

# User's Guide

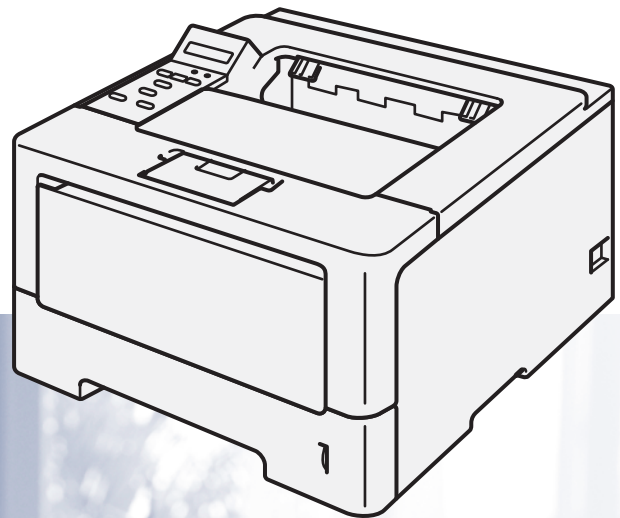
Brother Laser Printer

HL-5470DW

HL-5470DWT

HL-6180DW

HL-6180DWT



## **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.

HL-6180DW(T) in USA: Please go to the Brother Solutions Center at <http://solutions.brother.com/> and click Manuals on your model page to download the other manuals.

## User's Guides and where to find them?

Which manual?	What's in it?	Where is it?
<b>Product Safety Guide</b>	Read this Guide first. Please read the Safety Instructions before you set up your machine. See this Guide for trademarks and legal limitations.	Printed / In the Box
<b>Quick Setup Guide</b>	Follow the instructions for setting up your machine and installing the drivers and software for the operating system and connection type you are using.	Printed / In the Box
<b>User's Guide</b>	Learn the print operations, how to replace consumables, and performing routine maintenance. See troubleshooting tips.	For USA: HL-6180DW(T) PDF file / Brother Solutions Center at <a href="http://solutions.brother.com/">http://solutions.brother.com/</a>
<b>Network User's Guide</b>	This Guide provides useful information about wired and wireless network settings and security settings using the Brother machine. You can also find supported protocol information for your machine and detailed troubleshooting tips.	HL-5470DW(T) PDF file / CD-ROM / In the Box  For Other Countries: PDF file / CD-ROM / In the Box
<b>Wi-Fi Direct™ Guide</b>	This Guide provides details on how to configure and use your Brother machine for wireless printing directly from a mobile device supporting the Wi-Fi Direct™ standard.	PDF file / Brother Solutions Center at <a href="http://solutions.brother.com/">http://solutions.brother.com/</a>
<b>Google Cloud Print Guide</b>	This Guide provides details on how to configure your Brother machine to a Google account and use Google Cloud Print services for printing over the Internet from devices using Gmail™ for mobile, GOOGLE DOCS™ for mobile and applications for the Chrome OS.	PDF file / Brother Solutions Center at <a href="http://solutions.brother.com/">http://solutions.brother.com/</a>
<b>Mobile Print/Scan Guide for Brother iPrint&amp;Scan</b>	This Guide provides useful information about printing JPEG and PDF <sup>1</sup> files from your mobile device and scanning <sup>2</sup> from your Brother machine to your mobile device when connected on a Wi-Fi network.	PDF file / Brother Solutions Center at <a href="http://solutions.brother.com/">http://solutions.brother.com/</a>

<sup>1</sup> PDF printing is not supported on Windows® Phone.

<sup>2</sup> HL-5470DW(T) and HL-6180DW(T) do not support the scanning feature.

# Using the documentation

Thank you for buying a Brother machine! Reading the documentation will help you make the most of your machine.

## Symbols and conventions used in the documentation

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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.

### **Important**

Important indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.



Prohibition icons indicate actions that must not be performed.



Electrical Hazard icons alert you to possible electrical shock.



Fire Hazard icons alert you to the possibility of fire.



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.

### **Bold**

Bold style identifies keys on the machine control panel or computer screen.

### *Italics*

Italicized style emphasizes an important point or refers you to a related topic.

### Courier New

Courier New font identifies the messages shown on the LCD of the machine.

# Table of Contents

<b>1</b>	<b>Printing Methods</b>	<b>1</b>
	About this Machine .....	1
	Front view and Back view .....	1
	Acceptable paper and other print media .....	2
	Recommended paper and print media .....	2
	Type and size of paper .....	2
	Handling and using special paper .....	4
	Unprintable area when printing from a computer .....	7
	Loading paper .....	8
	Loading paper and print media .....	8
	Loading paper in the standard paper tray and the optional lower tray .....	8
	Loading paper in the multi-purpose tray (MP tray) .....	12
	Duplex (2-sided) printing .....	18
	Guidelines for printing on both sides of the paper .....	18
	Automatic duplex printing .....	19
	Manual duplex printing .....	21
<b>2</b>	<b>Driver and Software</b>	<b>22</b>
	Printer driver .....	22
	Printing a document .....	23
	Printer driver settings .....	24
	Windows® .....	25
	Accessing the printer driver settings .....	25
	Features in the Windows® printer driver .....	26
	Basic tab .....	26
	Advanced tab .....	31
	Print Profiles tab .....	39
	Accessories tab .....	41
	Support .....	43
	Features in the BR-Script3 printer driver (PostScript® 3™ language emulation) .....	45
	Uninstalling the printer driver .....	52
	Status Monitor .....	53
	Macintosh .....	55
	Features in the printer driver (Macintosh) .....	55
	Choosing page setup options .....	55
	Features in the BR-Script3 printer driver (PostScript® 3™ language emulation) .....	65
	Removing the printer driver .....	70
	Status Monitor .....	71
	Software .....	73
	Software for networks .....	73

<b>3</b>	<b>General Information</b>	<b>74</b>
	Control panel .....	74
	Control panel overview .....	74
	LED indications .....	76
	Machine status messages .....	76
	Menu table .....	77
	Reprinting documents .....	90
	Reprinting the last job .....	90
	How to reprint the last job .....	90
	Printing Secure data .....	91
	Secure data .....	91
	How to print Secure data .....	91
	Security features .....	92
	Secure Function Lock 2.0 .....	92
	Setting Lock .....	92
	Ecology features .....	94
	Toner Save .....	94
	Sleep Time .....	94
	Deep Sleep mode .....	94
	Quiet mode feature .....	95
	Turning Quiet mode on/off .....	95
<b>4</b>	<b>Options</b>	<b>96</b>
	Lower tray (LT-5400) .....	97
	SO-DIMM .....	98
	SO-DIMM types .....	98
	Installing extra memory .....	99
<b>5</b>	<b>Routine Maintenance</b>	<b>101</b>
	Replacing consumable items .....	101
	Replacing the toner cartridge .....	103
	Replacing the drum unit .....	110
	Cleaning and Checking the machine .....	116
	Cleaning the outside of the machine .....	116
	Cleaning the corona wire .....	118
	Cleaning the drum unit .....	120
	Cleaning the paper pick-up roller .....	125
	Packing and shipping the machine .....	126
<b>6</b>	<b>Troubleshooting</b>	<b>129</b>
	Identifying your problem .....	129
	Error and maintenance messages .....	130
	Paper jams .....	134
	If you are having difficulty with your machine .....	147
	Improving the print quality .....	151
	Machine Information .....	158
	Checking the Serial Number .....	158
	Default settings .....	158

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**A Appendix 160**

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Machine specifications.....160

- General.....160
- Print media .....162
- Printer .....163
- Interface.....163
- Computer requirements.....164
- Important information for choosing your paper.....165
- Consumable Items.....166
- Network (LAN).....166

Brother numbers.....167

**B Index 170**

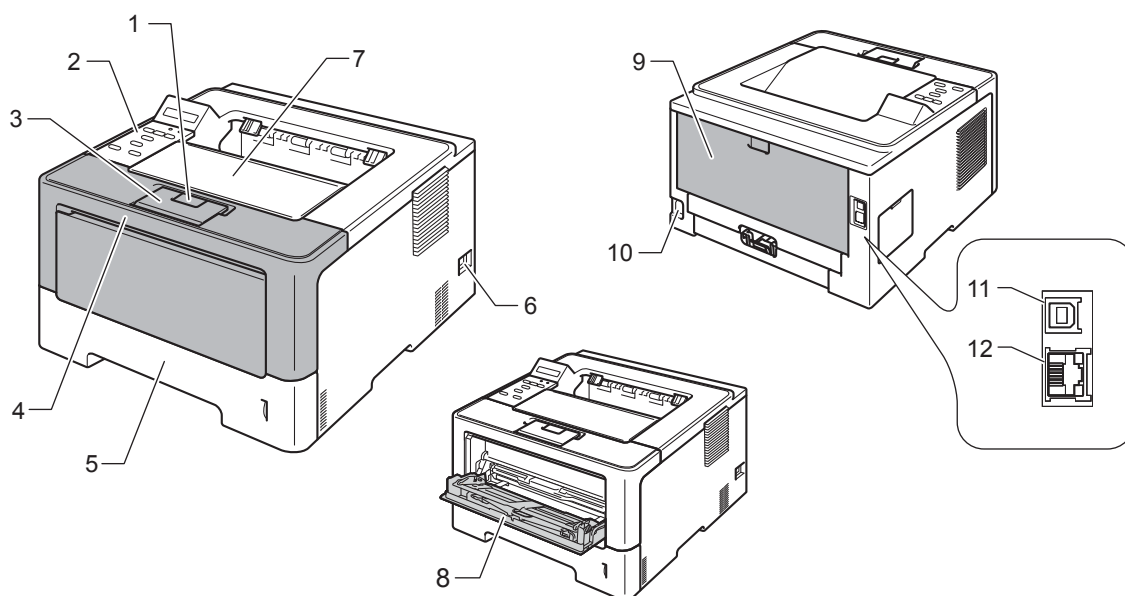
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# 1

## Printing Methods

### About this Machine

#### Front view and Back view



- 1 Front cover release button
- 2 Control panel with a Liquid Crystal Display (LCD)
- 3 Face-down output tray support flap (support flap)
- 4 Front cover
- 5 Paper tray
- 6 Power switch
- 7 Face-down output tray
- 8 Multi-purpose tray (MP tray)
- 9 Back cover (Face-up output tray when open)
- 10 AC power connector
- 11 USB port
- 12 10BASE-T / 100BASE-TX / 1000BASE-T port <sup>1</sup>

<sup>1</sup> 1000BASE-T is available for HL-6180DW(T).



#### Note

Most of the illustrations in this User's Guide show the HL-5470DW.

## 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: plain paper, thin paper, thick paper, thicker 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

Paper Type	Item
Plain paper	Xerox 4200 20 lb
	Hammermill Laser Print 24 lb (90 g/m <sup>2</sup> )
Recycled paper	(No specific brand recommended)
Labels	Avery laser labels white #5160
Envelopes	(No specific brand recommended)

## Type and size of paper

The machine feeds paper from the installed standard paper tray, multi-purpose tray or optional lower tray.

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

Tray and optional unit	Name
Paper tray	Tray 1
Optional lower tray unit (Standard equipment for HL-5470DWT and HL-6180DWT)	Tray 2
Multi-purpose tray	MP Tray



### Paper capacity of the paper trays

	Paper size	Paper types	No. of sheets
Paper Tray (Tray 1)	Letter, A4, Legal, B5 (ISO/JIS), Executive, A5, A5 (Long Edge), A6, B6 (ISO), Folio <sup>1</sup>	Plain paper, Thin paper and Recycled paper	up to 250 sheets 20 lb (80 g/m <sup>2</sup> ) <sup>2</sup> up to 500 sheets 20 lb (80 g/m <sup>2</sup> ) <sup>2</sup>
Multi-purpose Tray (MP Tray)	Width: 3 to 8.5 in. (76.2 to 215.9 mm) Length: 5 to 14 in. (127 to 355.6 mm)	Plain paper, Thin paper, Thick paper, Thicker paper, Bond paper, Recycled paper, Envelopes and Labels	50 sheets 20 lb (80 g/m <sup>2</sup> ) 3 Envelopes
Optional Lower Tray (Tray 2) <sup>3</sup>	Letter, A4, Legal, B5 (ISO/JIS), Executive, A5, B6 (ISO), Folio <sup>1</sup>	Plain paper, Thin paper and Recycled paper	up to 500 sheets 20 lb (80 g/m <sup>2</sup> )

<sup>1</sup> Folio size is 8.5 in. × 13 in. (215.9 mm x 330.2 mm).

<sup>2</sup> 250 sheets for HL-5470DW(T), 500 sheets for HL-6180DW(T)

<sup>3</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

### Recommended paper specifications

The following paper specifications are suitable for this machine.

Basis weight	20-24 lb (75-90 g/m <sup>2</sup> )
Thickness	80-110 μm
Roughness	Higher than 20 sec.
Stiffness	90-150 cm <sup>3</sup> /100
Grain direction	Long grain
Volume resistivity	10e <sup>9</sup> -10e <sup>11</sup> ohm
Surface resistivity	10e <sup>9</sup> -10e <sup>12</sup> ohm-cm
Filler	CaCO <sub>3</sub> (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 20 to 24 lb (75 to 90 g/m<sup>2</sup>).
- 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* >> page 165.)

## 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 392 °F (200 °C).
- If you use bond paper, paper having a rough surface or paper that is wrinkled or creased, the paper may exhibit degraded performance.

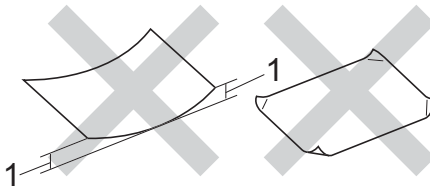
### Types of paper to avoid

#### ! 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 0.08 in. (2 mm) 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. 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.

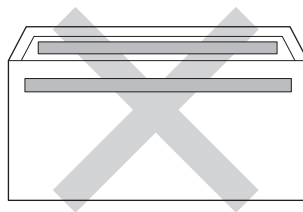
We recommend that you print a test envelope to make sure the print results are what you want.

### Types of envelopes to avoid

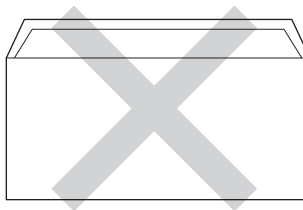
#### ❗ Important

DO NOT use envelopes:

- that are damaged, curled, wrinkled or an unusual shape
- that are extremely shiny or textured
- with clasps, staples, snaps or tie strings
- with self-adhesive closures
- that are of a baggy construction
- that are not sharply creased
- that are embossed (have raised writing on them)
- that were previously printed by a laser machine
- that are pre-printed on the inside
- that cannot be arranged neatly when stacked
- 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 windows, holes, cut-outs or perforations
- with glue on surface as shown in figure below

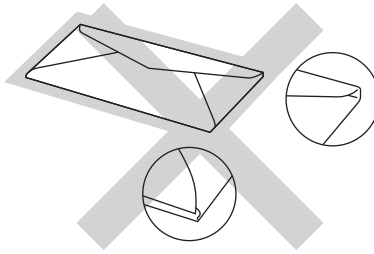


- with double flaps as shown in figure below



- with sealing flaps that are not folded down when purchased

- with 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.

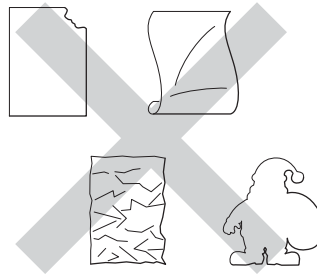
## Labels

The machine will print on most types of labels designed for use with a *laser* machine. 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 392 °F (200 °C) for a period of 0.1 seconds.

## Types of labels to avoid

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

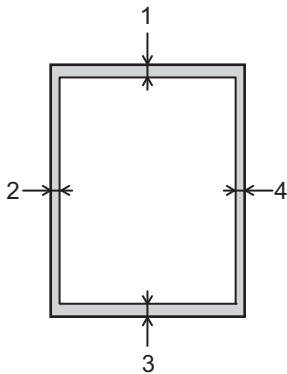


## ! Important

- Avoid feeding labels with the carrier sheet exposed because your machine will be damaged. **DO NOT** feed partially used carrier sheets.
- 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.
- **DO NOT** reuse or insert labels that have previously been used or are missing a few labels on the sheet.

## Unprintable area when printing from a computer

The figures below show maximum unprintable areas. The unprintable areas may vary depending on the paper size or settings in the application you are using.



Usage	Document Size	Top (1) Bottom (3)	Left (2) Right (4)
Print	Letter	0.16 in. (4.23 mm)	0.25 in. (6.35 mm)
	A4	0.16 in. (4.23 mm)	0.24 in. (6.01 mm)
	Legal	0.16 in. (4.23 mm)	0.25 in. (6.35 mm)



**Note**

When using BR-Script3 emulation, the unprintable area around the edges of the paper is 0.16 in. (4.23 mm).

# Loading paper

## Loading paper and print media

The machine can feed paper from the standard paper tray, optional lower tray or multi-purpose tray.

When you put paper into the paper tray, note the following:

- If your application software supports paper size selection on the print menu, you can select it through the software. If your application software does not support it, you can set the paper size in the printer driver or by using the control panel keys.

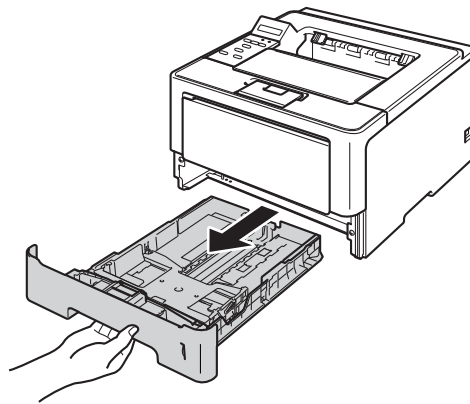
## Loading paper in the standard paper tray and the optional lower tray

You can load up to 250 sheets of paper (HL-5470DW(T)) or up to 500 sheets of paper (HL-6180DW(T)) in the standard paper tray (Tray 1). You can also load up to 500 sheets in the optional lower tray (Tray 2)<sup>1</sup>. Paper can be loaded up to the maximum paper mark (▼▼▼) on the right-hand side of the paper tray. (For the recommended paper to use, see *Acceptable paper and other print media* ►► page 2.)

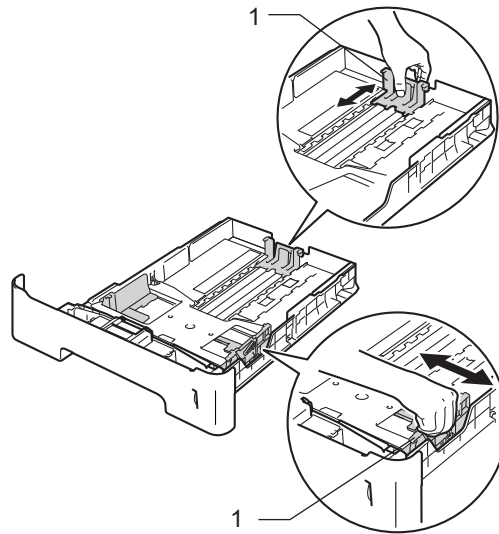
<sup>1</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

## Printing on plain paper, thin paper or recycled paper from Tray 1 and Tray 2

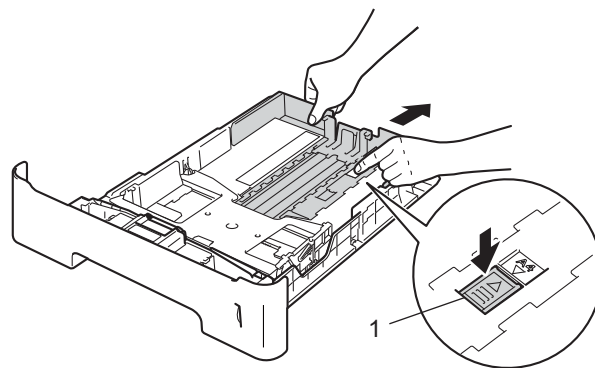
- 1 Pull the paper tray completely out of the machine.



- 2 While pressing the green paper-guide release lever (1), slide the paper guides to fit the paper you are loading in the tray. Make sure that the guides are firmly in the slots.

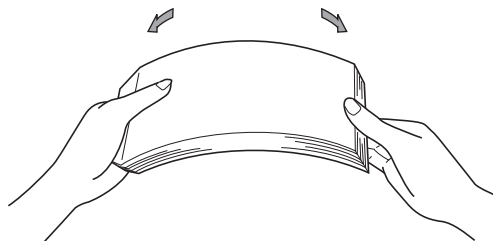


 **Note**

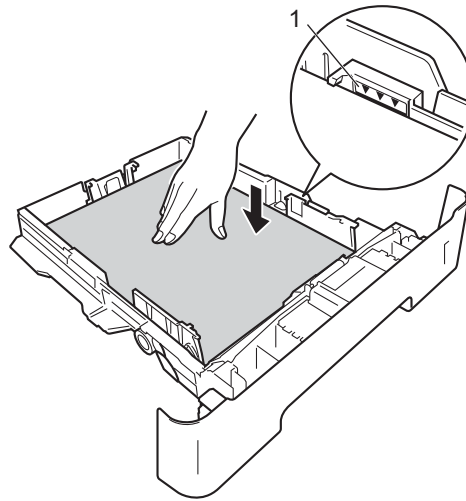


For Legal or Folio size paper, press the release button (1) in the bottom of the paper tray and then pull out the back of the paper tray. (Legal and Folio size paper are not available in some regions.)

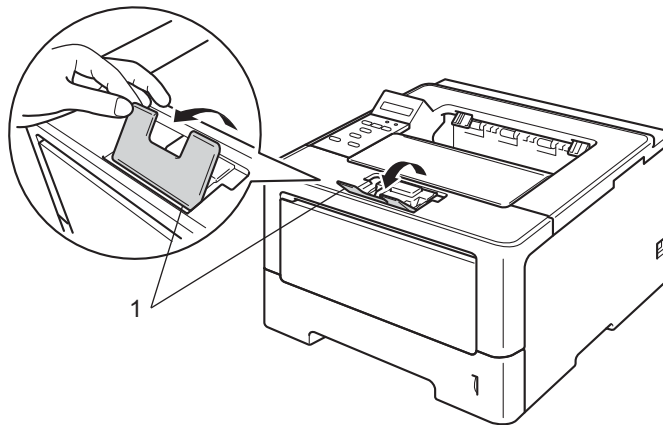
- 3 Fan the stack of paper well to avoid paper jams and misfeeds.



- 4 Put paper in the tray and make sure:
- The paper is below the maximum paper mark (▼▼▼) (1).  
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.



- 5 Put the paper tray firmly back in the machine. Make sure that it is completely inserted into the machine.
- 6 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.





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

■ **Paper Size**

- |           |               |              |                                      |                         |
|-----------|---------------|--------------|--------------------------------------|-------------------------|
| <b>A4</b> | <b>Letter</b> | <b>Legal</b> | <b>Executive</b>                     | <b>A5</b>               |
| <b>B5</b> | <b>B6</b>     | <b>Folio</b> | <b>A5 Long Edge</b><br>(Tray 1 only) | <b>A6 (Tray 1 only)</b> |

For the acceptable paper sizes, see *Type and size of paper* >> page 2.

■ **Media Type**

- |                    |                   |                       |
|--------------------|-------------------|-----------------------|
| <b>Plain Paper</b> | <b>Thin Paper</b> | <b>Recycled Paper</b> |
|--------------------|-------------------|-----------------------|

■ **Paper Source**

- |              |                             |
|--------------|-----------------------------|
| <b>Tray1</b> | <b>Tray2 (if available)</b> |
|--------------|-----------------------------|

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



**Note**

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The name of options in the drop-down lists may vary depending on your operating system and its version.

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8 Send the print data to the machine.

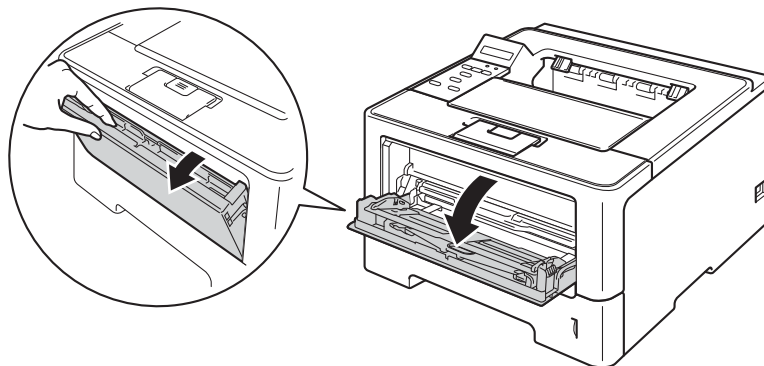
## Loading paper in the multi-purpose tray (MP tray)

You can load up to 3 envelopes or special print media in the MP tray or up to 50 sheets of plain paper. Use this tray to print on thick paper, bond paper, labels or envelopes. (For the recommended paper to use, see *Acceptable paper and other print media* >> page 2.)

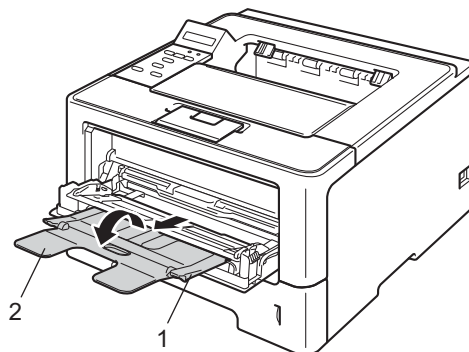
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### Printing on plain paper, thin paper, recycled paper and bond paper from the MP tray

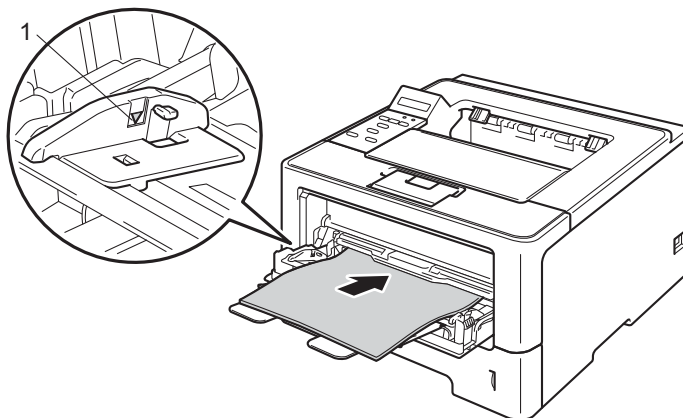
- 1 Open the MP tray and lower it gently.



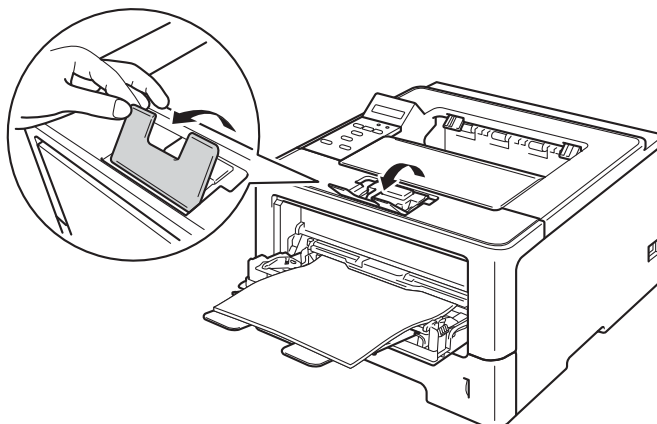
- 2 Pull out the MP tray support (1) and unfold the flap (2).



- 3 Put paper in the MP tray and make sure:
- The paper stays under the maximum paper mark (1).
  - The side to be printed on must be face up with the leading edge (top of the paper) in first.
  - The paper guides touch the sides of the paper so it will feed properly.



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



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

■ Paper Size

<b>A4</b>	<b>Letter</b>	<b>Legal</b>	<b>Executive</b>	<b>A5</b>
<b>A5 Long Edge</b>	<b>A6</b>	<b>B5</b>	<b>B6</b>	<b>3 x 5</b>
<b>Folio</b>	Customized paper size <sup>1</sup>			

<sup>1</sup> You can define your original paper size by choosing **User Defined...** in Windows® printer driver, **PostScript Custom Page Size** in BR-Script printer driver for Windows®, or **Custom Page Sizes** in Macintosh printer drivers.

For the acceptable paper sizes, see *Type and size of paper* >> page 2.

■ Media Type

<b>Plain Paper</b>	<b>Thin Paper</b>	<b>Recycled Paper</b>	<b>Bond Paper</b>
--------------------	-------------------	-----------------------	-------------------

■ Paper Source

**MP Tray**

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



**Note**

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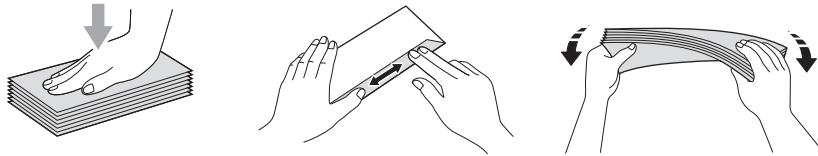
The name of options in the drop-down lists may vary depending on your operating system and its version.

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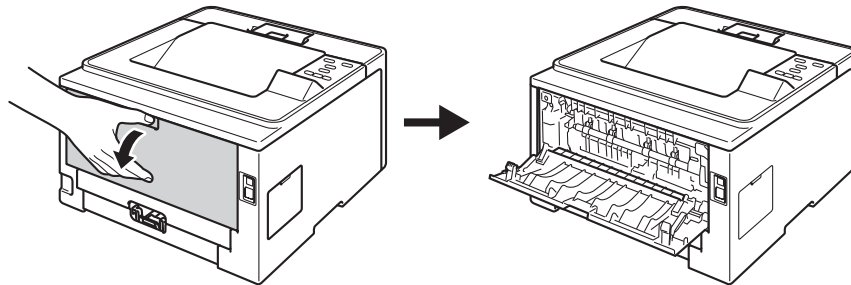
6 Send the print data to the machine.

## Printing on thick paper, labels and envelopes from the MP tray

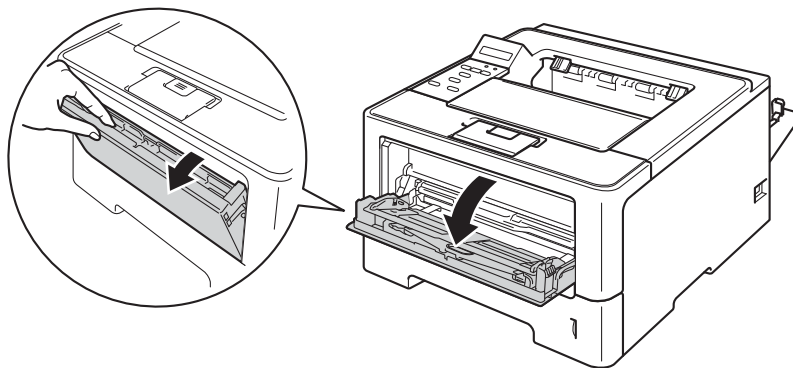
Before loading, press the corners and sides of the envelopes to make them as flat as possible.



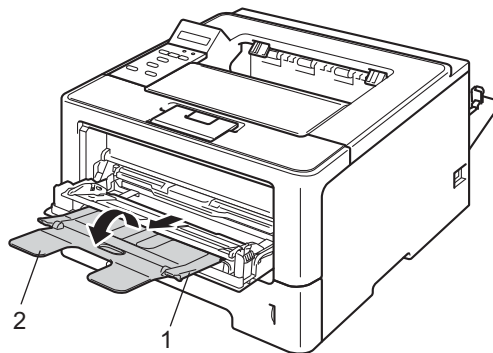
- 1 Open the back cover (face-up output tray).



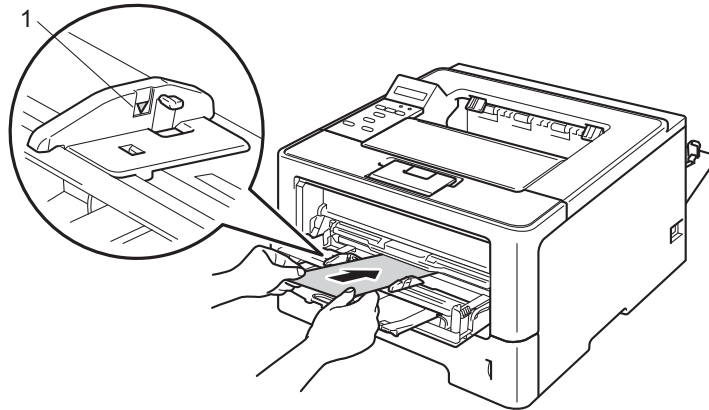
- 2 Open the MP tray and lower it gently.



- 3 Pull out the MP tray support (1) and unfold the flap (2).



- 4 Put paper, labels or envelopes in the MP tray. Make sure:
  - The number of envelopes in the MP tray does not exceed 3.
  - The paper, labels or envelopes stay under the maximum paper mark (1).
  - The side to be printed on must be face up.



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

■ **Paper Size**

<For printing thick paper or labels>

- |                     |                                    |              |                  |              |
|---------------------|------------------------------------|--------------|------------------|--------------|
| <b>A4</b>           | <b>Letter</b>                      | <b>Legal</b> | <b>Executive</b> | <b>A5</b>    |
| <b>A5 Long Edge</b> | <b>A6</b>                          | <b>B5</b>    | <b>B6</b>        | <b>3 x 5</b> |
| <b>Folio</b>        | Customized paper size <sup>1</sup> |              |                  |              |

<For Printing envelopes>

- |                                    |           |           |                |
|------------------------------------|-----------|-----------|----------------|
| <b>Com-10</b>                      | <b>DL</b> | <b>C5</b> | <b>Monarch</b> |
| Customized paper size <sup>1</sup> |           |           |                |

<sup>1</sup> You can define your original paper size by choosing **User Defined...** in Windows® printer driver, **PostScript Custom Page Size** in BR-Script printer driver for Windows®, or **Custom Page Sizes** in Macintosh printer drivers.

For the acceptable paper sizes, see *Type and size of paper* >> page 2.

### ■ Media Type

<For printing thick paper>

**Thick Paper**      **Thicker Paper**

<For printing labels>

**Label**

<For Printing envelopes>

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

### ■ Paper Source

**MP Tray**

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



#### Note

- The name of options in the drop-down lists may vary depending on your operating system and its version.
- When you use Envelope #10, choose **Com-10** (for Windows®) or **#10 Envelope** (for Macintosh) from the **Paper Size** drop-down list.
- 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), **PostScript Custom Page Size** (for BR-Script printer driver for Windows®) or **Custom Page Sizes** (for Macintosh printer driver).

- 6 Send the print data to the machine.



#### Note

- Remove each envelope as soon as it has been printed. Stacking the envelopes may cause them to jam or curl.
- If envelopes or thick paper get smudged during printing set the **Media Type** to **Env. Thick** or **Thicker Paper** to increase the fixing temperature.
- If the envelopes are creased after they are printed, see *Improving the print quality* >> page 151.
- If your thick paper curls during printing, put only one sheet at a time in the MP tray.
- Envelope joints that are sealed by the manufacturer should be secure.
- All sides of the envelope should be properly folded without wrinkles or creases.

- 7 Close the back cover (face-up output tray).

## Duplex (2-sided) printing

The supplied printer drivers 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 put it back in the paper tray. 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* >> page 134. If you have a print quality problem, see *Improving the print quality* >> page 151.)



#### Note

---

Make sure that the paper tray is completely inserted in the machine.

---



## Automatic duplex printing

If you are using the Macintosh Printer Driver, see *Duplex (2-sided) Printing* >> page 64.

### Automatic duplex printing with the Windows® printer driver

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

■ **Paper Size**

Letter

Legal

Folio

■ **Media Type**

Plain Paper

Recycled Paper

Thin Paper

■ **Paper Source**

Tray1

MP Tray

Tray2 (if available)

■ **Duplex / Booklet**

Duplex

■ **Duplex Type in Duplex Settings**

There are four options for each orientation. (See *Duplex / Booklet* >> page 29.)

■ **Binding Offset in Duplex Settings**

You can specify the offset for binding. (See *Duplex / Booklet* >> page 29.)



#### Note

- You should use plain paper, recycled paper or thin paper. Do not use bond paper.
- The name of options in the drop-down lists may vary depending on your operating system and its version.

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.

## Automatic duplex printing with the BR-Script printer driver for Windows®

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

■ **Paper Size**

Letter                      Legal                      Folio

■ **Media Type**

Plain Paper              Recycled Paper      Thin Paper

■ **Paper Source**

Tray1                      MP Tray                      Tray2 (if available)

■ **Print on Both sides**

Flip on Short Edge      Flip on Long Edge

■ **Page Order**

Front to Back              Back to Front



**Note**

- You should use plain paper, recycled paper or thin paper. Do not use bond paper.
- The name of options in the drop-down lists may vary depending on your operating system and its version.

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

---

The BR-Script printer driver for Windows® does not support manual duplex printing. If you are using the Macintosh Printer Driver, see *Manual Duplex Printing* >> page 64.

### Manual duplex printing with the Windows® printer driver

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 that are specified for the tray you are using, except envelopes and labels which have only one print side.

- **Paper Source**

Tray1                      MP Tray                      Tray2 (if available)

- **Duplex / Booklet**

Duplex (Manual)

- **Duplex Type in Duplex Settings**

There are four options for each orientation. (See *Duplex / Booklet* >> page 29.)

- **Binding Offset in Duplex Settings**

You can specify the offset for binding. (See *Duplex / Booklet* >> page 29.)

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.

---

## Printer driver

A printer driver is software that translates data from the format used by a computer to the format that a particular printer 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 Web site at <http://solutions.brother.com/>. Install the drivers by following the steps in the Quick Setup Guide. The latest printer drivers can be downloaded from the Brother Solutions Center Web site at:

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

### For Windows®

- Windows® printer driver (the most suitable printer driver for this product)
- BR-Script printer driver (PostScript® 3™ language emulation) <sup>1</sup>

<sup>1</sup> Install the driver using the Custom Install from the CD-ROM.

### For Macintosh

- Macintosh printer driver (the most suitable printer driver for this product)
- BR-Script printer driver (PostScript® 3™ language emulation) <sup>1</sup>

<sup>1</sup> For the installation instruction of the driver, visit us at <http://solutions.brother.com/>.

### For Linux® <sup>1 2</sup>

- LPR printer driver
- CUPS printer driver

<sup>1</sup> For more information and to download the printer driver for Linux please visit your model page at <http://solutions.brother.com/> or use the link on the CD-ROM we have supplied.

<sup>2</sup> Depending on Linux distributions, the driver may not be available or it may be released after the initial release of your model.

## Printing a document

---

When the machine receives data from your computer, it begins printing by picking up paper from the paper tray. The paper tray can feed many types of paper and envelopes. (See *Paper capacity of the paper trays* >> page 3.)

- 1 From your application, choose the Print command.  
If any other printer drivers are installed on your computer, choose **Brother HL-XXXX series** (Where XXXX is your model name.) as your printer driver from the Print or Print Settings menu in your software application, and then click **OK** or **Print** to begin printing.
- 2 Your computer sends the data to the machine. The **Data** LED will blink and the LCD will show *Printing*.
- 3 When the machine finishes printing all the data, the **Data** LED finishes blinking.



### Note

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- You can choose the paper size and orientation in your application software.
  - If your application software does not support your custom paper size, choose the next largest paper size.
  - Then adjust the print area by changing the right and left margins in your application software.
-

## Printer driver settings

---

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<sup>4</sup> / Booklet<sup>2 4</sup>
- Paper Source
- Scaling
- Reverse Print
- Use Watermark<sup>1 2</sup>
- Header-Footer Print<sup>1 2</sup>
- Toner Save Mode
- Secure Print
- Administrator<sup>1 2</sup>
- User Authentication<sup>1 2</sup>
- Use Reprint<sup>1 2</sup>
- Sleep Time
- Macro<sup>1 2</sup>
- Density Adjustment
- Improve Print Output
- Skip Blank Page<sup>1 3</sup>
- Print Profile<sup>1 2</sup>

<sup>1</sup> These settings are not available with the BR-script printer driver for Windows®.

<sup>2</sup> These settings are not available with the Macintosh printer driver and the BR-Script printer driver for Macintosh.



<sup>3</sup> These settings are not available with the BR-Script printer driver for Macintosh.

<sup>4</sup> Manual duplex printing / Manual booklet printing are not available with the BR-script printer driver for Windows®.

# Windows®

## Accessing the printer driver settings

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- 1 (For Windows® XP and Windows Server® 2003)  
Click **Start**, and then **Printers and Faxes**.  
(For Windows Vista® and Windows Server® 2008)  
Click the  button, **Control Panel, Hardware and Sound**, and then **Printers**.  
(For Windows® 7 and Windows Server® 2008R2)  
Click the  button and **Devices and Printers**.
- 2 Right-click the **Brother HL-XXXX series** icon (where XXXX is your model name) and select **Properties** (**Printer properties**, and **Brother HL-XXXX series** if necessary). The printer properties dialog box appears.
- 3 Choose the **General** tab and then click **Printing Preferences... (Preferences...)**. To configure the tray settings, choose the **Accessories** tab.

## Features in the Windows® printer driver

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

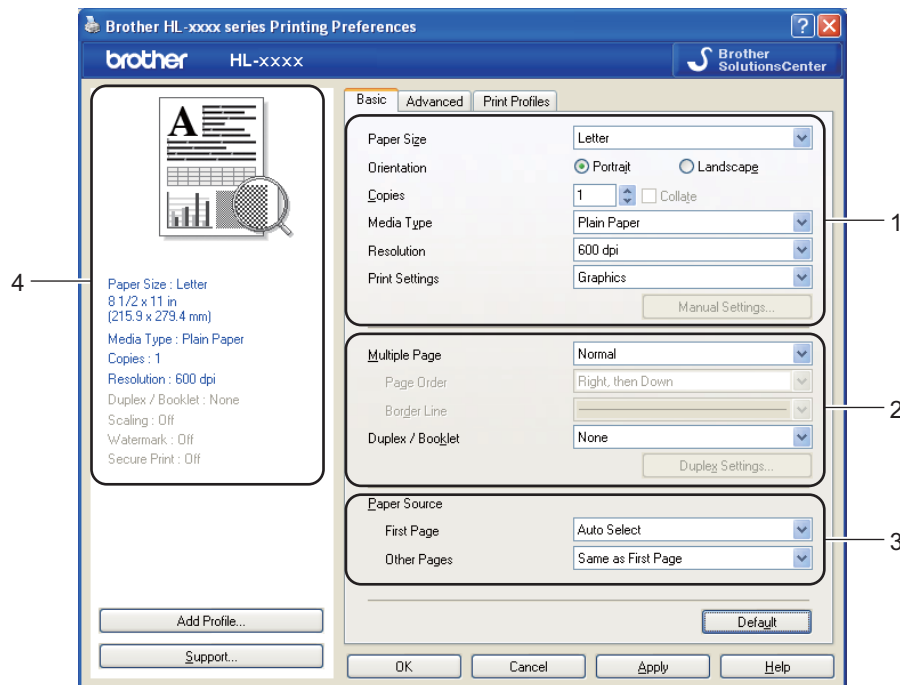


### Note

- The screens in this section are from Windows® XP. The screens on your PC will vary depending on your operating system.
- To access the printer driver settings, see *Accessing the printer driver settings* >> page 25.

## Basic tab

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



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


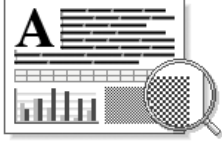


### Paper Size

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 (Vertical)	Landscape (Horizontal)
	

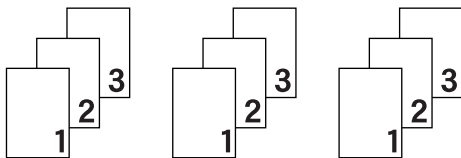
### Copies

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

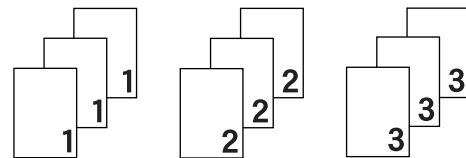
#### ■ Collate

With the Collate check box selected, one complete copy of your document will be printed and then 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 16 to 28 lb (60 to 105 g/m<sup>2</sup>) 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**. For more information, see *Paper capacity of the paper trays* >> page 3.

**Resolution**

You can choose the resolution as follows.

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

**Note**

The print speed will change depending on what print quality setting you choose. Higher print quality takes longer to print, while lower print quality takes less time to print.

**Print Settings**

You can change the print settings as follows:

**■ 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 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**

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.

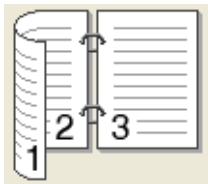
When you choose **Duplex** or **Duplex (Manual)**, the **Duplex Settings...** button becomes available to choose. You can set following settings in the **Duplex Settings** dialog box.

- **Duplex Type**

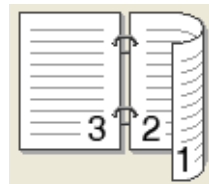
There are four types of duplex binding directions available for each orientation.

### Portrait

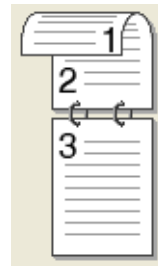
**Long Edge (Left)**



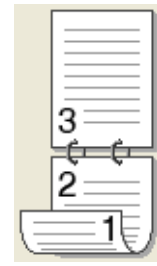
**Long Edge (Right)**



**Short Edge (Top)**



**Short Edge (Bottom)**



### Landscape

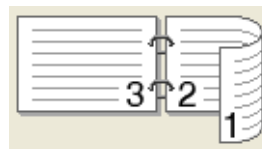
**Long Edge (Top)**



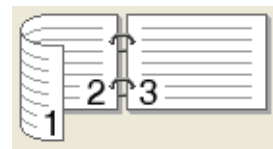
**Long Edge (Bottom)**



**Short Edge (Right)**



**Short Edge (Left)**



- **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**

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.

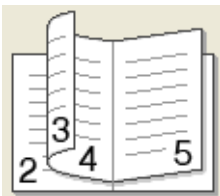
When you choose **Booklet** or **Booklet (Manual)**, the **Duplex Settings...** button becomes available to choose. You can set the following settings in the **Duplex Settings** dialog box.

- **Duplex Type**

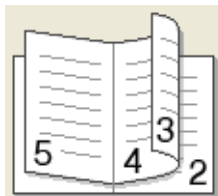
There are two types of duplex binding directions available for each orientation.

### Portrait

#### Left Binding



#### Right Binding

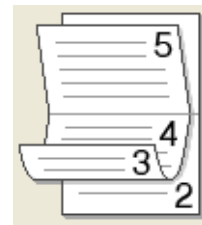


### Landscape

#### 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.

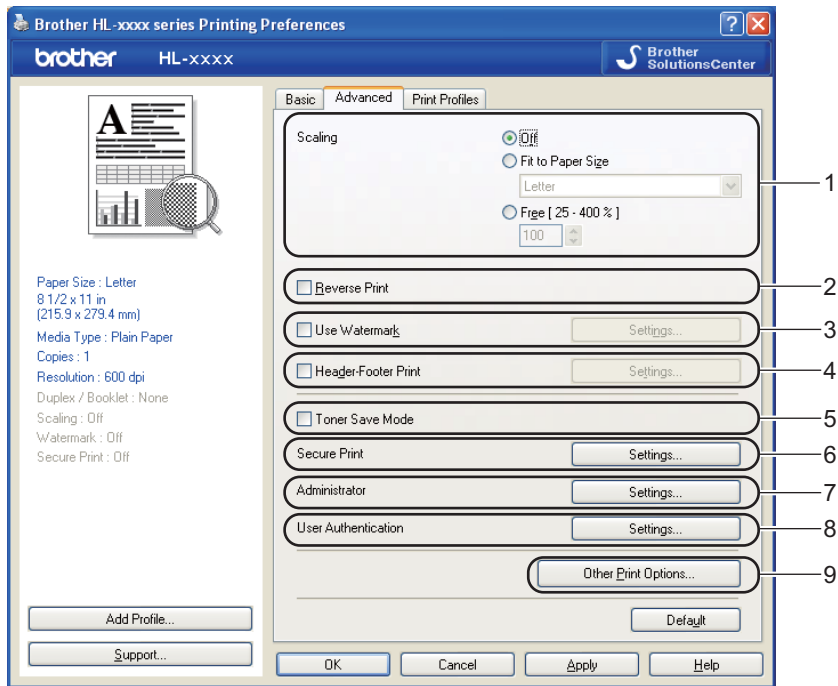
## Paper Source

You can choose **Auto Select**, **Tray1**, **Tray2**<sup>1 2</sup>, **MP Tray** or **Manual** and specify separate trays for printing the first page and for printing from the second page onwards.

<sup>1</sup> Available if the optional tray is installed.

<sup>2</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

## Advanced tab



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

- **Scaling (1)**
- **Reverse Print (2)**
- **Use Watermark (3)**
- **Header-Footer Print (4)**
- **Toner Save Mode (5)**
- **Secure Print (6)**
- **Administrator (7)**
- **User Authentication (8)**
- **Other Print Options (9)**

### Scaling

You can change the print image scaling.

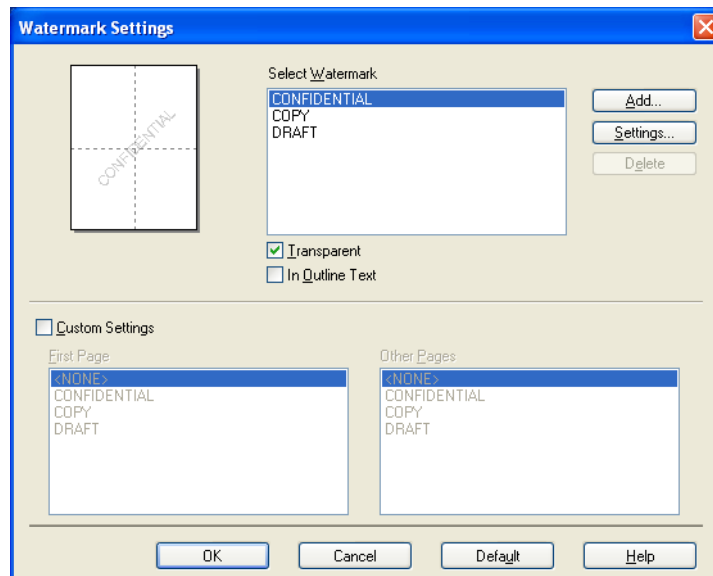
### Reverse Print

Check **Reverse Print** to reverse the data from up to down.

## Use Watermark

You can put a logo or text into your document as a watermark. You can choose one of the preset Watermarks, or you can use a bitmap file that you have created. Check **Use Watermark** and then click the **Settings...** button.

## Watermark Settings



### ■ Transparent

Check **Transparent** to print the watermarked image in the background of your document. If this feature is not checked then the watermark will be printed on top of your document.

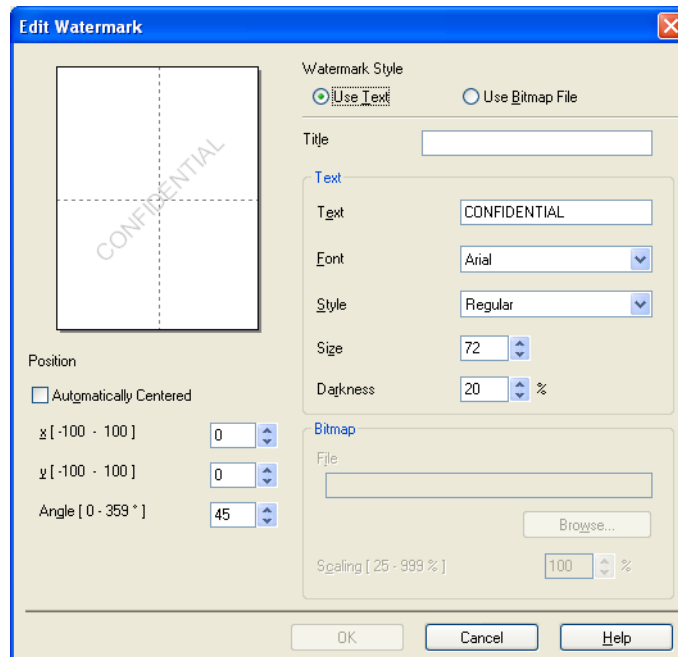
### ■ In Outline Text

Check **In Outline Text** if you only want to print an outline of the watermark. It is available when you choose a text watermark.

## ■ Custom Settings

You can choose to print which watermark to be printed on the first page or on the other pages.

Click the **Add** button to add the watermark settings and then choose **Use Text** or **Use Bitmap File** in **Watermark Style**.



- **Title**

Enter a suitable title into the field.

- **Text**

Enter your Watermark Text into the **Text** box, and then choose the **Font**, **Style**, **Size** and **Darkness**.

- **Bitmap**

Enter the file name and location of your bitmap image in the **File** box, or click **Browse** to search for the file. You can also set the scaling size of the image.

- **Position**

Use this setting if you want to control the position of the watermark on the page.

## Header-Header 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, prints 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** and **1200 dpi** resolutions.

## Secure Print

Secure documents are documents that are password protected when they are sent to the machine. Only the people who know the password will be able to print them. Since the documents are secured at the machine, you must enter the password using the control panel of the machine to print them.

To send a secured document:

- 1 Click **Settings...** from **Secure Print** and check **Secure Print**.
- 2 Enter your password and click **OK**.
- 3 To print the secured document, you must enter your password using the control panel of the machine. (See *Printing Secure data* >> page 91.)

To delete a secured document:

You need to use the control panel of the machine to delete a secured document. (See *Printing Secure data* >> page 91.)



## Administrator

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



### ■ Password

Enter the password into this box.



#### Note

Click **Set Password...** to change the password.

### ■ Copies Lock

Lock the copy pages selection to prevent multiple copy printing.

### ■ Multiple Page & Scaling Lock

Lock the scaling setting and multiple page setting.

### ■ 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.

## User Authentication

If you are restricted from PC Print by the Secure Function Lock 2.0 feature, you need to set your ID and PIN in the **User Authentication Settings** dialog. Click **Settings** of the **User Authentication** and enter your ID and PIN. If your PC login name is registered to Secure Function Lock 2.0, you can check the **Use PC Login Name** box instead of entering your ID and PIN.

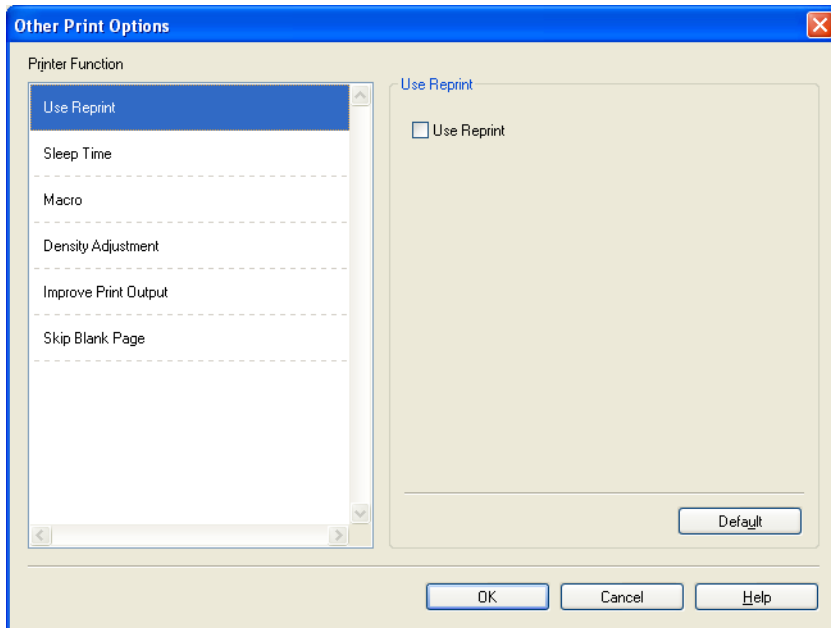
More information about Secure Function Lock 2.0 >> [Network User's Guide](#)



#### Note

- When you use the machine through a network you can see the information of your ID such as the status of restricted features and the number of remaining pages you are allowed to print by clicking the **Check Print Status**. The **Authentication result** dialog will appear.
- When you use the machine through a network, you can make the **Authentication result** dialog appear each time you print by checking the **Show print status before printing**.
- If you want to enter your ID and PIN each time you print, check the **Enter ID Name/PIN for each print job**.

## Other Print Options



You can set the following in Printer Function:

- **Use Reprint**
- **Sleep Time**
- **Macro**
- **Density Adjustment**
- **Improve Print Output**
- **Skip Blank Page**

### Use Reprint

The machine keeps the 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 *Reprinting documents* >> page 90.



#### 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 LCD shows `SLeeP`, but the machine can still receive data. Receiving a print job will automatically wake up the machine to start printing.

## Macro

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

## Density Adjustment

Increase or decrease the print density.

## 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.



#### Note

---

This operation will decrease the temperature of the machine's fusing process.

---

### ■ Improve Toner Fixing

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



#### Note

---

This operation will increase the temperature of the machine's fusing process.

---

### ■ 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 ambient 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.



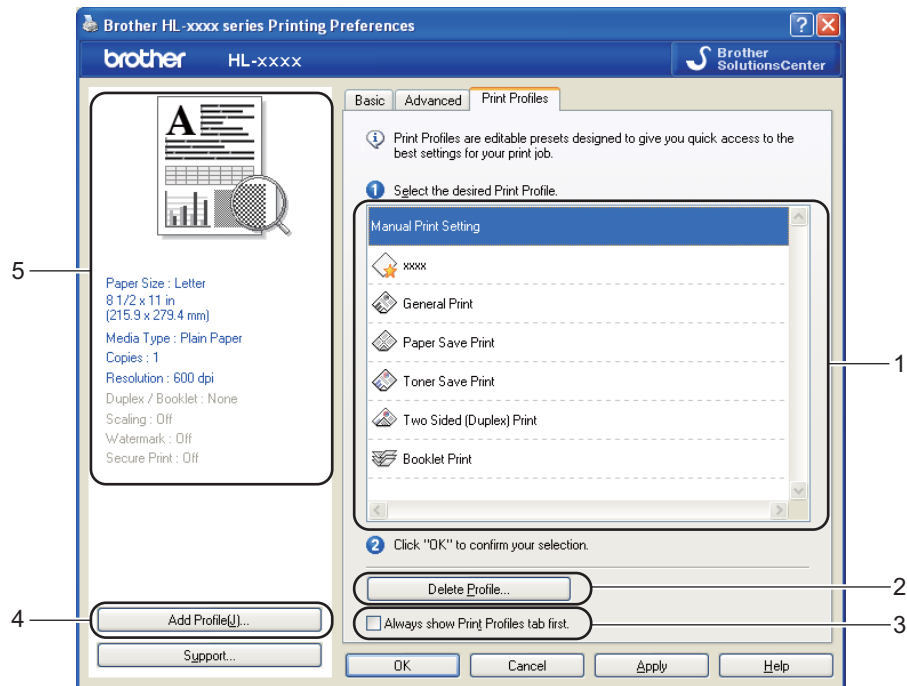
### Note

This option does not work when you choose the following options:

- **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**

## Print Profiles tab

**Print Profiles** are editable presets designed to give you quick access to frequently used printing configurations.



- **Print profile list box (1)**
- **Delete Profile (2)**
- **Always show Print Profiles tab first (3)**
- **Add Profile (4)**
- **Current print profile view (5)**

- 1 Choose your profile from the print profile list box.
- 2 If you want to display the **Print Profiles** tab at the front of the window from the next time you print, check **Always show Print Profiles tab first**.
- 3 Click **OK** to apply your chosen profile.

### Add Profile

The **Add Profile** dialog appears by clicking **Add Profile**. You can add 20 new profiles with your preferred settings.

- 1 Enter the desired title in **Name**.
- 2 Choose an icon you want to use from the Icon list, then click **OK**.
- 3 The current settings shown on the left side of the printer driver window will be saved.

## Delete Profile

The **Delete Profile** dialog appears by clicking **Delete Profile**. You can delete any of the profiles you have added.

- 1 Choose your profile from the print profile list box.
- 2 Click **Delete**.
- 3 The selected profile will be deleted.

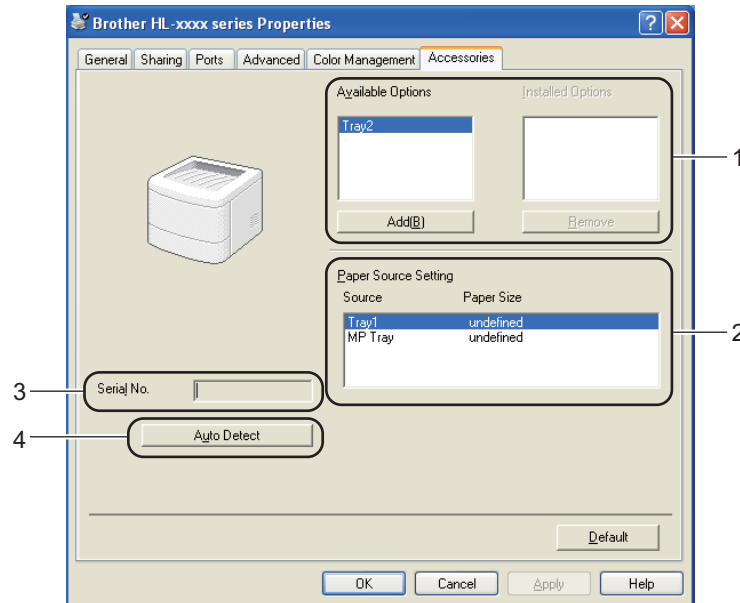
## Accessories tab



### Note

To access the **Accessories** tab, see *Accessing the printer driver settings* >> page 25.

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



### ■ Available Options / Installed Options (1)

You can manually add and remove the options that are installed on the machine. Tray settings will match the installed options.

### ■ Paper Source Setting (2)

This feature recognizes the paper size set from the control panel menu for each paper tray when you click **Auto Detect** (4).

### ■ Serial No. (3)

By clicking **Auto Detect** (4), the printer driver will probe the machine and display its serial number. If it fails to receive the information, the screen will display “-----”.

### ■ **Auto Detect (4)**

The **Auto Detect** function finds the currently installed optional devices and shows the available settings in the printer driver. When you click **Auto Detect**, options that are installed on the machine will be listed in **Available Options (1)**. You can manually add or remove the options by choosing an optional device you want to add or remove, and then clicking **Add** or **Remove**.



#### **Note**

---

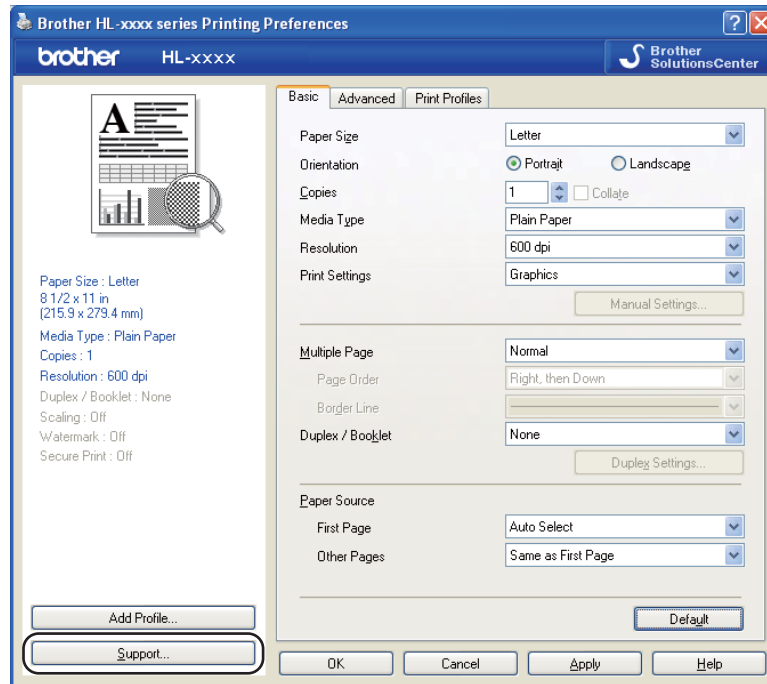
The **Auto Detect (4)** function is not available under the following machine conditions:

- The machine power switch is off.
  - The machine is in an error state.
  - The machine is connected to the print server using a USB cable in a shared network environment.
  - The cable is not connected to the machine correctly.
-



## Support

Click **Support...** in the **Printing Preferences** dialog box.



### ■ Brother Solutions Center (1)

The Brother Solutions Center (<http://solutions.brother.com/>) is a Web site 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 Web site for original/genuine Brother supplies by clicking this button.

■ **Brother CreativeCenter** (3)

You can visit our Web site for free and easy online solutions for business and home users by clicking this button.

■ **Print Settings** (4)

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

■ **Print Fonts** (7)

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

## Features in the BR-Script3 printer driver (PostScript® 3™ language emulation)



### Note

The screens in this section are from Windows® XP. The screens on your PC may vary depending on your operating system.

2

## Printing Preferences

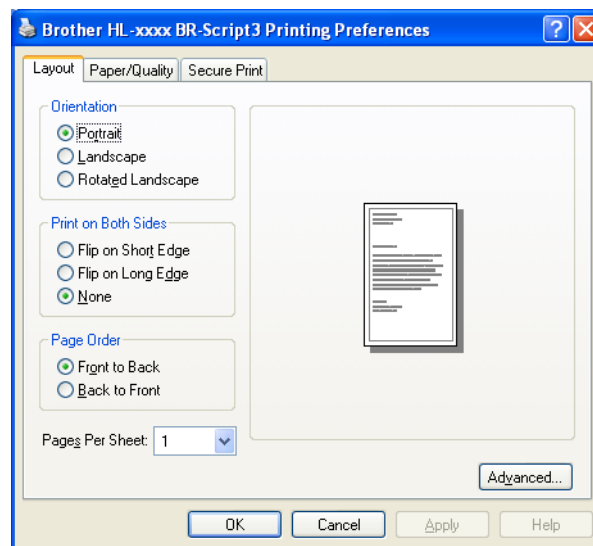


### Note

You can access the **Printing Preferences** dialog box by clicking **Printing Preferences...** in the **General** tab of the **Brother HL-XXXX BR-Script3 Properties** dialog box.

### ■ Layout tab

You can change the layout setting by choosing the settings for **Orientation**, **Print on Both Sides** (Duplex), **Page Order** and **Pages Per Sheet**.



- **Orientation**

Orientation selects the position of how your document will be printed.

(**Portrait**, **Landscape** or **Rotated Landscape**)

- **Print on Both Sides**

If you want to do duplex printing, choose **Flip on Short Edge** or **Flip on Long Edge**.

- **Page Order**

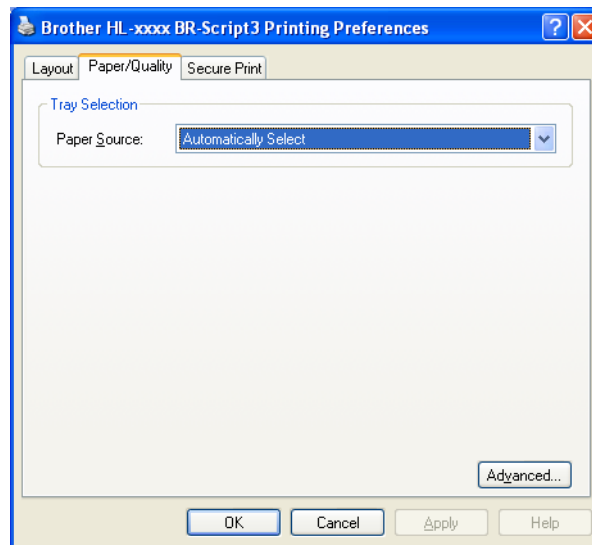
Specifies the order in which the pages of your document will be printed. **Front to Back** prints the document so that page 1 is on top of the stack. **Back to Front** prints the document so that page 1 is on the bottom of the stack.

- **Pages Per Sheet**

The **Pages Per Sheet** selection can reduce the image size of a page by allowing multiple pages to be printed on one sheet of paper. Also, you can print a document in the booklet style automatically when you choose **Booklet**.

- **Paper/Quality tab**

Choose the **Paper Source**.



- **Paper Source**

You can choose **Automatically Select**, **Auto Select**, **Tray1**, **Tray2**<sup>1,2</sup>, **MP Tray** or **Manual Feed**.

#### **Automatically Select**

This setting will automatically pull paper from any paper source that has a paper size defined in the printer driver that matches your document.

#### **Auto Select**

This setting will automatically pull paper from any paper source that has a paper size defined in the machine that matches your document.

#### **Tray1**

This setting will pull paper from Tray 1.

#### **Tray2**

This setting will pull paper from Tray 2. (Available if the optional tray is installed.)<sup>2</sup>

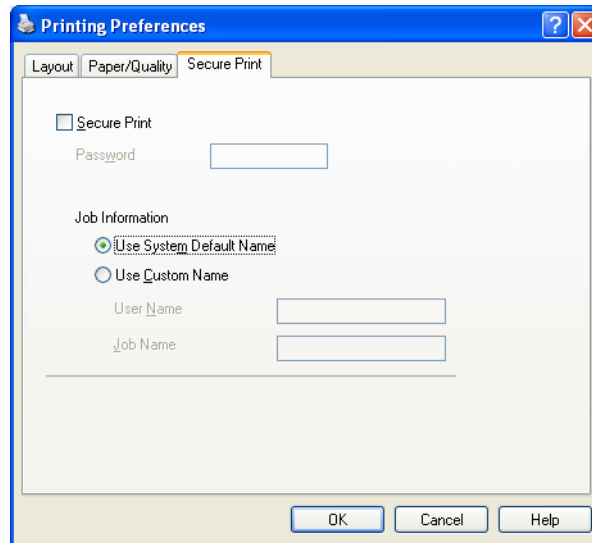
#### **MP Tray**

This setting will pull paper from the MP Tray. The paper size needs to match the defined paper size.

<sup>1</sup> Available if the optional tray is installed.

<sup>2</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

## ■ Secure Print tab



Secure documents are documents that are password protected when they are sent to the machine. Only the people who know the password will be able to print them. Since the documents are secured at the machine, you must enter the password using the control panel of the machine to print them.

To send a secured document:

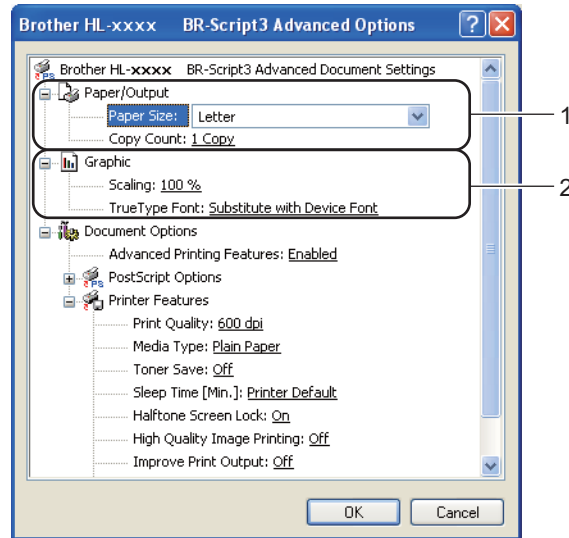
- 1 Check **Secure Print**.
- 2 Enter your password and click **OK**.
- 3 To print the secured document, you must enter your password using the control panel of the machine. (See *Printing Secure data* >> page 91.)

To delete a secured document:

You need to use the control panel of the machine to delete a secured document. (See *Printing Secure data* >> page 91.)

## Advanced options

You can access the **Advanced options** by clicking the **Advanced...** button on the **Layout** tab or **Paper/Quality** tab.



### 1 Choose the **Paper Size** and **Copy Count** (1).

#### ■ **Paper Size**

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

#### ■ **Copy Count**

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

### 2 Set the **Scaling** and **TrueType Font** settings (2).

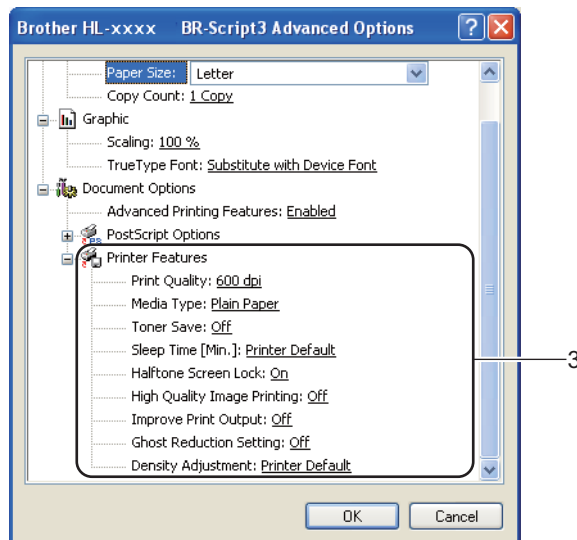
#### ■ **Scaling**

Specifies whether to reduce or enlarge documents, and by what percentage.

#### ■ **TrueType Font**

Specifies the TrueType font options. Click **Substitute with Device Font** (the default) to use equivalent printer fonts for printing documents that contain TrueType fonts. This will permit faster printing; however, you might lose special characters not supported by the printer font. Click **Download as Softfont** to download TrueType fonts for printing instead of using printer fonts.

- 3 You can change settings by choosing a setting in the **Printer Features** list (3):



### ■ Print Quality

You can choose the following print quality settings.

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

### ■ 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**

### ■ Toner Save

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



#### Note

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

### ■ Sleep Time [Min.]

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 LCD shows `Sleep`, but the machine can still receive data. Receiving a print job will automatically wake up the machine to start printing.

### ■ Halftone Screen Lock

Stops other applications from modifying the Halftone settings. The default setting is **On**.

### ■ High Quality Image Printing

You can get high quality image printing. If you set **High Quality Image Printing** to **On**, the print speed will be slower.

### ■ 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.



#### Note

This operation will decrease the temperature of the machine's fusing process.

#### • Improve Toner Fixing

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



#### Note

This operation will increase the temperature of the machine's fusing process.



### ■ Ghost Reduction Setting

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 ambient humidity is below 30% or ghosting may increase.



#### Note

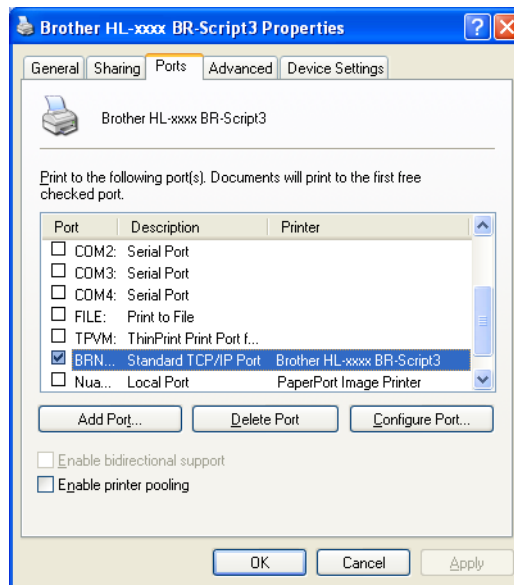
This feature may not reduce ghosting for all types of paper. Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.

### ■ Density Adjustment

Increase or decrease the print density.

## Ports tab

If you want to change the port where your machine is connected or the path to the network machine you are using, choose or add the port you want to use.



## 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 originally 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.
- 

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

## Status Monitor



The **Status Monitor** utility is a configurable software tool for monitoring the status of one or more devices, allowing you to get immediate notification of error messages such as paper empty or paper jam.



You can check the device status at anytime by double-clicking the icon in the tasktray or by choosing **Status Monitor** located in **Start/All Programs/Brother/HL-XXXX** on your PC.

(Windows® 7)

If you have set the **Enable Status Monitor on startup** during installation, you will find the  button or **Status Monitor** icon on the taskbar.

To show the **Status Monitor** icon on your taskbar, click the  button. The **Status Monitor** icon will appear in the small window. Then drag the  icon to the taskbar.



There is also a link to the **Troubleshooting** and Brother Genuine Supplies Web site. Click **Visit the Genuine Supplies website** button for more information on Brother genuine supplies.

### Note

- For more information about using the Status Monitor software, right-click the **Status Monitor** icon and choose **Help**.
- The automatic software update feature is active when the status monitor feature is active.

## Monitoring the machine's status

The Status Monitor icon will change color depending on the machine status.

- A green icon indicates the normal stand-by condition.



- A yellow icon indicates a warning.



- A red icon indicates a printing error has occurred.



There are two locations where you can display the **Status Monitor** on your PC - in the tasktray or on the desktop.

# Macintosh

## Features in the printer driver (Macintosh)

This machine supports Mac OS X 10.5.8 - 10.6.x - 10.7.x.



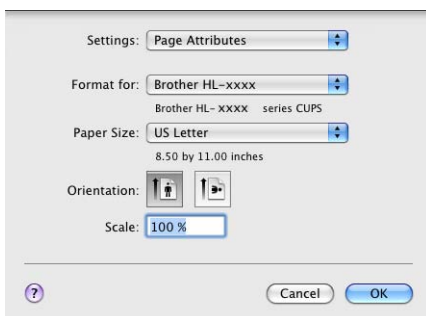
### Note

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

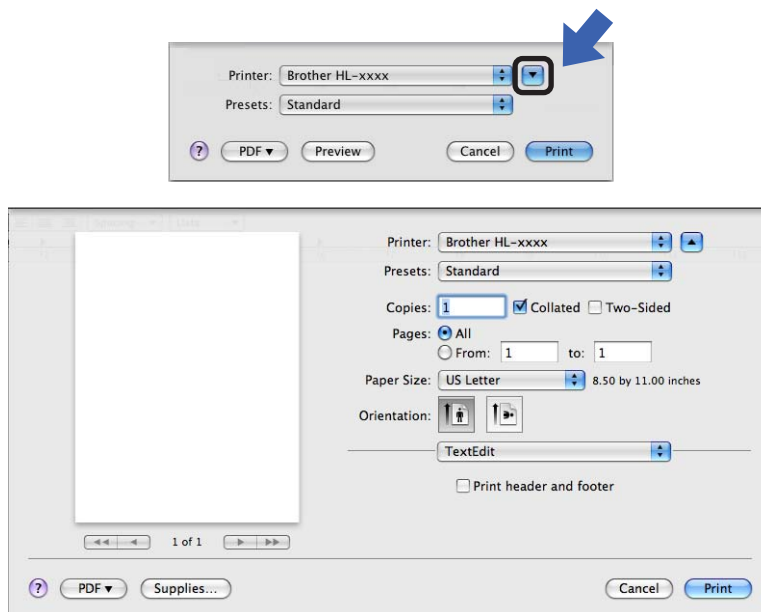
## Choosing page setup options

You can set the **Paper Size**, **Orientation** and **Scale**.

- 1 From an application such as TextEdit, click **File**, then **Page Setup**. Make sure **Brother 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**.



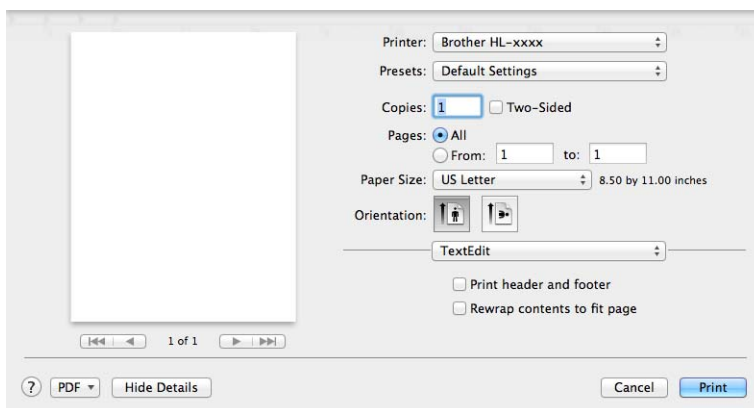
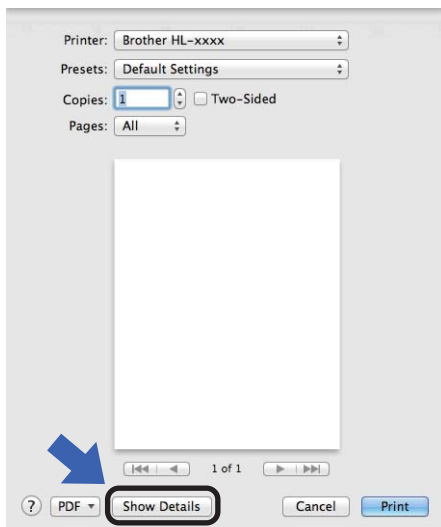
- 2 From an application such as TextEdit, click **File**, then **Print** to start printing.
  - (For Mac OS X 10.5.8 and 10.6.x)  
For more page setup options, click the disclosure triangle beside the Printer pop-up menu.



 **Note**

You can save the current settings as a preset by choosing **Save As** from the **Presets** drop-down list.

- (For Mac OS X 10.7.x)  
For more page setup options, click the **Show Details** button.

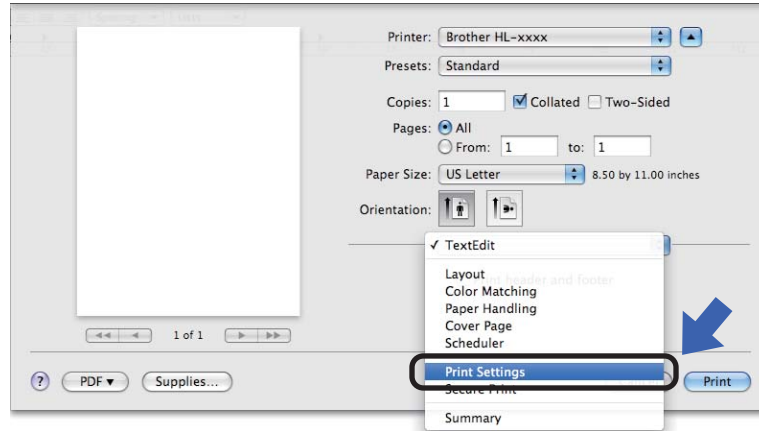


**Note**

You can save the current settings as a preset by choosing **Save Current Settings as Preset...** from the **Presets** drop-down list.

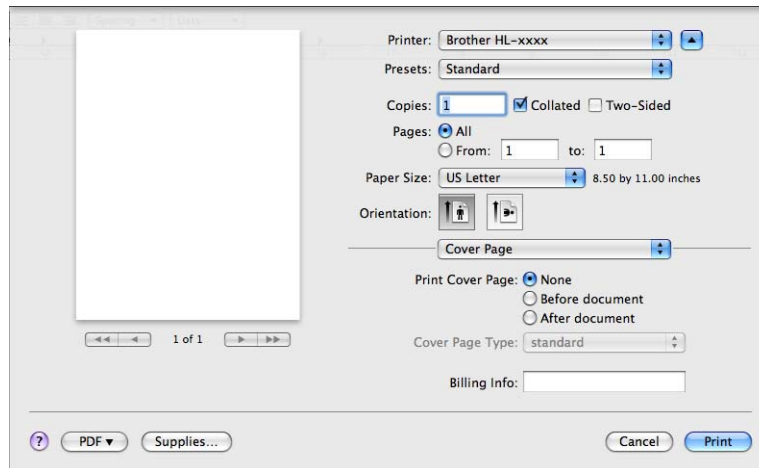
## Choosing printing options

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



## Cover Page

You can choose 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

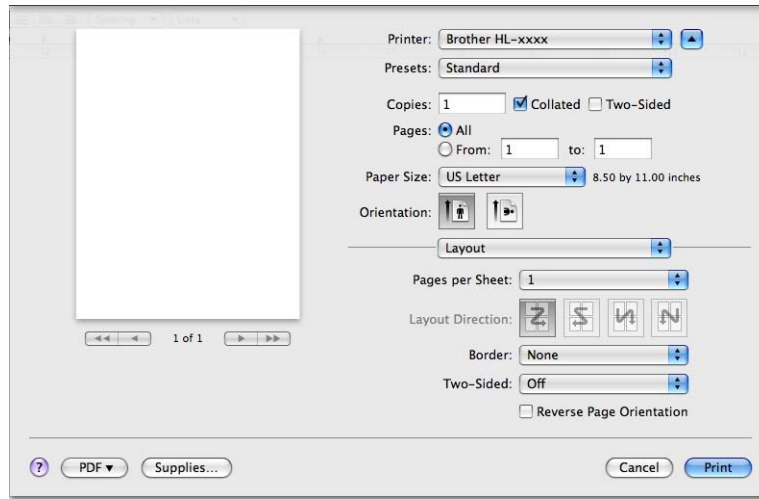
Choose a template for the cover page.

### ■ 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

The **Pages per Sheet** selection can reduce the image size of a page by allowing multiple pages to be printed on one sheet of 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 *Duplex (2-sided) Printing* ►► page 64.

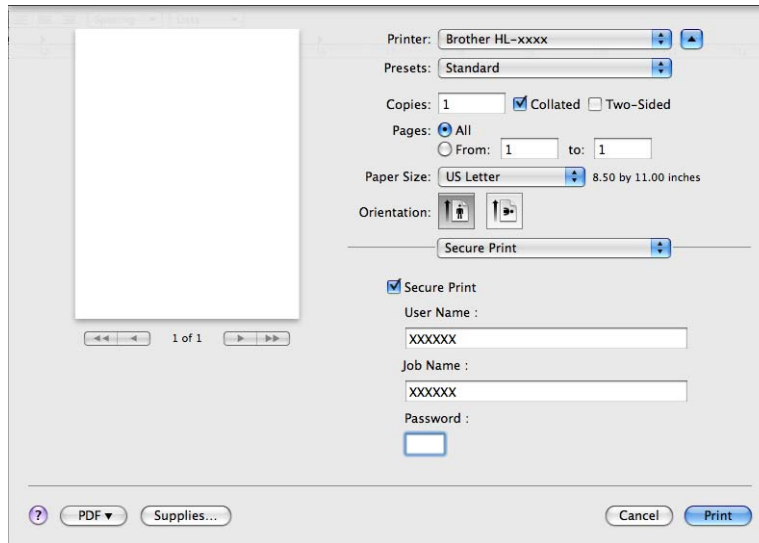
### ■ Reverse Page Orientation

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

### ■ Flip horizontally (Mac OS X 10.6.x and 10.7.x)

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

## Secure Print



### ■ Secure Print:

Secure documents are documents that are password protected when they are sent to the machine. Only the people who know the password will be able to print them. Since the documents are secured at the machine, you must enter the password using the control panel of the machine to print them.

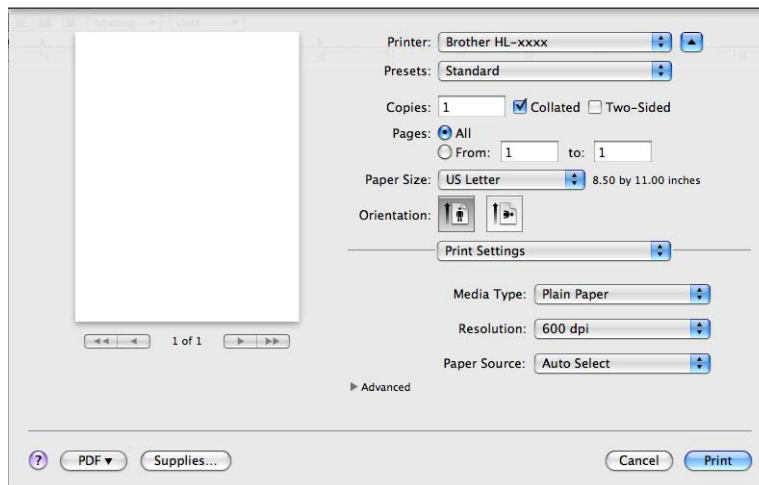
To send a secured document:

- 1 Check **Secure Print**.
- 2 Enter your password, user name and job name and click **Print**.
- 3 To print the secured document, you must enter your password using the control panel of the machine. (See *Printing Secure data* >> page 91.)

To delete a secured document: You need to use the control panel of the machine to delete a secured document. (See *Printing Secure data* >> page 91.)

## Print Settings

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



### ■ 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
- 1200 dpi

### ■ Paper Source

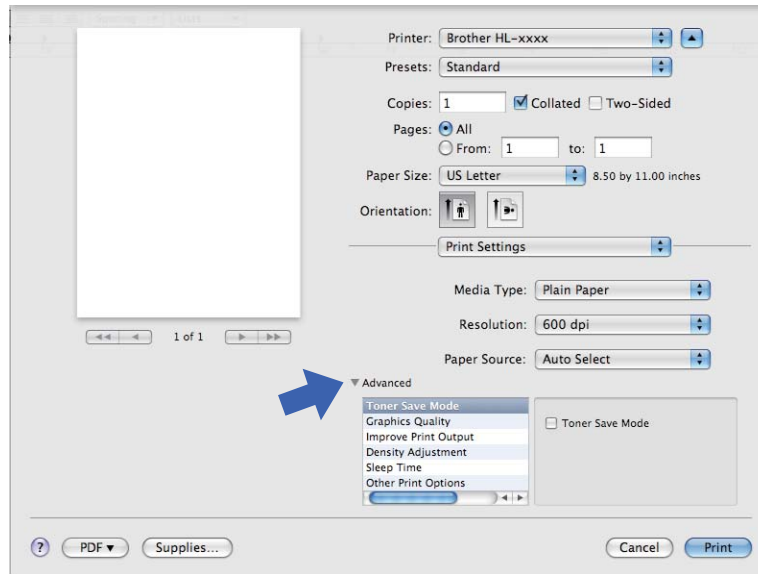
You can choose **Auto Select**, **Tray1**, **Tray2**<sup>1 2</sup>, **MP Tray** or **Manual**.

<sup>1</sup> Available if the optional tray is installed.

<sup>2</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

## Advanced print settings

When you click the triangle mark (▶) beside **Advanced**, the advanced print settings appear.



### ■ 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** and **1200 dpi** resolutions.

### ■ 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.

## ■ 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.



#### Note

This operation will decrease the temperature of the machine's fusing process.

### • Improve Toner Fixing

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



#### Note

This operation will increase the temperature of the machine's fusing process.

### • 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 ambient 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.

## ■ Density Adjustment

Increase or decrease the print density.

## ■ 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. 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 LCD shows `sleep`, but the machine can still receive data. Receiving a print job will automatically wake up the machine to start printing.

## ■ Other Print Options

### • Skip Blank Page

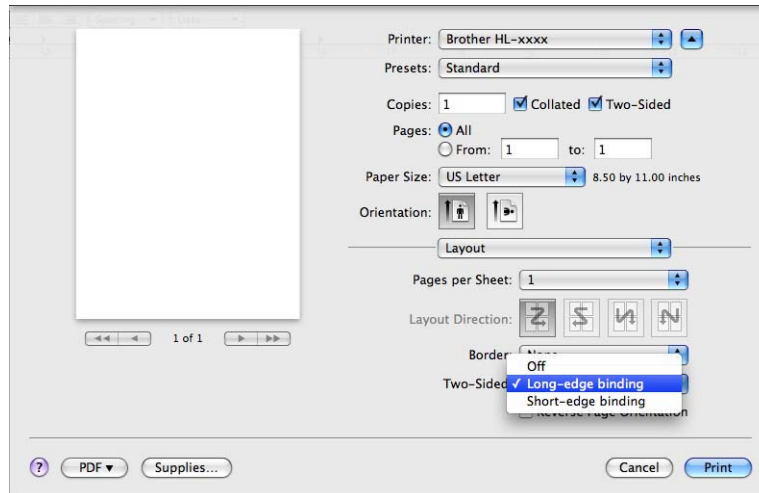
If **Skip Blank Page** is checked, the printer driver automatically detects blank pages and excludes them from printing.

## Duplex (2-sided) Printing

### ■ Automatic Duplex Printing

Select **Layout**.

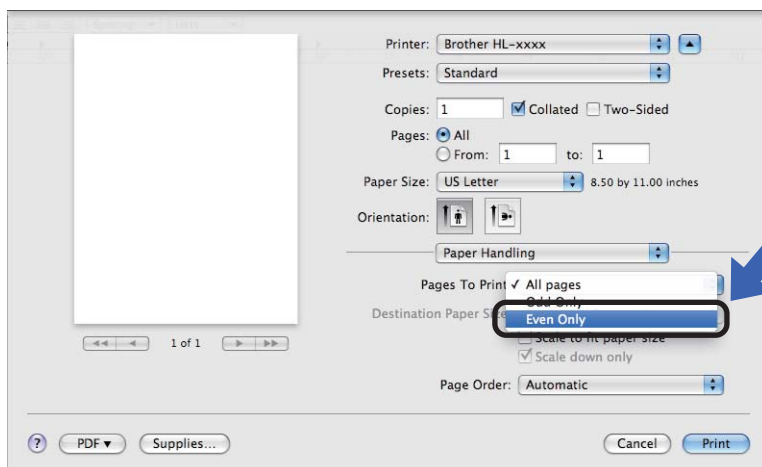
Choose **Long-edge binding** or **Short-edge binding** in **Two-Sided**.



### ■ Manual Duplex Printing

Select **Paper Handling**.

- Choose **Even Only** and **Print**. Reload the printed paper into the tray (blank side face down in Tray 1 or Tray 2, or blank side face up in MP tray). Choose **Odd Only** and **Print**.



## Features in the BR-Script3 printer driver (PostScript® 3™ language emulation)

This section introduces the distinctive operations of the BR-Script3 printer driver. For the basic operations of the BR-Script3 printer driver, see *Features in the printer driver (Macintosh)* >> page 55 for **Page Setup**, **Cover Page**, **Paper Source** and **Layout**.

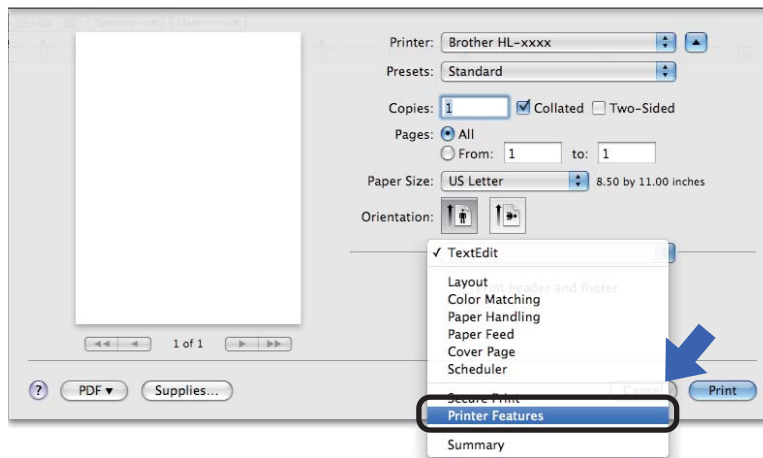


### Note

If you want to setup the PS driver (BR-Script3 printer driver), please go to the Brother Solutions Center at <http://solutions.brother.com/> and visit FAQ's on your model page for instructions.

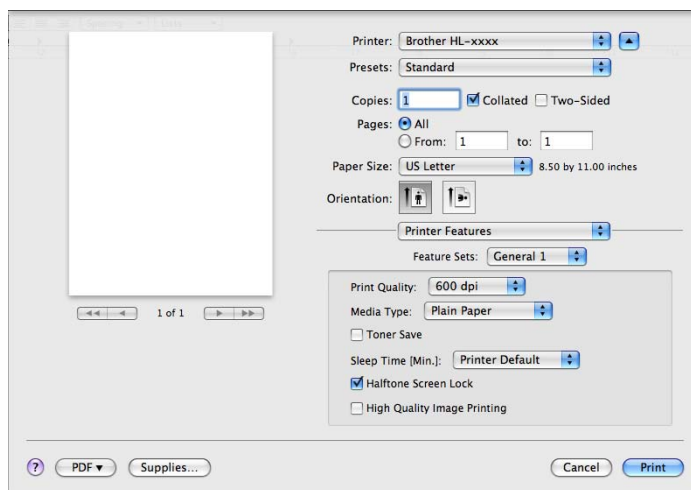
## Choosing printing options

To control special printing features, choose **Printer Features** from the Print dialog box.



## Printer Features

### Feature Sets: General 1



#### ■ Print Quality

You can change the resolution as follows:

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

#### ■ 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
- Hagaki<sup>1</sup>

<sup>1</sup> Postcard with the size specified by Japan Post Service Co., LTD



### ■ Toner Save

You can conserve toner using this feature. When you check **Toner Save**, your prints appear lighter. The default setting is Off.



#### Note

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

### ■ Sleep Time [Min.]

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. If you want to change the Sleep Time, choose **2**, **10** or **30**.

While the machine is in Sleep Mode, the LCD shows `sleep`, but the machine can still receive data. Receiving a print job will automatically wake up the machine to start printing.

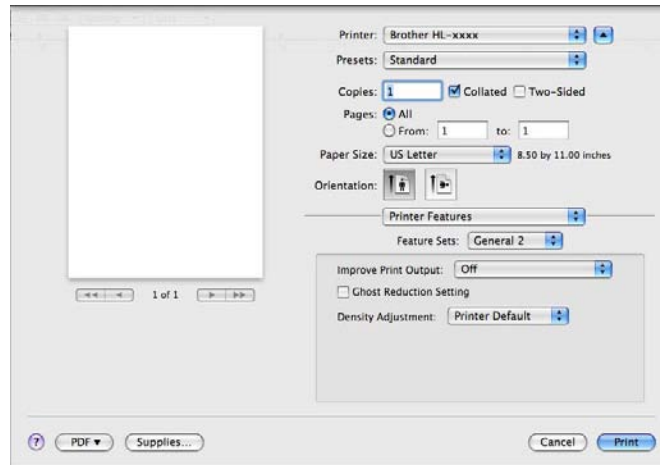
### ■ Halftone Screen Lock

Stops other applications from modifying the Halftone settings. The Default setting is on.

### ■ High Quality Image Printing

You can increase the quality of image printing. If you set **High Quality Image Printing** to On, the print speed will be slower.

## Feature Sets: General 2



### ■ 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.



#### Note

This operation will decrease the temperature of the machine's fusing process.

#### • Improve Toner Fixing

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



#### Note

This operation will increase the temperature of the machine's fusing process.

### ■ Ghost Reduction Setting

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 ambient humidity is below 30% or ghosting may increase.



#### Note

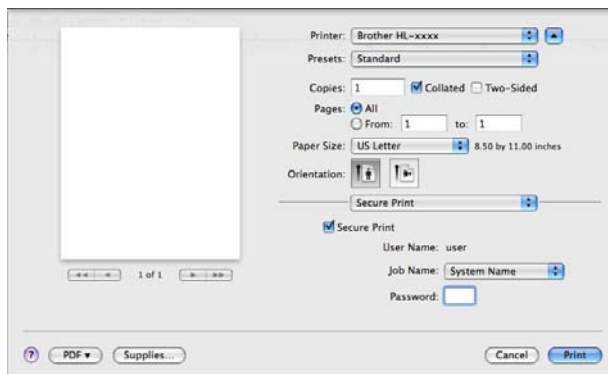
This feature may not reduce ghosting for all types of paper. Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.

### ■ Density Adjustment

Increase or decrease the print density.

## Secure Print

Secure documents are documents that are password protected when they are sent to the machine. Only the people who know the password will be able to print them. Since the documents are secured at the machine, you must enter the password using the control panel of the machine to print them.



If you want to create a secure print job, click **Secure Print** and check the **Secure Print** box. Enter a password in the **Password** box and click **Print**.

(For more information about Secure Print, See *Printing Secure data* >> page 91.)

## Removing the printer driver

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- 1 Log in as an 'Administrator'.
- 2 From the Apple menu, choose **System Preferences**. Click **Print & Fax**<sup>1</sup>, then choose the printer you want to remove and remove it by clicking the - button.
- 3 Click **OK**<sup>2</sup>.

<sup>1</sup> **Print & Scan** for Mac OS X 10.7.x users

<sup>2</sup> **Delete Printer** for Mac OS X 10.6.x and 10.7.x users

## Status Monitor

The **Status Monitor** utility is a configurable software tool for monitoring the status of the machine, letting you see error messages such as paper empty or paper jam at pre-set update intervals. You can also access the web based management. You can check the device status; follow these steps to Launch the Brother Status Monitor:

■ For Mac OS X 10.5.8

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

■ For Mac OS X 10.7.x

- 1 Run the **System Preferences**, select **Print & Scan**, then choose the machine.
- 2 Click the **Open Print Queue...**, then click **Printer Setup**. Select the **Utility** tab then click **Open Printer Utility**. Status Monitor will start up.

### Updating the machine's status

If you want the latest machine status while the **Status Monitor** window is open, click the Refresh  icon. You can set the interval at which the software will update the machine status information. Go to the menu bar, **Brother Status Monitor** and choose **Preferences**.



## Hiding or showing the window

After starting the **Status Monitor**, you can hide or show the window. To hide the window, go to the menu bar, **Brother Status Monitor** and choose **Hide Status Monitor**. To show the window, click the **Brother Status Monitor** icon in the dock.



## Quitting the window

Click **Brother Status Monitor** in the menu bar and then choose **Quit Status Monitor** from the pop-up menu.

## Web Based Management (Network Connection only)

You can access the Web Based Management System by clicking the machine icon on the **Status Monitor** screen. A standard Web Browser can be used to manage your machine using HTTP (Hyper Text Transfer Protocol).

More information on the Web Based Management System >> Network User's Guide: *Web Based Management*

# Software

## Software for networks

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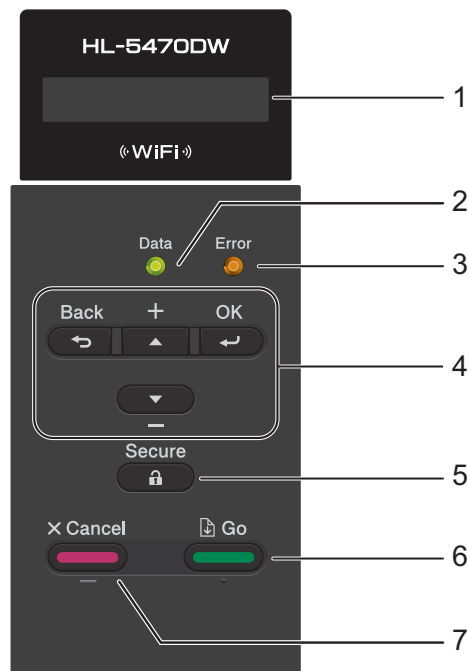
For the information about network utility software >> [Network User's Guide: \*Network features\*](#)

## Control panel

This machine has one back lit Liquid Crystal Display (LCD), seven keys and two Light Emitting Diodes (LEDs) on the control panel. The LCD is a 16 character single-line display.

### Control panel overview

The illustration is based on HL-5470DW.



#### 1 LCD

Displays messages to help you set up and use your machine.

A four level indicator shows the current wireless signal strength if you are using a wireless connection.



#### 2 Data LED

The LED will blink depending on the machine status. (For details, see *LED indications* >> page 76.)

#### 3 Error LED

Blinks in orange when the LCD displays an error or an important status message. (For details, see *LED indications* >> page 76.)



#### 4 Menu Keys:

▲ or ▼ ( + or -)

Press to scroll through the menus and options.

Press to enter numbers and increase the number. You can enter numbers in two ways. You can press ▲ or ▼ to move up or down one number at a time, or you can hold down ▲ or ▼ to move faster. When you see the number you want, press **OK**.

#### **OK**

Lets you store your settings in the machine. After changing a setting, the machine returns to the previous menu level.

#### **Back**

Go back one level in the menu structure.

Lets you choose the previous digit while setting numbers.

#### 5 Secure

You can print data saved in the memory when you enter your four-digit password. ( For details, see *Printing Secure data* >> page 91.)

#### 6 Go

You can clear some error messages by pressing **Go**. To clear all other errors follow the control panel instructions or see *Error and maintenance messages* >> page 130.

Pause and continue printing.

Lets you print any data remaining in the machine's memory.

Lets you choose the displayed option in the last menu level. After changing a setting, the machine returns to Ready mode.

Switch to Reprint mode by pressing this key and holding it down for about 4 seconds. (For details, see *Reprinting documents* >> page 90.)

#### 7 Cancel

Lets you cancel the current setting.

Cancels a programmed print job and clears it from the machine's memory. To cancel multiple print jobs, hold down this key until the LCD shows `Cancel All Jobs`.

## LED indications

The LEDs are lights which show the machine status.

### Data LED (Green)

LED indication	Meaning
On	Data is in the machine's memory.
Blinking	The machine is receiving or processing data.
Off	There is no remaining data in the memory.

### Error LED (Orange)

LED indication	Meaning
Blinking	There is a problem with the machine.
Off	There is no problem with the machine.

## Machine status messages

The following table shows the machine status messages during normal operation:

Machine Status Message	Meaning
Cooling Down	The machine is cooling down.
Cancel Printing Cancel All Jobs	The machine is canceling the job.
Ignore Data	The machine is ignoring data processed using the PS driver.
Pause	The machine has suspended its operations. Press <b>Go</b> to start the machine again.
Please Wait	The machine is warming up. The machine is carrying out the calibration process.
Printing	The machine is printing.
Ready	The machine is ready to print.
Sleep	In Sleep mode (power save mode) the machine acts as though it were turned off, but the machine can still receive data. Receiving a print job will automatically wake up the machine to start printing.
Deep Sleep <sup>1</sup>	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.

<sup>1</sup> When the Wireless Network is enabled the machine does not transfer to Deep Sleep mode. If you want to disable the Wireless Network, change the setting of WLAN Enable to Off. (See *Network Menu* >> page 86.)

## Menu table

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### How to access the menu mode

- 1 Press any of the Menu keys (**▲**, **▼**, **OK** or **Back**) to take the machine offline.
- 2 Scroll through each menu level by pressing **▲** or **▼** for the direction you want.
- 3 Press **OK** when the option you want appears on the LCD. The LCD will then show the next menu level.
- 4 Press **▲** or **▼** to scroll to your next menu selection.
- 5 Press **OK** or **Go**.  
When you have finished setting an option, the LCD will show *Accepted*.

### Menu table

There are six menus. For more information about the selections available in each menu, see the following tables.

If no control panel operations are performed for 30 seconds, the LCD automatically returns to Ready.



#### Note


The control panel LCD names for the paper trays are as follows:

- Standard paper tray: Tray 1 and T1
- Multi-purpose tray: MP
- Optional lower tray <sup>1</sup>: Tray 2 and T2

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<sup>1</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

**Machine Info.**

Submenu	Menu Selections	Options	Descriptions
Print Settings	-	-	Prints the Printer Settings page.
Print NetSetting	-	-	Prints the Network Configuration Report.
Print WLANReport	-	-	Prints the result of wireless LAN connectivity diagnosis.
Print File List	-	-	Prints a list of data saved in the memory.
Test Print	-	-	Prints the test page.
Demo Print	-	-	Prints the demonstration sheet.
Drum Dot Print	-	-	Prints the drum dot check sheet.
Print Font	HP LaserJet	-	Prints the font list and samples of HP LaserJet.
	BR-Script 3	-	Prints the font list and samples of BR-Script.
Serial No.	-	-	Shows the machine serial number.
Version	Main Version	-	Shows the main firmware version.
	Sub Version	-	Shows the sub firmware version.
	RAM Size	-	Shows the size of memory in this machine.
Page Count	-	-	Shows the current total printed pages.
Drum Count	-	-	Shows the current total pages printed for the drum unit.
Parts Life	Drum Life	-	Shows the remaining life for the drum unit.
	PF KitMP Life	-	Shows the pages left to print with the PF kit MP.
	PF Kit1 Life	-	Shows the pages left to print with the PF kit 1.
	PF Kit2 Life <sup>1</sup>	-	Shows the pages left to print with the PF kit 2.
	Fuser Life	-	Shows the pages left to print with the fuser unit.
	Laser Life	-	Shows the pages left to print with the laser unit.
 The factory settings are shown in Bold with an asterisk.			

<sup>1</sup> When Tray 2 is installed.

## Paper Tray


Submenu	Options	Descriptions
Tray Use	<b>Auto*</b> / MP Only / Tray1 Only / Tray2 Only <sup>1</sup>	Chooses the tray that will be used.
Manual Feed	On / <b>Off*</b>	Chooses whether to feed paper manually.
Priority	(Without Tray 2 installed) <b>MP&gt;T1*</b> / T1>MP  (With Tray 2 installed) <b>MP&gt;T1&gt;T2*</b> / MP>T2>T1 / T1>T2>MP / T2>T1>MP / T1>T2 / T2>T1 / T1>MP>T2 / T2>MP>T1	When <b>Auto</b> is chosen in Tray Use: Chooses the order in which the machine uses the paper trays that contain paper of the same size.
MP First	On / <b>Off*</b>	Chooses whether to feed paper from the MP tray as a priority.
Duplex	On(Long Bind) / On(Short Bind) / <b>Off*</b>	Chooses whether to automatically print on both sides of the paper.
MP Size	<b>Any*</b> / Letter / Legal / A4 / Executive / Com-10 / DL / JIS B5 / B5 / A5 / A5 L / JIS B6 / B6 / A6 / Monarch / C5 / Folio / 3X5 / User Defined	Chooses the size of paper you put in the MP tray.
MP Media Fix	Plain Paper / Thick Paper / Thicker Paper / Thin Paper / Recycled Paper / Bond Paper / Envelopes / Env. Thick / Env. Thin / Label / <b>Off*</b>	Chooses the media type of paper you put in the MP tray. When you choose the media type here (except <b>Off</b> ), the setting for Media Type selected in the printer driver will be ignored.
Tray1 Size	<b>Any*</b> / Letter / Legal / A4 / Executive / JIS B5 / B5 / A5 / A5 L / B6 / A6 / Folio	Chooses the size of paper you loaded in the standard paper tray.
Tray2 Size <sup>1</sup>	<b>Any*</b> / Letter / Legal / A4 / Executive / JIS B5 / B5 / A5 / B6 / Folio	Chooses the size of paper you loaded in the optional lower tray (Tray 2) <sup>2</sup> .
 The factory settings are shown in Bold with an asterisk.		

<sup>1</sup> When Tray 2 is installed.


<sup>2</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.

## General Setup

Submenu	Menu Selections	Options	Descriptions
Local Language	-	<b>English*</b> / Français...	Changes the LCD language for your country.
Resolution	-	300 / <b>600*</b> / HQ1200 / 1200	Chooses a print resolution 300, 600, or 1200 dots per inch, or HQ1200 (2400×600 dpi).
Density	-	-6 / ... / -1 / <b>0*</b> / 1 / ... / 6	Increases or Decreases the print density.
Ecology	Sleep Time	0 / 1 / 2 / <b>3*</b> / 4 / 5 / ... Min	Sets the time to return to Power Save mode.
	Toner Save	On / <b>Off*</b>	Increases the page yield of the toner cartridge.
Quiet Mode	-	On / <b>Off*</b>	Decreases printing noise.
Panel Control	Button Repeat	<b>0.1*</b> / 0.4 / 0.6 / 0.8 / 1.0 / 1.4 / 1.8 / 2.0 Sec	Sets the time for the LCD message to change when holding ▲ or ▼ at intervals.
	Message Scroll	<b>level1*</b> / level2 / ... / Level10	Sets the time in seconds that an LCD message will scroll across the LCD. From Level 1=0.2 sec to Level 10=2.0 sec.
	LCD Contrast	-□□■□□+	Adjusts the contrast of the LCD.
	Auto Online	<b>On*</b> / Off	Sets the machine to automatically return to Ready mode.
Setting Lock	-	-	Turns the lock panel settings On or Off using the password.
Reprint	-	On / <b>Off*</b>	Turns the reprint settings On or Off.
Interface	Select	<b>Auto*</b> / USB / Network	Chooses the interface you use. If you choose <b>Auto</b> , the machine automatically changes the interface to USB or Ethernet depending on which interface is receiving data.
	Auto IF Time	1 / 2 / 3 / 4 / <b>5*</b> / ... / 99Sec	You need to set the time-out period for the auto interface selection.
	Input Buffer	Level 1 / 2 / 3 / <b>4*</b> / ... / 7	Increases or decreases the input buffer capacity.
Delete Storage	Macro ID (ROM)	-	Deletes the data in the ROM.
	Font ID (ROM)	-	
	Format (ROM)	-	Formats the ROM.

 The factory settings are shown in Bold with an asterisk.

## Print Menu

Submenu	Menu Selections	Options	Descriptions
Emulation	-	<b>Auto (EPSON)*</b> / Auto (IBM) / HP LaserJet / BR-Script 3 / Epson FX-850 / IBM Proprinter	Chooses the emulation mode you use.  When you choose Auto (EPSON) or Auto (IBM), the machine automatically selects the emulation mode from the following combinations.  ■ Auto (EPSON) HP LaserJet / BR-Script 3 / Epson FX-850  ■ Auto (IBM) HP LaserJet / BR-Script 3 / IBM Proprinter  If you choose an option other than Auto (EPSON) or Auto (IBM), each emulation mode will be fixed.
Auto Continue	-	On / <b>Off*</b>	If this setting is enabled the machine will automatically clear a paper size error, and will use any compatible paper from other paper trays.
Media Type	-	<b>Plain Paper*</b> / Thick Paper / Thicker Paper / Thin Paper / Recycled Paper / Bond Paper / Envelopes / Env. Thick / Env. Thin / Label	Sets the type of paper.
Paper	-	<b>Letter*</b> / Legal / A4 / Executive / Com-10 / DL / JIS B5 / B5 / A5 / A5 L / JIS B6 / B6 / A6 / Monarch / C5 / Folio	Sets the size of paper.
Copies	-	<b>1*</b> / 2 / ... / 999	Sets the number of printed pages.
Orientation	-	<b>Portrait*</b> / Landscape	This machine can print pages in portrait or landscape orientation.
 The factory settings are shown in Bold with an asterisk.			

## Print Menu (continued)

Submenu	Menu Selections	Options	Descriptions
Print Position	X Offset	-500 / -499 / ... / -1 / <b>0*</b> / 1 / ... / 499 / 500Dots	Moves the print start position (at the top-left corner of pages) horizontally up to -500 (left) to +500 (right) dots in 300 dpi.
	Y Offset	-500 / -499 / ... / -1 / <b>0*</b> / 1 / ... / 499 / 500Dots	Moves the print start position (at the top-left corner of pages) vertically up to -500 (up) to +500 (down) dots in 300 dpi.
Auto FF	-	On / <b>Off*</b>	Allows you to print the remaining data without pressing <b>Go</b> .
HP LaserJet	Font No.	I000 / ... / <b>I059*</b> / ... / I071	Sets the font number.
	Font Pitch	0.44 / ... / <b>10.00*</b> / ... / 99.99	Sets the font pitch. Font Pitch menu will appear when you choose I059 to I071 in Font No. setting.
	Font Point	4.00 / ... / <b>12.00*</b> / ... / 999.75	Sets the font size. Font Point menu will appear when you choose I000 to I058 in Font No. setting.
	Symbol Set	<b>PC-8*</b> / PC-8 D/N / ...	Sets the symbol set or the character set.
	Table Print	-	Prints code table. If Change Emulation appears on the LCD, choose Auto (EPSON), Auto (IBM) or HP LaserJet in Emulation of the Print Menu. (See page 81.)
	Auto LF	On / <b>Off*</b>	ON: CR → CR+LF, OFF: CR → CR
	Auto CR	On / <b>Off*</b>	ON: LF → LF+CR, FF → FF+CR, or VT → VT+CR OFF: LF → LF, FF → FF, or VT → VT
	Auto WRAP	On / <b>Off*</b>	Chooses whether a line feed and carriage return will happen when the machine reaches the right margin.
	Auto SKIP	<b>On*</b> / Off	Chooses whether a line feed and carriage return will happen when the machine position reaches the bottom margin.
Left Margin	##	Sets the left margin at column 0 to 70 columns at 1 cpi. The default setting is 0 cpi.	



The factory settings are shown in Bold with an asterisk.



## Print Menu (continued)

Submenu	Menu Selections	Options	Descriptions
HP LaserJet (Continued)	Right Margin	##	Sets the right margin at column 10 to 80 columns at 1 cpi. The default setting is 80 cpi (Letter).
	Top Margin	#.##	Sets the top margin at a distance from the top edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.50 inches.
	Bottom Margin	#.##	Sets the bottom margin at a distance from the bottom edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.50 inches.
	Lines	###	Sets the number of lines on each page from 5 to 128 lines. The default setting is 60 lines (Letter).
Epson FX-850	Font No.	I000 / ... / <b>I059*</b> / ... / I071	Sets the font number.
	Font Pitch	0.44 / ... / <b>10.00*</b> / ... / 99.99	Sets the font pitch. Font Pitch menu will appear when you choose I059 to I071 in Font No. setting.
	Font Point	4.00 / ... / <b>12.00*</b> / ... / 999.75	Sets the font size. Font Point menu will appear when you choose I000 to I058 in Font No. setting.
	Character Set	<b>US ASCII*</b> / GERMAN / ...	Sets the symbol set or the character set.
	Table Print	-	Prints code table. If Change Emulation appears on the LCD, choose Auto (EPSON), Auto (IBM) or HP LaserJet in Emulation of the Print Menu. (See page 81.)
	Auto LF	On / <b>off*</b>	ON: CR - CR+LF, OFF: CR - CR
	Auto Mask	On / <b>off*</b>	Sets the top and bottom margins to two-line each. When you set Auto Mask to On, this setting overrides the Top Margin and Bottom Margin settings.
	Left Margin	##	Sets the left margin at column 0 to 70 columns at 1 cpi. The default setting is 0 cpi.
	Right Margin	##	Sets the right margin at column 10 to 80 columns at 1 cpi. The default setting is 80 cpi.



The factory settings are shown in Bold with an asterisk.

## Print Menu (continued)

Submenu	Menu Selections	Options	Descriptions
Epson FX-850 (Continued)	Top Margin	#.##	Sets the top margin at a distance from the top edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.33 inches.
	Bottom Margin	#.##	Sets the bottom margin at a distance from the bottom edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.33 inches.
	Lines	###	Sets the number of lines on each page from 5 to 128 lines. The default setting is 62 lines (Letter).
IBM Proprinter	Font No.	I000 / ... / <b>I059*</b> / ... / I071	Sets the font number.
	Font Pitch	0.44 / ... / <b>10.00*</b> / ... / 99.99	Sets the font pitch. Font Pitch menu will appear when you choose I059 to I071 in Font No. setting.
	Font Point	4.00 / ... / <b>12.00*</b> / ... / 999.75	Sets the font size. Font Point menu will appear when you choose I000 to I058 in Font No. setting.
	Character Set	<b>PC-8*</b> / PC-8 D/N / ...	Sets the symbol set or the character set.
	Table Print	-	Prints code table. If Change Emulation appears on the LCD, choose Auto (EPSON), Auto (IBM) or HP LaserJet in Emulation of the Print Menu. (See page 81.)
	Auto LF	On / <b>off*</b>	ON: CR → CR+LF, OFF: CR → CR
	Auto CR	On / <b>off*</b>	ON: LF → LF+CR, FF → FF+CR, or VT → VT+CR OFF: LF → LF, FF → FF, or VT → VT
	Auto Mask	On / <b>off*</b>	Sets the top and bottom margins to two-line each. When you set Auto Mask to On, this setting overrides the Top Margin and Bottom Margin settings.
	Left Margin	##	Sets the left margin at column 0 to 70 columns at 1 cpi. The default setting is 0 cpi.
	Right Margin	##	Sets the right margin at column 10 to 80 columns at 1 cpi. The default setting is 80 cpi.



The factory settings are shown in Bold with an asterisk.

**Print Menu (continued)**


Submenu	Menu Selections	Options	Descriptions
IBM Proprinter (Continued)	Top Margin	#.##	Sets the top margin at a distance from the top edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.33 inches.
	Bottom Margin	#.##	Sets the bottom margin at a distance from the bottom edge of the paper: 0.00, 0.33, 0.50, 1.00, 1.50 or 2.00 inches. The default setting is 0.33 inches.
	Lines	###	Sets the number of lines on each page from 5 to 128 lines. The default setting is 62 lines (Letter).
BR-Script 3	Error Print	<b>On*</b> / Off	Chooses whether to automatically print the error information when errors occur.



The factory settings are shown in Bold with an asterisk.


### Network Menu

Submenu 1	Submenu 2	Menu Selections	Options	Descriptions
Wired LAN	TCP/IP	Boot Method	<b>Auto*</b> / Static / RARP / BOOTP / DHCP	Chooses the IP method that best suits your needs.
		IP Address	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the IP address.
		Subnet Mask	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the Subnet mask.
		Gateway	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the Gateway address.
		IP Boot Tries	0 / 1 / 2 / <b>3*</b> / ... / 32767	Specifies the number of attempts the machine will try to obtain an IP address when the Boot Method is set to any setting except Static.
		APIPA	<b>On*</b> / Off	Automatically allocates the IP address from the link-local address range. <sup>1</sup>
		IPv6	On / <b>Off*</b>	Sets use of IPv6 protocol.
	Ethernet	-	<b>Auto*</b> / 100B-FD / 100B-HD / 10B-FD / 10B-HD	Chooses Ethernet link mode.
	Wired Status	-	Active 1000B-FD <sup>2</sup> / Active 100B-FD / Active 100B-HD / Active 10B-FD / Active 10B-HD / Inactive / Wired OFF	Shows Ethernet link status.
	MAC Address	-	-	Shows MAC address of the machine.
	Set to Default	Restores wired network settings of the internal print server to the factory default.		
Wired Enable	-	<b>On*</b> / Off	Chooses Ethernet link mode.	

 The factory settings are shown in Bold with an asterisk.


## Network Menu (continued)

Submenu 1	Submenu 2	Menu Selections	Options	Descriptions
WLAN	TCP/IP	Boot Method	<b>Auto*</b> / Static / RARP / BOOTP / DHCP	Chooses the IP method that best suits your needs.
		IP Address	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the IP address.
		Subnet Mask	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the Subnet mask.
		Gateway	###.###.###.### (000.000.000.000)* <sup>1</sup>	Enter the Gateway address.
		IP Boot Tries	0 / 1 / 2 / <b>3*</b> / ... / 32767	Specifies the number of attempts the machine will try to obtain an IP address when the Boot Method is set to any setting except Static.
		APIPA	<b>On*</b> / Off	Automatically allocates the IP address from the link-local address range. <sup>1</sup>
		IPv6	On / <b>Off*</b>	Enables or Disables the IPv6 protocol.
	Setup Wizard	-	-	Configures the wireless network settings using the setup wizard.
	WPS/AOSS	-	-	Configures the wireless network settings using WPS or AOSS™ method.
	WPS w/PIN Code	-	-	Configures the wireless network settings using WPS with a PIN code.


 The factory settings are shown in Bold with an asterisk.

**Network Menu (continued)**

Submenu 1	Submenu 2	Menu Selections	Options	Descriptions	
WLAN (Continued)	WLAN Status (Appears only when WLAN Enable is On and Wired Enable is Off.)	Status	Active (11n) / Active (11b) / Active (11g) / Wired LAN Active / WLAN OFF / AOSS Active / Connection Fail	Shows wireless Ethernet link status.	
		Signal	Strong / Medium / Weak / None	Shows the signal condition.	
		Channel	-	Shows the channel in use when Status is Active.	
		Speed	-	Shows the connecting speed when Status is Active.	
		SSID	-	Shows SSID [uses a maximum of 32 digits and characters 0-9, a-z and A-Z in ASCII values]	
		Comm. Mode	<b>Ad-hoc*</b> / Infrastructure	Shows the current Communication Mode.	
	MAC Address	-	-	Shows MAC address of the machine.	
	Set to Default	Restores wireless network settings of the internal print server to the factory default.			
	WLAN Enable	-	On / <b>Off*</b>	Turns the wireless interface on or off.	
Wi-Fi Direct	Push Button	-	-	You can easily configure your Wi-Fi Direct™ network settings using the one-button push method.	
	PIN Code	-	-	You can easily configure your Wi-Fi Direct™ network settings using WPS with a PIN code.	
	Manual	-	-	You can manually configure your Wi-Fi Direct™ network settings.	
	Group Owner	-	On / <b>Off*</b>	Sets your machine as the Group Owner.	
	Device Info.	Device Name	-	-	You can see the device name of your machine.
		SSID	-	-	Shows SSID of Group Owner.  When the machine is not connected, the LCD shows Not Connected.
		IP Address	-	-	You can see the current IP Address of your machine.

 The factory settings are shown in Bold with an asterisk.


**Network Menu (continued)**

Submenu 1	Submenu 2	Menu Selections	Options	Descriptions
Wi-Fi Direct (Continued)	Status Info.	Status	G/O Active(**) / Client Active / Not Connected / Off / Wired LAN Active  ** = the number of devices	You can see the current Wi-Fi Direct™ network status.
		Signal	-	You can see the current Wi-Fi Direct™ network signal strength.  When your machine acts as the Group Owner, the LCD always shows Strong.
		Channel	-	Shows the channel in use when the Status is G/O Active(**) or Client Active.
		Speed	-	Shows the connecting speed when the Status is G/O Active(**) or Client Active.
	I/F Enable	-	On / <b>Off</b> *	Enable or Disable the Wi-Fi Direct™ connection.
Network Reset	Restores all network settings of the internal print server to the factory default.			
 The factory settings are shown in Bold with an asterisk.				

<sup>1</sup> ### means a number within the range of 000 to 255. On connection to the network, if the machine's 'Boot Method' is 'Auto' the machine will attempt to automatically set the IP address and Subnet Mask from a boot server such as DHCP or BOOTP. If a boot server cannot be found, an APIPA IP address will be allocated, such as 169. 254. [001-254]. [000-255]. If the 'Boot Method' of the machine is set to 'Static' you will need to manually enter an IP address from the machine's control panel.

<sup>2</sup> For HL-6180DW(T)

**Reset Menu**

Display Shows	Description
Network	Restores all network settings of the internal print server to the factory default.
Factory Reset	Resets the machine and restores the printer settings (including command settings) to the factory default settings.
 The factory settings are shown in Bold with an asterisk.	

# Reprinting documents

## Reprinting the last job

You can reprint the data from the last print job without sending it from the computer again.



### Note

- The Reprint function is not available when Secure Function Lock 2.0 is On. (For more information about Secure Function Lock 2.0 >> Network User's Guide: *Secure Function Lock 2.0*)
- If the machine does not have enough memory to spool the print job, it will not print the document.
- If you wait 30 seconds to continue the control panel operation, the LCD leaves the reprint setting automatically.
- For more information about the settings in the printer driver, see *Advanced tab* >> page 31.
- After turning the power switch off, the last print job will be deleted.

## How to reprint the last job



1 Make sure that the **Reprint** setting is **On** by using the keys on the control panel to enter the **General Setup** menu.



### Note

If you print with the Windows® printer driver we have supplied with the machine, the settings for **Use Reprint** in the printer driver will take priority over the settings made on the control panel. Check the **Use Reprint** check box in the printer driver. (For more information, see *Use Reprint* >> page 36.)



2 Press **Go** for about 4 seconds and release it.



3 Make sure that the LCD shows **Reprint: Print**. Press **OK**.



4 Press **▲** or **▼** to enter the number of copies you want. You can choose between 1 and 999 **Copies**.



5 Press **OK** or **Go**.



### Note

If you want to delete the last print job from the memory, do the following process instead of the step 3 and the subsequent steps.

- Press **▲** or **▼** to choose **Reprint: Delete**. Press **OK**.

The LCD will show **Deleted**, and then the machine will return to **Ready** mode.



## Printing Secure data

### Secure data

Secure documents are protected by a password and only those people who know the password will be able to print the document. The machine will not print the document when you send it for printing. To print the document, you must use the control panel of the machine (with the password). Secure data will be deleted after it is printed once.

When the area to spool data is full, the LCD shows `Out of Memory`. Press **Cancel** to return to Ready mode. If you want to delete the spooled data, you can carry out this operation using the control panel.



#### Note

- Secure data will be deleted when the machine is turned off.
- If you wait 30 seconds to continue the control panel operation, the LCD leaves the Secure Print setting automatically.
- For more information about the settings in the printer driver and how to create secure data, see *Secure Print* >> page 34 (For Windows® printer driver), *Advanced options* >> page 48 (For Windows® BR-Script printer driver), *Secure Print* >> page 60 (For Macintosh printer driver) or *Secure Print* >> page 69 (For Macintosh BR-Script printer driver).

### How to print Secure data

- 1 Press **Secure**.
- 2 Press ▲ or ▼ to choose the user name. Press **OK**.
- 3 Press ▲ or ▼ to choose the job. Press **OK**.
- 4 Press ▲ or ▼ to enter your password. Press **OK**.
- 5 Press ▲ or ▼ to choose `Print`. Press **OK**.
- 6 Press ▲ or ▼ to enter the number of copies you want.
- 7 Press **OK** or **Go**.



#### Note

If you want to delete the secure print data from the memory, do the following process instead of the step 5 and the subsequent steps.

- Press ▲ or ▼ to choose `Delete`. Press **OK**.

The LCD will show `Deleted`, and then the machine will return to Ready mode.

# Security features

## Secure Function Lock 2.0

---

Secure Function Lock lets you restrict Public access to the Print function <sup>1</sup>.

This feature also prevents users from changing the Default settings of the machine by limiting access to the Menu settings. Before using the security features you must first enter an administrator password. Access to restricted operations can be enabled by creating a restricted user. Restricted users must enter a user password to use the machine. Secure Function Lock can be set by using Web Based Management and BRAdmin Professional 3 (Windows<sup>®</sup> only). (▶▶ Network User's Guide)

<sup>1</sup> Print function includes print jobs via Google Cloud Print and Brother iPrint&Scan.



### Note

- Make a careful note of your password. If you forget it, you will have to reset the password stored in the machine. For information about how to reset the password call Brother Customer Service.
  - Only administrators can set limitations and make changes for each user.
- 

## Setting Lock

---

Setting Lock lets you set a password to stop other people from accidentally changing your machine settings. Make a careful note of your password. If you forget it, you will have to reset the passwords stored in the machine. Please call your administrator or your Brother dealer.

While Setting Lock is On, you cannot change the following settings without a password:

- Paper Tray
- General Setup
- Print Menu (except Table Print)
- Network (except Status, Mac Address, Status Info. and Device Info. of Wi-Fi Direct)
- Reset Menu

### Setting up the password

- 1 Press ▲ or ▼ to choose `General Setup`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Setting Lock`. Press **OK**.
- 3 Enter a four-digit number for the password. To enter each digit, press ▲ or ▼ to choose a number and then press **OK**.
- 4 Re-enter the password when the LCD shows `Verify:`.

## Changing your Setting Lock password

Turn the Setting Lock off before you change the password. (See *Turning Setting Lock on/off* >> page 93.)

- 1 Press ▲ or ▼ to choose `General Setup`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Setting Lock`. Press **OK**.
- 3 Press ▲ or ▼ to choose `Set Password`. Press **OK**.
- 4 Enter the registered four-digit password. To enter each digit, press ▲ or ▼ to choose a number and then press **OK**.
- 5 Enter a four-digit number for the new password. To enter each digit, press ▲ or ▼ to choose a number and then press **OK**.
- 6 Re-enter the password when the LCD shows `Verify:`.

## Turning Setting Lock on/off

If you enter the wrong password when following the instructions below, the LCD will show `Wrong Password`. Re-enter the correct password.

### Turning Setting Lock on

- 1 Press ▲ or ▼ to choose `General Setup`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Setting Lock`. Press **OK**.
- 3 Press **OK** when the LCD shows `On`.
- 4 Enter the registered four-digit password. To enter each digit, press ▲ or ▼ to choose a number and then press **OK**.

### Turning Setting Lock off

- 1 Press ▲ or ▼ to choose `General Setup`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Setting Lock`. Press **OK**.
- 3 Enter the registered four-digit password. To enter each digit, press ▲ or ▼ to choose a number and then press **OK**.
- 4 Press **OK** or **Go** when the LCD shows `Off`.

## Ecology features

### Toner Save

---

You can save toner using this feature. When you set Toner Save to **On**, prints appear lighter. The default setting is **Off**.

- 1 Press **▲** or **▼** to choose **General Setup**. Press **OK**.
- 2 Press **▲** or **▼** to choose **Ecology**. Press **OK**.
- 3 Press **▲** or **▼** to choose **Toner Save**. Press **OK**.
- 4 Press **▲** or **▼** to choose **On** or **Off**. Press **OK** or **Go**.

### Sleep Time

---

The Sleep mode setting can reduce power consumption. When the machine is in Sleep Mode (Power Save mode) it acts as though it were turned off. The machine will wake up and start printing when it receives a print job.

You can choose how long the machine must be idle before it goes into Sleep mode. When the machine receives a print file or document, the timer will be reset. The default setting is 3 minutes. While the machine is in Sleep mode the LCD will show **Sleep**.

- 1 Press **▲** or **▼** to choose **General Setup**. Press **OK**.
- 2 Press **▲** or **▼** to choose **Ecology**. Press **OK**.
- 3 Press **▲** or **▼** to choose **Sleep Time**. Press **OK**.
- 4 Press **▲** or **▼** to enter the length of time the machine will remain idle before entering Sleep mode. Press **OK** or **Go**.

### Deep Sleep mode

---

If the machine is in Sleep mode and does not receive any jobs for a certain length of time, the machine will go into Deep Sleep mode automatically and the LCD will show **Deep Sleep**. Deep Sleep mode uses less power than Sleep Mode. The machine will wake up, when the machine receives a print job.

If a wireless network is enabled, the machine will not enter Deep Sleep mode.  
To disable the wireless network >> Network User's Guide: *Control panel setup*

## Quiet mode feature

The Quiet mode setting can reduce printing noise. When Quiet Mode is turned on, the print speed becomes slower. The default setting is Off.

### Turning Quiet mode on/off

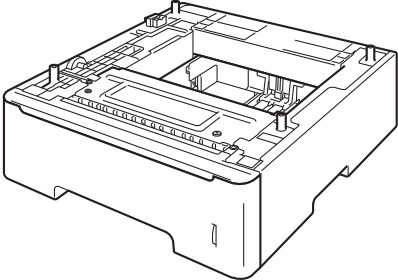
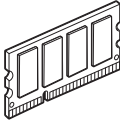
---

- 1 Press ▲ or ▼ to choose `General Setup`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Quiet Mode`. Press **OK**.
- 3 Press ▲ or ▼ to choose `On` or `Off`. Press **OK** or **Go**.

# 4

## Options

This machine has the following optional accessories. You can increase the capabilities of the machine with these items.

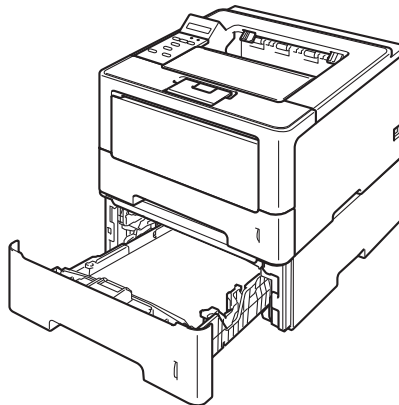
<b>Lower tray <sup>1</sup></b>	<b>SO-DIMM memory</b>
LT-5400	
	
See <i>Lower tray (LT-5400)</i> ▶▶ page 97.	See <i>SO-DIMM</i> ▶▶ page 98.

<sup>1</sup> HL-5470DWT and HL-6180DWT are equipped with the lower tray as standard equipment.

## Lower tray (LT-5400)

One optional lower tray (Tray 2) can be installed on HL-5470DW and HL-6180DW<sup>1</sup>, and the lower tray can hold up to 500 sheets of 20 lb (80 g/m<sup>2</sup>) paper. When the optional lower tray is installed, the machine can hold up to 800 sheets of plain 20 lb (80 g/m<sup>2</sup>) paper for HL-5470DW and 1,050 sheets for HL-6180DW. If you want to buy the optional lower tray unit, call the dealer you bought the machine from or Brother Customer Service.

<sup>1</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.



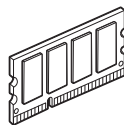
For setup, see the User's Guide that we have supplied with the lower tray unit.

### **!** WARNING

If you use a Lower Tray, DO NOT carry the machine with the Lower Tray as you may be injured or cause damage to the machine because it is not attached to the Lower Tray.

## SO-DIMM

The machine has 128 MB of standard memory and one slot for optional memory expansion. You can increase the memory up to a maximum of 384 MB by installing one SO-DIMM (Small Outline Dual In-line Memory Module).



### SO-DIMM types

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For information regarding memory for your Brother machine please visit us at:  
<http://www.brother-usa.com/support/memory/>

In general, the SO-DIMM must have the following specifications:

Type: 144-pin and 16-bit output

CAS latency: 4

Clock frequency: 267 MHz (533 Mb/S/Pin) or more

Capacity: 256 MB

Height: 30.0 mm (1.18 in.)

DRAM type: DDR2 SDRAM



#### Note

- There might be some SO-DIMMs that will not work with the machine.
  - For more information, call the dealer you bought the machine from or Brother Customer Service.
-



## Installing extra memory

---

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

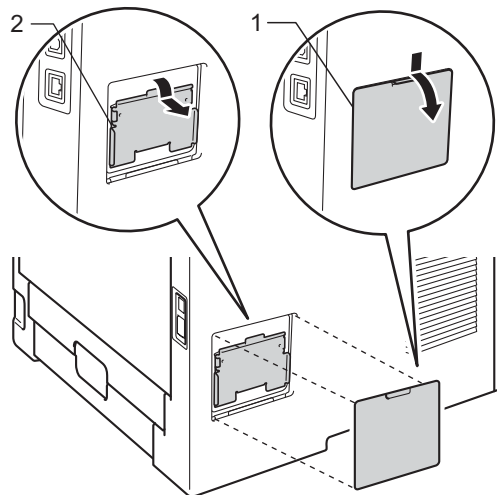


**Note**

Always turn off the machine power switch before installing or removing the SO-DIMM.

---

- 3 Remove the plastic (1) and then the metal (2) SO-DIMM covers.



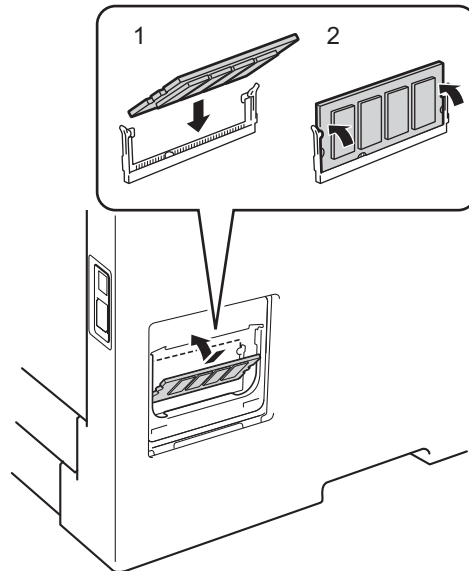
- 4 Unpack the SO-DIMM and hold it by its edges.

**! Important**

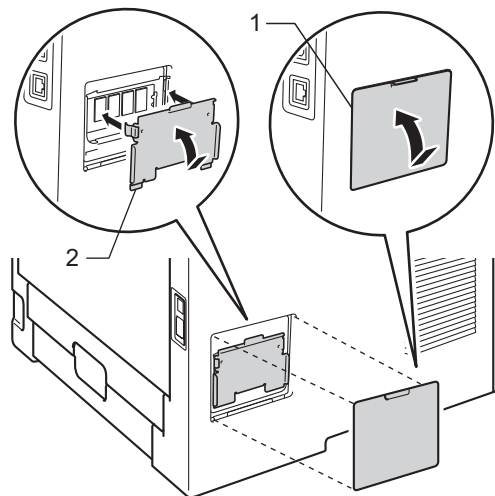
To prevent damage to the machine from static electricity, DO NOT touch the memory chips or the board surface.

---

- 5 Hold the SO-DIMM by the edges and align the notches in the SO-DIMM with the protrusions in the slot. Insert the SO-DIMM diagonally (1), then tilt it toward the interface board until it clicks into place (2).



- 6 Put the metal (2) and then the plastic (1) SO-DIMM covers back on.



- 7 Plug the machine's power cord back into the AC power outlet first, and then connect the interface cables.
- 8 Turn on the machine's power switch.

**Note**

To make sure that you have installed the SO-DIMM properly, you can print the printer settings page that shows the current memory size. (See *Machine Info.* >> page 78.)

# 5

## Routine Maintenance

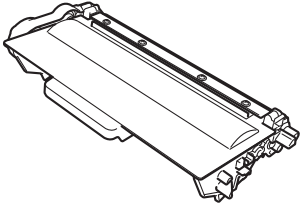
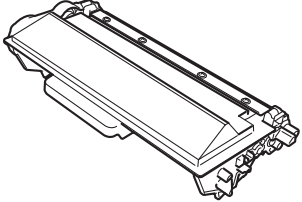
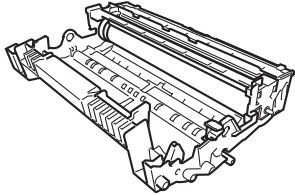
### Replacing consumable items

You will need to replace the consumable items when the machine indicates that the life of the consumable is over. You can replace the following consumable items by yourself:



**Note**

The drum unit and toner cartridge are two separate parts.

Toner cartridge	Drum unit
See <i>Replacing the toner cartridge</i> >> page 103.	See <i>Replacing the drum unit</i> >> page 111.
Order No. TN-720, TN-750, TN-780 <sup>1</sup>	Order No. DR-720
<p data-bbox="386 779 578 806">TN-720, TN-750</p>  <p data-bbox="435 1035 526 1062">TN-780</p> 	

<sup>1</sup> TN-780 is available for HL-6180DW(T).

You will need to clean the machine regularly and replace the consumable items when the following messages are displayed on the LCD.

LCD messages	Consumable item to replace	Approximate life	How to replace	Order No.
Replace Toner	Toner cartridge	3,000 pages <sup>1 2 5</sup> 8,000 pages <sup>1 2 6</sup> 12,000 pages <sup>1 2 7</sup>	See page 104	TN-720 <sup>5</sup> TN-750 <sup>6</sup> TN-780 <sup>7</sup>
Replace Drum	Drum unit	30,000 pages <sup>1 3 4</sup>	See page 110	DR-720
Drum Stop				

<sup>1</sup> Letter or A4 size single-sided pages.

<sup>2</sup> Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

<sup>3</sup> 1 page per job

<sup>4</sup> Drum life is approximate and may vary by type of use.

<sup>5</sup> Standard toner cartridge

<sup>6</sup> High yield toner cartridge

<sup>7</sup> Super high yield toner cartridge (HL-6180DW(T) only)



**Note**

- 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.
- We recommend placing used consumable items on a piece of paper to prevent accidentally spilling or scattering the material inside.
- If you use paper that is not a direct equivalent for the recommended paper, the life of consumable items and machine parts may be reduced.
- The projected life for each of toner cartridges is based on ISO/IEC 19752. Frequency of replacement will vary depending on the complexity of printed pages, percentage of coverage and type of media used.

## Replacing the toner cartridge

Order No. TN-720 <sup>1</sup>, TN-750 <sup>2</sup>, TN-780 <sup>3 5</sup>

The Standard toner cartridge can print approximately 3,000 pages <sup>4</sup>. The High Yield toner cartridge can print approximately 8,000 pages <sup>4</sup>. The Super High Yield toner cartridge can print approximately 12,000 pages <sup>4 5</sup>. Actual page count will vary depending on your average type of document. When a toner cartridge is running low, the LCD shows `Toner Low`.

The toner cartridge that comes supplied with the machine will need to be replaced after approximately 3,000 pages <sup>4</sup>.

<sup>1</sup> Standard toner cartridge

<sup>2</sup> High yield toner cartridge

<sup>3</sup> Super high yield toner cartridge

<sup>4</sup> Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

<sup>5</sup> Available for HL-6180DW(T)



### Note

- It is a good idea to keep a new toner cartridge ready for use when you see the Toner Low warning.
- To ensure high quality printing, we recommend that you use only Genuine Brother Brand toner cartridges. When you want to buy toner cartridges, please call Brother Customer Service.
- If you print graphics, bold text, charts, Web pages with borders, or other types of printouts that consist of more than simple text, the amount of toner used will increase.
- We recommend that you clean the machine when you replace the toner cartridge. See *Cleaning and Checking the machine* >> page 116.
- If you change the print density setting for lighter or darker printing, the amount of toner used will change.
- Wait to unpack the toner cartridge until immediately before you put it into the machine.

## Toner Low

`Toner Low`

If the LCD shows `Toner Low`, the machine has nearly run out of toner. Buy a new toner cartridge and have it ready before you get a `Replace Toner` message.

## Replace Toner

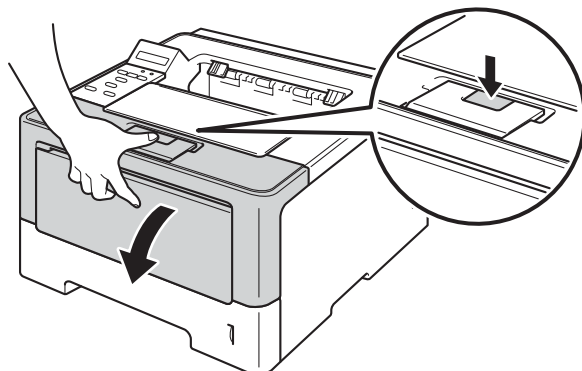
When the following message appears on the LCD, you need to replace the toner cartridge:

`Replace Toner`

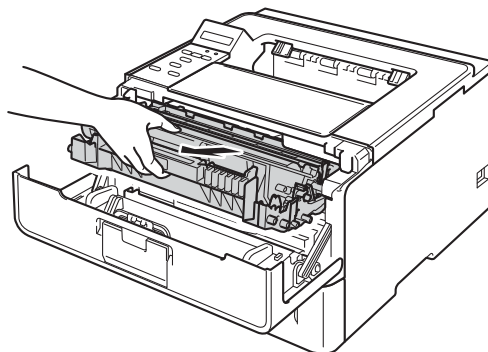
When the LCD shows `Replace Toner` the machine will stop printing until you replace the toner cartridge. A new genuine Brother toner cartridge will reset the `Replace Toner` mode.

## Replacing the toner cartridge

- 1 Make sure that the machine is turned on. Leave the machine for at least 10 minutes to cool down.
- 2 Press the front cover release button and then open the front cover.



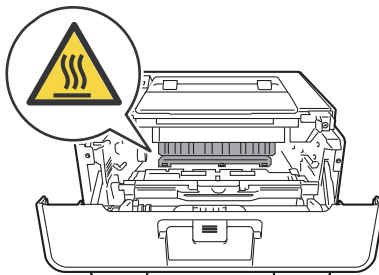
- 3 Take out the drum unit and toner cartridge assembly.



### WARNING

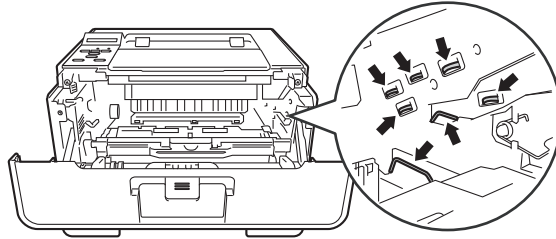


After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.

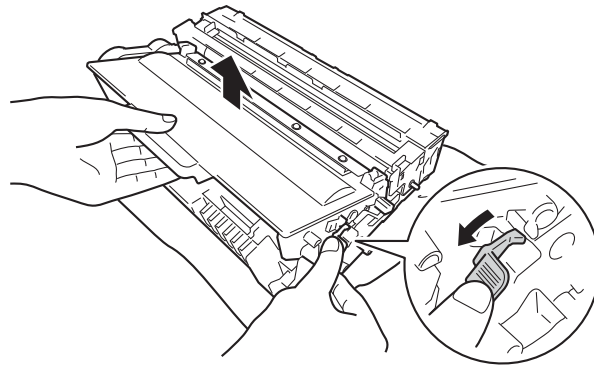


**! Important**

- 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.
- 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.



**! WARNING**



- **DO NOT** put a toner cartridge or a toner cartridge and drum unit assembly into a fire. It could explode, resulting in injuries.
- **DO NOT** use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the machine. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.

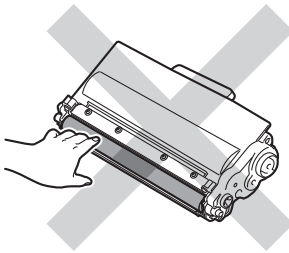
(>> Product Safety Guide: *To use the product safely*)



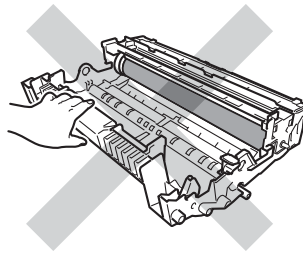
**! Important**

- 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.

<Toner cartridge>



<Drum unit>

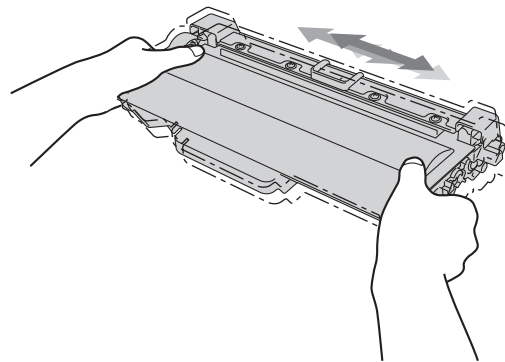


- We recommend that you place the toner cartridge on a clean, flat, level, stable surface with a sheet of disposable paper or cloth underneath it in case you accidentally spill or scatter toner.

**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 your used consumable items to the Brother collection program. If you choose not to return your used consumable, please discard the used consumable according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office.

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.

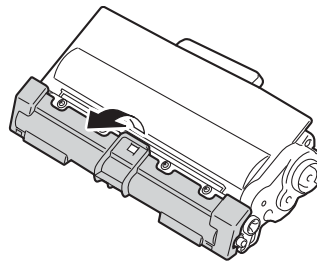




**!** Important

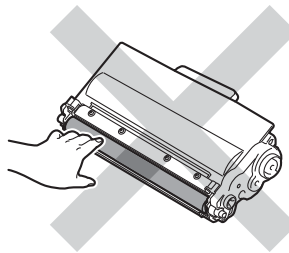
- Wait to unpack the new toner cartridge until immediately before you put it in the machine. If a toner cartridge is left unpacked for a long time, the toner life will be shortened.
- If an unpacked drum unit is put in direct sunlight or room light, the unit may be damaged.
- Brother strongly recommends 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 third party toner and/or cartridges in the Brother machine may cause damage to the machine and/or may result in unsatisfactory print quality. In addition, use of third party toner and/or cartridges may trigger incorrect status messages, cause the printer to stop prematurely or otherwise malfunction. Our limited warranty coverage does not apply to any problem that is caused by the use of 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.

- 6** Pull off the protective cover.

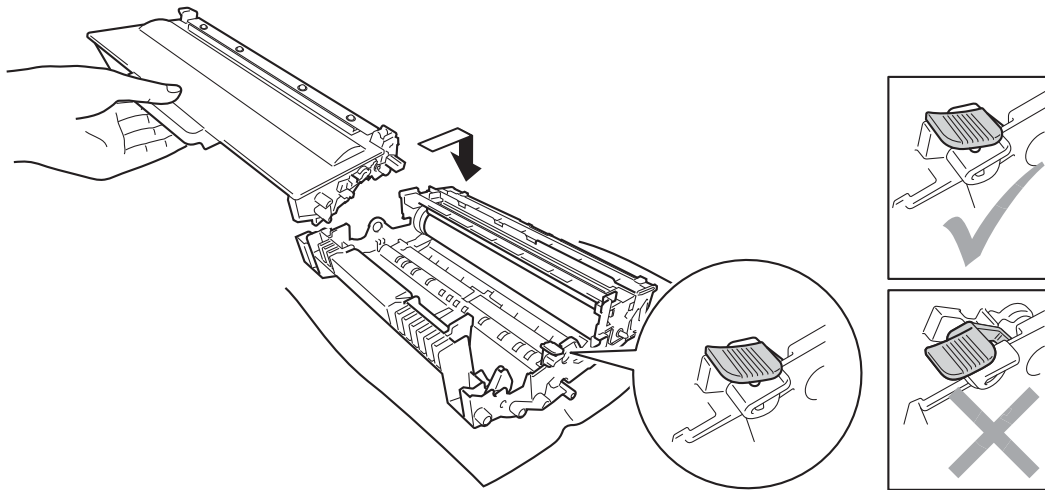


**!** Important

Put the toner cartridge in the drum unit immediately after you have removed the protective cover. To prevent any degradation to the print quality, DO NOT touch the shaded parts shown in the illustrations.



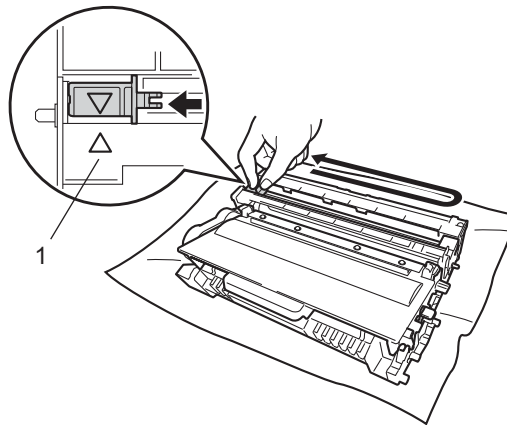
- Put the new toner cartridge firmly into the drum unit until you hear it lock into place. If you put it in properly, the green lock lever on the drum unit will lift automatically.



**Note**

Make sure that you put in the toner cartridge properly or it may separate from the drum unit.

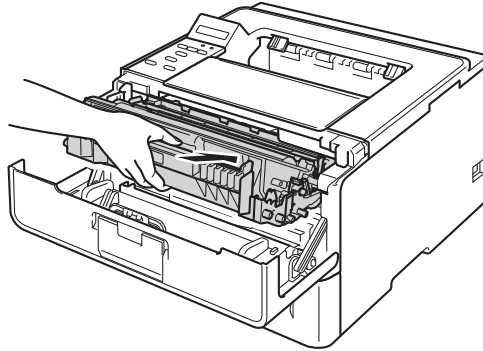
- Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



**Note**

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

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



- Close the front cover of the machine.



**Note**

After replacing the toner cartridge, **DO NOT** turn off the machine's power switch or open the front cover until the LCD shows *Ready*.

## Replacing the drum unit

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Order No. DR-720

A new drum unit can print approximately 30,000 Letter or A4 size single-sided pages.



### Note

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- There are many factors that determine the actual drum life, such as the temperature, humidity, type of paper, type of toner used and so on. Under ideal conditions, the average drum life is estimated at approximately 30,000 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 Error

Drum Error

The corona wire has become dirty. Clean the corona wire in the drum unit. (See *Cleaning the corona wire* >> page 118.)

If you cleaned the corona wire and `Drum Error` was not cleared then the drum unit is at the end of its life. Replace the drum unit with a new one.

## Drum End Soon

Drum End Soon

The drum unit is nearing the end of its rated life and will require replacement. We recommend you keep a genuine Brother drum unit ready for installation.

Clean the corona wire in the drum unit. If you don't, printed pages may have a vertical stripe or `Drum Error` may occur. (See *Cleaning the corona wire* >> page 118.)

## Replace Drum

Replace Drum

The drum unit has exceeded its rated life. Please replace the drum unit with a new one. We recommend a genuine Brother drum unit be installed at this time.

After replacement, reset the drum counter by following the instructions included with the new drum unit.

## Drum Stop

Drum Stop

We cannot guarantee the print quality. Please replace the drum unit with a new one. We recommend a genuine Brother drum unit be installed at this time.

After replacement, reset the drum counter by following the instructions included with the new drum unit.

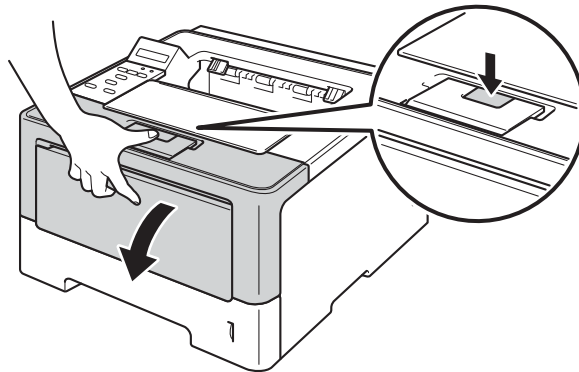
## Replacing the drum unit

### ! Important

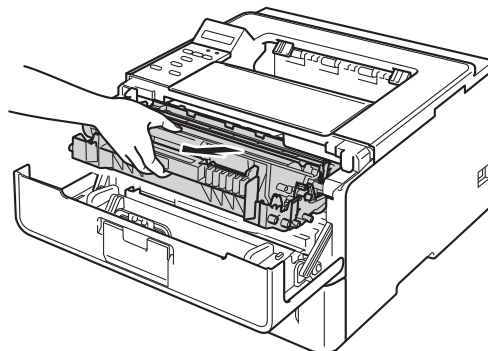
- While removing the drum unit, handle it carefully because it may contain toner. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- Every time you replace the drum unit, clean the inside of the machine. (See *Cleaning and Checking the machine* >> page 116.)

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. Leave the machine for at least 10 minutes to cool down.
- 2 Press the front cover release button and then open the front cover.



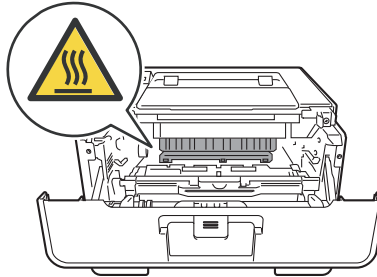
- 3 Take out the drum unit and toner cartridge assembly.



## WARNING



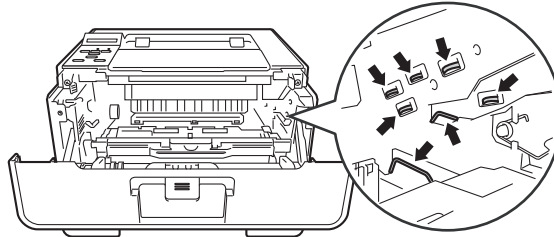
After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.



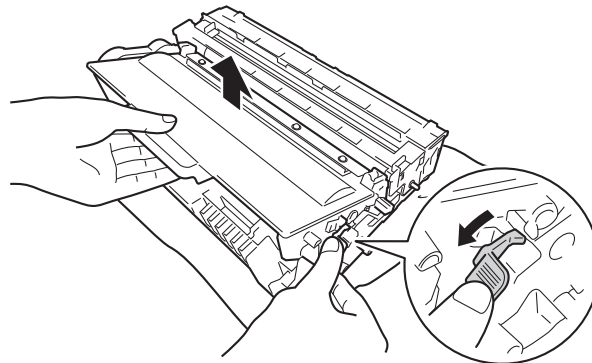
5

### Important

- 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.
- 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.



## ⚠ WARNING



- DO NOT put a toner cartridge or a toner cartridge and drum unit assembly into a fire. It could explode, resulting in injuries.
- DO NOT use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the machine. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.

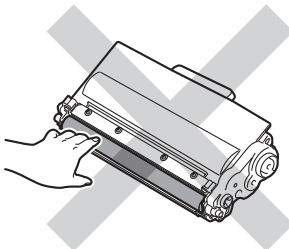
(>> Product Safety Guide: *To use the product safely*)



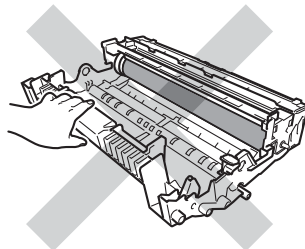
### ⓘ Important

- 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.

<Toner cartridge>



<Drum unit>



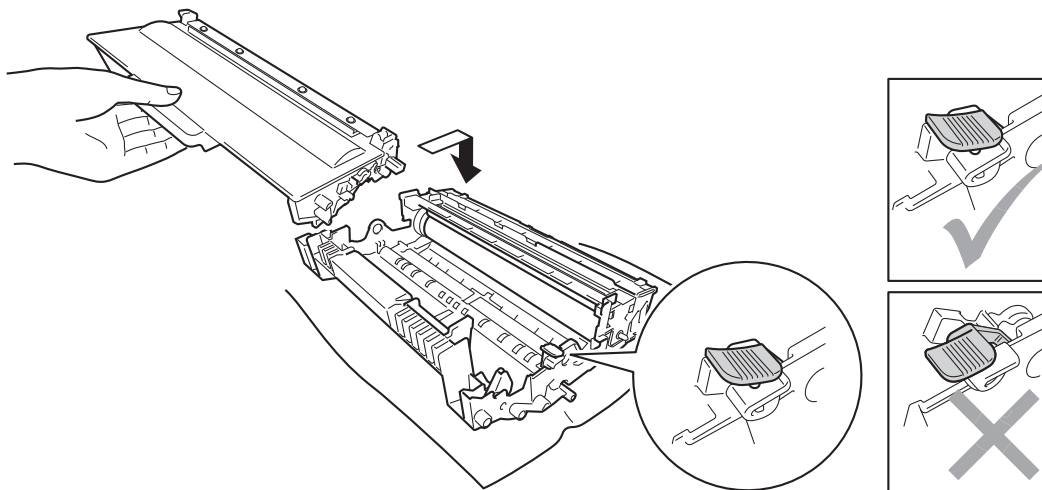
- We recommend that you place the toner cartridge on a clean, flat, level, stable surface with a sheet of disposable paper or cloth underneath it in case you accidentally spill or scatter toner.

### 📝 Note

- Be sure to seal up the used drum unit tightly in a suitable bag so that toner powder does not spill out of the drum unit.
- Go to <http://www.brother.com/original/index.html> for instructions on how to return your used consumable items to the Brother collection program. If you choose not to return your used consumable, please discard the used consumable according to local regulations, keeping it separate from domestic waste. If you have questions, call your local waste disposal office.

- 5 Unpack the new drum unit.

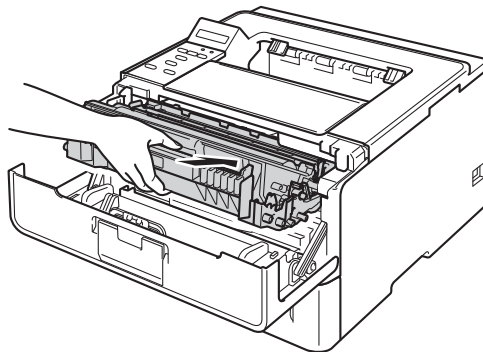
- Put the toner cartridge firmly into the new drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever on the drum unit will lift automatically.



**Note**

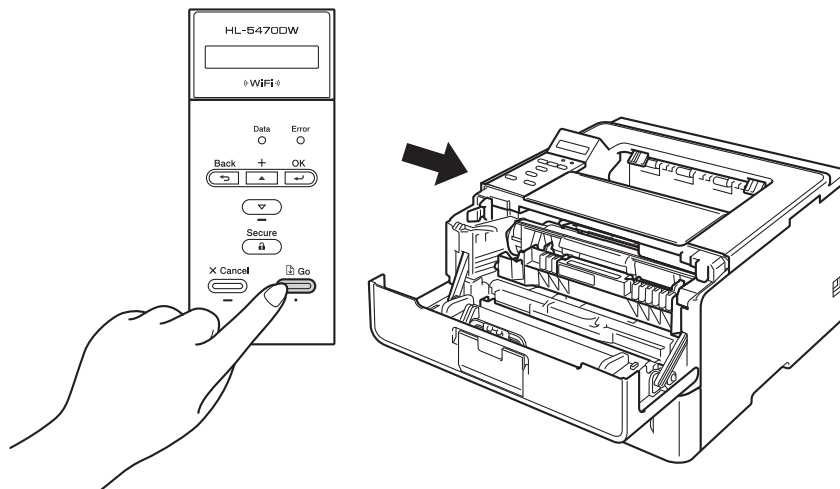
Make sure that you put in the toner cartridge properly or it may separate from the drum unit.

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





- 8 When you *replace* the drum unit with a new one, you need to reset the drum counter. Hold down **Go** until the Drum Clear message is displayed on the LCD, then release **Go**.



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

- 9 Close the front cover of the machine.

## Cleaning and Checking the machine

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 put a toner cartridge or a toner cartridge and drum unit assembly into a fire. It could explode, resulting in injuries.
- DO NOT use flammable substances, any type of spray, or an organic solvent/liquid containing alcohol or ammonia to clean the inside or outside of the machine. Doing so could cause a fire or electrical shock. Instead, use only a dry, lint-free cloth.

(>> Product Safety Guide: *To use the product safely*)

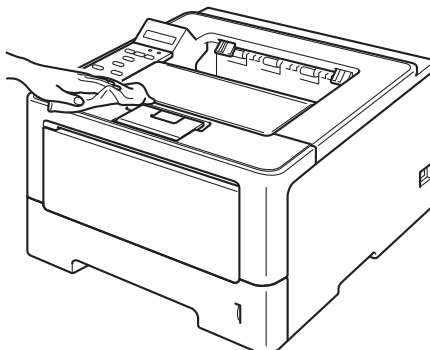


### **ⓘ Important**

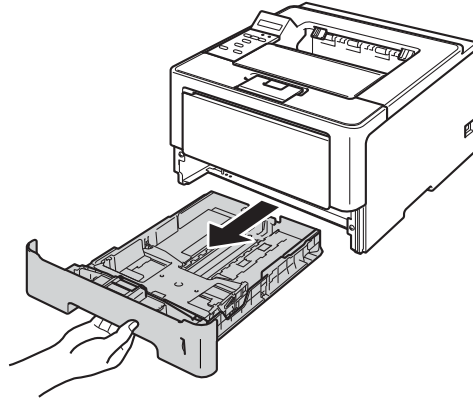
Use neutral detergents. Cleaning with volatile liquids such as thinner or benzine will damage the surface of the machine.

## Cleaning the outside of the machine

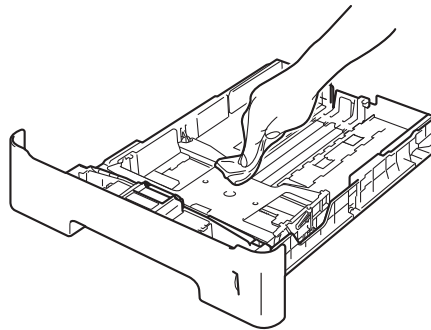
- 1 Turn off the machine's power switch.
- 2 Disconnect the interface cables from the machine, and then unplug the power cord from the AC power outlet.
- 3 Wipe the outside of the machine with a dry, lint-free cloth to remove dust.



- 4 Pull the paper tray completely out of the machine.



- 5 If paper is loaded in the paper tray, remove it.
- 6 Remove anything that is stuck inside the paper tray.
- 7 Wipe the inside and the outside of the paper tray with a dry, lint-free cloth to remove dust.

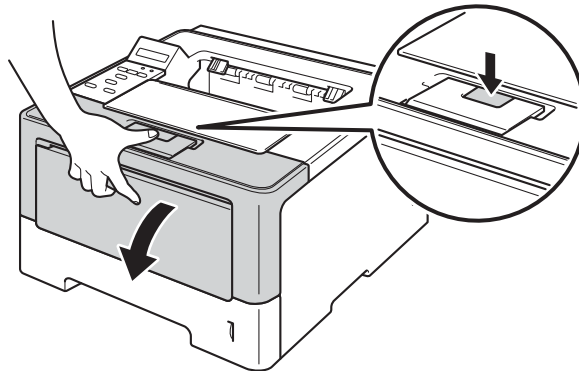


- 8 Re-load the paper and put the paper tray firmly back in the machine.
- 9 Plug the machine's power cord back into the AC power outlet first, and then connect the interface cables.
- 10 Turn on the machine's power switch.

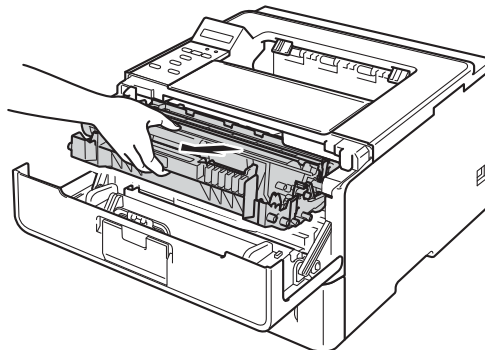
## Cleaning the corona wire

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

- 1 Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
- 2 Press the front cover release button and then open the front cover.



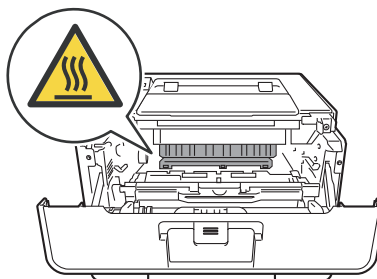
- 3 Take out the drum unit and toner cartridge assembly.



### WARNING

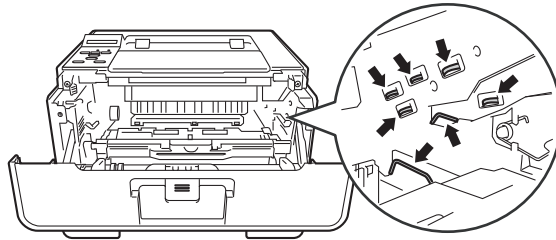


After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.

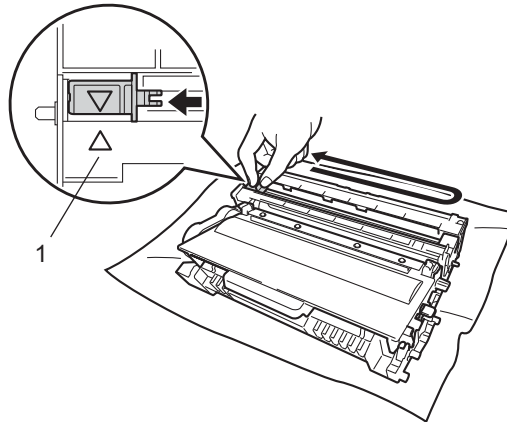


**! Important**

- 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.
- Handle the drum unit and toner cartridge assembly 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.



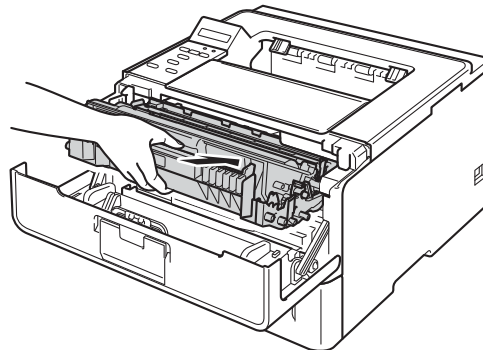
- 4 Clean the corona wire inside the drum unit by gently sliding the green tab from left to right and right to left several times.



**Note**

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

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

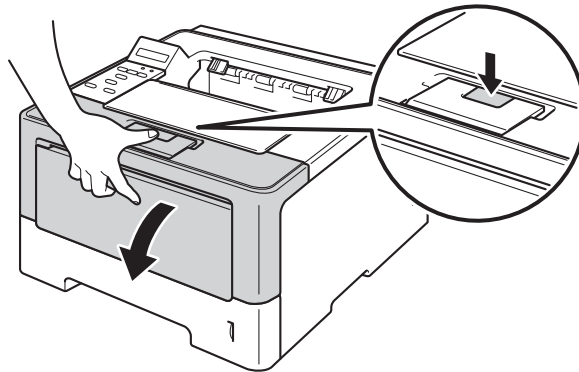


- 6 Close the front cover of the machine.

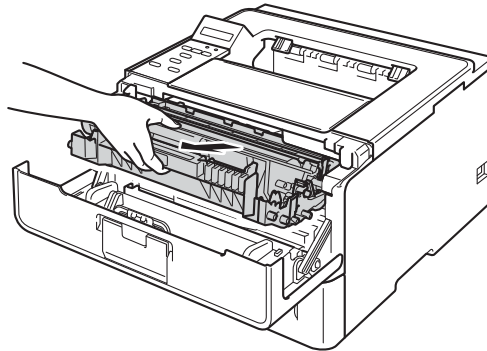
## Cleaning the drum unit

If your printout has white or black dots at 3.7 in. (94 mm) intervals, the drum may have foreign material, such as glue from a label stuck on the drum surface. Follow the steps below to solve the problem.

- 1 Make sure the machine is in Ready mode.
- 2 Press ▲ or ▼ to choose **Machine Info.** Press **OK**.
- 3 Press ▲ or ▼ to choose **Drum Dot Print**. Press **OK** to print the drum dot check sheet.
- 4 Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
- 5 Turn off the machine's power switch.
- 6 Press the front cover release button and then open the front cover.



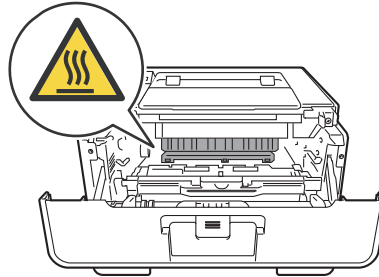
- 7 Take out the drum unit and toner cartridge assembly.



## WARNING



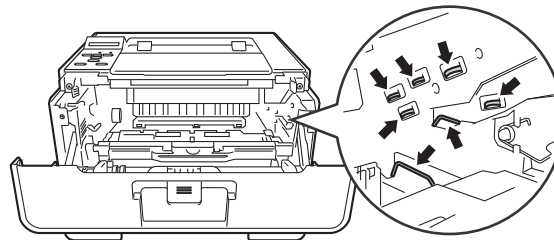
After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.



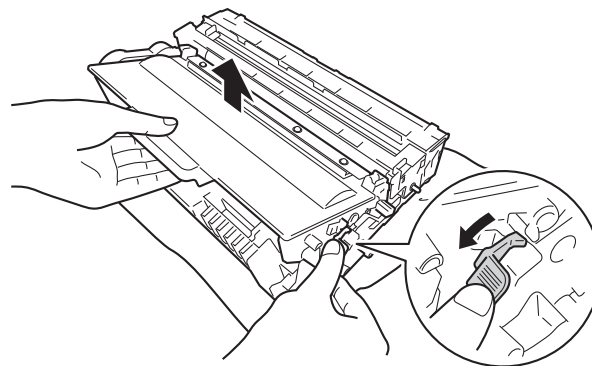
5

### Important

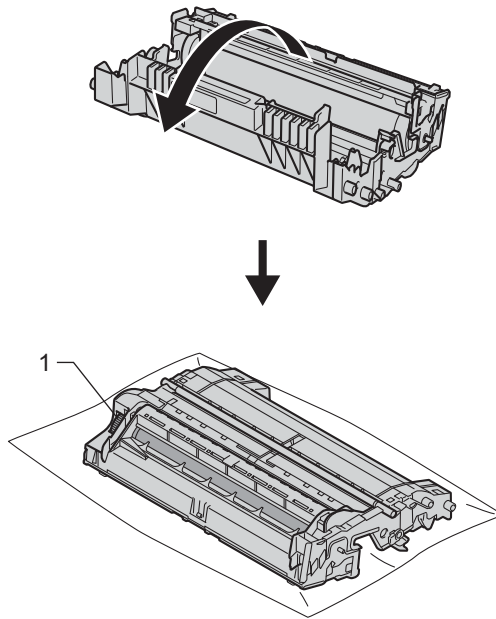
- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- Handle the drum unit and toner cartridge assembly carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- To prevent damage to the machine from static electricity, **DO NOT** touch the electrodes shown in the illustration.



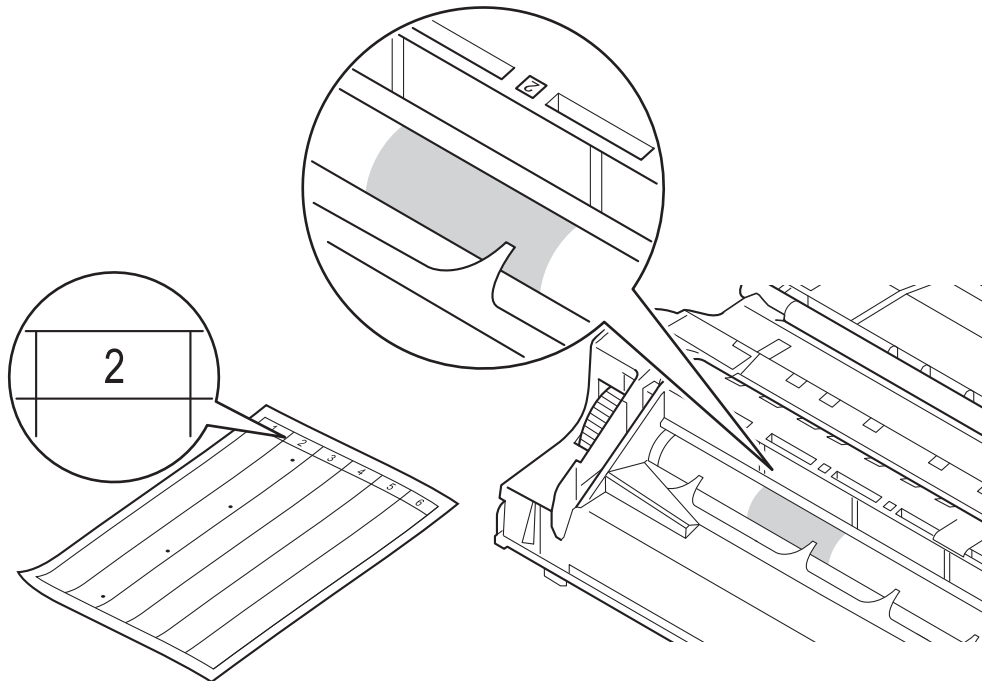
- 8 Push down the green lock lever and take the toner cartridge out of the drum unit.



- 9 Turn the drum unit as shown in the illustration. Make sure that the drum unit gear (1) is on the left hand side.

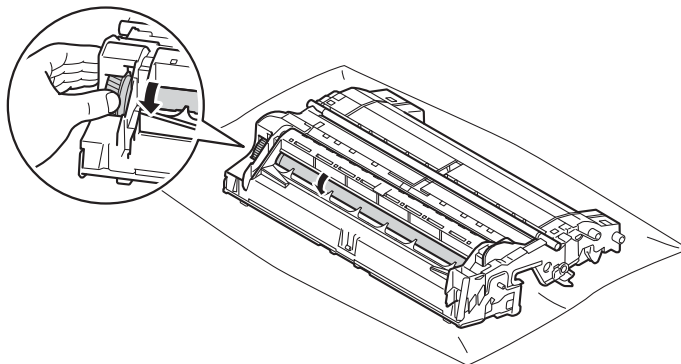


- 10 Use the numbered markers next to the drum roller to find the mark. For example, a dot in column 2 on the check sheet would mean that there is a mark in the "2" region of the drum.

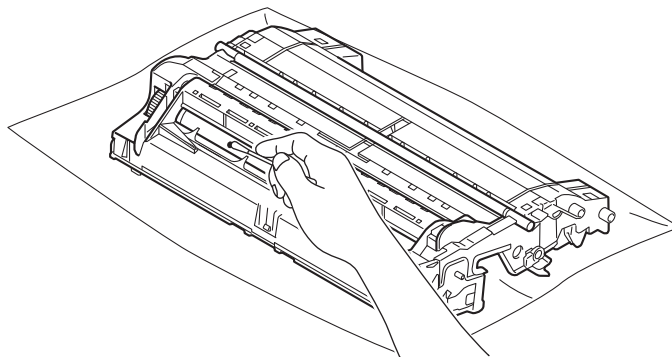




- 11 Turn the drum unit gear toward you by hand while looking at surface of the suspected area.



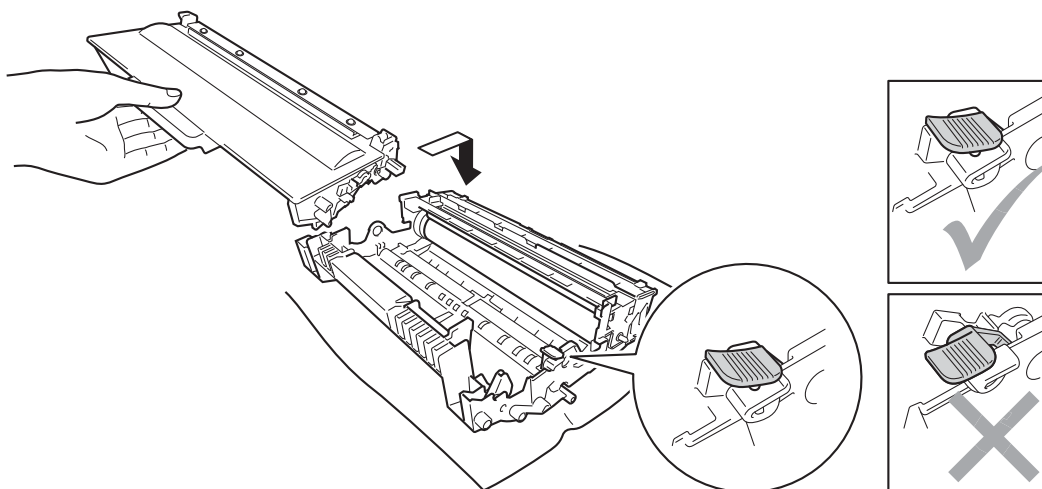
- 12 When you have found the mark on the drum that matches the drum dot check sheet, wipe the surface of the drum gently with a cotton swab until the mark on the surface comes off.



**!** Important

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

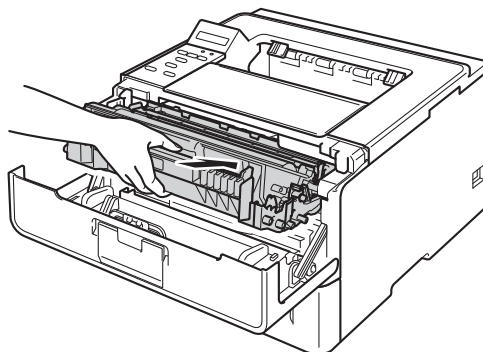
- Put the toner cartridge back into the drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever on the drum unit will lift automatically.



**Note**

Make sure that you put in the toner cartridge properly or it may separate from the drum unit.

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

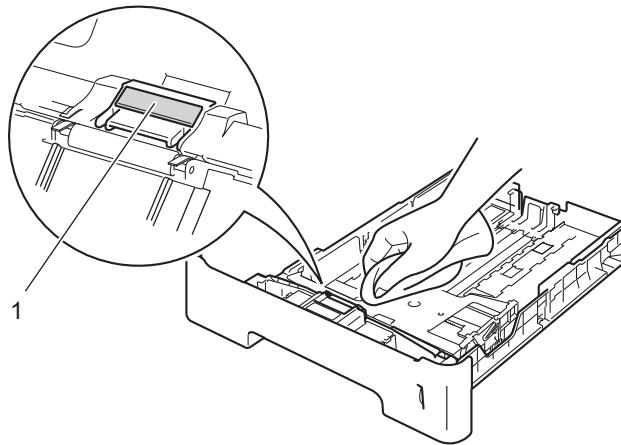


- Close the front cover of the machine.
- Turn on the machine's power switch.

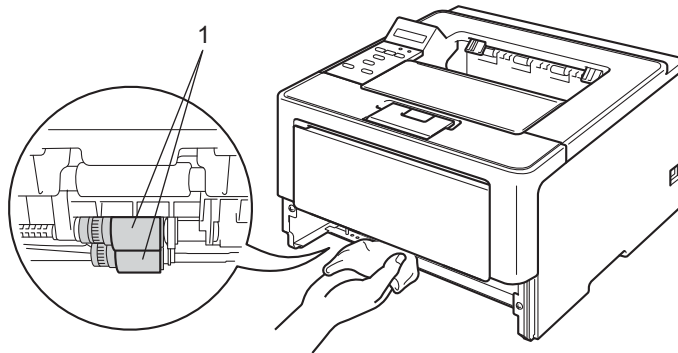
## Cleaning the paper pick-up roller

Cleaning the paper pick-up roller periodically may prevent paper jams by insuring the proper feeding of paper.

- 1 Turn off the machine's power switch.
- 2 Disconnect the interface cables from the machine, and then unplug the power cord from the AC power outlet.
- 3 Pull the paper tray completely out of the machine.
- 4 Tightly wring out a lint-free cloth soaked in lukewarm water, and then wipe the separator pad (1) of the paper tray with it to remove dust.



- 5 Wipe the two pick-up rollers (1) inside of the machine to remove dust.



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

## Packing and shipping the machine

### **⚠ WARNING**

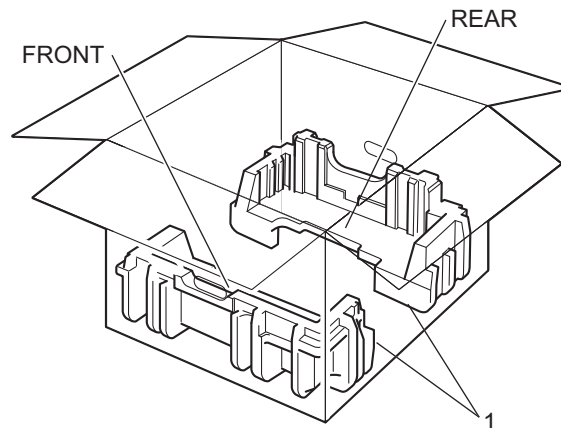
If you use a Lower Tray, DO NOT carry the machine with the Lower Tray as you may be injured or cause damage to the machine because it is not attached to the Lower Tray.



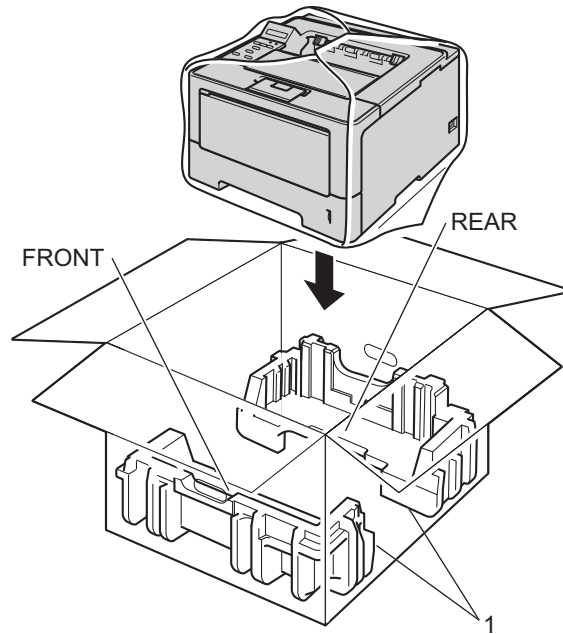
### **Note**

- 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.
- For HL-5470DWT and HL-6180DWT users, the lower tray and the machine should be packed separately into each original packing box and then pack them into the largest original box.

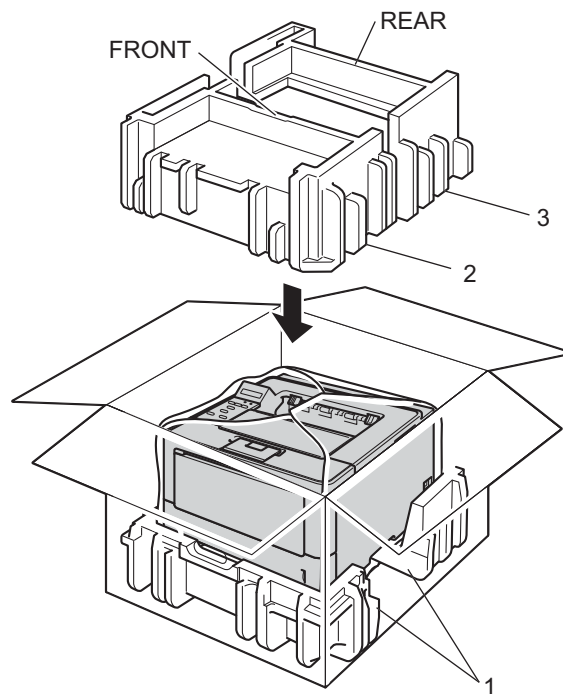
- 1 Turn off the machine's power switch. Leave the machine turned off for at least 10 minutes to cool down.
- 2 Disconnect all the cables, and then unplug the power cord from the AC power outlet.
- 3 Put the packing material (1) into the carton.



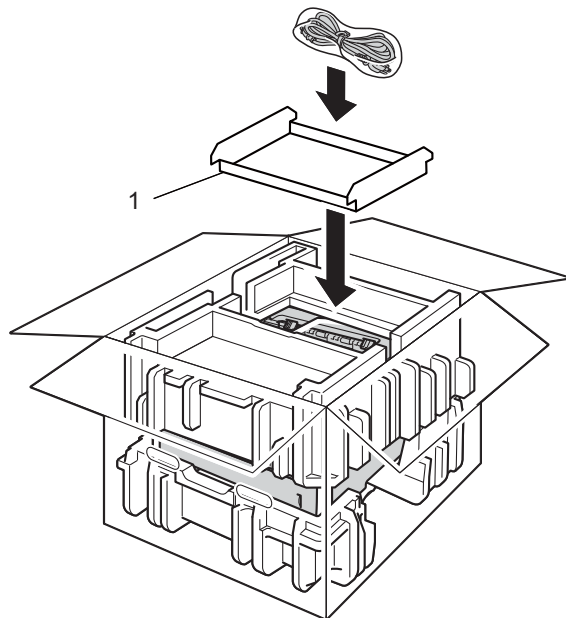
- 4 Wrap the machine in a plastic bag, then put it on the bottom packing material (1).



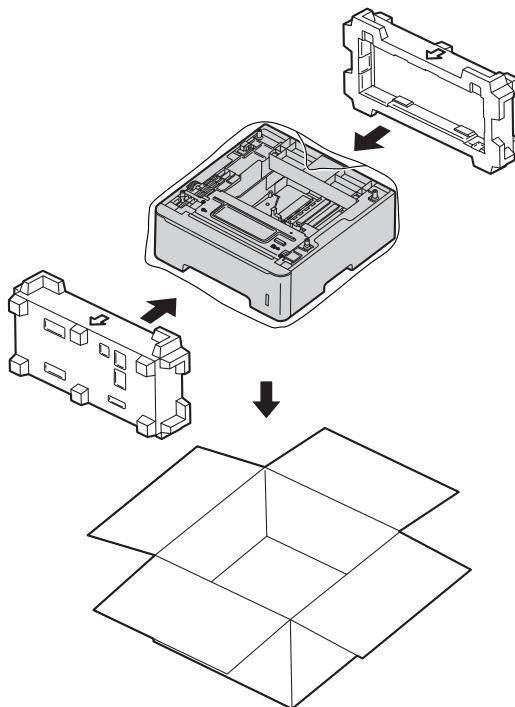
- 5 Put the packing material (2) marked "FRONT" on the front of the machine. Put the packing material (3) marked "REAR" on the back of the machine.



- Put the cardboard tray (1) on the top and put the power cord in it.



- Close the carton and tape it shut.
- <If you have a Lower Tray>  
Repack the lower tray as shown in the illustration.



If you think there is a problem with your machine, check each item below first and follow the troubleshooting tips. Most problems can be easily resolved by yourself.

HL-6180DW(T) in USA: Please go to the Brother Solutions Center at <http://solutions.brother.com/> and click Manuals on your model page to download the other manuals.

## Identifying your problem

First, check the following.

- The machine's power cord is connected properly and the machine's power switch is turned on. If the machine does not turn on after connecting the power cord, see *Other difficulties* >> page 150.
- All of the protective parts have been removed.
- Paper is inserted properly in the paper tray.
- The interface cables are securely connected to the machine and the computer, or wireless connection is set up on both the machine and your computer.
- LCD Messages  
(See *Error and maintenance messages* >> page 130.)

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

Machine does not print.

- Paper handling  
(See *Paper handling difficulties* >> page 148.)

Pages are printed, but there are still problems.

- Print quality  
(See *Improving the print quality* >> page 151.)
- Printout is incorrect  
(See *Printing difficulties* >> page 147.)

Network and other problems:

- *Network difficulties* >> page 149
- *Other difficulties* >> page 150

## Error and maintenance messages

As with any sophisticated office product, errors may occur and consumable items may need to be replaced. If this happens, your machine identifies the error or required routine maintenance and shows the appropriate message. The most common error and maintenance messages are shown below.

You can correct most errors and perform routine maintenance by yourself. If you need more help, the Brother Solutions Center offers the latest FAQs and troubleshooting tips:

Visit us at <http://solutions.brother.com/>.

Error message	Cause	Action
Access Denied	The function you want to use is restricted by Secure Function Lock 2.0.	Contact your administrator to check your Secure Function Lock Settings.
Cartridge Error	The toner cartridge is not installed correctly.	Pull out the drum unit and toner cartridge assembly, take out the toner cartridge, and put it back into the drum unit again. Put the drum unit and toner cartridge assembly back in the machine. If the problem continues, call Brother Customer Service.
Cover is Open	The front cover is not closed completely.	Close the front cover of the machine.
	The fuser cover is not closed completely or paper was jammed in the back of the machine when you turned on the power.	<ul style="list-style-type: none"> <li>■ Close the fuser cover of the machine.</li> <li>■ Make sure paper is not jammed inside the back of the machine, and then close the fuser cover and press <b>Go</b>. (See <i>Paper is jammed at the back of the machine</i> &gt;&gt; page 139.)</li> </ul>
DIMM Error	<ul style="list-style-type: none"> <li>■ The DIMM is not installed correctly.</li> <li>■ The DIMM is broken.</li> <li>■ The DIMM does not meet the required specifications.</li> </ul>	<ul style="list-style-type: none"> <li>■ Turn off the machine and remove the DIMM. (See <i>Installing extra memory</i> &gt;&gt; page 99.)</li> <li>■ Confirm the DIMM meets the required specifications. (For details, see <i>SO-DIMM types</i> &gt;&gt; page 98.)</li> <li>■ Re-install the DIMM correctly. Wait a few seconds, and then turn it on again.</li> <li>■ If this error message appears again, replace the DIMM with a new one. (See <i>Installing extra memory</i> &gt;&gt; page 99.)</li> </ul>
Drum End Soon	The drum unit is near the end of its life.	Order a new drum unit now so a replacement drum unit will be available when the LCD shows <i>Replace Drum</i> . (See <i>Drum End Soon</i> >> page 110.)
Drum Error	The corona wire on the drum unit needs to be cleaned.	Clean the corona wire. (See <i>Cleaning the corona wire</i> >> page 118.)
	The toner cartridge is placed in the machine without the drum unit.	Put the toner cartridge into the drum unit, and then re-install the drum unit and toner cartridge assembly in the machine
Drum Stop	It is time to replace the drum unit.	Replace the drum unit. (See <i>Replacing the drum unit</i> >> page 111.)



Error message	Cause	Action
Duplex Disabled	The back cover of the machine is not closed completely.	Close the back cover of the machine.
	The duplex tray is not installed or not installed correctly.	Re-install the duplex tray.
Fuser Error	The temperature of the fuser unit does not rise to a specified temperature within the specified time.	Turn the power switch off, wait a few seconds, and then turn it on again. Leave the machine for 15 minutes with the power on.
	The fuser unit is too hot.	
Jam Duplex	The paper is jammed in the duplex tray or the fuser unit.	See <i>Paper is jammed in the Duplex tray</i> >> page 136.
Jam Inside	The paper is jammed inside the machine.	See <i>Paper is jammed inside the machine</i> >> page 143.
	The toner cartridge is placed in the machine without the drum unit.	Put the toner cartridge into the drum unit, and then re-install the drum unit and toner cartridge assembly in the machine.
Jam MP Tray	The paper is jammed in the MP tray of the machine.	See <i>Paper is jammed in the MP tray</i> >> page 134.
Jam Rear	The paper is jammed in the back of the machine.	See <i>Paper is jammed at the back of the machine</i> >> page 139.
Jam Tray 1 Jam Tray 2	The paper is jammed in the paper tray of the machine.	See <i>Paper is jammed in Paper Tray 1 or Tray 2</i> >> page 134.
Limit Exceeded	The printing limit set by Secure Function Lock 2.0 was reached.	Contact your administrator to check your Secure Function Lock Settings.
Log Access Error	The machine could not access the print log file in the server.	Contact your administrator to check the Store Print Log to Network settings.  (For detailed information >> Network User's Guide: Store Print Log to Network)
Manual Feed	<b>Manual</b> was selected as the paper source when there was no paper in the MP tray.	Place the same size of paper in the MP tray as is shown on the LCD. If the machine is in Pause mode, press <b>Go</b> . (See <i>Loading paper in the multi-purpose tray (MP tray)</i> >> page 12.)
No Paper Load <size> paper in <tray>.	The machine is out of paper or paper is not correctly loaded in the specified paper tray.	Put paper in the indicated paper tray.  Make sure the paper guides are set to the correct size.
No Toner	The toner cartridge or the drum unit and toner cartridge assembly is not installed properly.	Remove the drum unit and toner cartridge assembly, remove the toner cartridge from the drum unit, and re-install the toner cartridge back into the drum unit again. Re-install the drum unit and toner cartridge assembly back in the machine. If the problem continues, replace the toner cartridge. (See <i>Replacing the toner cartridge</i> >> page 104)
No Tray	The standard paper tray is not installed or not installed correctly.	Re-install the standard paper tray.

Error message	Cause	Action
Out of Memory Secure Print Data is full.	The machine's memory is full.	Press <b>Cancel</b> and delete the previously stored secure print data.
Out of Memory Add more Memory.	The machine's memory is full.	Reduce the complexity of your document or reduce the print resolution. Add more memory. (see <i>Installing extra memory</i> >> page 99.)
Print Unable ##	The machine has a mechanical problem.	Turn the power switch off, wait a few minutes, and then turn it on again. If the problem continues, call Brother Customer Service.
Replace Drum	It is time to replace the drum unit.	Replace the drum unit. (See <i>Replacing the drum unit</i> >> page 111.)
	The drum unit counter was not reset when a new drum was installed.	Reset the drum unit counter. (See <i>Replacing the drum unit</i> >> page 111.)
Replace Fuser	It is time to replace the fuser unit.	Call Brother Customer Service or a Brother Authorized Service Center to replace the fuser unit. To replace Fuser Unit call Brother Customer Service at: <b>1-877-BROTHER (1-877-276-8437) (in USA)</b> <b>1-877-BROTHER (in Canada)</b> or to locate a Brother Authorized Service Center, visit us at: <a href="http://www.brother-usa.com/service/">http://www.brother-usa.com/service/</a>
Replace Laser	It is time to replace the laser unit.	Call Brother Customer Service or a Brother Authorized Service Center to replace the laser unit. To replace Laser Unit call Brother Customer Service at: <b>1-877-BROTHER (1-877-276-8437) (in USA)</b> <b>1-877-BROTHER (in Canada)</b> or to locate a Brother Authorized Service Center, visit us at: <a href="http://www.brother-usa.com/service/">http://www.brother-usa.com/service/</a>
Replace PF Kit1 Replace PF Kit2 Replace PF KitMP	It is time to replace the paper feeding kit.	Call Brother Customer Service or a Brother Authorized Service Center to replace the PF kit. To replace PF Kit call Brother Customer Service at: <b>1-877-BROTHER (1-877-276-8437) (in USA)</b> <b>1-877-BROTHER (in Canada)</b> or to locate a Brother Authorized Service Center, visit us at: <a href="http://www.brother-usa.com/service/">http://www.brother-usa.com/service/</a>

Error message	Cause	Action
Replace Toner	The toner cartridge is at the end of its life. The machine will stop all print operations.	Replace the toner cartridge. (See <i>Replacing the toner cartridge</i> >> page 104.)
Size Error DX	The paper size defined in the printer driver and the control panel menu is not available for automatic duplex printing.	Press <b>Cancel</b> . Choose a paper size which is supported by the duplex tray. The paper size you can use for automatic duplex printing is Letter, Legal or Folio.
	The paper in the tray is not correct size and is not available for automatic duplex printing.	Load the correct size of paper in the tray and set the size of paper to the tray. (See <i>Paper Tray</i> >> page 79.) The paper size you can use for automatic duplex printing is Letter, Legal or Folio.
Size Mismatch	The paper in the indicated tray is not the correct size.	Put the same size paper in the paper tray that is selected in the printer driver, and then press <b>Go</b> , or select the size of paper that you loaded in the indicated paper tray.
Storage Full	There is no space on the ROM.	Press <b>Cancel</b> or <b>Go</b> . Delete unnecessary macros or fonts. (See <i>Delete Storage</i> >> page 80.)
Toner Low	If the LCD shows <i>Toner Low</i> you can still print; however, the machine is telling you that the toner cartridge is near the end of its life.	Order a new toner cartridge now so a replacement toner cartridge will be available when the LCD shows <i>Replace Toner</i> .

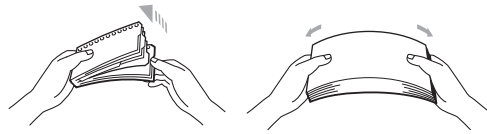
## Paper jams

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.

### Paper is jammed in the MP tray

If the LCD shows **Jam MP Tray**, follow these steps:

- 1 Remove the paper from the MP tray.
- 2 Remove any jammed paper from in and around the MP tray.
- 3 Fan the paper stack, and then put it back in the MP tray.

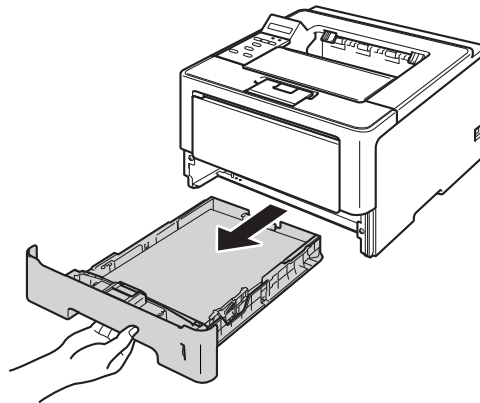


- 4 When loading paper in the MP tray, make sure that the paper stays under the maximum paper height guides on both sides of the tray.
- 5 Press **Go** to resume printing.

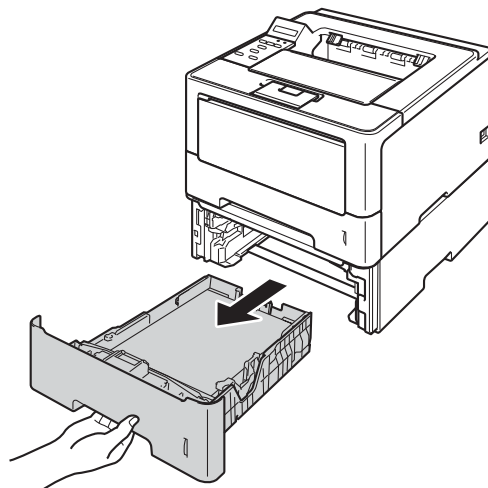
### Paper is jammed in Paper Tray 1 or Tray 2

If the LCD shows **Jam Tray 1** or **Jam Tray 2**, follow these steps:

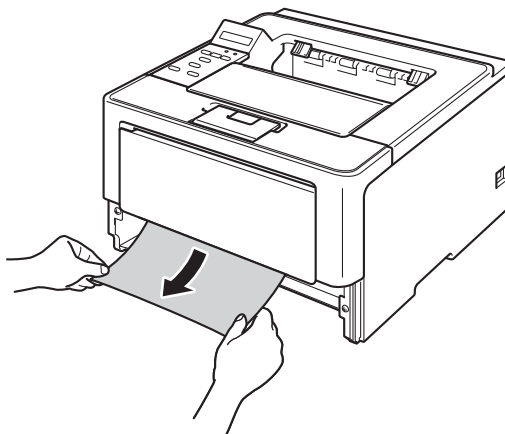
- 1 Pull the paper tray completely out of the machine.  
For **Jam Tray 1**:



For Jam Tray 2:



- 2 Use both hands to slowly pull out the jammed paper.



**Note**

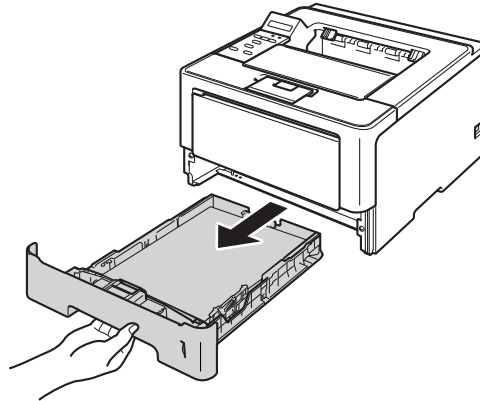
Pulling the jammed paper downward allows you to remove the paper more easily.

- 3 Make sure that the paper is below the maximum paper mark (▼▼▼) in the paper tray. 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.
- 4 Put the paper tray firmly back in the machine.

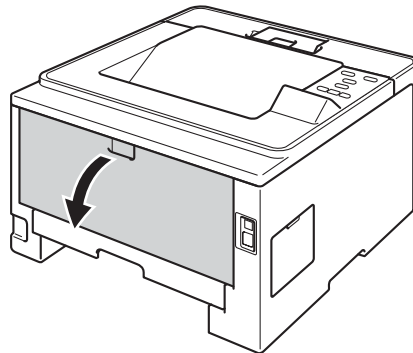
## Paper is jammed in the Duplex tray

If the LCD shows *Jam Duplex*, follow these steps:

- 1 Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
- 2 Pull the paper tray completely out of the machine.



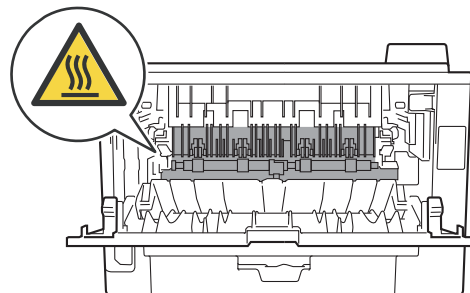
- 3 Open the back cover.



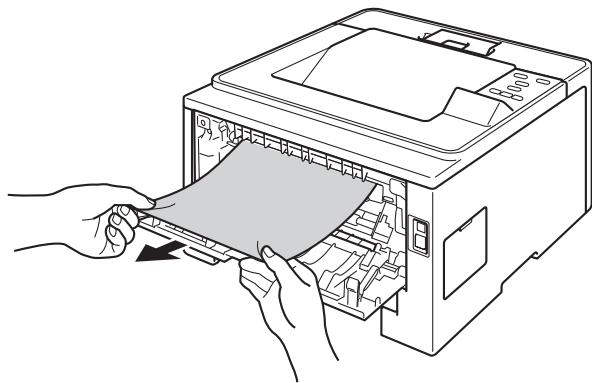
### **WARNING**



After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.

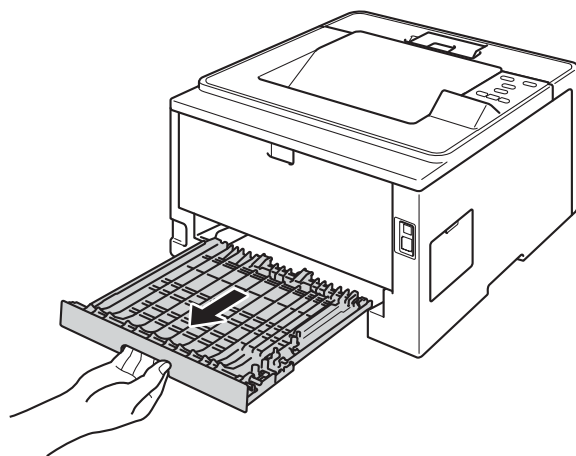


- Using both hands, gently pull the jammed paper out of the back of the machine.

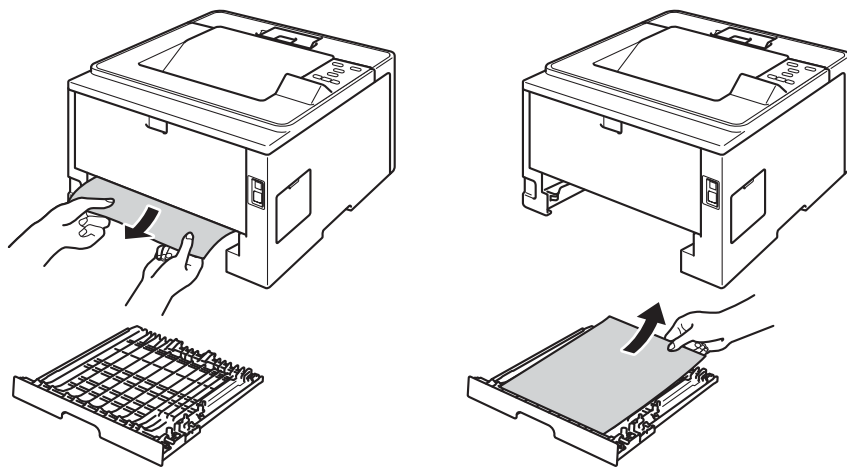


- Close the back cover.

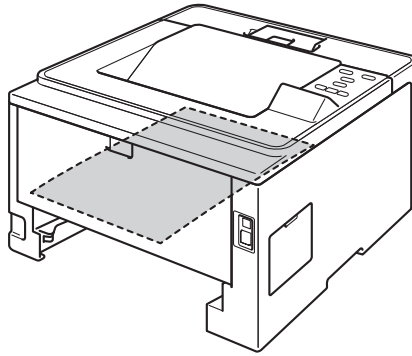
- Pull the duplex tray completely out of the machine.



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



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



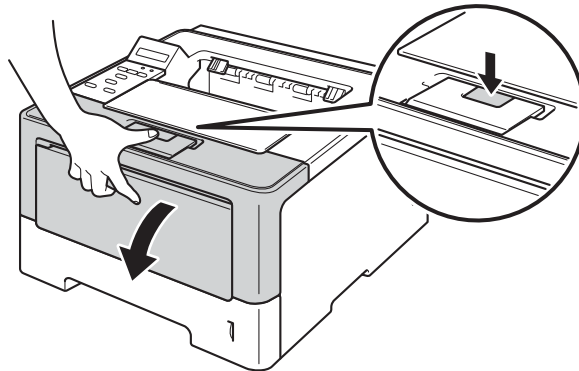
- 9 Put the duplex tray back into the machine.
- 10 Put the paper tray firmly back in the machine.



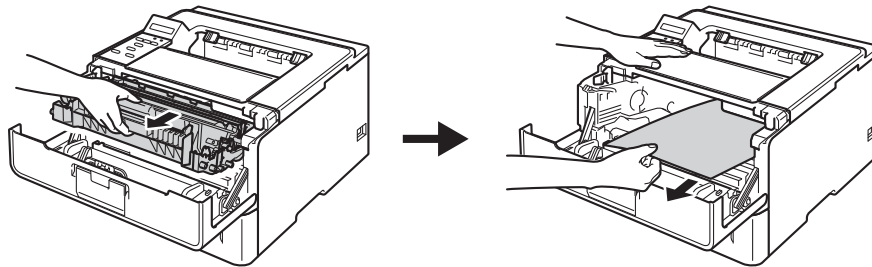
## Paper is jammed at the back of the machine

If the LCD shows `Jam Rear`, a paper jam occurred behind the back cover. Follow these steps:

- 1 Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
- 2 Press the front cover release button and then open the front cover.



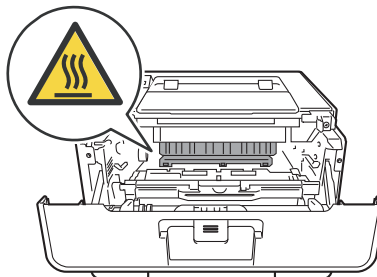
- 3 Slowly take out the drum unit and toner cartridge assembly. The jammed paper may be pulled out with the drum unit and toner cartridge assembly, or this may release the paper so you can pull it out from inside of the machine.



### WARNING

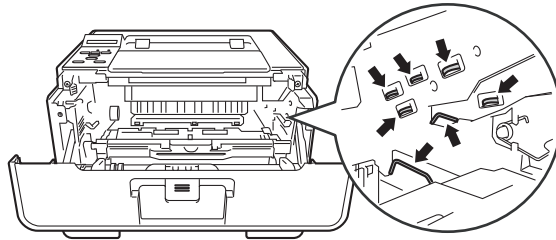


After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.

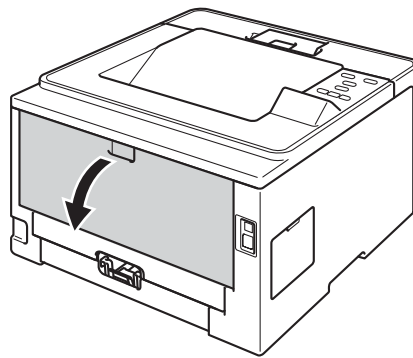


**!** Important

- 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.
- Handle the drum unit and toner cartridge assembly 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.



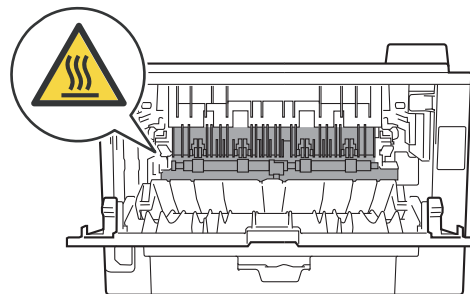
- 4 Open the back cover.



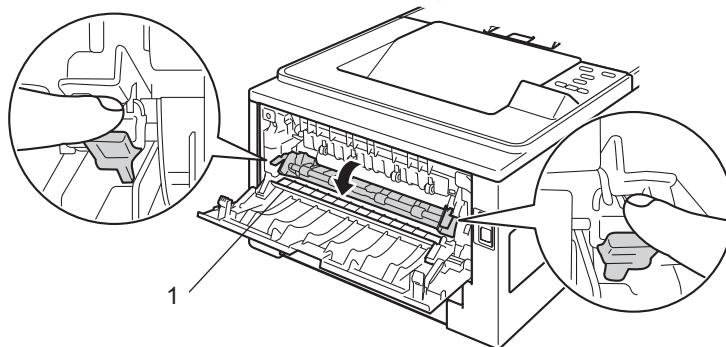
**!** WARNING



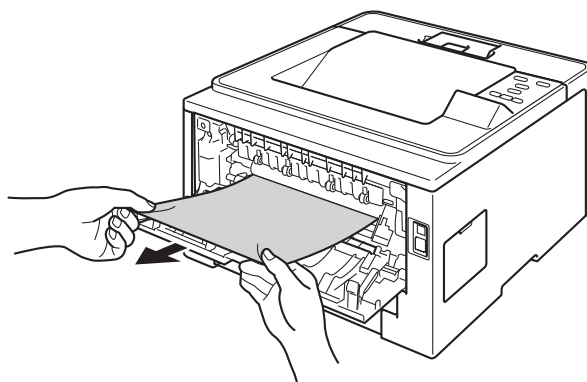
After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.



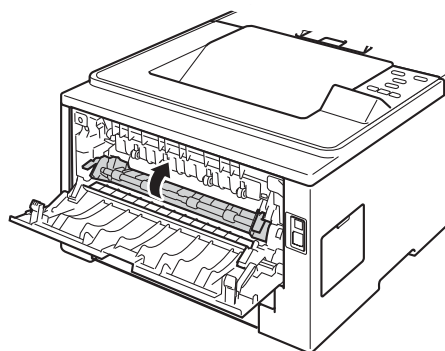
- 5 Pull the green tabs at the left and right hand sides toward you and fold down the fuser cover (1).



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

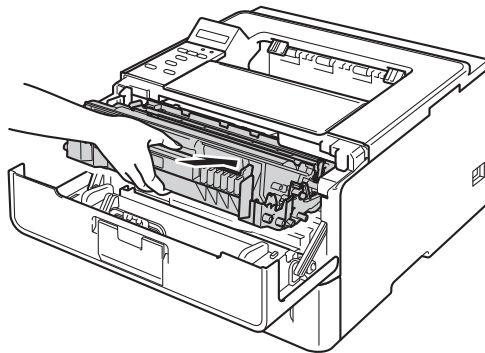


- 7 Close the fuser cover.



- 8 Close the back cover.

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

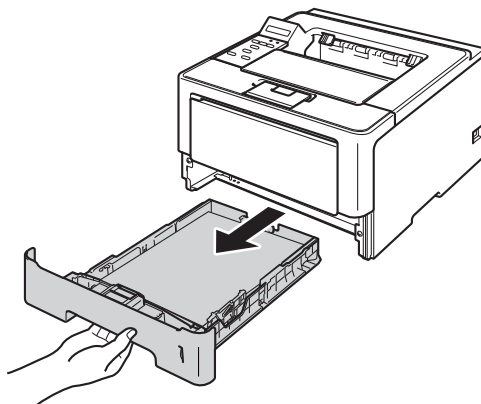


- 10 Close the front cover of the machine.

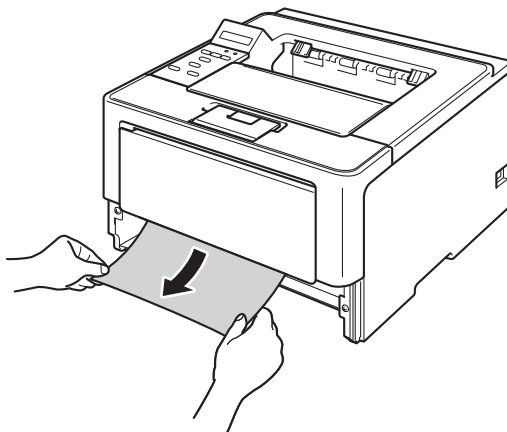
## Paper is jammed inside the machine

If the LCD shows `Jam Inside`, follow these steps:

- 1 Leave the machine turned on for 10 minutes for the internal fan to cool the extremely hot parts inside the machine.
- 2 Pull the paper tray completely out of the machine.



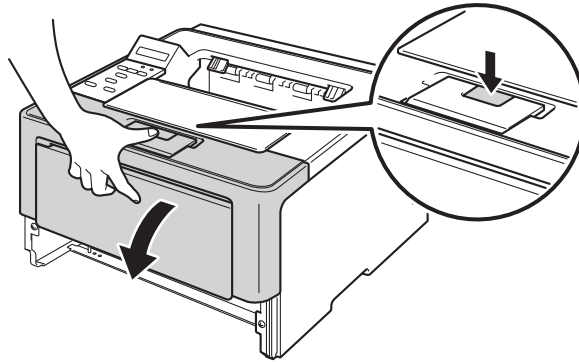
- 3 Use both hands to slowly pull out the jammed paper.



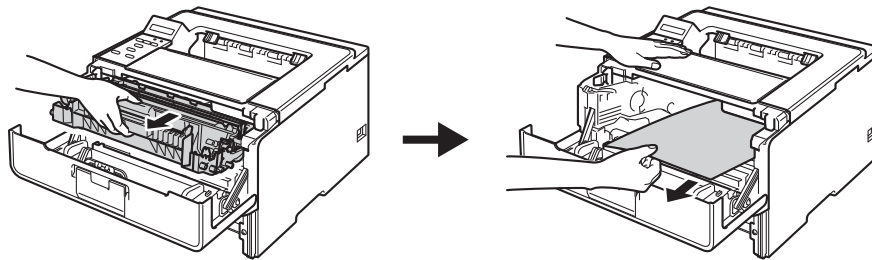
### Note

Pulling the jammed paper downward allows you to remove the paper more easily.

- 4 Press the front cover release button and then open the front cover.



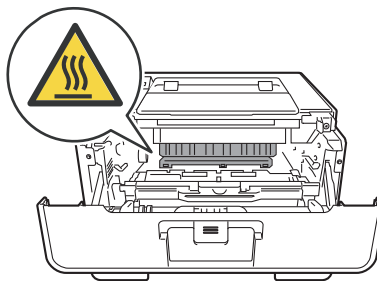
- 5 Slowly take out the drum unit and toner cartridge assembly. The jammed paper may be pulled out with the drum unit and toner cartridge assembly, or this may release the paper so you can pull it out from inside of the machine.



**! WARNING**

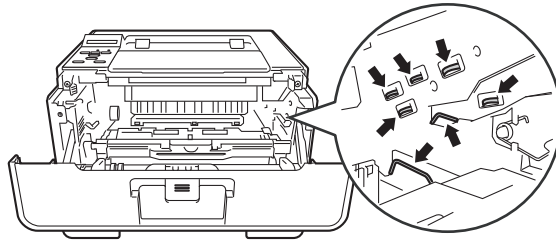


After you have just used the machine, some internal parts of the machine will be extremely hot. Wait for the machine to cool down before you touch the internal parts of the machine.



**! Important**

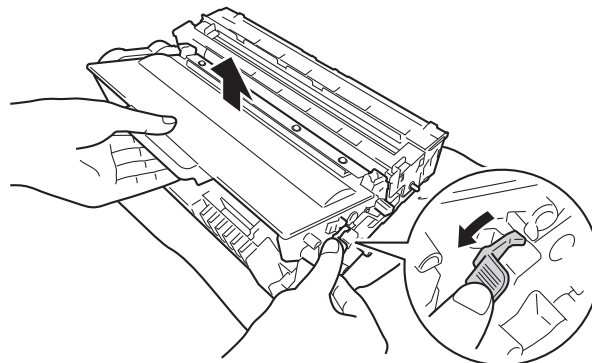
- We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.
- Handle the drum unit and toner cartridge assembly carefully. If toner scatters on your hands or clothes, immediately wipe or wash it off with cold water.
- To prevent damage to the machine from static electricity, **DO NOT** touch the electrodes shown in the illustration.



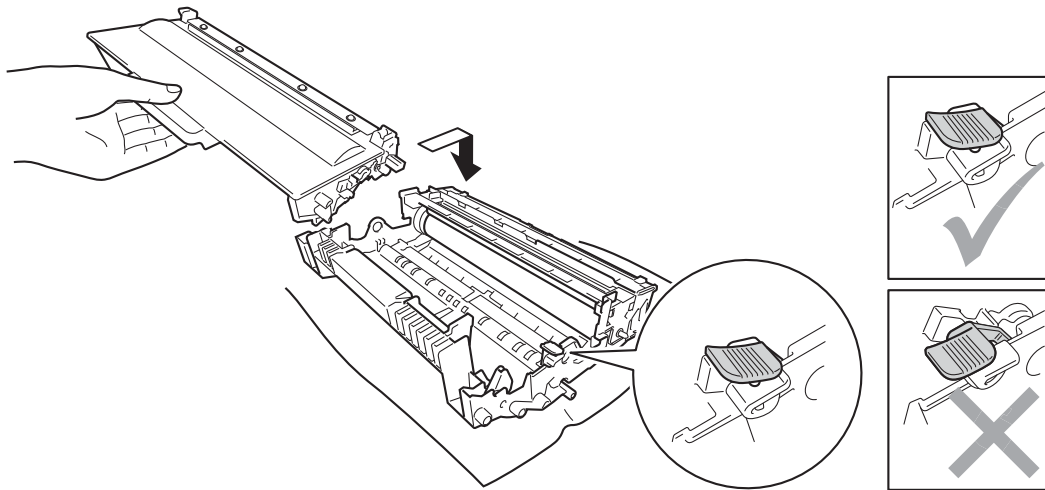
**Note**

The drum unit and toner cartridge are two separate parts. Make sure both are installed as an assembly. If the toner cartridge is placed in the machine without the drum unit, the messages Drum Error or Jam Inside may be displayed.

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



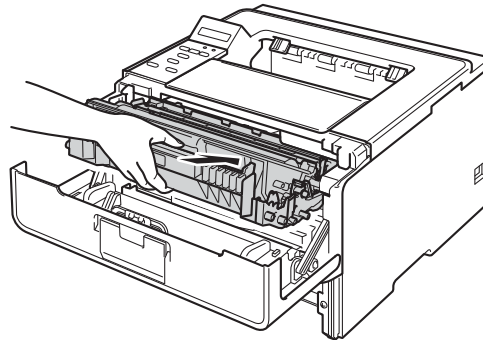
- Put the toner cartridge back into the drum unit until you hear it lock into place. If you put the cartridge in properly, the green lock lever on the drum unit will lift automatically.



 **Note**

Make sure that you put in the toner cartridge properly or it may separate from the drum unit.

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



- Close the front cover of the machine.
- Put the paper tray firmly back in the machine.

 **Note**

If you turn off the machine during Jam Inside, the machine will print incomplete data from your computer. Before you turn on the machine, delete the print spool job on your computer.



## If you are having difficulty with your machine

### ❗ Important

- For technical help, you must call the country where you bought the machine. Calls must be made from within that country.
- If you think there is a problem with your machine, check the chart below and follow the troubleshooting tips. Most problems can be easily resolved 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/>.
- Using non-Brother supplies may affect the print quality, hardware performance, and machine reliability.

### Printing difficulties

Difficulties	Suggestions
No printout.	Check that the correct printer driver has been installed and chosen.
	Check to see if the LCD is showing an error message. (See <i>Error and maintenance messages</i> >> page 130.)
	Check that the machine is online: (Windows® 7 and Windows Server® 2008 R2) Click the <b>Start</b> button and <b>Devices and Printers</b> . Right-click <b>Brother HL-XXXX series</b> and click <b>See What's Printing</b> . Click <b>Printer</b> and make sure <b>Use Printer Offline</b> is unchecked. (Windows Vista® and Windows Server® 2008) Click the <b>Start</b> button, <b>Control Panel, Hardware and Sound</b> , and then <b>Printers</b> . Right-click <b>Brother HL-XXXX series</b> . Make sure that <b>Use Printer Offline</b> is unchecked. (Windows® XP and Windows Server® 2003) Click the <b>Start</b> button and choose <b>Printers and Faxes</b> . Right-click <b>Brother HL-XXXX series</b> . Make sure that <b>Use Printer Offline</b> is unchecked.
	Contact your administrator to check your Secure Function Lock settings.
The machine is not printing or has stopped printing.	Press <b>Cancel</b> . The machine will cancel the print job and clear it from the memory. The printout may be incomplete.
	There is an unprintable area on the top and bottom of the page. Adjust the top and bottom margins in your document to allow for this. (See <i>Unprintable area when printing from a computer</i> >> page 7.)
The machine prints unexpectedly or it prints garbage.	Press <b>Cancel</b> to cancel print jobs.
	Check the settings in your application to make sure it is set up to work with your machine.
The machine prints the first couple of pages correctly, then some pages have text missing.	Check the settings in your application to make sure that it is set up to work with your machine.
	Your computer is not recognizing the machine's input buffer's full signal. Make sure that you connected the interface cable correctly. (>> Quick Setup Guide)


### Printing difficulties (continued)

Difficulties	Suggestions
Cannot perform 'Page Layout' printing.	Check that the paper size setting in the application and in the printer driver are the same.
Print speed is too slow.	Try changing the printer driver setting. The highest resolution needs longer data processing, sending and printing time.
	Check that the back cover is firmly closed and the duplex tray is firmly installed.
	If the machine is in Quiet mode, print speed is slower. Check the Quiet mode setting. (See <i>Turning Quiet mode on/off</i> >> page 95.)
The machine does not print from Adobe® Illustrator®.	Reduce the print quality. (See <i>Basic tab</i> >> page 26 (for Windows®)) (See <i>Print Settings</i> >> page 61 (for Macintosh))
Poor print quality	See <i>Improving the print quality</i> >> page 151.

### Paper handling difficulties

Difficulties	Suggestions
The machine does not feed paper.	If there is no paper, load a new stack of paper into the paper tray.
	If there is paper in the paper tray, make sure it is straight. If the paper is curled, you should straighten it. Sometimes it is helpful to remove the paper, turn the stack over and put it back into the paper tray.
	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 <i>Cleaning the paper pick-up roller</i> >> page 125.)
The machine does not feed paper from the MP tray.	Make sure that <b>MP Tray</b> is chosen in the printer driver.
	Fan the paper well and put it back in the tray firmly.
How do I print on envelopes?	You can load envelopes in the MP tray. Your application must be set up to print the envelope size you are using. This is usually done in the Page Setup or Document Setup menu of your application. (See your application's manual for more information.)

## Network difficulties

Difficulties	Suggestions
<p>Cannot print over a wired Network.</p>	<p>If you are having Network problems &gt;&gt; Network User's Guide.</p> <p>Make sure your machine is powered on and is on-line and in Ready mode. Print the Network Configuration report to verify your Network settings are correct. You can Print the Network Configuration report in the following menu selection: Machine Info., Print NetSetting and then press <b>Go</b>.</p> <p>Reconnect the LAN cable to the hub to verify that the cable and network connections are good. If possible, try connecting the machine to a different port on your hub using a different cable. You can check the current wired network status from the Network control panel menu.</p> <p>(See <i>Network Menu</i> &gt;&gt; page 86.)</p>
<p>The Brother software cannot be installed.</p>	<p><b>(Windows®)</b> If the Security Software warning appears on the PC screen during the installation, change the Security Software settings to permit the Brother product setup program or other program to run.</p> <p><b>(Macintosh)</b> If you are using a firewall function of anti-spyware or antivirus security software, temporarily disable it and then install the Brother software.</p>
<p>Cannot connect to wireless network.</p>	<p>Investigate the problem using the WLAN report. You can Print the WLAN report in the following menu selection: Machine Info., Print WLANReport and then press <b>Go</b>.</p> <p>For more details &gt;&gt; Quick Setup Guide</p>
<p> For other problems concerning using your machine on a Network &gt;&gt; Network User's Guide</p>	

## Other difficulties

Difficulties	Suggestions
<p>The machine will not turn on.</p>	<p>Adverse conditions on the power connection (such as lightning or a power surge) may have triggered the machine's internal safety mechanisms. Turn the machine off and unplug the power cord. Wait for ten minutes, then plug in the power cord and turn the machine on.</p> <p>If you still cannot turn on the machine, plug the power cord directly into a different known working wall outlet (do not plug it into a surge suppressor or backup battery type of device), and then turn on the machine. If this works, then the wall outlet, battery backup device, or surge suppressor device is the cause of the problem.</p>
<p>The machine cannot print EPS data that includes binary with the BR-Script3 printer driver.</p>	<p><b>(Windows®)</b>            You need the following settings to print EPS data:</p> <ol style="list-style-type: none"> <li>1 For Windows® 7 and Windows Server® 2008 R2:                Click the <b>Start</b> button and <b>Devices and Printers</b>.                For Windows Vista® and Windows Server® 2008:                Click <b>Start</b> button, <b>Control Panel, Hardware and Sound</b>, and then <b>Printers</b>.                For Windows® XP and Windows Server® 2003:                Click <b>Start</b> button, and select <b>Printers and Faxes</b>.</li> <li>2 Right-click the <b>Brother HL-XXXX BR-Script3</b> icon and select <b>Properties</b> <sup>1</sup>.</li> <li>3 From the <b>Device Settings</b> tab, choose <b>TBCP</b> (Tagged binary communication protocol) in <b>Output Protocol</b>.</li> </ol> <p><b>(Macintosh)</b>            If your machine is connected to a computer with a USB interface, you cannot print EPS data that includes binary. You can print the EPS data at the machine through a network. For installing BR-Script3 printer driver through the network, visit the Brother Solutions Center at <a href="http://solutions.brother.com/">http://solutions.brother.com/</a>.</p>

<sup>1</sup> **Printer properties** for Windows® 7 and Windows Server® 2008 R2 users

## Improving the print quality



If you have a print quality problem, print a test page first (see *Machine Info.* >> page 78). If the printout looks good, the problem is probably not the machine. Check the interface cable or try the machine on another computer. If the printout has a quality problem, check the following steps first. And then, if you still have a print quality problem, check the chart below and follow the recommendations.

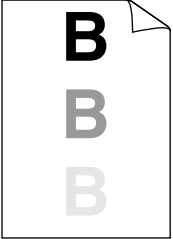

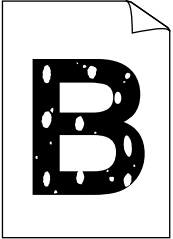




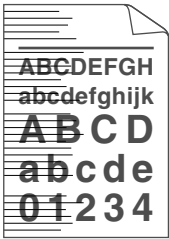

**Note**

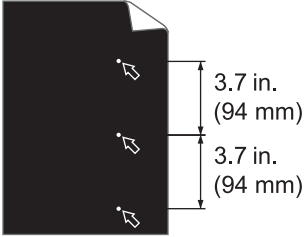
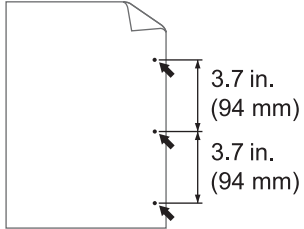
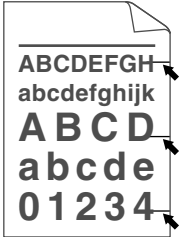
Using non-Brother supplies may affect the print quality, hardware performance, and machine reliability.

- 1 To get the best print quality, we suggest using the recommended paper. Check that you are using paper that meets our specifications. (See *Acceptable paper and other print media* >> page 2.)
- 2 Check that the drum unit and toner cartridge are installed properly.

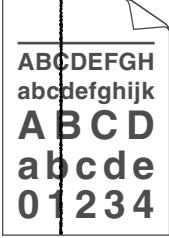


Examples of poor print quality	Recommendation
 <p style="text-align: center;"><b>Faint</b></p>	<ul style="list-style-type: none"> <li>■ Take out the drum unit and toner cartridge assembly. Hold the assembly level with both hands and gently shake it from side to side several times to spread the toner evenly inside the cartridge.</li> <li>■ If the LCD shows <i>Replace Toner</i>, put in a new toner cartridge. &gt;&gt; <i>Replacing the toner cartridge</i> &gt;&gt; page 104</li> <li>■ Check the machine's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault. &gt;&gt; <i>Product Safety Guide: Choosing a location</i></li> <li>■ If the whole page is too light, <i>Toner Save</i> may be turned on. Turn off <i>Toner Save</i> in the machine's menu settings or <b>Toner Save Mode</b> in the <b>Advanced</b> tab (For Windows®) or the <b>Advanced</b> print settings of <b>Print Settings</b> (For Macintosh) of the driver.</li> <li>■ Clean the corona wire of the drum unit. &gt;&gt; <i>Cleaning the corona wire</i> &gt;&gt; page 118</li> <li>■ Put in a new toner cartridge. &gt;&gt; <i>Replacing the toner cartridge</i> &gt;&gt; page 104</li> <li>■ Put in a new drum unit. &gt;&gt; <i>Replacing the drum unit</i> &gt;&gt; page 111</li> </ul>
 <p style="text-align: center;"><b>Gray background</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. &gt;&gt; <i>Acceptable paper and other print media</i> &gt;&gt; page 2</li> <li>■ Check the machine's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. &gt;&gt; <i>Product Safety Guide: Choosing a location</i></li> <li>■ Put in a new toner cartridge. &gt;&gt; <i>Replacing the toner cartridge</i> &gt;&gt; page 104</li> <li>■ Put in a new drum unit. &gt;&gt; <i>Replacing the drum unit</i> &gt;&gt; page 111</li> </ul>

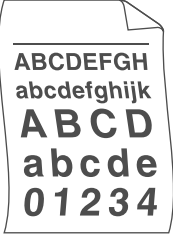
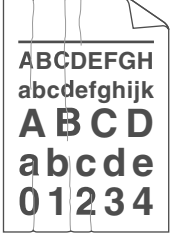

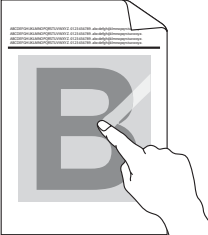
Examples of poor print quality	Recommendation
 <p data-bbox="310 554 389 579"><b>Ghost</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. Rough-surfaced paper or thick paper may cause this problem.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Make sure that you choose the appropriate media type in the printer driver or in the machine's <i>Media Type</i> menu setting.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Choose <b>Reduce Ghosting</b> mode in the printer driver.                             <ul style="list-style-type: none"> <li>➤➤ <i>Other Print Options</i> ➤➤ page 36 (For Windows®)</li> <li>➤➤ <i>Print Settings</i> ➤➤ page 61 (For Macintosh)</li> </ul> </li> <li>■ Put in a new drum unit.                             <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> <li>■ Put in a new toner cartridge.                             <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the toner cartridge</i> ➤➤ page 104</li> </ul> </li> <li>■ The fuser unit may be contaminated. Call Brother Customer Service at:  <b>In USA:</b> 1-877-BROTHER (1-877-276-8437)  <b>In Canada:</b> 1-877-BROTHER</li> </ul>
 <p data-bbox="261 1243 438 1268"><b>Toner specks</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications. Rough-surfaced paper may cause the problem.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Clean the corona wire of the drum unit.                             <ul style="list-style-type: none"> <li>➤➤ <i>Cleaning the corona wire</i> ➤➤ page 118</li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.                             <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> <li>■ The fuser unit may be contaminated. Call Brother Customer Service at:  <b>In USA:</b> 1-877-BROTHER (1-877-276-8437)  <b>In Canada:</b> 1-877-BROTHER</li> </ul>
 <p data-bbox="269 1663 428 1688"><b>Hollow print</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that you use paper that meets our specifications.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Choose <b>Thick Paper</b> mode in the printer driver, choose <i>Thick Paper</i> in the machine's <i>Paper Type</i> menu setting or use thinner paper than you are currently using.</li> <li>■ Check the machine's environment. Conditions such as high humidity can cause hollow print.                             <ul style="list-style-type: none"> <li>➤➤ <i>Product Safety Guide: Choosing a location</i></li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.                             <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>


Examples of poor print quality	Recommendation
 <p data-bbox="290 552 407 579"><b>All black</b></p>	<ul style="list-style-type: none"> <li data-bbox="581 289 1495 352">■ Clean the corona wire inside the drum unit by sliding the green tab. Be sure to return the green tab to the home position (▲).  <ul style="list-style-type: none"> <li data-bbox="610 365 1114 394">➤➤ <i>Cleaning the corona wire</i> ➤➤ page 118</li> </ul> </li> <li data-bbox="581 411 1273 441">■ The drum unit may be damaged. Put in a new drum unit.  <ul style="list-style-type: none"> <li data-bbox="610 453 1097 483">➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>
 <p data-bbox="172 856 526 886"><b>White lines across the page</b></p>	<ul style="list-style-type: none"> <li data-bbox="581 600 1495 663">■ Make sure that you use paper that meets our specifications. A rough surfaced paper or thick print media can cause this problem.  <ul style="list-style-type: none"> <li data-bbox="610 676 1260 705">➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2.</li> </ul> </li> <li data-bbox="581 722 1495 785">■ Make sure that you choose the appropriate media type in the printer driver or in the machine's <b>Media Type</b> menu setting.</li> <li data-bbox="581 802 1495 865">■ The problem may disappear by itself. Print multiple blank pages to clear this problem, especially if the machine has not been used for a long time.</li> <li data-bbox="581 882 1273 911">■ The drum unit may be damaged. Put in a new drum unit.  <ul style="list-style-type: none"> <li data-bbox="610 924 1097 953">➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>
 <p data-bbox="215 1218 482 1247"><b>Line across the page</b></p>	<ul style="list-style-type: none"> <li data-bbox="581 961 1114 991">■ Clean the corona wire inside the drum unit.  <ul style="list-style-type: none"> <li data-bbox="610 1003 1114 1033">➤➤ <i>Cleaning the corona wire</i> ➤➤ page 118</li> </ul> </li> <li data-bbox="581 1050 1273 1079">■ The drum unit may be damaged. Put in a new drum unit.  <ul style="list-style-type: none"> <li data-bbox="610 1092 1097 1121">➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>
 <p data-bbox="167 1522 535 1585"><b>White lines, bands or ribbing across the page</b></p>	<ul style="list-style-type: none"> <li data-bbox="581 1266 1463 1329">■ Check the machine's environment. Conditions such as high humidity and high temperatures may cause this print quality problem.  <ul style="list-style-type: none"> <li data-bbox="610 1341 1157 1371">➤➤ <i>Product Safety Guide: Choosing a location</i></li> </ul> </li> <li data-bbox="581 1388 1495 1417">■ If the problem is not solved after printing a few pages, put in a new drum unit.  <ul style="list-style-type: none"> <li data-bbox="610 1430 1097 1459">➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>

Examples of poor print quality	Recommendation
 <p><b>White Spots on black text and graphics at 3.7 in. (94 mm) intervals</b></p>  <p><b>Black Spots at 3.7 in. (94 mm) intervals</b></p>	<ul style="list-style-type: none"> <li>■ 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.                     <ul style="list-style-type: none"> <li>➤➤ <i>Cleaning the drum unit</i> ➤➤ page 120</li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.                     <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>
 <p><b>Black toner marks across the page</b></p>	<ul style="list-style-type: none"> <li>■ 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.                     <ul style="list-style-type: none"> <li>➤➤ <i>Cleaning the drum unit</i> ➤➤ page 120</li> </ul> </li> <li>■ Make sure that you use paper that meets our specifications.                     <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Do not use paper that has clips or staples because they will scratch the surface of the drum.</li> <li>■ If the unpacked drum unit is in direct sunlight or room light, the unit may be damaged.</li> <li>■ The toner cartridge may be damaged. Put in a new toner cartridge.                     <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the toner cartridge</i> ➤➤ page 104</li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.                     <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>



Examples of poor print quality	Recommendation
 <p><b>Black lines down the page</b> <b>Printed pages have toner stains down the page</b></p>	<ul style="list-style-type: none"> <li>■ Clean the corona wire inside the drum unit by sliding the green tab.  <ul style="list-style-type: none"> <li>➤➤ <i>Cleaning the corona wire</i> ➤➤ page 118</li> </ul> </li> <li>■ Make sure the green tab of the corona wire is at the home position (▲).</li> <li>■ The toner cartridge may be damaged. Put in a new toner cartridge.  <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the toner cartridge</i> ➤➤ page 104</li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.  <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> <li>■ The fuser unit may be contaminated. Call Brother Customer Service at:  <b>In USA:</b> 1-877-BROTHER (1-877-276-8437)  <b>In Canada:</b> 1-877-BROTHER</li> </ul>
 <p><b>White lines down the page</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that foreign material such as a torn piece of paper, sticky notes or dust is not inside the machine and around the drum unit and toner cartridge.</li> <li>■ The toner cartridge may be damaged. Put in a new toner cartridge.  <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the toner cartridge</i> ➤➤ page 104</li> </ul> </li> <li>■ The drum unit may be damaged. Put in a new drum unit.  <ul style="list-style-type: none"> <li>➤➤ <i>Replacing the drum unit</i> ➤➤ page 111</li> </ul> </li> </ul>
 <p><b>Image skewed</b></p>	<ul style="list-style-type: none"> <li>■ 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.</li> <li>■ Set the paper guides correctly.  <ul style="list-style-type: none"> <li>➤➤ <i>Printing on plain paper, thin paper or recycled paper from Tray 1 and Tray 2</i> ➤➤ page 8</li> </ul> </li> <li>■ If you are using the MP tray, see <i>Printing on plain paper, thin paper, recycled paper and bond paper from the MP tray</i> ➤➤ page 12.</li> <li>■ The paper tray may be too full.  <ul style="list-style-type: none"> <li>➤➤ <i>Loading paper and print media</i> ➤➤ page 8</li> </ul> </li> <li>■ Check the paper type and quality.  <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Check for loose objects such as torn paper inside the machine.</li> <li>■ If the problem only occurs during duplex printing, check for torn paper in the duplex tray, verify that the duplex tray is inserted completely and verify that the back cover is closed completely.</li> </ul>

Examples of poor print quality	Recommendation
 <p data-bbox="253 548 444 579"><b>Curled or wavy</b></p>	<ul style="list-style-type: none"> <li>■ Check the paper type and quality. High temperatures and high humidity will cause paper to curl.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> <li>➤➤ <i>Product Safety Guide: Choosing a location</i></li> </ul> </li> <li>■ 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.</li> <li>■ Open the back cover (face-up output tray) to let the printed paper exit onto the face-up output tray.</li> <li>■ Choose <b>Reduce Paper Curl</b> mode in the printer driver when you do not use our recommended paper.                             <ul style="list-style-type: none"> <li>➤➤ <i>Other Print Options</i> ➤➤ page 36 (For Windows®)</li> <li>➤➤ <i>Print Settings</i> ➤➤ page 61 (For Macintosh)</li> </ul> </li> </ul>
 <p data-bbox="224 1075 475 1106"><b>Wrinkles or creases</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that paper is loaded properly.                             <ul style="list-style-type: none"> <li>➤➤ <i>Printing on plain paper, thin paper or recycled paper from Tray 1 and Tray 2</i> ➤➤ page 8</li> </ul> </li> <li>■ Check the paper type and quality.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Turn over the stack of paper in the tray or rotate the paper 180° in the input tray.</li> </ul>
 <p data-bbox="233 1344 466 1375"><b>Envelope Creases</b></p>	<ul style="list-style-type: none"> <li>■ Make sure that envelopes are printed with the back cover (face-up output tray) opened.                             <ul style="list-style-type: none"> <li>➤➤ <i>Printing on thick paper, labels and envelopes from the MP tray</i></li> <li>➤➤ page 15</li> </ul> </li> <li>■ Check the envelope type and quality.                             <ul style="list-style-type: none"> <li>➤➤ <i>Acceptable paper and other print media</i> ➤➤ page 2</li> </ul> </li> <li>■ Make sure envelopes are fed only from the MP tray.                             <ul style="list-style-type: none"> <li>➤➤ <i>Loading paper in the multi-purpose tray (MP tray)</i> ➤➤ page 12</li> </ul> </li> </ul>
 <p data-bbox="277 1709 418 1740"><b>Poor fixing</b></p>	<ul style="list-style-type: none"> <li>■ Choose <b>Improve Toner Fixing</b> mode in the printer driver.                             <ul style="list-style-type: none"> <li>➤➤ <i>Other Print Options</i> ➤➤ page 36 (For Windows®)</li> <li>➤➤ <i>Print Settings</i> ➤➤ page 61 (For Macintosh)</li> </ul> </li> </ul> <p>If this selection does not provide enough improvement, change the printer driver setting in <b>Media Type</b> to a thick setting.</p>

Examples of poor print quality	Recommendation
 <p data-bbox="305 558 391 590">Curled</p>	<ul style="list-style-type: none"> <li data-bbox="581 289 1256 321">■ Choose <b>Reduce Paper Curl</b> mode in the printer driver.                             <ul style="list-style-type: none"> <li data-bbox="610 338 1227 369">➤➤ <i>Other Print Options</i> ➤➤ page 36 (For Windows®)</li> <li data-bbox="610 386 1159 417">➤➤ <i>Print Settings</i> ➤➤ page 61 (For Macintosh)</li> </ul> </li> <li data-bbox="581 434 1484 495">■ Open the back cover (face-up output tray) to let the printed paper exit onto the face-up output tray.</li> </ul>

# Machine Information

## Checking the Serial Number

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You can see the machine's Serial Number on the LCD.

- 1 Press ▲ or ▼ to choose `Machine Info..` Press **OK**.
- 2 Press ▲ or ▼ to choose `Serial No..` Press **OK**.

## Default settings

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The machine has three levels of default settings; the default settings have been set at the factory before shipment. (See *Menu table* >> page 77.)

- Network
- Factory Reset
- Settings Reset



### Note

- You cannot modify the preset default settings.
  - Page counters can never be changed.
- 

## Network default settings

If you want to reset only the print server back to its default settings (by resetting all network information such as the password and IP address), follow these steps:

- 1 Press ▲ or ▼ to choose `Reset Menu`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Network`. Press **OK**.
- 3 Press ▲ to choose `Yes`. The machine will restart automatically.

## Factory Reset

You can partially reset the machine back to its default printer settings. The settings that will not be reset are the `Interface`, `Local Language`, `Reprint`, `Setting Lock`, `Secure Function Lock 2.0` and the `Network settings`:

- 1 Press ▲ or ▼ to choose `Reset Menu`. Press **OK**.
- 2 Press ▲ or ▼ to choose `Factory Reset`. Press **OK**.
- 3 Press ▲ to choose `Reset`.

## Settings Reset

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

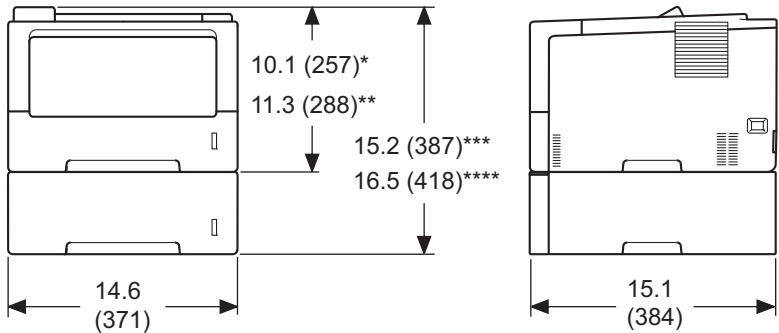
- 1 Disconnect the network cable from the machine; otherwise the network settings (such as IP address) will not be reset.
- 2 Press ▲ or ▼ to choose `Reset Menu`. Press **OK**.
- 3 Press ▲ and **Cancel** at the same time. Press **OK** after `Settings Reset` appears.
- 4 Press **OK** after `Restart Printer?` appears.
- 5 The machine will restart automatically.

# A

## Appendix

### Machine specifications

#### General

Model	HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT
<b>Printer Type</b>	Laser			
<b>Print Method</b>	Electrophotographic Laser Printer			
<b>Memory Capacity</b>	Standard	128 MB		
	Optional	1 slot: DDR2 SO-DIMM (144-pin) up to 256 MB		
<b>LCD (liquid crystal display)</b>	16 characters × 1 line			
<b>Power Source</b>	110 - 120 V AC 50/60 Hz			
<b>Power Consumption</b> <sup>1</sup> (Average)	Peak	Approx. 1200 W		
	Printing	Approx. 716 W at 77 °F (25 °C)	Approx. 727 W at 77 °F (25 °C)	
	Printing (Quiet Mode)	Approx. 348 W at 77 °F (25 °C)	Approx. 342 W at 77 °F (25 °C)	
	Ready	Approx. 5.0 W at 77 °F (25 °C)	Approx. 4.9 W at 77 °F (25 °C)	
	Sleep (WLAN:On)	Approx. 2.9 W		
	Deep Sleep	Approx. 0.6 W	Approx. 0.7 W	
<b>Dimensions</b>	 <p>* : HL-5470DW, HL-5470DWT      *** : HL-5470DWT  ** : HL-6180DW, HL-6180DWT      **** : HL-6180DWT</p> <p style="text-align: right;">Unit: in. (mm)</p>			
<b>Weights (with consumables)</b>	23.1 lb (10.5 kg)	30.0 lb (13.6 kg)	25.4 lb (11.5 kg)	32.2 lb (14.6 kg)

<sup>1</sup> USB connections to PC

Model			HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT	
Noise Level	Sound Pressure	Printing	LPAM = 59 dB (A)				
		Ready	LPAM = 34 dB (A)				
		Printing (Quiet Mode)	LPAM = 54 dB (A)				
	Sound Power <sup>1</sup>	Printing	LWAd = 6.79 B (A)		LWAd = 6.83 B (A)	LWAd = 6.80 B (A)	
		Ready	LWAd = 4.70 B (A)	LWAd = 4.63 B (A)	LWAd = 4.56 B (A)	LWAd = 4.50 B (A)	
		Printing (Quiet Mode)	LWAd = 6.4 B (A)				
Temperature		Operating	50 °F to 90.5 °F (10 to 32.5 °C)				
		Storage	32 °F to 104 °F (0 to 40 °C)				
Humidity		Operating	20 to 80% (without condensation)				
		Storage	10 to 90% (without condensation)				

<sup>1</sup> Measured in accordance with the method described in RAL-UZ122.

## Print media

Model			HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT
<b>Paper Input</b> <sup>1</sup>	Paper Tray (Standard)	Paper Type	Plain Paper, Thin Paper, Recycled Paper			
		Paper Size	Letter, A4, B5 (ISO/JIS), A5, A5 (Long Edge), B6 (ISO), A6, Executive, Legal, Folio			
		Paper Weight	16 to 28 lb (60 to 105 g/m <sup>2</sup> )			
		Maximum Paper Capacity	Up to 250 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain paper	Up to 500 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain paper		
	Multi-purpose tray (MP tray)	Paper Type	Plain Paper, Thin Paper, Thick Paper, Thicker Paper, Recycled Paper, Bond Paper, Label, Envelope, Env.Thin, Env.Thick			
		Paper Size	Width: 3 to 8.5 in (76.2 to 215.9 mm) Length: 5 to 14 in (127.0 to 355.6 mm)			
		Paper Weight	16 to 43 lb (60 to 163 g/m <sup>2</sup> )			
		Maximum Paper Capacity	Up to 50 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain paper			
	Paper Tray 2 (Optional) <sup>2</sup>	Paper Type	Plain Paper, Thin Paper, Recycled Paper			
		Paper Size	Letter, A4, B5 (ISO/JIS), A5, B6 (ISO), Executive, Legal, Folio			
		Paper Weight	16 to 28 lb (60 to 105 g/m <sup>2</sup> )			
		Maximum Paper Capacity	Up to 500 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain paper			
<b>Paper Output</b> <sup>1</sup>	Face-Down Output Tray	Up to 150 sheets of 20 lb (80 g/m <sup>2</sup> ) Plain paper (face-down delivery to the face-down output paper tray)				
	Face-Up Output Tray	One sheet (face-up delivery to the face-up output tray)				
<b>Duplex</b>	Automatic Duplex Printing	Paper Type	Plain Paper, Thin Paper, Recycled Paper			
		Paper Size	Letter, Legal, Folio			
		Paper Weight	16 to 28 lb (60 to 105 g/m <sup>2</sup> )			

<sup>1</sup> For labels, we recommend removing the printed sheets from the output paper tray immediately after they exit the machine to avoid the possibility of smudging.

<sup>2</sup> Tray 2 is standard on HL-5470DWT and HL-6180DWT.



## Printer

Model	HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT
<b>Automatic 2-sided (Duplex) Print</b>	Yes			
<b>Emulation</b>	PCL6, BR-Script3 (PostScript® 3™), IBM ProPrinter XL, EPSON FX-850			
<b>Resolution</b>	1200 × 1200 dpi HQ1200 (2400 × 600 dpi) quality 600 × 600 dpi			
<b>Print Speed</b> <sup>1 2</sup>	Single side print	Up to 40 ppm (Letter size) Up to 38 ppm (A4 size)	Up to 42 ppm (Letter size) Up to 40 ppm (A4 size)	
	Duplex Print	Up to 18 sides per minute (9 sheets per minute) (Letter or A4 size)		
<b>First Print Time</b> <sup>3</sup>	Less than 8.5 seconds at 73.4 °F (23 °C) / 115 V			

<sup>1</sup> The print speed may change depending on the type of document you print.

<sup>2</sup> Print speed may be slower when the machine is connected by wireless LAN.

<sup>3</sup> From Ready mode and standard tray

## Interface

Model	HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT
<b>USB</b>	Hi-Speed USB 2.0 <sup>1 2</sup> It is recommended you use a USB 2.0 cable (Type A/B) that is no more than 6 feet (2 meters) long.			
<b>Ethernet</b> <sup>3</sup>	10BASE-T / 100BASE-TX Use a straight-through Category 5 (or greater) twisted-pair cable.		10BASE-T / 100BASE-TX / 1000BASE-T Use a straight-through Category 5e (or greater) Shielded Twisted-Pair (STP) cable. <sup>4</sup>	
<b>Wireless LAN</b> <sup>3</sup>	IEEE 802.11 b/g/n (Infrastructure mode) IEEE 802.11 b (Ad-hoc mode)			

<sup>1</sup> Your machine has a Hi-Speed USB 2.0 interface. The machine can also be connected to a computer that has a USB 1.1 interface.

<sup>2</sup> Third party USB ports are not supported.

<sup>3</sup> For detailed network specifications, see *Network (LAN)* >> page 166 and >> Network User's Guide

<sup>4</sup> When you connect the machine to a Gigabit Ethernet Network, use the network devices complying with 1000BASE-T.

## Computer requirements

Computer Platform & Operating System Version		Processor Minimum Speed	Minimum RAM	Recommended RAM	Hard Disk Space to install	Supported PC Interface <sup>1</sup>
<b>Windows® Operating System</b>	Windows® XP Home Edition	Intel® Pentium® II or equivalent	128 MB	256 MB	80 MB	USB, 10Base-T/100Base-TX (Ethernet), 1000Base-T (Gigabit Ethernet) <sup>2</sup> , Wireless 802.11b/g/n
	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				
<b>Macintosh Operating System</b>	OS X 10.5.8	PowerPC® G4/G5 Intel® Processor	512 MB	1 GB	80 MB	
	OS X 10.6.x	Intel® Processor	1 GB	2 GB		
	OS X 10.7.x	Intel® Processor	2 GB	2 GB		

<sup>1</sup> Third party USB ports are not supported.

<sup>2</sup> 1000Base-T is available for HL-6180DW(T).

For the latest driver updates, visit <http://solutions.brother.com/>.

## Important information for choosing your paper

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The information in this section will 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.

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### 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 20 to 24 lb (75 to 90 g/m<sup>2</sup>), although this machine is able to cope with thinner or thicker paper than these weights.

### Long grain and short grain

The pulp fiber of the paper is aligned during paper manufacturing. And 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.

## Consumable Items

Model		HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT	Order No.
Toner Cartridge	Inbox	Approx. 3,000 pages Letter or A4 page <sup>1</sup>				-
	Standard	Approx. 3,000 pages Letter or A4 page <sup>1</sup>				TN-720
	High Yield	Approx. 8,000 pages Letter or A4 page <sup>1</sup>				TN-750
	Super High Yield	-	Approx. 12,000 pages Letter or A4 page <sup>1</sup>		TN-780	
Drum Unit		Approx. 30,000 pages Letter or A4 pages (1 page / job) <sup>2</sup>				DR-720

<sup>1</sup> Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

<sup>2</sup> Drum life is approximate and may vary by type of use.

## Network (LAN)

Model		HL-5470DW	HL-5470DWT	HL-6180DW	HL-6180DWT
LAN		You can connect your machine to a network for Network Printing. Also included is Brother BRAdmin Light <sup>1 2</sup> Network Management software.			
Protocols	IPv4	ARP, RARP, BOOTP, DHCP, APIPA(Auto IP), WINS/NetBIOS name resolution, DNS Resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP/IPPS, FTP Server, TELNET Server, HTTP/HTTPS server, TFTP client and server, SMTP Client, SNMPv1/v2c/v3, ICMP, Web Services (Print), CIFS client, SNTP client			
	IPv6	NDP, RA, DNS resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP/IPPS, FTP Server, TELNET Server, HTTP/HTTPS server, TFTP client and server, SMTP Client, SNMPv1/v2c/v3, ICMPv6, Web Services (Print), CIFS Client, SNTP Client			
Security Protocols	Wired	APOP, POP before SMTP, SMTP-AUTH, SSL/TLS (IPPS, HTTPS, SMTP, POP), SNMP v3, 802.1x (EAP-MD5, EAP-FAST, PEAP, EAP-TLS, EAP-TTLS), Kerberos			
	Wireless	APOP, POP before SMTP, SMTP-AUTH, SSL/TLS (IPPS, HTTPS, SMTP, POP), SNMP v3, 802.1x (LEAP, EAP-FAST, PEAP, EAP-TLS, EAP-TTLS), Kerberos			
Wireless Network Security		WEP 64/128 bit, WPA-PSK (TKIP/AES), WPA2-PSK (AES)			
Wireless Network Setup Support Utility	AOSS™	Yes			
	WPS	Yes			

<sup>1</sup> (For Windows® users) Brother BRAdmin Light is available from the CD-ROM provided with the machine.  
(For Macintosh users) Brother BRAdmin Light is available as a download from <http://solutions.brother.com/>.

<sup>2</sup> (For Windows® users) If you require more advanced printer management, use the latest Brother BRAdmin Professional utility version that is available as a download from <http://solutions.brother.com/>.

## 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:** 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, and Driver Updates and Utilities: <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 Cartridge	TN-720 (Standard, Approx. 3,000 pages) <sup>1 2</sup>
	TN-750 (High Yield, Approx. 8,000 pages) <sup>1 2</sup>
	TN-780 (Super High Yield, Approx. 12,000 pages) <sup>1 2 5</sup>
Drum Unit	DR-720 (Approx. 30,000 pages) <sup>1 3 4</sup>

<sup>1</sup> Letter or A4 size single-sided pages.

<sup>2</sup> Approx. cartridge yield is declared in accordance with ISO/IEC 19752.

<sup>3</sup> 1 page per job.

<sup>4</sup> Drum life is approximate and may vary by type of use.

<sup>5</sup> TN-780 is available for HL-6180DW(T).

# B Index

## A

Accessories and supplies ..... 160  
Accessories tab ..... 41

## B

Back key ..... 75  
Brother Numbers (USA/Canada) ..... 167, 168, 169  
BR-Script3 ..... 45, 65

## C

Cancel key ..... 75  
Cleaning ..... 116  
Computer requirements ..... 164  
Consumable items ..... 101, 102, 166  
Control panel ..... 74  
Control panel LCD menu ..... 77  
Corona wire ..... 118

## D

Data LED ..... 76  
Deep Sleep ..... 76  
Deep sleep mode ..... 94  
Default settings ..... 158  
Dimensions ..... 160  
Drum unit ..... 110  
Duplex (2-sided) printing ..... 18

## E

Emulation ..... 163  
Envelopes ..... 3, 5, 15  
Error LED ..... 76  
Error messages ..... 130

## F

FAQs (Frequently Asked Questions) ..... 167  
Folio ..... 3

## G

General Setup ..... 80  
Go key ..... 75

## I

Interface ..... 163

## J

Jam duplex ..... 136  
Jam in MP tray ..... 134  
Jam Inside ..... 143  
Jam Rear ..... 139  
Jam Tray 1 ..... 134  
Jam Tray 2 ..... 134

## K

Keys ..... 74

## L

Labels ..... 3, 6, 15  
LCD (liquid crystal display) ..... 74  
LED (light-emitting diode) ..... 76  
Linux ..... 22  
Lower tray ..... 97

## M

Machine information ..... 78  
Macintosh ..... 22  
Maintenance messages ..... 101, 102  
Manual duplex printing ..... 21  
Media specifications ..... 162  
Memory ..... 98, 160  
Menu settings ..... 77

## N

Network connectivity ..... 163  
Network menu ..... 86  
Network software ..... 73

## P

Paper ..... 2, 165  
  loading ..... 8, 12  
  recommended ..... 2, 3  
  size ..... 2  
  tray capacity ..... 3  
  type ..... 2  
Paper jams ..... 134  
Paper Tray ..... 79  
Plain paper ..... 2



Print	
difficulties .....	147
Macintosh	
BR-Script3 printer driver .....	65
Printer driver .....	55
Windows®	
Booklet printing .....	30
BR-Script3 printer driver .....	45
Duplex printing .....	29
Printer driver .....	26
Print Menu .....	81
Print quality .....	151
Printer driver .....	22, 52, 70

## Q

---

Quiet mode .....	95
------------------	----

## R

---

Register your product .....	167
Reprint .....	90
Reset Menu .....	89

## S

---

Secure data .....	91
Service centers (USA/Canada) .....	168
Sleep mode .....	76, 94
SO-DIMM .....	98
Specifications .....	160
Status Monitor	
Macintosh .....	71
Windows® .....	53
Supplies (USA/Canada) .....	169

## T

---

TCP/IP .....	86, 87
Thick paper .....	15
Toner cartridge .....	103, 104
Troubleshooting .....	129, 147
if you are having difficulty	
network .....	149
paper handling .....	148
printing .....	147

## U

---

Unprintable area .....	7
Utilities .....	167

## W

---

Watermark .....	31, 35
Weights .....	160
WLAN .....	87, 88