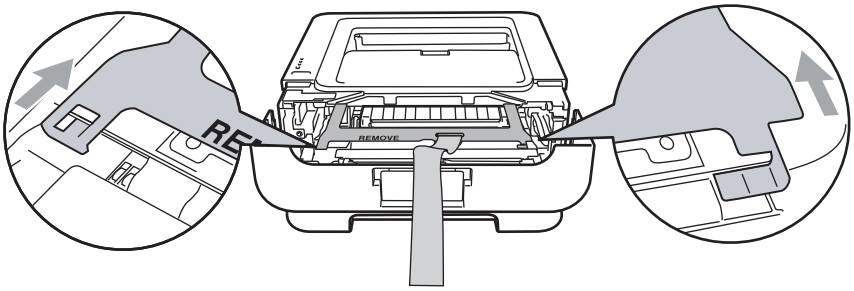


IMPORTANT

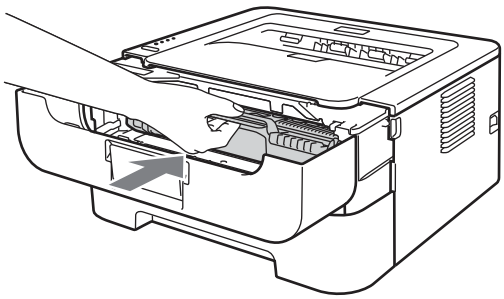
- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine from static electricity, DO NOT touch the electrodes shown in the illustration.



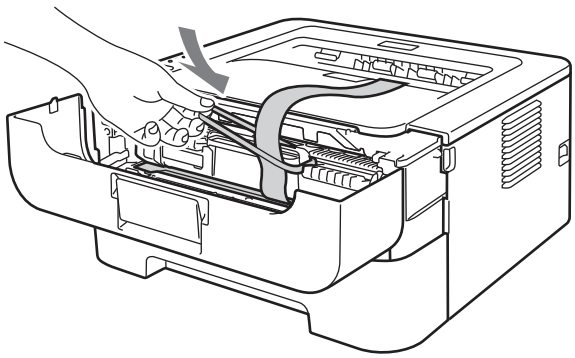
4 Put the protective material in the machine with the "REMOVE" text to the left, as shown in the illustration.



5 Put the drum unit and toner cartridge assembly back into the machine.



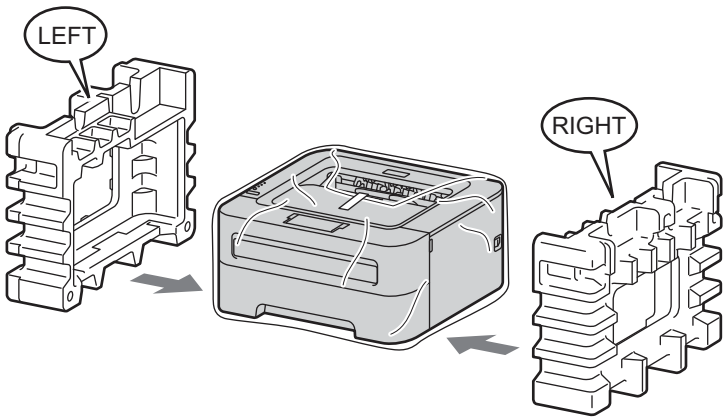
6 Put the elastic band over the handle of the drum unit, as shown in the illustration.



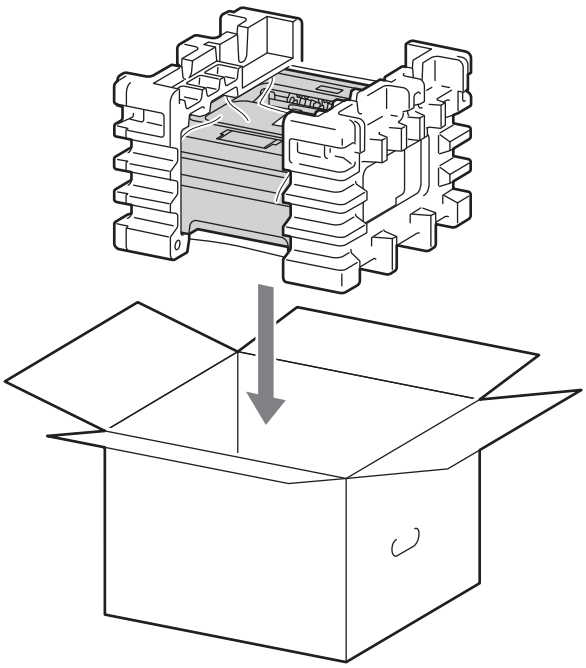
7 Close the front cover.

8 Put the machine into the bag it originally came in.

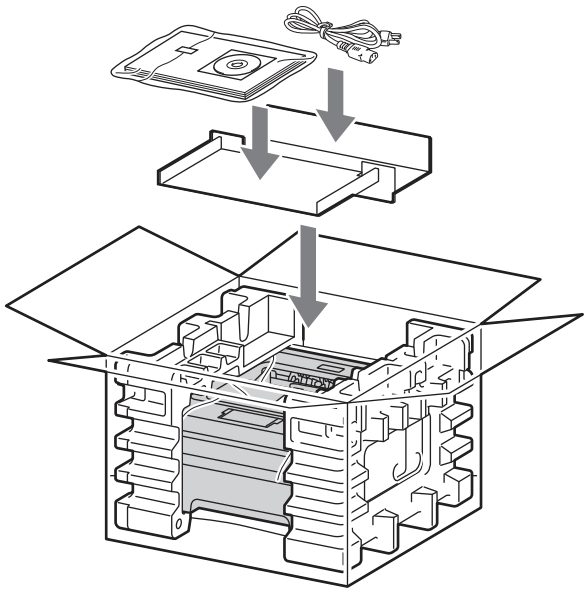
9 Put the styrofoam piece marked "RIGHT" on the right side of the machine. Put the styrofoam piece marked "LEFT" on the left side of the machine.



10 Put the machine into the original carton.



⓫ Put the AC power cord and printed materials in the original carton as shown in the illustration.



⓬ Close the carton and tape it shut.

5 Troubleshooting

You can correct most problems by yourself. If you need additional help, the Brother Solutions Center offers the latest FAQs and troubleshooting tips. Visit us at http://solutions.brother.com/.

Identifying your problem

First, check the following:

- The AC power cord is connected properly and the machine is turned on.
- All of the protective parts have been removed.
- The toner cartridge and drum unit is installed properly.
- The front cover, back cover, and fuser cover are completely closed.
- Paper is inserted properly in the paper tray.
- The interface cable is securely connected to the machine and the computer.
- The correct driver for the machine has been chosen and is installed.
- The computer is set up to connect to the correct machine port.

Machine does not print:

If you did not solve your problem with the above checks, identify your problem and then go to the page suggested below.

- **Machine's LEDs are flashing**

  See *LEDs (Light Emitting Diodes)* on page 53.

- **Status Monitor Error Message appears**

  See *Error messages in the Status Monitor* on page 101.

- **Paper handling**

  (See *Paper handling* on page 103 and *Paper jams and how to clear them* on page 105.)

- **Other problems**

  (See *Other problems* on page 120.)

Pages are printed, but there are problems with:

- **Print quality**

  (See *Improving the print quality* on page 112.)

- **Printout is incorrect**

  (See *Solving print problems* on page 119.)

Error messages in the Status Monitor

The Status Monitor will report problems with the machine. Take the proper action by referring to the following table.

If you want to turn the status monitor on, see *Status Monitor* on page 38 (For Windows® user) or *Status Monitor* on page 50 (For Macintosh users).

Error message	Action
CARTRIDGE ERROR	■ Make sure the drum unit and toner cartridge assembly is installed properly.
DRUM END SOON	■ The drum unit will need to be replaced soon. Buy a new drum unit to replace the current one. See *Replacing the drum unit* on page 79.
DRUM ERROR	■ See *Cleaning the corona wire* on page 85. ■ If your LEDs still show the same error indication after you have cleaned the corona wire, replace the drum unit with a new one. See *Replacing the drum unit* on page 79.
DRUM STOP	■ Replace the drum unit with a new one. See *Replacing the drum unit* on page 79
DUPLEX DISABLED [1]	■ Close the back cover of the printer and put the duplex tray back in.
FRONT COVER OPEN	■ Close the front cover of the machine.
FUSER COVER OPEN	■ Close the fuser cover located behind the back cover of the machine.
FUSER ERROR	■ If the **FUSER ERROR** pop-up message appears on your computer, turn the machine's power switch off, wait a few seconds, and then turn it on again. Leave the machine for 15 minutes with the power on.
JAM TRAY 1 **JAM INSIDE** **JAM REAR** **JAM DUPLEX** [1]	■ Clear the jammed paper from the indicated area. See *Paper jams and how to clear them* on page 105.
MANUAL FEED	■ If the manual feed slot is empty, put a piece of paper in it. ■ Make sure you use paper that meets Brother's recommended paper specifications. See *Acceptable paper and other print media* on page 3. ■ Load the same size paper that you selected in the current driver setting.
MEMORY FULL	■ Press **Go** to print the remaining data in the machine memory. Cancel the print job if you want to delete the remaining data in the machine memory. See *Go button* on page 60. ■ Reduce the complexity of your document or lower the print resolution.

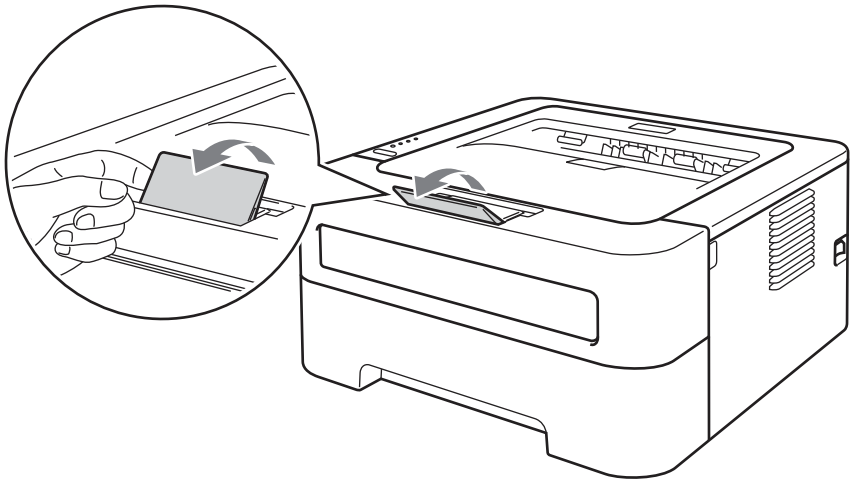
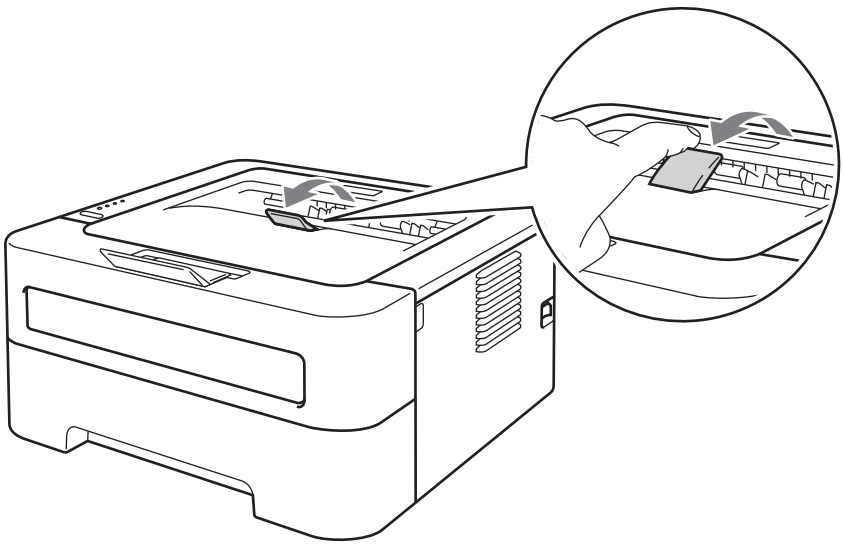
Error message	Action
NO PAPER T1	■ The paper tray may be out of paper or not properly installed. If it is empty, put a new stack of paper in the paper tray and then press **Go**. If the problem is still unsolved, the paper pick-up roller may be dirty. Clean the paper pick-up roller. See *Cleaning the paper pick-up roller* on page 94. ■ If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten it before printing. Sometimes it is helpful to remove the paper, turn the stack over and put it back in the paper tray. ■ Reduce the amount of paper in the paper tray, and then try again. ■ Make sure you use paper that meets Brother's recommended paper specifications. See *Acceptable paper and other print media* on page 3. ■ Load the same size paper that you selected in the current driver setting.
NO TONER	■ Open the front cover, then install the toner cartridge.
PRINT OVERRUN	■ Press **Go** to print the remaining data in the machine memory. Cancel the print job if you want to delete the remaining data in the machine memory. See *Go button* on page 60. ■ If this does not clear the error, reduce the complexity of your document or lower the print resolution. ■ (HL-2250DN / HL-2270DW / HL-2275DW only) Change the following settings in the supplied Windows® driver and try again. The best combination of these settings will vary depending on your document: • Graphics [1] • TrueType mode [1] • Use Printer TrueType® Fonts [1] [1] Choose the **Basic** tab, choose **Manual** in **Print Settings**, and then click the **Manual Settings...**.
REPLACE DRUM	■ Replace the drum unit with a new one. See *Replacing the drum unit* on page 79
REPLACE TONER	■ See *Replacing the toner cartridge* on page 71.
Service call error	■ Check the LED indication to identify the error. See *Service call indications* on page 58.
SIZE ERROR DX [1]	■ Choose a paper size which is supported by the duplex tray. (See *Type and size of paper* on page 4.)
TONER ENDED	■ Replace the toner cartridge with a new one. See *Replacing the toner cartridge* on page 71
TONER LOW	■ Buy a new toner cartridge and have it ready for when the **REPLACE TONER** status is indicated.

[1] This message is for HL-2240D / HL-2242D / HL-2250DN / HL-2270DW / HL-2275DW only.

Paper handling

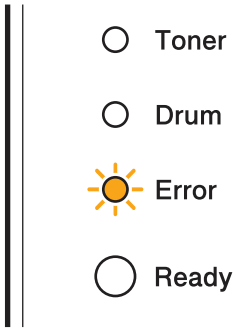
First, make sure that you are using paper that meets Brother's recommended paper specifications. (See *Acceptable paper and other print media* on page 3.)

Problem	Recommendation
The machine does not feed paper.	■ If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten it before printing. Sometimes it is helpful to remove the paper, turn the stack over, and then put it back in the paper tray. If the paper continues to curl, replace the paper. ■ Reduce the amount of paper in the paper tray, and then try again. ■ Make sure that manual feed mode is not chosen in the printer driver. ■ Clean the paper pick-up roller. See *Cleaning the paper pick-up roller* on page 94.
The machine does not feed paper from the manual feed slot.	■ Put only one sheet of paper in the manual feed slot. ■ Make sure that you have chosen **Manual** in **Paper Source** of the printer driver.
The machine does not feed envelopes.	■ The machine feeds envelopes from the manual feed slot. You must set up your application to print on the size of envelopes you are using. This is usually done in the page setup or document setup menu of your software. (See your application manual.)
A paper jam has occurred.	■ Clear the jammed paper. (See *Paper jams and how to clear them* on page 105.)
The machine does not print.	■ Make sure that the cable is connected to the machine. ■ Make sure the machine is powered on and that no error LEDs are lit on the machine control panel. ■ Make sure that you have chosen the correct printer driver.
When printing on normal paper, it creases.	■ Change the printer driver setting in **Media Type** to a thin setting.

Problem	Recommendation
The paper slides off the top output tray.	■ Lift up the output tray support flap 1.  ■ If the paper curls and slides off, lift up the output tray support flap 2. 

Paper jams and how to clear them

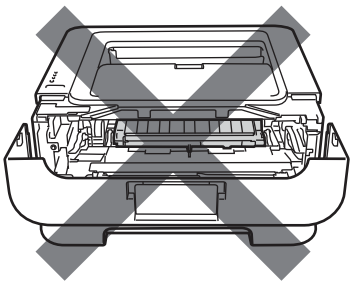
If a paper jam occurs, the machine will flash the **Error** LED as shown below.

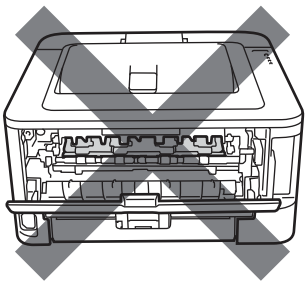


⚠ WARNING

HOT SURFACE

- After you have just used the printer, some internal parts will be extremely hot. Wait at least 10 minutes for the machine to cool down.
- To prevent any degradation to the print quality, DO NOT touch the shaded parts shown in the illustrations.





Clear the jammed paper as follows.

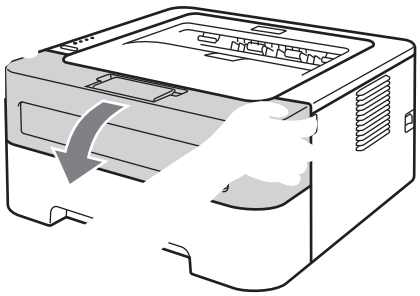
If the jammed paper is removed completely by following the steps below, you can install the paper tray first, and then close the front cover. The machine will resume printing automatically.

If the machine does not start printing automatically, press **Go**. If the machine still does not start printing, check that all the remaining jammed paper has been removed from the machine. Then try printing again.

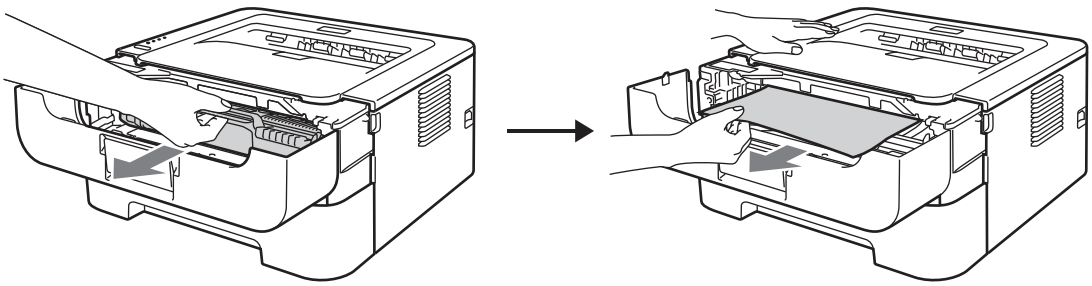
Note

- Always remove all paper from the paper tray and straighten the stack when you add new paper. This helps prevent multiple sheets of paper from feeding through the machine at one time and prevents paper jams.
- Please confirm that you have installed both a toner cartridge and a drum unit in the machine. If you have not installed a drum unit or have installed the drum unit improperly, then this may cause a paper jam in your Brother machine.

1. Open the front cover and leave the machine turned on for at least 10 minutes to cool down.



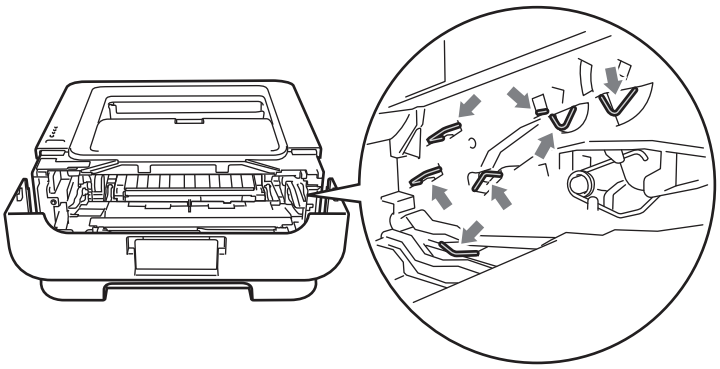
2. Slowly take out the drum unit and toner cartridge assembly. The jammed paper may be pulled out with the drum unit and toner cartridge assembly, or this may release the paper so you can pull it out from inside of the machine.



If you cannot remove the drum unit and toner cartridge assembly easily, do not use extra force. Instead, go to step ❹.

IMPORTANT

- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- To prevent damage to the machine caused by static electricity, DO NOT touch the electrodes shown in the illustration.

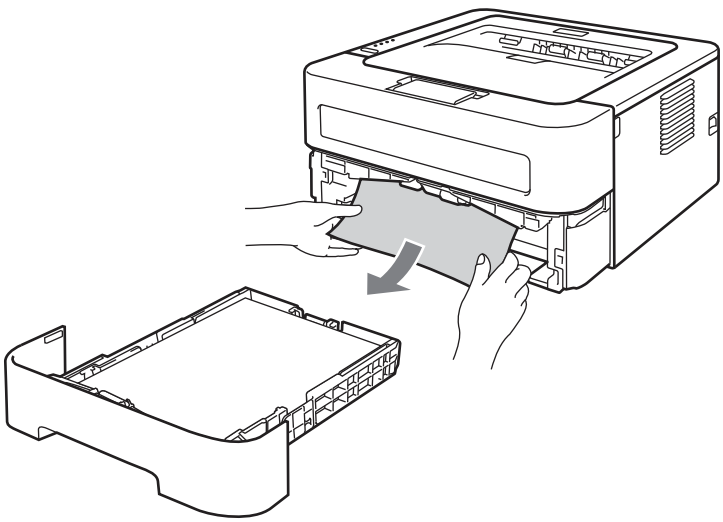


3. Close the front cover.

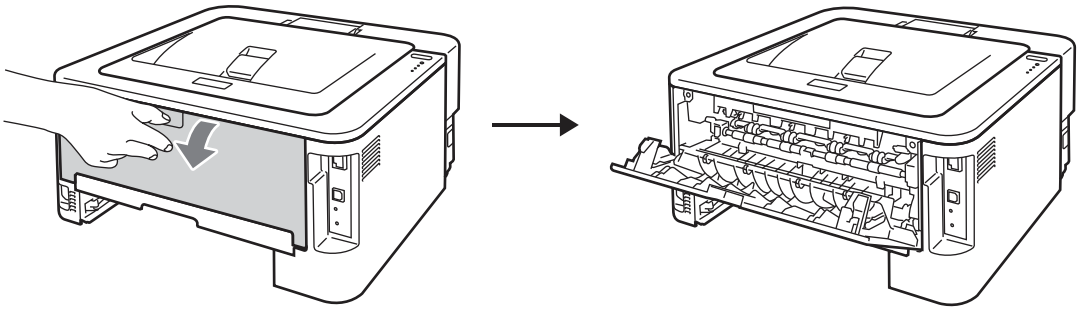
Note

Do not put the drum unit and toner cartridge assembly back in at this point.

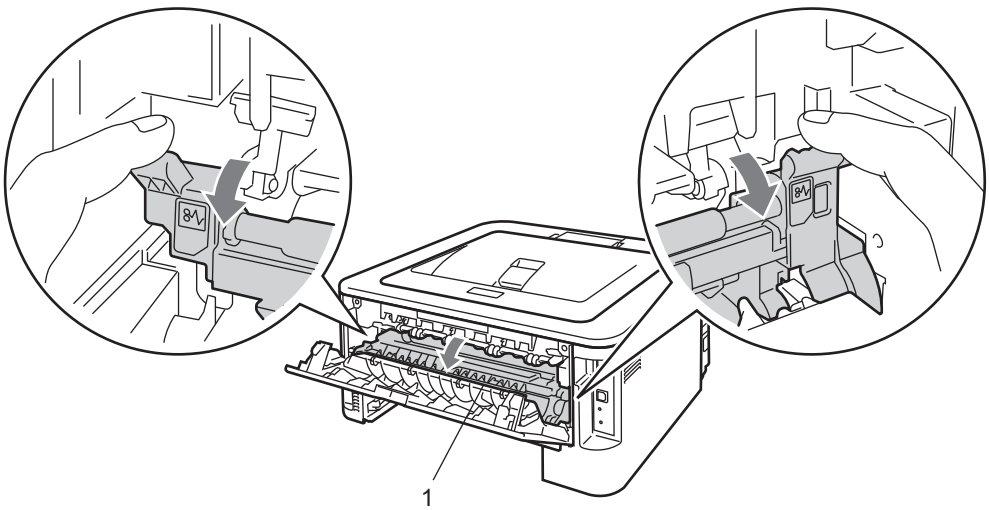
4. Pull the paper tray completely out of the machine.
5. Use both hands to slowly pull out the jammed paper.



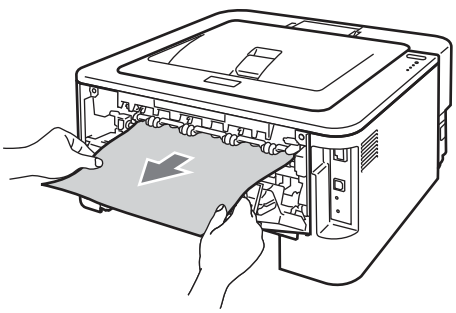
6 Open the back cover (face-up output tray).



7 Pull down the tabs at the left and right hand sides to open the fuser cover (1).

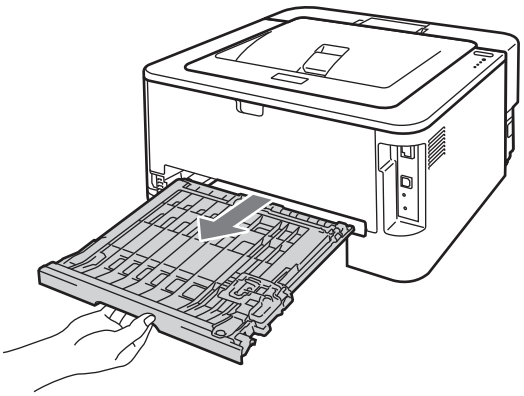


8 Using both hands, gently pull the jammed paper out of the fuser unit.

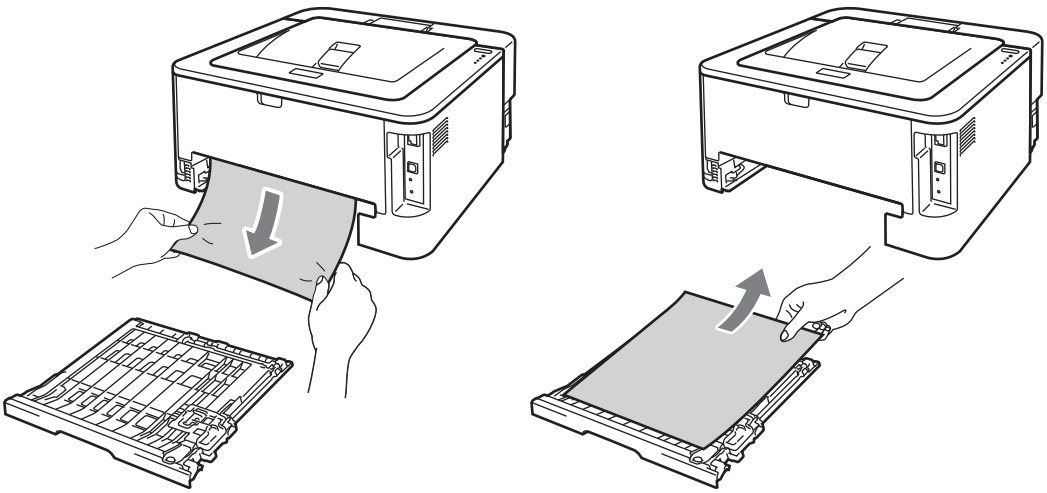


9 Close the fuser cover and the back cover (face-up output tray).

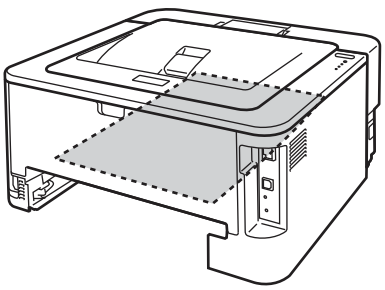
⑩ Pull the duplex tray completely out of the machine.



⑪ Pull the jammed paper out of the machine or the duplex tray.



⑫ Make sure that the jammed paper does not remain under the machine from static electricity.

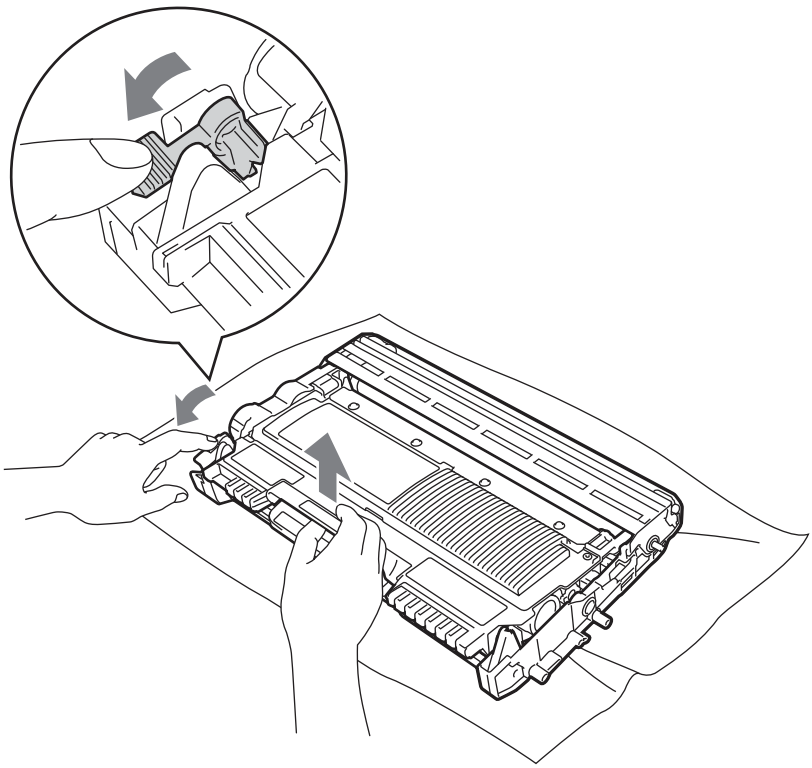


⑬ Put the duplex tray back in the machine.

14 Put the paper tray firmly back in the machine.

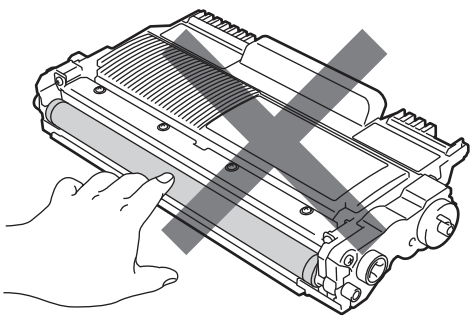
15 If you could not remove the drum unit and toner cartridge assembly in step ❷, you must do step ❷ now before you can go to step ⓰

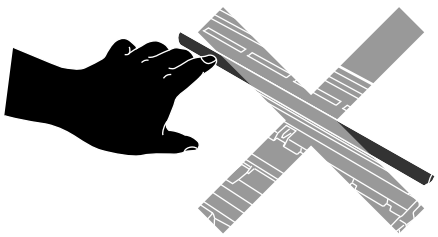
16 Push down the green lock lever and take the toner cartridge out of the drum unit. Clear the jammed paper if there is any inside the drum unit.



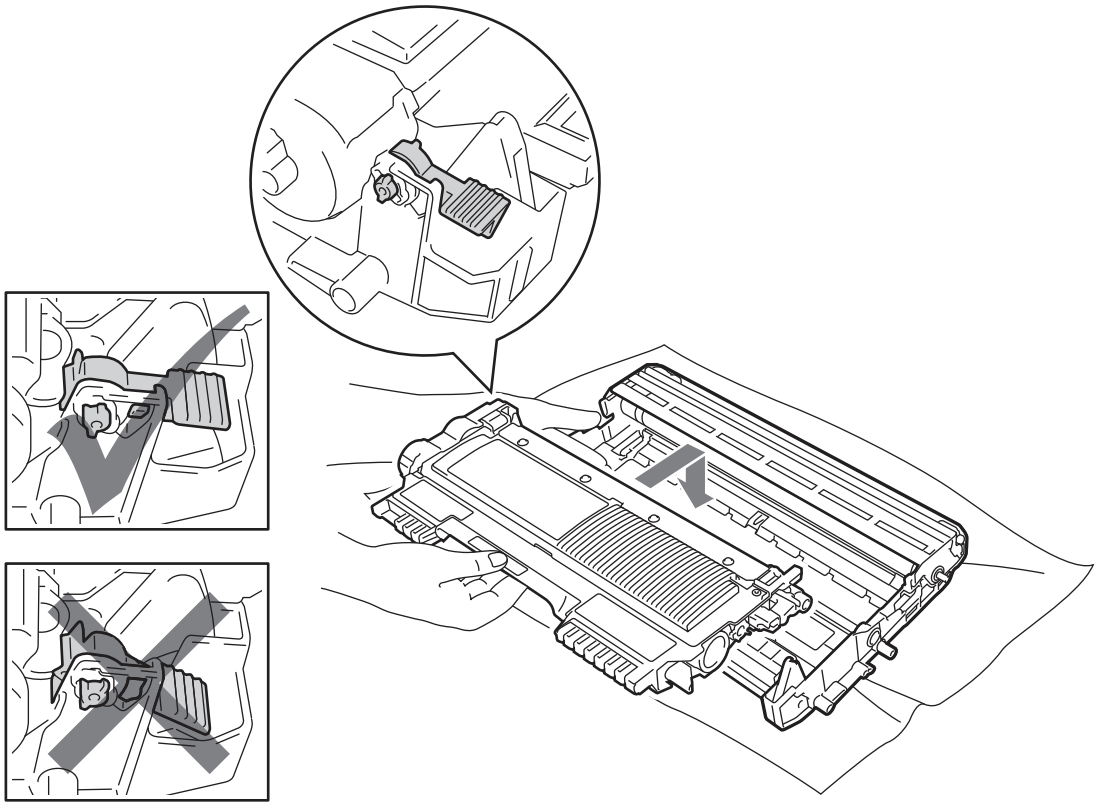
IMPORTANT

- Handle the toner cartridge carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

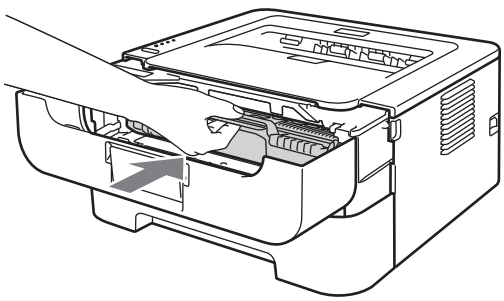




17 Put the toner cartridge back into the drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever will lift automatically.



18 Open the front cover. Put the drum unit and toner cartridge assembly back into the machine.



19 Close the front cover.

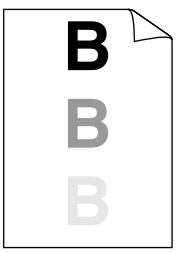
20 Make sure that the **Error** LED is off and that the **Ready** LED light is on. If the machine does not start printing automatically, press **Go**.

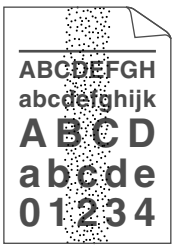
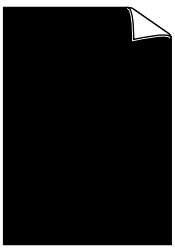
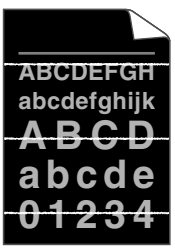
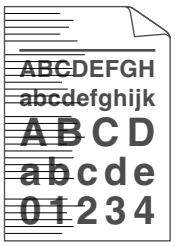
Improving the print quality

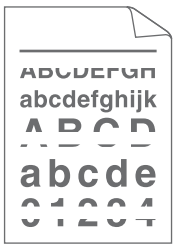
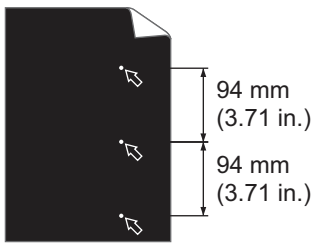
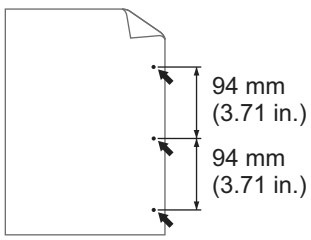
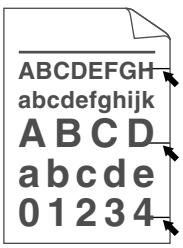
If you have a print quality problem, print a test page first (see *Print a test page* on page 61). If the printout looks good, the problem is probably not the machine. Check the interface cable or try the machine on another computer.

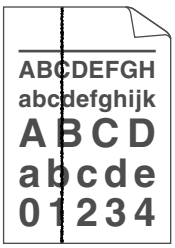
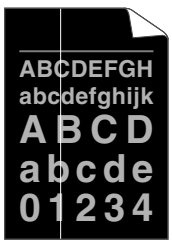
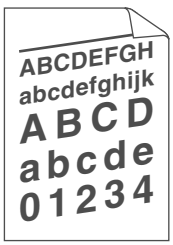
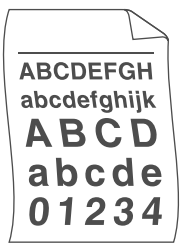
Using non-Brother supplies may affect the print quality, hardware performance, and machine reliability.

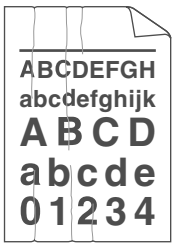
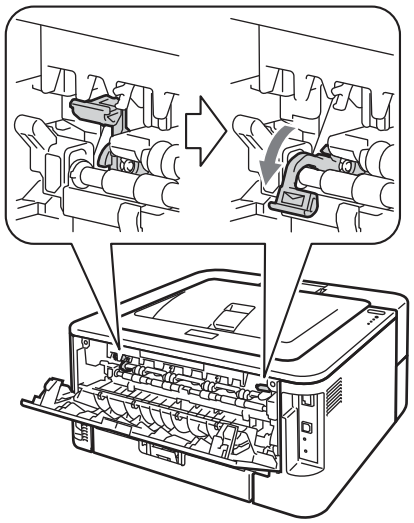
This section gives information on the following topics.

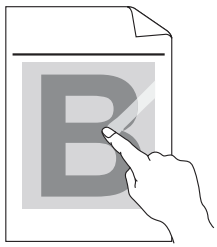
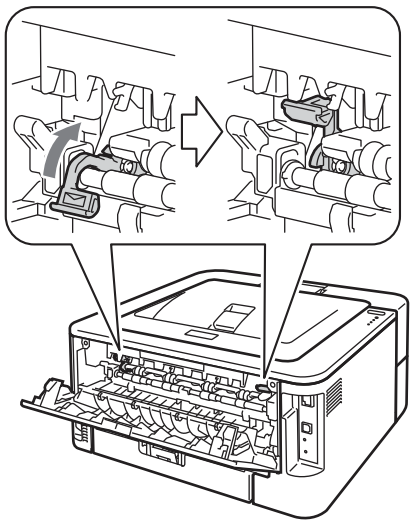
Examples of poor print quality	Recommendation
 Faint	■ Take out the drum unit and toner cartridge assembly. Hold the assembly level with both hands and gently shake it from side to side several times to spread the toner evenly inside the cartridge. ■ If the LEDs indicate **REPLACE TONER** (Continue mode), put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ Check the machine's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault. See *Safety and Legal booklet*. ■ If the whole page is too light, **Toner Save Mode** may be on. Turn off **Toner Save Mode** in **Advanced** tab (For Windows®) or **Basic** tab of **Print Settings** (For Macintosh) of the driver. ■ Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ Put in a new drum unit. See *Replacing the drum unit* on page 79.
 Gray background	■ Make sure that you use paper that meets our specifications. See *Acceptable paper and other print media* on page 3. ■ Check the machine's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. See *Safety and Legal booklet*. ■ Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ Put in a new drum unit. See *Replacing the drum unit* on page 79.
 **Ghost**	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper or thick print media may cause this problem. See *Acceptable paper and other print media* on page 3. ■ Make sure that the media type setting in the driver matches the type of paper you are using. See *Acceptable paper and other print media* on page 3. ■ Choose **Reduce Ghosting** mode in the printer driver. See **Improve Print Output** in *Other Print Options...* on page 32 (For Windows®) or *Print Settings* on page 43 (For Macintosh). ■ Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71 ■ Put in a new drum unit. See *Replacing the drum unit* on page 79. ■ The fuser unit may be contaminated. Call your Brother dealer or Brother Customer Service.

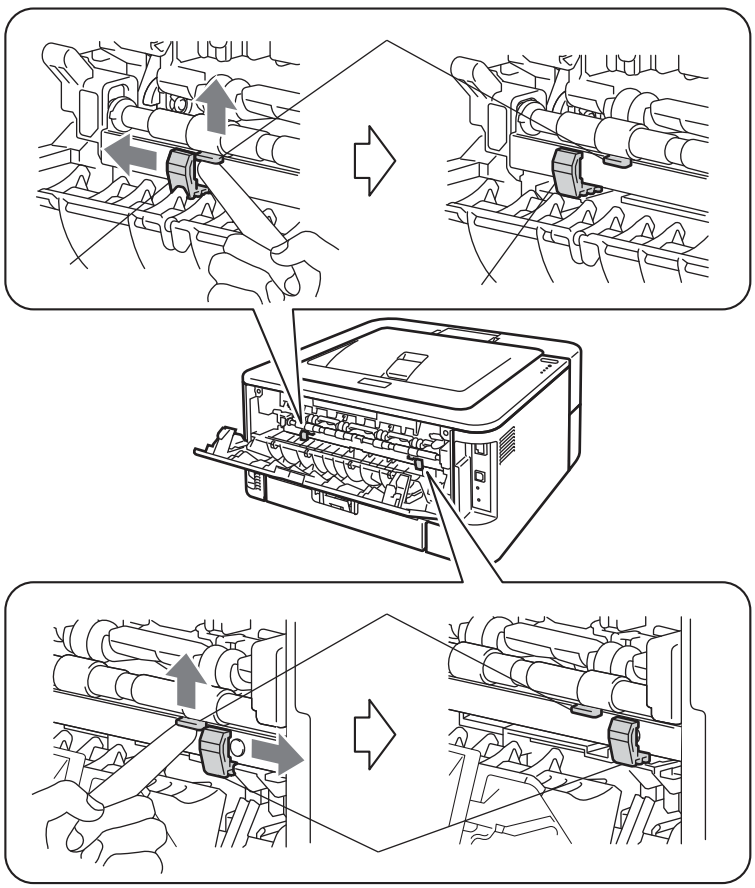
Examples of poor print quality	Recommendation
 **Toner specks**	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper may cause the problem. See *Acceptable paper and other print media* on page 3. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79. ■ The fuser unit may be contaminated. Call Brother Customer Service.
 Hollow print	■ Make sure that you use paper that meets our specifications. See *Acceptable paper and other print media* on page 3. ■ Choose **Thick Paper** mode in the printer driver, or use thinner paper than what you are now using. ■ Check the machine's environment. Conditions such as high humidity can cause hollow print. See *Safety and Legal booklet*. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79.
 **All black**	■ Clean the primary corona wire inside the drum unit by sliding the green tab. Be sure to return the green tab to the home position (▲). See *Cleaning the corona wire* on page 85. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79.
 **White lines across the page**	■ Make sure that you use paper that meets our specifications. A rough surfaced paper or thick print media can cause problems. ■ Make sure that you choose the correct media type in the printer driver. ■ Make sure that a torn piece of paper is not stuck inside the machine blocking the scanner. ■ The problem may disappear by itself. Print multiple pages to clear this problem, especially if the machine has not been used for a long time. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79.
 **Lines across the page**	■ Clean the primary corona wire in the drum unit. See *Cleaning the corona wire* on page 85. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79.

Examples of poor print quality	Recommendation
 **White lines, bands or ribbing across the page**	■ Check the machine's environment. Conditions such as high humidity and high temperatures may cause this print quality problem. ■ If the problem is not solved after printing a few pages, put in a new drum unit. (See *Replacing the drum unit* on page 79.)
 **White Spots on black text and graphics at 94 mm (3.71 in.) intervals**  **Black Spots at 94 mm (3.71 in.) intervals**	■ If the problem is not solved after printing a few pages, the drum unit may have foreign material, such as glue from a label, stuck on the drum. Clean the drum unit. (See *Cleaning the drum unit* on page 87) ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79.
 **Black toner marks across the page**	■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79. ■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ Make sure that you use paper that meets our specifications. See *Acceptable paper and other print media* on page 3. ■ If you use label sheets for laser printers, the glue from the sheets may sometimes stick to the OPC drum surface. Clean the drum unit. See *Cleaning the drum unit* on page 87. ■ Do not use paper that has clips or staples because they will scratch the surface of the drum. ■ If the unpacked drum unit is in direct sunlight or room light, the unit may be damaged.

Examples of poor print quality	Recommendation
 **Black lines down the page** Printed pages have toner stains down the page.	■ Clean the primary corona wire inside the drum unit by sliding the green tab. See *Cleaning the corona wire* on page 85. ■ Make sure the green tab of the primary corona wire is at the home position (▲). ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79. ■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ The fuser unit may be contaminated. Call your dealer or Brother Customer Service.
 **White lines down the page**	■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 71. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 79. ■ If the LEDs indicate **REPLACE TONER** (Continue mode), put in a new toner cartridge. See *Replacing the toner cartridge* on page 71.
 **Page skewed**	■ Make sure that the paper or other print media is loaded properly in the paper tray and that the guides are not too tight or too loose against the paper stack. ■ Set the paper guides correctly. See *Printing from the paper tray (plain paper, recycled paper and thin paper only)* on page 10. ■ If you are using the manual feed slot, see *Printing from the Manual feed slot* on page 13. ■ The paper tray may be too full. See *Printing from the paper tray (plain paper, recycled paper and thin paper only)* on page 10. ■ Check the paper type and quality. See *Acceptable paper and other print media* on page 3.
 **Curled or wavy**	■ Check the paper type and quality. High temperatures and high humidity will cause paper to curl. See *Acceptable paper and other print media* on page 3. ■ If you do not use the machine often, the paper may have been in the paper tray too long. Turn over the stack of paper in the paper tray. Also, fan the paper stack and then rotate the paper 180° in the paper tray. ■ Open the back cover (face-up output tray) to let the printed paper out on the face-up output tray. ■ Choose **Reduce Paper Curl** mode in the printer driver when you do not use our recommended paper. See **Improve Print Output** in *Other Print Options...* on page 32 (For Windows®) or *Print Settings* on page 43 (For Macintosh).

Examples of poor print quality	Recommendation
 **Wrinkles or creases**	■ Make sure that the paper is loaded properly. See *Printing from the paper tray (plain paper, recycled paper and thin paper only)* on page 10. ■ Check the paper type and quality. See *Acceptable paper and other print media* on page 3. ■ Turn over the stack of paper in the tray or try rotating the paper 180° in the input tray.
 Envelope creases	■ Make sure that the two green envelope levers inside the back cover are pulled down when you print the envelope.  **Note** When you have finished printing, open the back cover and reset the two green levers back to their original position.

Examples of poor print quality	Recommendation
 **Poor fixing**	■ Open the back cover and make sure that the two green envelope levers on the left and right hand sides are in the up position.  ■ Choose **Improve Toner Fixing** mode in the printer driver. See **Improve Print Output** in *Other Print Options...* on page 32 (For Windows®) or *Print Settings* on page 43 (For Macintosh). If this selection does not provide enough improvement, select **Thicker Paper** in **Media Type** settings.

Examples of poor print quality	Recommendation
 Curled	■ Choose **Reduce Paper Curl** mode in the printer driver when you do not use our recommended paper. See **Improve Print Output** in *Other Print Options...* on page 32 (For Windows®) or *Print Settings* on page 43 (For Macintosh). ■ Turn the paper over in the paper tray, and print again. (Excluding letterhead paper) If the problems remains, switch the Anti-Curl Levers as follows: 1 Open the back cover. 2 Lift the lever (1) and slide the two gray levers (2) in the direction of the arrow. 

Solving print problems

Problem	Recommendation
The machine prints unexpectedly or it prints garbage data.	■ Make sure that the printer cable is not too long. We recommend that you use a USB cable that is no longer than 2 meters (6.5 feet). ■ Make sure that the printer cable is not damaged or broken. ■ If you are using an interface-switching device, remove it. Connect your computer directly to your machine, and then try again. ■ Make sure that you have chosen the correct printer driver with 'Set as Default Printer'. ■ Make sure that the machine is not connected to the same port that is also connected to a storage device or scanner. Remove all other devices and connect the machine to the port only.
The machine cannot print full pages of a document. An error message **MEMORY FULL** appears.	■ Press **Go** to print the remaining data in the machine's memory. Cancel the print job if you want to delete the remaining data in the machine memory. (See *Go button* on page 60.) ■ Reduce the complexity of your document or reduce the print resolution.
The machine cannot print full pages of a document. An error message **PRINT OVERRUN** appears.	■ Press **Go** to print the remaining data in the machine memory. Cancel the print job if you want to delete the remaining data in the machine memory. See *Go button* on page 60. ■ Reduce the complexity of your document or select a lower print resolution. ■ (HL-2250DN / HL-2270DW / HL-2275DW only) Change the following settings in the supplied Windows® driver and try again. The best combination of these settings will vary depending on your document: • Graphics [1] • TrueType mode [1] • Use Printer TrueType® Fonts [1] [1] Choose the **Basic** tab, choose **Manual** in **Print Settings**, and then click **Manual Settings...**.
The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	■ Adjust the top and bottom margins of your document.

Network problems (HL-2250DN / HL-2270DW / HL-2275DW only)

For problems concerning using your machine on a Network, see the *Network User's Guide*.

The latest *Network User's Guide* in PDF format is available by accessing the Brother Solutions Center (http://solutions.brother.com/).

Other problems

For Macintosh with USB

Problem	Recommendation
The machine does not appear in **Print Setup Utility** (Mac OS X 10.4.11) or **Print & Fax** in **System Preferences** (Mac OS X 10.5.x and 10.6.x).	■ Make sure that the machine is turned on. ■ Make sure that the USB interface cable is connected directly to the Macintosh and that it is connected to the USB port of the machine. ■ Make sure the printer driver is installed correctly.
Unable to print from the application.	■ Make sure that the supplied Macintosh printer driver is installed in the **Hard Disk** and that it is chosen with **Print Setup Utility** (Mac OS X 10.4.11) or **Print & Fax** in **System Preferences** (Mac OS X 10.5.x and 10.6.x).

A Appendix

Machine specifications

Note

This chapter provides a summary of the machines' specifications. For additional specifications visit http://www.brother.com/ for details.

Engine

Model		HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Technology		Electrophotographic			
Print speed [1] [2] (A4 size/ Letter size)	Single-sided Print	Up to 20 ppm (A4 size) [3], Up to 21 ppm (Letter size) [3]	Up to 24 ppm [3]		Up to 26 ppm (A4 size) [3], Up to 27 ppm (Letter size) [3]
	Duplex Print	N/A		Up to 10 sides per minute (5 sheets per minute) (A4 or Letter size) [3]	
First print time [4]	From Ready mode	Less than 10 secs	Less than 8.5 secs		
	From Sleep mode	Less than 19 secs	Less than 16.5 secs		
Resolution		600 x 600 dpi HQ1200 (2400 x 600 dpi) quality			

1 The print speed may change depending on the type of document you print.

2 Print speed may be slower when the machine is connected by wireless (HL-2270DW / HL-2275DW only).

3 From standard paper tray.

4 First print out time may change if the machine is calibrating or registering itself.

Controller

Model		HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Processor		ARM9 200MHz			
Memory		8 MB			32 MB
Interface		Hi-speed USB 2.0			Hi-speed USB 2.0, 10BASE-T/100BASE-TX Ethernet, IEEE802.11b/g Wireless
Network Connectivity	Protocols	N/A			TCP/IP (Standard 10BASE-T/100BASE-TX Ethernet) [1]
	Management tool	N/A			BRAdmin Light [2] BRAdmin Professional 3 [3] Web BRAdmin [4] Web Based Management [5]
Emulation		N/A			PCL6
Resident fonts	PCL	N/A			49 scalable fonts, 12 bitmap fonts, 13 bar codes [6]

1 See the *Network User's Guide* for details on the supported network protocols.

2 Brother original Windows® and Macintosh utility for machine and print server management. Install from the supplied CD-ROM.

3 Brother original Windows® utility for machine and print server management. Download from http://solutions.brother.com/.

4 Server based management utility. Download from http://solutions.brother.com/.

5 Machine and print server management through Web Based Management (Web browser).

6 Code39, Interleaved 2 of 5, FIM (US-PostNet), Post Net (US-PostNet), EAN-8, EAN-13, UPC-A, UPC-E, Codabar, ISBN (EAN), ISBN (UPC-E), Code128 (set A, set B, set C), EAN-128 (set A, set B, set C)

Software

Model		HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Printer driver	Windows® [1]	Windows GDI printer driver for Windows® 2000 Professional, XP Home Edition, XP Professional Edition, XP Professional x64 Edition, Windows Server® 2003, Windows Server® 2003 x64 Edition, Windows Vista®, Windows Server® 2008, Windows Server® 2008 R2, Windows® 7			
	Macintosh	Brother Laser Driver for Mac OS X 10.4.11, 10.5.x, 10.6.x			
	Linux [2] [3]	Linux driver for CUPS printing system (x86 and x64 environments)			
		Linux driver for LPD/LPRng printing system (x86 and x64 environments)			
Utilities		N/A			Driver Deployment Wizard [4]

[1] For the latest driver updates, visit http://solutions.brother.com/.

[2] Download the printer driver for Linux from http://solutions.brother.com/.

[3] Depending on Linux distributions, the driver may not be available.

[4] The Driver Deployment Wizard automates the installation of printers in a peer-to-peer network (Windows® only).

Control panel

Model	HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
LED	4 LEDs: Toner LED, Drum LED, Error LED and Ready LED			
Button	1 button: Go button			

Paper handling

Model		HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Paper Input [1]	Manual feed slot	1 sheet			
	Paper tray	250 sheets			
Paper Output [1]	Face-down	100 sheets			
	Face-up	1 sheet (straight paper path)			
Duplex	Manual duplex	Yes			
	Auto duplex	N/A		Yes	

[1] Calculated with 80 g/m^2 (20 lb) paper

Media specifications

Model		HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Media types	Manual feed slot	Plain paper, Thin paper, Thick paper, Recycled paper, Bond paper, Labels and Envelopes			
	Paper tray	Plain paper, Thin paper, Recycled paper			
	Automatic duplex printing	N/A		Plain paper, Thin paper, Recycled paper	
Media weights	Manual feed slot	60 to 163 g/m^2 (16 to 43 lb)			
	Paper tray	60 to 105 g/m^2 (16 to 28 lb)			
	Automatic duplex printing	N/A		60 to 105 g/m^2 (16 to 28 lb)	
Media sizes	Manual feed slot	Width: 76.2 to 216 mm (3.0 to 8.5 in.) Length: 116 to 406.4 mm (4.6 to 16 in.)			
	Paper tray (Standard)	A4, Letter, B5(ISO/JIS), A5, A5 (Long Edge), B6(ISO), A6, Executive, Legal [1], Folio [1]			
	Automatic duplex printing	N/A		Letter, Legal [1], Folio [1]	

[1] Legal or Folio size paper is not available in some regions outside the USA and Canada.

A

Supplies

HL-2130 / HL-2220

Model		HL-2130	HL-2220	Order No.
Toner Cartridge	Starter cartridge	Approx. 700 pages A4 or Letter page [1]		N/A
	Standard cartridge	Approx. 1,000 pages A4 or Letter page [1]	Approx. 1200 pages A4 or Letter page [1]	TN-410 (For HL-2130) TN-420 (For HL-2220)
	High yield cartridge	N/A	Approx. 2,600 pages A4 or Letter pages [1]	TN-450
Drum Unit		Approx. 12,000 pages A4 or Letter pages (1 page / job) [2]		DR-420

HL-2230 / HL-2240 / HL-2240D / HL-2270DW / HL-2275DW

Model		HL-2230/HL-2240	HL-2240D	HL-2270DW	HL-2275DW	Order No.
Toner Cartridge	Starter cartridge	Approx. 700 pages A4 or Letter pages [1]			Approx. 1,200 pages A4 or Letter pages [1]	N/A
	Standard cartridge	Approx. 1,200 pages A4 or Letter pages [1]				TN-420
	High yield cartridge	Approx. 2,600 pages A4 or Letter pages [1]				TN-450
Drum Unit		Approx. 12,000 pages A4 or Letter pages (1 page / job) [2]				DR-420

[1] Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

[2] Drum yield is approximate, and may vary by type of use.

Dimensions / weights

Model	HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Dimensions (W × D × H)	368 × 360 × 183 mm (14.5 × 14.2 × 7.2 in.)			
Weights (With consumables)	Approx. 6.7 kg / 14.8 lb		Approx. 7.0 kg / 15.4 lb	

Other

Model			HL-2130/HL-2220	HL-2230/HL-2240	HL-2240D	HL-2270DW/HL-2275DW
Power source			110 - 120 V AC, 50 / 60 Hz			
Power consumption [1] (Average)		Instantaneous Peak	Approx. 1,056 W			
		Printing	Approx. 421 W at 25 °C (77 °F)	Approx. 495 W at 25 °C (77 °F)		
		Ready	Approx. 62 W at 25 °C (77 °F)	Approx. 65 W at 25 °C (77 °F)		
		Sleep (Wireless: On)	N/A			Approx. 2.8 W
		Deep Sleep	Approx. 0.8 W	Approx. 0.9 W		
Noise level	Sound Pressure	Printing	LpAm = 53 dB (A)			
		Ready	LpAm = 31 dB (A)			
	Sound power	Printing	LWAd = 6.6 B (A)	LWAd = 6.7 B (A)		
		Ready	LWAd = 4.6 B (A)			
Ecology	Power Save		Yes			
	Toner Save [2]		Yes			

[1] USB connection to PC

[2] We do not recommend Toner Save Mode for printing Photo or Gray Scale images.

A

Computer requirements

Computer Platform & Operating System Version		Processor Minimum Speed	Minimum RAM	Recommended RAM	Hard Disk Space to install	Supported PC Interface [2]
Windows® Operating System [1]	Windows® 2000 Professional	Intel® Pentium® II or equivalent	64 MB	256 MB	50 MB	USB, 10BASE-T / 100BASE-TX (Ethernet), Wireless 802.11b/g
	Windows® XP Home Edition		128 MB			
	Windows® XP Professional					
	Windows® XP Professional x64 Edition	64-bit (Intel® 64 or AMD64) supported CPU	256 MB	512 MB		
	Windows Vista®	Intel® Pentium® 4 or equivalent 64-bit (Intel® 64 or AMD64) supported CPU	512 MB	1 GB		
	Windows® 7	Intel® Pentium® 4 or equivalent 64-bit (Intel® 64 or AMD64) supported CPU	1 GB (32-bit) 2 GB (64-bit)	1 GB (32-bit) 2 GB (64-bit)		
	Windows Server® 2003	Intel® Pentium® III or equivalent	256 MB	512 MB		
	Windows Server® 2003 x64 Edition	64-bit (Intel® 64 or AMD64) supported CPU				
	Windows Server® 2008	Intel® Pentium® 4 or equivalent 64-bit (Intel® 64 or AMD64) supported CPU	512 MB	2 GB		
	Windows Server® 2008 R2	64-bit (Intel® 64 or AMD64) supported CPU				
Macintosh Operating System	Mac OS X 10.4.11 and 10.5.x	PowerPC® G4/G5 Intel® Core™ Processor	512 MB	1 GB	80 MB	
	Mac OS X 10.6.x	Intel® Core™ Processor	1 GB	2 GB		

1 Microsoft® Internet Explorer® 6.0 or greater.

2 Third party USB ports are not supported.

Important information for choosing your paper

This section gives information to help you choose paper to use with this machine.

Note

If you use paper that is not recommended, a paper jam or misfeed may occur in the machine.

Before you buy a large quantity of paper

Make sure that the paper is suitable for the machine.

Paper for plain paper copies

Paper is divided by usage, such as paper for printing and paper for copying. The usage is usually written on the paper's package. Check the package to see whether it is suitable for laser printers. Use paper that is suitable for laser printers.

Basis weight

The basis weight of the paper in general use varies in different countries. We recommend that you use paper that weighs 75 to 90 g/m^2 (20 to 24 lb), although this machine is able to cope with thinner or thicker paper than these weights.

Unit	Europe	USA
g/m^2	80 to 90	75 to 90
lb		20 to 24

Long grain and short grain

The pulp fiber of the paper is aligned during paper manufacturing. Paper can be classified into two types, long grain and short grain.

Long grain paper fibers run in the same direction as the long edge of the paper. Short grain paper fibers run perpendicular to the long edge of the paper. Though most plain paper for copying is long grain, some is short grain. We recommend that you use long grain paper for this machine. Short grain paper is too weak for the paper transport of the machine.

Acid paper and neutralized paper

Paper can be classified as either acid paper or neutralized paper.

Though modern paper manufacture methods started with acid paper, neutralized paper is recently taking the place of acid paper because of environmental issues.

However, many forms of acid paper can be found in recycled paper. We recommend that you use neutralized paper for this machine.

You can use an acid paper check pen to distinguish acid paper from neutral paper.

Print surface

The characteristics of the face side and reverse side of a sheet of paper may vary a little.

Usually, the opening side of the paper ream package is the print side. Follow the instructions on the paper package. Typically, the print side is indicated by an arrow.

Moisture content

Moisture content is the amount of water left in the paper after manufacture. It is one of the important characteristics of the paper. This can change greatly depending on the storage environment, although usually paper contains about 5% water by weight. Because paper often absorbs water, the amount of water can sometimes be about 10% in a high humidity environment. When the amount of water increases, the characteristics of the paper changes greatly. The fixing of the toner may become worse. For storage of the paper and during use, we recommend that the humidity of the surrounding environment be between 50% and 60%.

Rough estimate of basis weight

g/m^2	lb	
	Bond	Index
60	16	
64	17	
75	20	
90	24	
105	28	
120	32	
135	36	
163	43	90

Paper size

Paper size	mm	in.
Letter		8.5 × 11 in.
Legal		8.5 × 14 in.
Executive		7.25 × 10.5 in.
A4	210 × 297 mm	
A5	148 × 210 mm	
A5 Long Edge	210 × 148 mm	
A6	105 × 148 mm	
Envelope Monarch		3.875 × 7.5 in.
Envelope Com-10		4.12 × 9.5 in.
Envelope DL	110 × 220 mm	
Envelope C5	162 × 229 mm	
B5 (JIS)	182 × 257 mm	
B5 (ISO)	176 × 250 mm	
B6 (ISO)	125 × 176 mm	
Folio		8.5 × 13 in.
Post Card	100 × 148 mm	
Envelope DL-L	220 × 110 mm	
3 × 5		3 × 5 in.

Symbol and character sets (HL-2250DN / HL-2270DW / HL-2275DW only)

For the HP LaserJet emulation modes, you can choose the symbol and character sets using Web Based Management (Web browser) when connected to a network.

How to use Web Based Management (Web browser)

To use Web Based Management (Web browser), follow the steps below.

Note

We recommend Microsoft® Internet Explorer® 6.0 (or greater) or Firefox 3.0 (or greater) for Windows® and Safari 3.0 (or greater) for Macintosh. Please also make sure that JavaScript and cookies are always enabled in whichever browser you use. To use a Web browser, you will need to know the IP address of the print server.

1. Start your Web browser.
2. Type `http://printer_ip_address/` into your browser. (Where `printer_ip_address` is the IP address or the node name)
   - For example:

     `http://192.168.1.2/` (if the machine's IP address is 192.168.1.2.)

Note

- If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server.
- For Windows® users, as the print server supports TCP/IP and NetBIOS, you can also enter the NetBIOS name of the print server. The NetBIOS name can be seen on the printer settings page. The NetBIOS name assigned is the first 15 characters of the node name and by default it will appear as "BRNxxxxxxxxxxxx" for a wired network or "BRWxxxxxxxxxxxx" for a wireless network.
- For Macintosh users, you can also have easy access to Web Based Management by clicking the machine icon on **Status Monitor** screen.

3. Click **Printer Settings**.
4. Enter a user name and a password.

Note

The login name for the Administrator is "`admin`" (case sensitive) and the default password is "`access`".

5. Click **OK**.
6. Choose the **HP LaserJet** tab and click **Font Setup**. Choose a symbol set you want to use from the **Symbol Set** list box.

Symbol and character sets list

OCR symbol sets

When you choose the OCR-A or OCR-B font, the matching symbol set is always used.

OCR A (0O)

OCR B (1O)

HP LaserJet mode

ABICOMP Brazil / Portugal (13P)
ABICOMP International (14P)
Desktop (7J)
Greek8 (8G)
Hebrew7 (0H)
HP German (0G)
HP Spanish (1S)
ISO8859 / 5 Latin / Cyrillic (10N)
ISO8859 / 7 Latin / Greek (12N)
ISO Latin1 (0N)
ISO Latin2 (2N)
ISO Latin5 (5N)
ISO Latin6 (6N)
ISO8859 / 15 Latin9 (9N)
ISO10 Swedish (3S)
ISO11 Swedish (0S)
ISO14 JIS ASCII (0K)
ISO15 Italian (0I)
ISO16 Portuguese (4S)
ISO17 Spanish (2S)
ISO2 IRV (2U)
ISO21 German (1G)
ISO25 French (0F)
ISO4 UK (1E)
ISO57 Chinese (2K)
ISO6 ASCII (0U)
ISO60 Norwegian1 (0D)
ISO61 Norwegian2 (1D)
ISO69 French (1F)
ISO84 Portuguese (5S)
ISO85 Spanish (6S)
Legal (1U)
Math-8 (8M)
MC Text (12J)
MS Publishing (6J)
OCR-A (0O)
OCR-B (1O)
PC-1004 (9J)
PC-775 (26U)
PC-8 (10U)
PC-8 Bulgarian (13R)
PC-8 D/N (11U)
PC-8 Greek Alternate (437G) (14G)
PC-8 Latin / Greek (12G)
PC-8 PC Nova (27Q)
PC-8 Turkish (9T)
PC-850 (12U)
PC-851 Greece (10G)
PC-852 (17U)
PC-853 Latin3 (Turkish) (18U)
PC-855 Cyrillic (10R)
PC-857 Latin5 (Turkish) (16U)
PC-858 Multilingual Euro (13U)
PC-860 Portugal (20U)
PC-861 Iceland (21U)
PC-863 Canadian French (23U)
PC-865 Nordic (25U)
PC-866 Cyrillic (3R)

HP LaserJet mode

PC-869 Greece (11G)
PS Math (5M)
Roman8 (8U)
Roman Extension (0E)
Symbol (19M)
UKRAINIAN (14R)
Ventura Math (6M)
Windings (579R)
Windows Baltic (19L)
Windows Greek (9G)
Windows Latin2 (9E)
Pi Font (15U)
PS Text (10J)
Roman9 (4U)
Russian-GOST (12R)
Turkish8 (8T)
Ventura Intl (13J)
Ventura US (14J)
Windows 3.0 (9U)
Windows Cyrillic (9R)
Windows Latin1 (19U)
Windows Latin5 (5T)

Quick reference for bar code control commands (HL-2250DN / HL-2270DW / HL-2275DW only)

The machine can print bar codes in the HP LaserJet emulation modes.

Print bar codes or expanded characters

Code	ESC i
Dec	27 105
Hex	1B 69

Format: ESC i n ... n \

Creates bar codes or expanded characters according to the segment of parameters ‘n ... n’. For more information about parameters, see the following Definition of Parameters. This command must end with the ‘ \ ’ code (5CH).

Definition of parameters

This bar code command can have the following parameters in the parameter segment (n ... n). As parameters are effective within the single command syntax ESC i n ... n \, they do not apply in the bar code commands. If certain parameters are not given, they take the preset settings. The last parameter must be the bar code data start (‘b’ or ‘B’) or the expanded character data start (‘l’ or ‘L’). Other parameters can be given in any sequence. Each parameter can start with a lower-case or upper-case character, for example, ‘t0’ or ‘T0’, ‘s3’ or ‘S3’ and so one.

Bar code mode

n = ‘t0’ or ‘T0’	CODE 39 (default)
n = ‘t1’ or ‘T1’	Interleaved 2 of 5
n = ‘t3’ or ‘T3’	FIM (US-Post Net)
n = ‘t4’ or ‘T4’	Post Net (US-Post Net)
n = ‘t5’ or ‘T5’	EAN 8, EAN 13, or UPC A
n = ‘t6’ or ‘T6’	UPC E
n = ‘t9’ or ‘T9’	Codabar
n = ‘t12’ or ‘T12’	Code 128 set A
n = ‘t13’ or ‘T13’	Code 128 set B
n = ‘t14’ or ‘T14’	Code 128 set C
n = ‘t130’ or ‘T130’	ISBN (EAN)
n = ‘t131’ or ‘T131’	ISBN (UPC-E)
n = ‘t132’ or ‘T132’	EAN 128 set A
n = ‘t133’ or ‘T133’	EAN 128 set B

n = ‘t134’ or ‘T134’	EAN 128 set C

This parameter selects the bar code mode as shown above. When n is ‘t5’ or ‘T5’ the bar code mode (EAN 8, EAN 13, or UPC A) varies according to the number of characters in the data.

Bar code, expanded character, line block drawing and box drawing

n = ‘s0’ or ‘S0’	3: 1 (default)
n = ‘s1’ or ‘S1’	2: 1
n = ‘s3’ or ‘S3’	2.5: 1

This parameter chooses the bar code style as above. When the EAN 8, EAN 13, UPC-A, Code 128 or EAN 128 bar code mode is chosen, this bar code style parameter is ignored.

Expanded Character

‘S’

0 = White

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

For example ‘S’ n1 n2

n1 = Background fill pattern

n2 = Foreground fill pattern

If ‘S’ is followed by only one parameter, the parameter is a foreground fill pattern.

Line block drawing & box drawing

‘S’

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

Bar code

n = ‘mnnn’ or ‘Mnnn’ (nnn = 0 ~ 32767)

This parameter shows the bar code width. The unit of ‘nnn’ is a percentage.

Bar code human readable line ON or OFF

n = ‘r0’ or ‘R0	Human readable line OFF
n = ‘r1’ or ‘R1	Human readable line ON

Preset:	Human readable line ON
	(1) ‘T5’ or ‘t5’
	(2) ‘T6’ or ‘t6’
	(3) ‘T130’ or ‘t130’
	(4) ‘T131’ or ‘t131’
Preset:	Human readable line OFF
	All others

This parameter shows whether the machine prints the human readable line below the bar code. Human readable characters are always printed with OCR-B font of 10 pitch and all the current character style enhancements are masked. The default setting is determined by the bar code mode selected by ‘t’ or ‘T’.

Quiet zone

n = ‘onnn’ or ‘Onnn’ (nnn = 0 ~ 32767)

Quiet zone is the space on both sides of the bar codes. Its width can be shown using the units that are set by the ‘u’ or ‘U’ parameter. (For the description of ‘u' or ‘U' parameter, see the next section.) The default setting of the quiet-zone width is 1 inch.

Bar code, expanded character unit, line block drawing and box drawing

n = ‘u0’ or ‘U0’	mm (preset)
n = ‘u1’ or ‘U1’	1/10
n = ‘u2’ or ‘U2’	1/100
n = ‘u3’ or ‘U3’	1/12
n = ‘u4’ or ‘U4’	1/120
n = ‘u5’ or ‘U5’	1/10 mm
n = ‘u6’ or ‘U6’	1/300
n = ‘u7’ or ‘U7’	1/720

This parameter shows the measurement units of X-axis offset, Y-axis offset, and bar code height.

Bar code, expanded character, line block drawing and box drawing offset in X-axis

n = ‘xnnn’ or ‘Xnnn’

This parameter shows the offset from the left margin in the ‘u’- or ‘U’-specified unit.

Bar code & expanded character offset in Y-axis

n = ‘ynnn’ or ‘Ynnn’

This parameter shows the downward offset from the current print position in the ‘u’- or ‘U’-specified unit.

Bar code, expanded character, line block drawing and box drawing height

n = ‘hnnn’, ‘Hnnn’, ‘dnnn’, or ‘Dnnn’

1 EAN13, EAN8, UPC-A, ISBN (EAN13, EAN8, UPC-A), ISBN (UPC-E): 22 mm

2 UPC-E: 18 mm

3 Others: 12 mm

Expanded characters → 2.2 mm (preset)

Line block drawing and box drawing → 1 dot

This parameter shows the height of bar codes or expanded characters as shown above. It can start with ‘h’, ‘H’, ‘d’, or ‘D’. The height of bar codes is shown in the ‘u’- or ‘U’-specified unit. The default setting of the bar code height (12 mm, 18 mm or 22 mm) is determined by the bar code mode selected by ‘t’ or ‘T’.

Expanded character width, line block drawing and box drawing

n = ‘wnnn’ or ‘Wnnn’

Expanded character → 1.2 mm

Line block drawing and box drawing → 1 dot

This parameter shows the width of expanded characters as shown above.

Expanded character rotation

n = ‘a0’ or ‘A0’	‘Upright (preset)
n = ‘a1’ or ‘A1’	‘Rotated 90 degrees
n = ‘a2’ or ‘A2’	‘Upside down, rotated 180 degrees
n = ‘a3’ or ‘A3’	‘Rotated 270 degrees

Bar code data start

n = ‘b’ or ‘B’

Data that follows ‘b’ or ‘B’ is read in as bar code data. Bar code data must end with the ‘ \ ’ code (5CH), which also ends this command. The acceptable bar code data is determined by the bar code mode selected by ‘t’ or ‘T’.

- When CODE 39 is chosen with the parameter ‘t0’ or ‘T0’

  Forty three characters ‘0’ to ‘9’, ‘A’ to ‘Z’, ‘-’, ‘ . ’, ‘ (space)’, ‘$’, ‘ / ’, ‘+’, and ‘%’ can be accepted as bar code data. Other characters will cause a data error. The number of characters for bar codes is not limited. The bar code data automatically starts and ends with an asterisk ‘ * ’ (start character and stop character). If the received data has an asterisk ‘ * ’ at the beginning or end, the asterisk is regarded as a start character or stop character.

■ When Interleaved 2 of 5 is selected with the parameter ‘t1’ or ‘T1’:

Ten numerical characters ‘0’ to ‘9’ can be accepted as bar code data. Other characters cause a data error. The number of characters for bar codes is not limited. This mode of bar codes needs even characters. If the bar code data has odd characters, ‘0’ is automatically added to the end of the bar code data.

■ When FIM (US-Post Net) is selected with the parameter ‘t3’ or ‘T3’

Characters ‘A’ to ‘D’ are valid and one digit of data can be printed. Upper-case and lower-case alphabet characters can be accepted.

■ When Post Net (US-Post Net) is selected with the parameter ‘t4’ or ‘T4’

Numbers ‘0’ to ‘9' can be data and it must end with a check digit. ‘?’ can be used instead of the check digit.

■ When EAN 8, EAN 13, or UPC A is selected with the parameter ‘t5’ or ‘T5’

Ten numbers ‘0’ to ‘9’ can be accepted as bar code data. The number of characters for bar codes is limited as follows:

EAN 8: Total 8 digits (7 digits + 1 check digit)

EAN 13: Total 13 digits (12 digits + 1 check digit)

UPC A: Total 12 digits (11 digits + 1 check digit)

A number of characters other than those stated above will cause a data error that results in the bar code data being printed as normal print data. If the check digit is not correct, the machine decides the correct check digit automatically so that the correct bar code data will be printed. When EAN13 is selected, adding ‘+’ and a two-digit or five-digit number after the data can create an add-on code.

■ When UPC-E is selected with the parameter ‘t6’ or ‘T6’:

The numbers ‘0’ to ‘9’ can be accepted as bar code data.

Eight digits [1] [2]	(standard format) The first character must be ‘0’ and the data must end with a check digit. Total eight digits = ‘0’ plus 6 digits plus 1 check digit.
Six digits [2]	The first character and the last check digit are removed from the eight digit data.

[1] ‘?’ can be used instead of a check digit.

[2] Adding ‘+’ and two-digit or five-digit number after the data creates an add-on code.

■ When Codebar is chosen with the parameter ‘t9’ or ‘T9’

Characters ‘0’ to ‘9’, ‘-’, ‘ . ’, ‘$’, ‘/’, ‘+’, ‘ : ’ can be printed. Characters ‘A’ to ‘D’ can be printed as a start-stop code, which can be upper case or lower case. If there is no start-stop code, errors will happen. A check digit cannot be added and using ‘?’ causes errors.

■ When Code 128 Set A, Set B, or Set C is selected with the parameter ‘t12’ or ‘T12’, ‘t13’ or ‘T13’, or ‘t14’ or ‘T14’

Code 128 sets A, B and C can be individually selected. Set A shows characters Hex 00 to 5F. Set B includes characters Hex 20 to 7F. Set C includes the pairs 00 to 99. Switching is allowed between the code sets by sending %A, %B, or %C. FNC 1, 2, 3, and 4 are produced with %1, %2, %3, and %4. The SHIFT code, %S, allows temporary switching (for one character only) from set A to set B and vice versa. The ‘%’ character can be encoded by sending it twice.

■ When ISBN (EAN) is selected with the parameter ‘t130’ or ‘T130’

The same rules apply as for ‘t5’ or ‘T5’.

- When ISBN (UPC-E) is selected with the parameter ‘t131’ or ‘T131’:

  The same rules apply as for ‘t6’ or ‘T6’.

- When EAN 128 set A, set B or set C is selected with the parameter ‘t132’ or ‘T132’, ‘t133’ or ‘T133’ or ‘t134’ or ‘T134’

  The same rules apply as for ‘t12’ or ‘T12’, ‘t13’ or ‘T13’, or ‘t14’ or ‘T14’.

Box drawing

ESC i ... E (or e)

‘E’ or ‘e’ is a terminator.

Line block drawing

ESC i ... V (or v)

‘V’ or ‘v’ is a terminator.

Expanded character data start

n = ‘l’ or ‘L’

Data that follows ‘l’ or ‘L’ is read as expanded character data (or labeling data). Expanded character data must end with the ‘ \ ’ code (5CH), which also ends this command.

Table of Code (EAN) 128 set C

Code(EAN) 128 set C describes an original command. The correspondence table is as follows.

0	00	NUL	0x00
1	01	SOH	0x01
2	02	ST	

52	52	4	0x34
53	53	5	0x35

B Appendix (for Europe and Other Countries)

Brother numbers

IMPORTANT

For technical and operational help, you must call the country where you bought the machine. Calls must be made ***from within*** that country.

Register your product

Please complete the Brother Warranty Registration or, for your convenience and most efficient way to register your new product, register on-line at

http://www.brother.com/registration/

Frequently asked questions (FAQs)

The Brother Solutions Center is our one-stop resource for all your machine needs. You can download the latest drivers, software and utilities, read FAQs and troubleshooting tips to learn how to get the most from your Brother product.

http://solutions.brother.com/

You can check here for Brother driver updates.

Customer Service

Visit http://www.brother.com/ for contact information on your local Brother office.

Service center locations

For service centres in Europe, contact your local Brother Office. Address and telephone contact information for European offices can be found at http://www.brother.com/ by selecting your country.

Internet Addresses

Brother Global Web Site: http://www.brother.com/

For Frequently Asked Questions (FAQs), Product Support and Technical Questions, and Driver Updates and Utilities: http://solutions.brother.com/

C Appendix (for USA and Canada)

Brother numbers

IMPORTANT

For technical and operational help, you must call the country where you bought the machine. Calls must be made ***from within*** that country.

Register your product

By registering your product with Brother International Corporation, you will be recorded as the original owner of the product.

Your registration with Brother:

- may serve as a confirmation of the purchase date of your product should you lose your receipt;
- may support an insurance claim by you in the event of product loss covered by insurance; and,
- will help us notify you of enhancements to your product and special offers.

Please complete the Brother Warranty Registration or, for your convenience and most efficient way to register your new product, register on-line at

http://www.brother.com/registration/

FAQs (frequently asked questions)

The Brother Solutions Center is our one-stop resource for all your machine needs. You can download the latest software and utilities and read FAQs and troubleshooting tips to learn how to get the most from your Brother product.

http://solutions.brother.com/

You can check here for Brother driver updates.

Customer Service

In USA:	http://www.brother-usa.com/support (Self-Service/Email/Chat)
	1-877-BROTHER (1-877-276-8437)
In Canada:	1-877-BROTHER

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

In USA:	Printer Customer Support
	Brother International Corporation
	7905 North Brother Boulevard
	Bartlett, TN 38133
In Canada:	Brother International Corporation (Canada), Ltd.
	- Marketing Dept.
	1, rue Hotel de Ville Dollard-des-Ormeaux, PQ, Canada H9B 3H6

Service center locator (USA only)

For the location of a Brother authorized service center, call 1-877-BROTHER (1-877-276-8437) or visit us on-line at http://www.brother-usa.com/service/.

Service center locations (Canada only)

For the location of a Brother authorized service center, call 1-877-BROTHER.

Internet addresses

Brother Global Web Site: http://www.brother.com/

For Frequently Asked Questions (FAQs), Product Support and Technical Questions, Driver Updates and Utilities, and User's Guides: http://solutions.brother.com/

For Brother Accessories & Supplies:

In USA :http://www.brothermall.com/

In Canada :http://www.brother.ca/

Ordering supplies

For best quality results use only genuine Brother supplies, which are available at most Brother retailers. If you cannot find the supplies you need and you have a Visa, MasterCard, Discover, or American Express credit card, you can order supplies directly from Brother. (You can visit us online for a complete selection of the Brother accessories and supplies that are available for purchase.)

Note

In Canada only Visa and MasterCard are accepted.

In USA:	1-877-552-MALL (1-877-552-6255)
	1-800-947-1445 (fax)
	http://www.brothermall.com/
In Canada:	1-877-BROTHER
	http://www.brother.ca/

Description	Item
Toner Cartridges	TN-420 (Standard, prints approx. 1,200 pages) [1]
	TN-450 (High Yield, prints approx. 2,600 pages) [1]
Drum Unit	DR-420

[1] Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

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