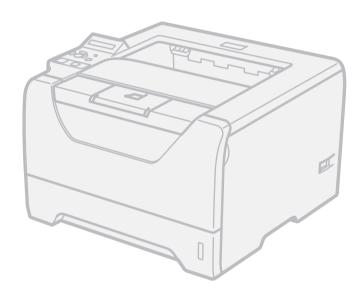


Brother Laser Printer

USER'S GUIDE



HL-5380DN

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 printer.

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

Please read this User's Guide thoroughly before you use the printer. Keep the CD-ROM in a convenient place so you can use it quickly if you need to.

You can also read the User's Guide in HTML format by visiting our web site at http://solutions.brother.com/ or accessing it from the CD-ROM directly.

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.

Using this guide

Symbols used in this guide

We use the following icons throughout this User's Guide:

A WARNING

Warnings tell you what to do to prevent possible personal injury.

A CAUTION

Cautions specify procedures you must follow or avoid to prevent possible minor injuries.

! IMPORTANT

Important specify procedures you must follow or avoid to prevent possible damage to the printer or other object.



Electrical Hazard icons alert you to a possible electrical shock.



Hot Surface icons warn you not to touch machine parts that are hot.



Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

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Safety precautions

To use the printer safely

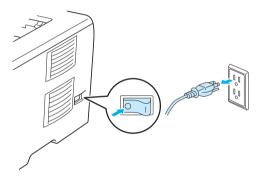
If you DO NOT follow these safety instructions, there is a possibility of a fire, electrical shock, burn or suffocation. Please keep these instructions for later reference and read them before attempting any maintenance.



WARNING



There are high voltage electrodes inside the printer. Before you clean the inside of the printer, make sure that you have turned off the power switch and unplugged the printer from the AC power outlet.





DO NOT handle the plug with wet hands. Doing this might cause an electrical shock.



Always make sure the plug is fully inserted.

This product must be installed near an AC power outlet that is easily accessible. In case of an emergency, you must disconnect the power cord from the AC power outlet to shut off the power completely.

Lightning and power surges can damage this product! We recommend that you use a quality surge protection device on the AC power line, or unplug the cords during a lightning storm.

Avoid using this product during an electrical storm. There may be a remote risk of electric shock from lightning.

DO NOT use this product to report a gas leak in the vicinity of the leak.

Use only the power cord provided with the machine.

Plastic bags are used in the packaging of your machine. To avoid danger of suffocation, keep these bags away from babies and children.

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 this may cause a fire or electrical shock. See *Cleaning* on page 117 for how to clean the machine.







DO NOT use a vacuum cleaner to clean up scattered toner. Doing this might cause the toner dust to ignite inside the vacuum cleaner, potentially starting a fire. Carefully clean the toner dust with a dry, lint-free cloth and dispose of it according to local regulations.

Cleaning the outside of the printer:

Make sure that you have unplugged the printer from the AC power outlet.

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

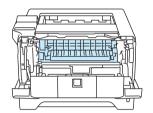
DO NOT use cleaning materials that contain ammonia.

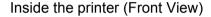


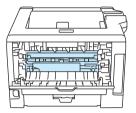
CAUTION



After you have just used the printer, some internal parts of the printer will be extremely hot. To prevent injury, when you open the front cover or back cover (back output tray) of the printer, DO NOT touch the shaded parts shown in the illustration. If you do this, you may get burned.







Open the back cover (Back View)

Avoid placing your machine in a high-traffic area.

DO NOT place the machine near heaters, air conditioners, refrigerators, water, chemicals or devices that contain magnets or generate magnetic fields.

DO NOT expose the machine to direct sunlight, excessive heat, open flames, salty or corrosive gasses, moisture, or dust.

DO NOT connect your machine to an AC power outlet controlled by wall switches or automatic timers.

DO NOT connect your machine to an AC power outlet on the same circuit as large appliances or other equipment that might disrupt the power supply.

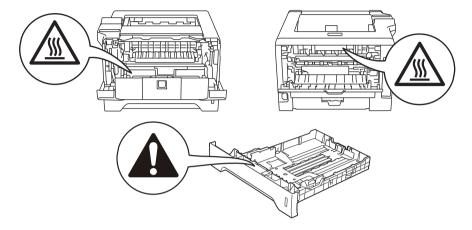
DO NOT put objects on top of the machine.

DO NOT use this product near water, for example, near a bath tub, wash bowl, kitchen sink, washing machine, or in a wet basement or near a swimming pool.





DO NOT remove or damage the caution label located on or around the fuser.



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Shipment of the Printer

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

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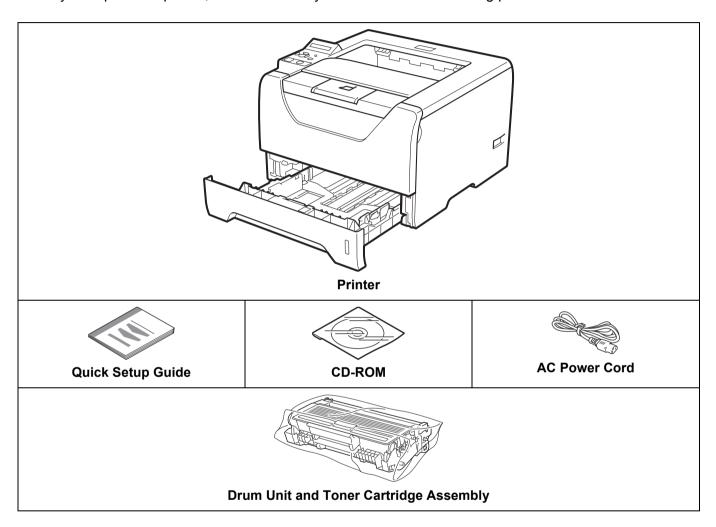
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1 About this Printer

Carton components

When you unpack the printer, make sure that you have all of the following parts.



Interface cable

The interface cable is not a standard accessory. Purchase the appropriate cable for the interface you are using.

■ USB cable

Please make sure you use a USB 2.0 interface cable that is no longer than 6 feet (2.0 meters).

DO NOT connect the interface cable at this time. Connecting the interface cable is done during the printer driver installation process.

Make sure that you connect it to the USB port of your computer and not to a USB port on a keyboard or non-powered USB hub.

Third party USB ports are not supported by Macintosh.

■ Parallel cable

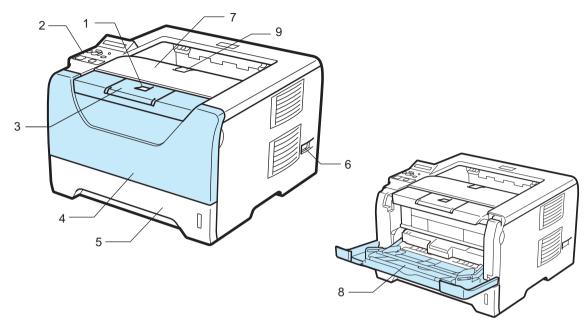
DO NOT use a parallel interface cable that is longer than 6 feet (2.0 meters).

Use a shielded interface cable that is IEEE 1284-compliant.

■ Network cable

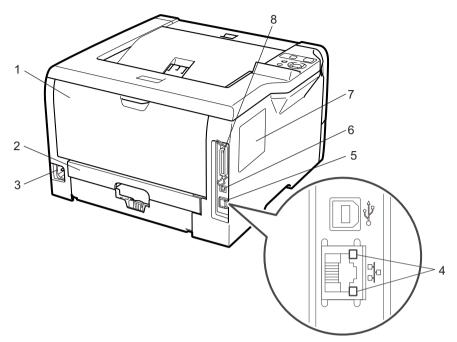
Use a straight-through Category5 (or greater) twisted-pair cable for 10BASE-T or 100BASE-TX Fast Ethernet Network.

Front view



- 1 Front Cover Release Button
- 2 Control Panel
- 3 Face-down Output Tray Support Flap 1 (Support Flap 1)
- 4 Front Cover
- 5 Paper Tray
- 6 Power Switch
- 7 Face-down Output Tray
- 8 Multi-purpose Tray (MP Tray)
- 9 Face-down Output Tray Support Flap 2 (Support Flap 2)

Back view



- 1 Back Cover (Back Output Tray)
- 2 Duplex Tray
- 3 AC Power Connector
- 4 Network Activity LEDs (Light Emitting Diodes)
- 5 10BASE-T / 100BASE-TX (Ethernet) Port
- **6 USB Interface Connector**
- 7 SO-DIMM (memory) Cover
- **8 Parallel Interface Connector**

Positioning the printer

Read the following before you use the printer.

Power supply

Use the printer within the recommended power range.

Power source: USA and Canada: AC 110 to 120 V, 50/60 Hz

Europe and Australia: AC 220 to 240 V, 50/60 Hz

The power cord, including extensions, should be no longer than 5 meters (16.5 feet).

Do not share the same power circuit with other high-powered appliances, such as an air conditioner, copier, shredder and so on. If you cannot avoid using the printer with these appliances, we recommend that you use a voltage transformer or a high-frequency noise filter.

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

Environment

- Put your printer on a flat, stable surface such as a desk that is free of vibration and shocks.
- Put the printer near an AC power outlet, so that it can be easily unplugged from the AC power outlet if there is an emergency.
- Only use the printer within the following ranges of temperature and humidity:

Temperature: 10 °C to 32.5 °C (50 °F to 90.5 °F)

Humidity: 20% to 80% (without condensation)

- Use the printer in a well-ventilated room.
- DO NOT put the printer where the ventilation hole of the printer is blocked. Keep a gap of roughly 100 mm (4 in.) between the ventilation hole and the wall.
- DO NOT expose the printer to direct sunlight, excessive heat, moisture, or dust.
- DO NOT put the printer near devices that contain magnets or produce magnetic fields.
- DO NOT expose the printer to open/naked flames or salty or corrosive gasses.
- DO NOT put objects on top of the printer.
- DO NOT put the printer near heaters, air conditioners, water, chemicals or refrigerators.
- Keep the printer horizontal when you carry it.

Printing Methods

About paper

Type and size of paper

The printer loads paper from the installed paper tray or the multi-purpose tray.

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

Paper tray	Tray 1
Multi-purpose tray	MP Tray
Optional lower tray unit	Tray 2 / Tray 3
Duplex unit for automatic duplex printing	DX

When looking at this page on the CD-ROM, you can jump to the page for each printing method by clicking (i) in the table.

Media type	Tray 1	Tray 2/ Tray 3	MP Tray	DX	Choose the media type from the printer driver
Plain paper					Plain Paper
75 g/m ² to 105 g/m ² (20 to 28 lb)	①	①	①	(i)	
Recycled paper	(i)	①	①	①	Recycled Paper
Bond paper	(i)	①	①		Bond Paper
Rough paper– 60 g/m ² to 163 g/m ² (16 to 43 lb)	60 g/m ² to 105 g/m ² (16 to 28 lb)	60 g/m ² to 105 g/m ² (16 to 28 lb)	60 g/m ² to 163 g/m ² (16 to 43 lb)		
Thin paper					Thin Paper
60 g/m ² to 75 g/m ² (16 to 20 lb)	①	①	①	(i)	
Thick paper					Thick Paper or Thicker
105 g/m ² to 163 g/m ² (28 to 43 lb)			①		Paper
Transparency	(i)		_		Transparencies
	Up to 10		①		
	sheets		Up to 10 sheets		
	A4 or Letter		A4 or Letter		
Labels			①		Thicker Paper
			A4 or Letter		

Media type	Tray 1	Tray 2/ Tray 3	MP Tray	DX	Choose the media type from the printer driver
Envelopes)		Envelopes
					Env. Thin
		Up to 3 sheets		Env. Thick	

	Tray 1	Tray 2/ Tray3	MP Tray	DX
Paper size	A4, Letter, B5 (ISO), Executive, A5, A6, B6 (ISO), A5(Long Edge)	A4, Letter, B5 (ISO), Executive, A5, B6 (ISO)	Width: 69.8 to 216 mm (2.75 to 8.5 in.) Length: 116 to 406.4 mm (4.57 to 16 in.)	A4
Number of sheets (80 g/m ² / 20 lb)	250 sheets	250 sheets/ 250 sheets	50 sheets	

Recommended paper

	Europe	USA
Plain paper	Xerox Premier TCF 80 g/m ²	Xerox 4200 20 lb
	Xerox Business 80 g/m ²	Hammermill Laser Print (24 lb=90g/m ²)
Recycled paper	Xerox Recycled Supreme 80 g/m ²	(Not supported)
Transparency	3M CG3300	3M CG3300
Labels	Avery laser label L7163	Avery laser labels white #5160
Envelope	Antalis River series (DL)	(No specific brand recommended)

- Before you buy a lot of paper, test a small quantity to make sure that the paper is suitable.
- Use paper that is made for plain-paper copying.
- Use paper that is 75 to 90 g/m² (20 to 24 lb).
- Use neutral paper. Do not use acidic or alkaline paper.
- Use long-grain paper.
- Use paper with a moisture content of approximately 5%.
- This printer can use recycled paper that meets DIN 19309 specifications.

!MPORTANT

DO NOT use ink jet paper because it may cause a paper jam or damage your printer.

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

DO NOT put different types of paper in the paper tray at the same time because it may cause paper jams or misfeeds.



- Preprinted paper must use ink that can withstand the temperature of the printer's fusing process (200 degrees centigrade).
- If you use bond paper, paper having a rough surface or paper that is wrinkled or creased, the paper may exhibit degraded performance.

To help you choose which paper to use with this printer, see *Important information for choosing your paper* on page 157.

Types of envelopes

Most envelopes will be suitable for your printer. However, some envelopes may have feed and print quality problems due to the way they have been made. A suitable envelope should have edges with straight, well-creased folds and the leading edge should not be thicker than two pieces of paper. The envelope should lie flat and not be of baggy or flimsy construction. You should buy quality envelopes from a supplier who understands that you will be using the envelopes in a laser printer. Before you print a lot of envelopes, test one to make sure that the print results are what you want.

Brother does not recommend a particular envelope because envelope manufacturers may change the envelope specifications. You are responsible for the quality and performance of the envelopes you use.

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



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



- DO NOT print envelopes using duplex printing.
- You must choose the same paper size from your application as the paper in the tray.

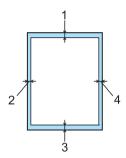
Unprintable area

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



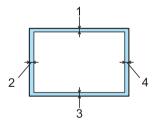
When using BR-Script emulation, the edges of the paper that cannot be printed on are 4.32 mm (0.17 in).

Portrait



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

Landscape



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

Printing methods

Printing on plain paper, bond paper and transparencies

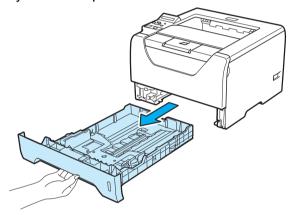
Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3



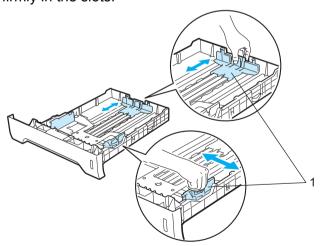
Transparencies are only for Tray1.

(For the recommended paper to use, see *About paper* on page 6.)

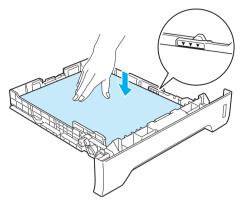
1 Pull the paper tray completely out of the printer.



While pressing the blue paper-guide release lever (1), slide the paper guides to fit the paper size. Make sure that the guides are firmly in the slots.



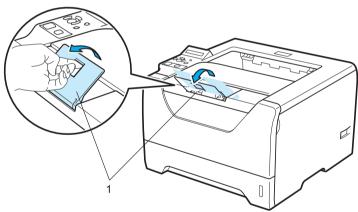
3 Put paper in the tray, and make sure that the paper is below the maximum paper mark (▼▼▼). The side to be printed on must be face down.



! IMPORTANT

Make sure the paper guides touch the sides of the paper so it will feed properly.

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



6 Choose the following from the printer driver:

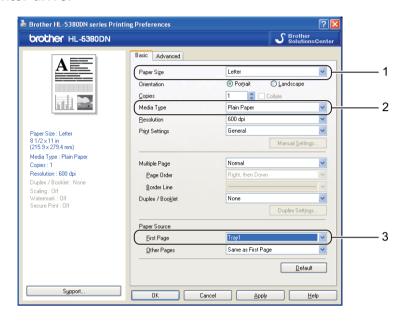
Paper Size.....(1)

Media Type.....(2)

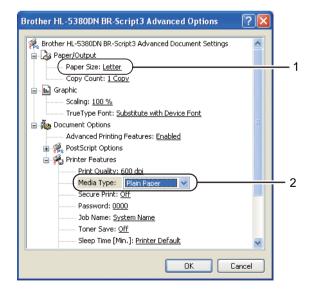
Paper Source.....(3)

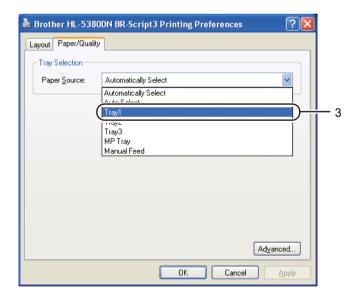
and any other settings you may want to make. (See Chapter 3: Driver and Software.)

■ Windows[®] printer driver



■ BR-Script printer driver for Windows®

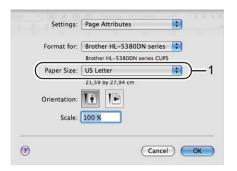


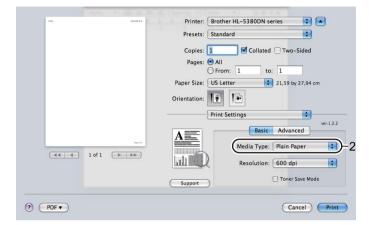


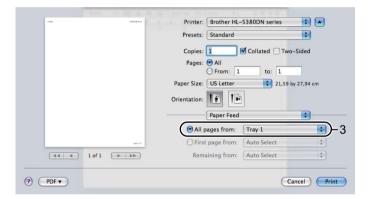


To use the BR-Script printer driver for Windows® you must install the driver using the Custom Install from the CD-ROM.

■ Macintosh printer driver







Send the print data to the printer.

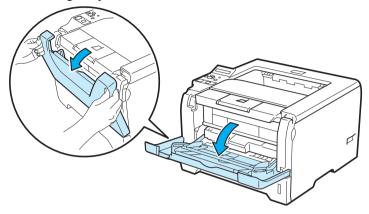
! IMPORTANT

When printing on transparencies, remove each transparency at once after printing. Stacking the printed transparencies may cause a paper jam or the transparency to curl.

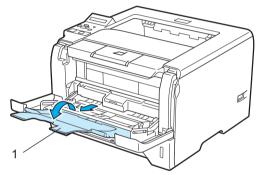
Printing on plain paper, bond paper or transparencies from the MP tray

(For the recommended paper to use, see *About paper* on page 6.)

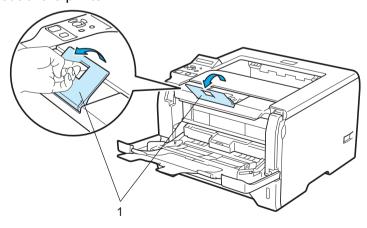
1 Open the MP tray and lower it gently.



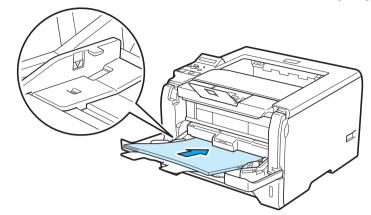
2 Pull out the MP tray support flap (1).



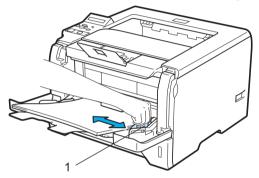
3 Lift up the support flap to prevent paper from sliding off the face-down output tray, or remove each page as soon as it comes out of the printer.



4 Put paper in the MP tray. Make sure that the paper stays under the maximum paper mark (▼) on both sides of the tray. The side to be printed on must be face up with the leading edge (top of the paper) in first.



6 While pressing the paper-guide release lever (1), slide the paper guide to fit the paper size.



6 Choose the following from the printer driver:

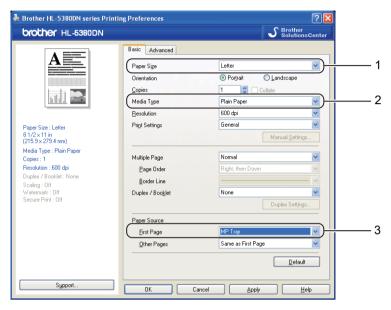
Paper Size.....(1)

Media Type.....(2)

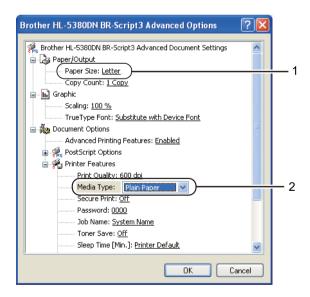
Paper Source.....(3)

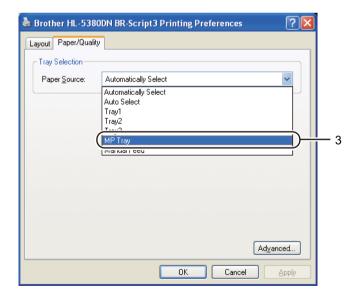
and any other settings you may want to make. (See Chapter 3: Driver and Software.)

■ Windows[®] printer driver



■ BR-Script printer driver for Windows®

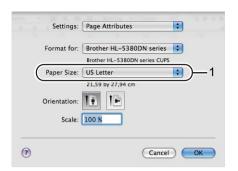


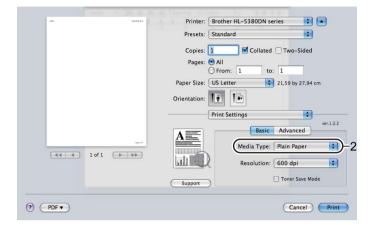


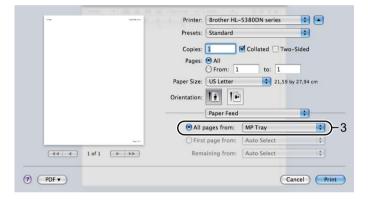


To use the BR-Script printer driver for Windows® you must install the driver using the Custom Install from the CD-ROM.

■ Macintosh printer driver







Send the print data to the printer.

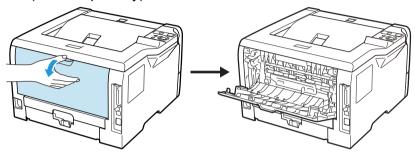
! IMPORTANT

When printing on transparencies, remove each transparency at once after printing. Stacking the printed transparencies may cause a paper jam or the transparency to curl.

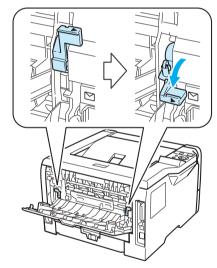
Printing on thick paper, labels and envelopes

When the back output tray is pulled down, the printer has a straight paper path from the MP tray through to the back of the printer. Use this paper feed and output method when you want to print on thick paper, labels or envelopes. (For the recommended paper to use, see *About paper* on page 6 and *Types of envelopes* on page 9.)

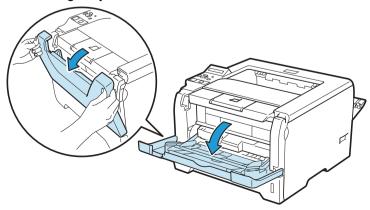
1 Open the back cover (back output tray).



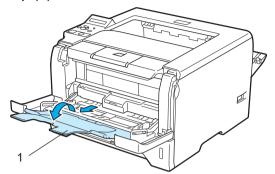
2 <For printing envelopes only> Pull down the two gray levers, one on the left-hand side and one on the right-hand side, toward you as shown in the illustration below.



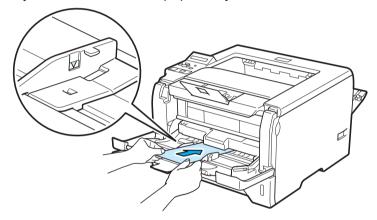
3 Open the MP tray and lower it gently.



4 Pull out the MP tray support flap (1).

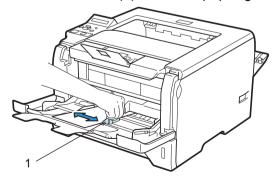


6 Put paper in the MP tray. Make sure that the paper stays under the maximum paper mark (▼).





- DO NOT put more than 3 envelopes in the MP tray.
- Envelope joints that are sealed by the manufacturer should be secure.
- The side to be printed on must be face up.
- All sides of the envelope should be properly folded without wrinkles or creases.
- 6 While pressing the paper-guide release lever (1), slide the paper guide to fit the paper size.



7 Choose the following from the printer driver:

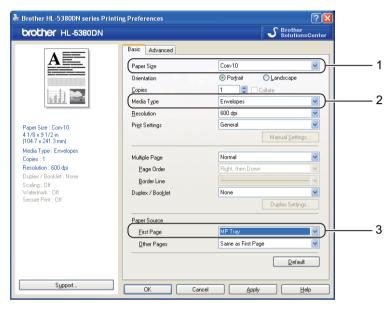
Paper Size.....(1)

Media Type.....(2)

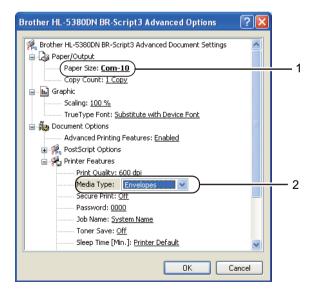
Paper Source.....(3)

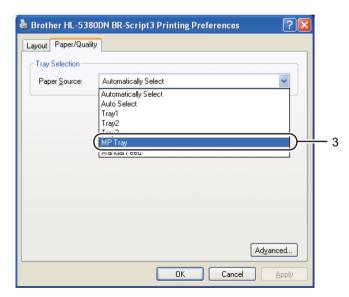
and any other settings you may want to make. (See Chapter 3: Driver and Software.)

■ Windows[®] printer driver



■ BR-Script printer driver for Windows®

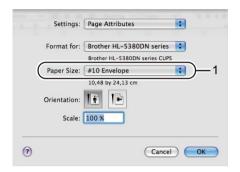


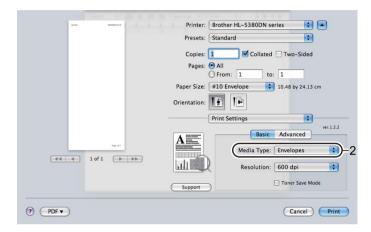


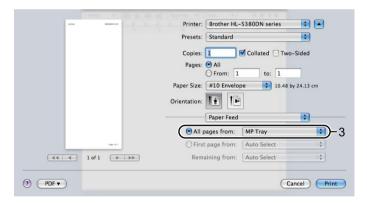


- To use the BR-Script printer driver you must install the driver using the Custom Install from the CD-ROM.
- When you use Envelope #10, choose Com-10 for the Paper Size.
- For other envelopes which are not listed in the printer driver, such as Envelope #9 or Envelope C6, choose **User Defined...** (For more information on envelope sizes, see *Paper size* on page 158.)

■ Macintosh printer driver









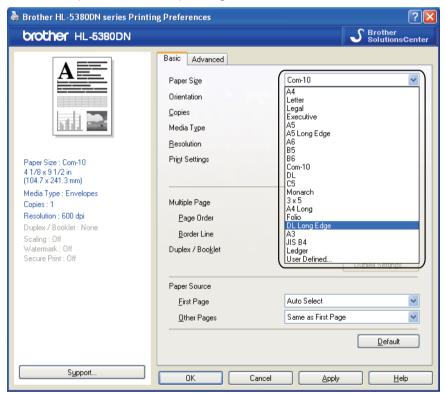
For other envelopes which are not listed in the printer driver, such as Envelope #9 or Envelope C6, choose **Custom Page Sizes**. (For more information on envelope sizes, see *Paper size* on page 158.)

8 Send the print data to the printer.

9 <For printing envelopes only> When you have finished printing, reset the two gray levers which are pulled down at step ② back to the original position.



- Remove each sheet or envelope at once after printing. Stacking the sheets or envelopes may cause the paper to jam or curl.
- If envelopes get smudged during printing set the **Media Type** to **Thick Paper** or **Thicker Paper** to increase the fixing temperature.
- If envelopes are creased after they are printed, see Improving the print quality on page 141.
- (For Windows[®] users) If DL size double flap envelopes are creased after printing, choose **DL Long Edge** in **Paper Size**, from the **Basic** tab. Put a new DL size double-flap envelope in the MP tray with the longest edge of the envelope in first, then print again.



- When you put paper in the MP tray, remember the following:
 - Put the leading edge (top of the paper) in first and push it gently into the tray.
 - Make sure that the paper is straight and in the proper position in the MP tray. If it is not, the paper may not be fed properly, resulting in a skewed printout or a paper jam.

Duplex printing

The supplied printer drivers for Windows[®] 2000 or greater and Mac OS X 10.3.9 or greater all enable duplex printing. For more information about how to choose the settings, see the **Help** text in the printer driver.

Guidelines for printing on both sides of the paper

- If the paper is thin, it may wrinkle.
- If paper is curled, straighten it and then put it back in the paper tray or the MP tray.
- If the paper is not feeding properly, it may be curled. Remove the paper and straighten it.
- When you use the manual duplex function, it is possible that there may be paper jams or poor print quality. (If there is a paper jam, see *Paper jams and how to clear them* on page 130. If you have a print quality problem, see *Improving the print quality* on page 141.)



- The screens in this section are based on Windows[®] XP. The screens on your computer may vary depending on your operating system.
- Use A4 size paper when you use the automatic duplex printing function.
- · Make sure that the back cover is closed.
- Make sure that the paper tray is completely inserted into the printer.
- If paper is curled, straighten it and then put it back in the paper tray.
- You should use plain paper, recycled paper or thin paper. DO NOT use bond paper.

Manual duplex printing

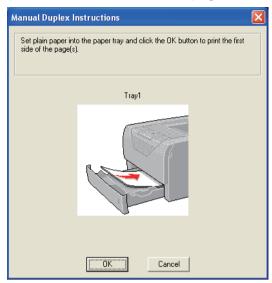
- The BR-Script printer driver (PostScript® 3™ emulation) does not support manual duplex printing.
- If you are using the Macintosh Printer Driver, see *Duplex Printing* on page 64.

Manual duplex printing from the paper tray

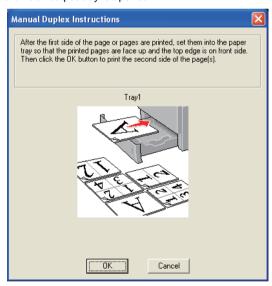
- 1 In the printer driver choose the **Basic** tab, and choose the **Duplex** printing mode from the **Duplex** / **Booklet** setting, and then from the **Basic** tab choose the Paper Source to be **Tray1**.
- Click the Duplex Settings... button, the Duplex Settings will appear.
- 3 Choose Manual Duplex from Duplex Mode settings, and click OK on the computer screen.

4 Send the data to the printer.

The printer will automatically print all the even-numbered pages on one side of the paper first.



- 5 Remove the printed even-numbered pages from the output tray and then, in the same order ¹, put them back in the paper tray with the side to be printed on (blank side) face down. Follow the instructions on the computer screen.
 - ¹ Put papers in opposite order when the Back output tray is opened.



6 The printer will now automatically print all the odd-numbered pages on the other side of the paper.



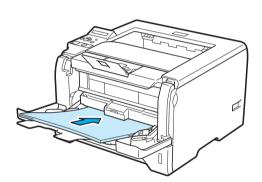
- If you choose the **Paper Source** to be **Auto Select**, put the printed even-numbered pages in the MP tray.
- When you put paper in the paper tray, first empty the tray. Next, put the printed pages in the tray, with the printed side face up. (DO NOT add the printed pages to the top of a stack of unprinted paper.)

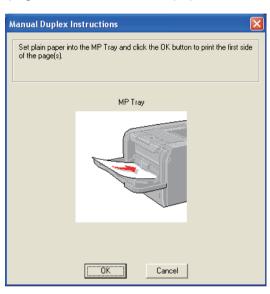
Manual duplex printing from the MP tray



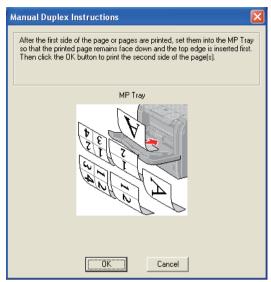
Before putting the sheets back in the MP tray, you will have to straighten them, or you may get paper jams.

- 1 In the printer driver choose the **Basic** tab, and choose the **Duplex** printing mode from the **Duplex** / **Booklet** setting, and then from the **Basic** tab choose the Paper Source to be **MP Tray**.
- 2 Click the **Duplex Settings...** button, the **Duplex Settings** will appear.
- 3 Choose Manual Duplex from Duplex Mode settings, and click OK on the computer screen.
- 4 Put the paper in the MP tray with the side to be printed on first facing up. Send the data to the printer. The printer will automatically print all the even-numbered pages on one side of the paper first.





5 Remove the printed even-numbered pages from the output tray and then, in the same order ¹, put them back into the MP tray. Put the paper with the side to be printed on (the blank side) face up. Follow the instructions on the computer screen.



- ¹ Put papers in opposite order when the Back output tray is opened.
- 6 The printer will now automatically print all the odd-numbered pages.

Paper orientation for manual duplex printing

The printer prints the second page first.

If you print 10 pages on 5 sheets of paper, it will print page 2 and then page 1 on the first sheet of paper. It will print page 4 and then page 3 on the second sheet of paper. It will print page 6 and then page 5 on the third sheet of paper, and so on.

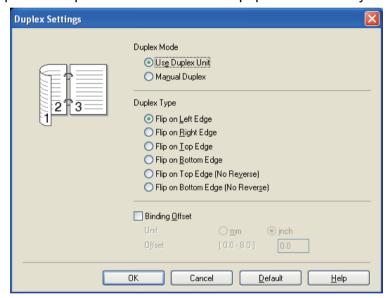
When doing manual duplex printing, the paper must be put in the paper tray in the following way:

- For the paper tray:
 - Put the side to be printed on face down with the leading edge (top) of the paper at the front of the tray.
 - To print on the second side, put the paper face up, with the leading edge (top) of the paper at the front of the tray.
 - If letterhead paper is used, put the paper in the tray with the heading face up at the front of the tray.
 - To print on the second side, put the heading face down at the front of the tray.
- For the multi-purpose tray (MP tray):
 - Put the side to be printed on face up with the leading edge (top) of the paper in first.
 - To print on the second side, put the paper face down, with the leading edge (top) of the paper in first.
 - If letterhead paper is used, put it in with the heading face down and in first.
 - To print on the second side, put the heading face up and in first.

Automatic duplex printing

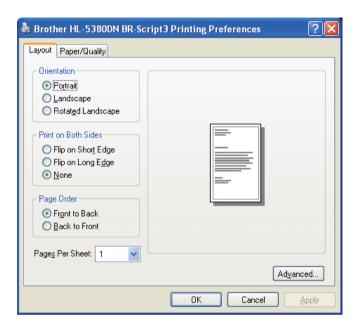
If you are using the Macintosh® Printer Driver, see *Duplex Printing* on page 64.

- 1 Put paper in the paper tray or MP tray.
- For the Windows[®] printer driver
 - 1 Open the **Properties** dialog box in the printer driver.
 - 2 From the **General** tab, click the **Printing Preferences** button.
 - 3 From the Basic tab, choose Duplex from the Duplex / Booklet setting.
 - 4 Click the **Duplex Settings...** button, the **Duplex Settings** will appear.
 - 5 Choose **Use Duplex Unit** from the **Duplex Mode** setting.
 - 6 Click **OK**. The printer will print on both sides of the paper automatically.



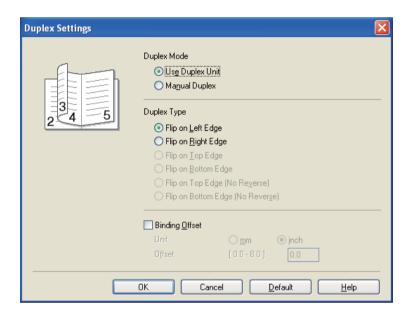
For the BR-Script printer driver

- 1 Open the **Properties** dialog box in the printer driver.
- 2 From the **General** tab, click the **Printing Preferences** button.
- 3 From the Layout tab, choose Orientation, Print on Both Sides and Page Order.
- **4** Click **OK**. The printer will print on both sides of the paper automatically.



Booklet printing

- 1 Put paper in the paper tray or MP tray.
- 2 For the Windows[®] printer driver
 - 1 Open the **Properties** dialog box in the printer driver.
 - 2 From the **General** tab, click the **Printing Preferences** button.
 - 3 From the **Basic** tab, choose **Booklet** from the **Duplex** / **Booklet** setting.
 - 4 Click the **Duplex Settings...** button, the **Duplex Settings** will appear.
 - 5 Choose **Use Duplex Unit** or **Manual Duplex** from the **Duplex Mode** Setting.
 - 6 Click OK.



For the BR-Script printer driver

- 1 Open the **Properties** dialog box in the printer driver.
- 2 From the **General** tab, click the **Printing Preferences** button.
- 3 From the Layout tab, choose Booklet from the Pages Per Sheet setting.
- **4** Click **OK**. The printer will print a booklet automatically.

Carbon copy printing

Carbon copy printing allows you to automatically print one page of data on different kinds of paper by changing the paper source. You can make copies as though you are printing on carbon paper using a dot matrix printer. For example, you can print 'Data A' to 'Sheet 1' which is blue colored paper and then to 'Sheet 2' which is yellow colored and has some information already printed on it. If you put paper for 'Sheet 1' in Tray 1 and paper for 'Sheet 2' in the MP tray, the printer will automatically feed paper for 'Sheet 1' from Tray 1 and 'Sheet 2' from the MP tray.

For more information, visit us at http://solutions.brother.com/

3

Driver and Software

Printer driver

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

(If you want to uninstall the printer driver, see *Uninstalling the printer driver* on page 72.)

For Windows®

- Windows[®] printer driver (the most suitable printer driver for this product)
- BR-Script (PostScript® 3™ language emulation) printer driver

For Macintosh

- Macintosh printer driver (the most suitable printer driver for this product)
- BR-Script (PostScript® 3[™] language emulation) printer driver ¹
- ¹ To install the driver, see *Installing the BR-Script3 printer driver* on page 66.

For Linux^{® 1 2}

- LPR printer driver
- CUPS printer driver
- Download the printer driver for Linux from http://solutions.brother.com/ or a link on the supplied CD-ROM.
- ² Depending on Linux distributions, the driver may not be available.



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

	Windows [®] printer driver	BR-Script printer driver	Macintosh Printer Driver	LPR / CUPS printer driver ¹
Windows® 2000 Professional	①	①		
Windows® XP Home Edition	①	①		
Windows® XP Professional	①	①		
Windows Vista [®]	①	①		
Windows Server [®] 2003	①	①		
Windows Server® 2008	①	①		
Windows [®] XP Professional x64 Edition	①	(i)		
Windows Server [®] 2003 x64 Edition	1	①		
Mac OS X 10.3.9 or greater		①	①	
Linux ¹				(i)

For the information on supported Linux distribution and to download the printer driver, visit us at http://solutions.brother.com/.
You can also download the printer driver from a link on the supplied CD-ROM. If you download from a link on CD-ROM, click Install Other Drivers or Utilities, then click For Linux users on the screen menu. Access to internet is required.

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

- Paper Size
- Orientation
- Copies
- Media Type
- **■** Resolution
- **■** Print Settings
- **■** Multiple Page
- Duplex / Booklet ³
- **■** Paper Source
- Scaling
- **■** Reverse Print
- Use Watermark ¹³
- Header-Footer Print ³
- **■** Toner Save Mode
- Administrator ³
- **■** Secure Print
- Use Reprint ¹³
- Sleep Time
- Macro ¹³
- Page Protection ¹³
- Density Adjustment ²
- Improve Print Output
- These settings are not available with the BR-script printer driver for Windows[®].
- ² These settings are not available with the Macintosh printer driver.
- ³ These settings are not available with the Macintosh printer driver and the BR-Script printer driver for Macintosh.

Features in the printer driver (for Windows®)

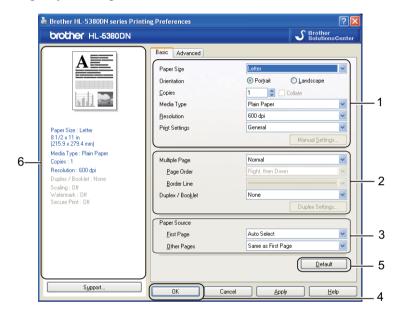
(For more information, see the **Help** text in the printer driver.)



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

Basic tab

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



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



This area (6) shows the current settings.

Paper Size

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

Orientation

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



Copies

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

■ Collate

With the Collate check box selected, one complete copy of your document will be printed and then 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.



Media Type

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

Plain Paper Thick Paper Thicker Paper Bond Paper Env. Thick Env. Thin Recycled Paper Envelopes Transparencies



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

Resolution

You can choose the resolution as follows.

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



If you use the high quality 1200 dpi setting (1200 x 1200 dpi) the print speed will be slower.

Print Setting

You can manually change the print setting.

■ General

This is a printing mode for general printing of documents.

■ Graphics

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

■ Office Document

This is the best mode for printing office documents.

■ 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 enlarging 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 on 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.

Duplex / Booklet

When you want to print a booklet or do duplex printing, use this function, and then from the **Basic** tab, choose a **Duplex** / **Booklet** (See *Duplex printing* on page 24).

■ None

Disable duplex printing.

Duplex

When you want to do duplex printing, use this function.

If you choose **Duplex** and click **Duplex Settings...** button. You can set the following settings.

Duplex Mode

Use Duplex Unit

In this mode, the printer prints on both sides of the paper automatically.

Manual Duplex

In this mode, the printer prints all the even numbered page 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.

Duplex Type

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

Binding Offset

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

■ Booklet

When you want to print a booklet, use this function. To make the Booklet, fold the printed pages down the middle.

If you choose **Booklet** and click **Duplex Settings...** button. You can set the following settings.

Duplex Mode

Use Duplex Unit

In this mode, the printer prints on both sides of the paper automatically.

Manual Duplex

In this mode, the printer prints all the even numbered page 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.

Duplex Type

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

Binding Offset

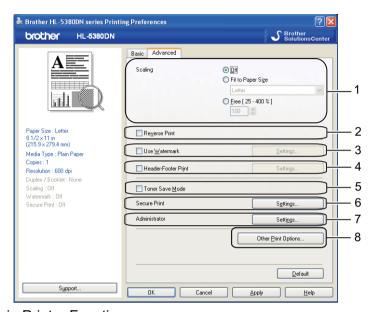
If you check the Binding Offset option, you can also specify the offset for binding in inches or millimeters.

Paper Source

You can choose **Auto Select**, **Tray1**, **Tray2** ¹, **Tray3** ¹, **MP Tray** or **Manual** and specify separate trays for printing the first page and for printing from the second page onwards.

Tray2 and Tray3 are options. You must add Tray2 or Tray3 in the Accessories tab to select Tray2 or Tray3 from the driver. (See Accessories tab on page 44.)

Advanced tab



You can set the following in Printer Function:

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

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 documents as a watermark.

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

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

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

Header-Footer Print

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

■ ID Print

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

Toner Save Mode

You can save running costs by turning on the **Toner Save Mode**, which cuts the print density.



- We do not recommend Toner Save for printing Photo or Greyscale images.
- Toner Save Mode is not available for 1200 dpi or HQ 1200 resolution.

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 **Settings...** and check the **Secure Print** box. Enter a password in the **Password** box and click **OK**.

(For more information about the Secure Print, See Printing Secure data on page 85.)



- If you do not check **RAMDISK** in the **Accessories** tab, the check box remains greyout.
- Check the **Secure Print** check box if you want to prevent other people from printing your data.

Administrator

Administrators have the authority to limit the number of copies, scaling setting and watermark setting functions.

■ Password

Enter the password into this box.

■ Set Password...

Click here to change the password.

■ Set

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

■ Copies Lock

Lock the copy pages selection to prevent multiple copy printing.

■ Multiple Page & Scaling Lock

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

■ Watermark Lock

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

■ Header-Footer Print Lock

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

Other Print Options...

You can set the following in Printer Function:

- **■** Use Reprint
- Sleep Time
- Macro
- Page Protection
- Density Adjustment
- **Improve Print Output**

Use Reprint

The printer 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 on page 83.



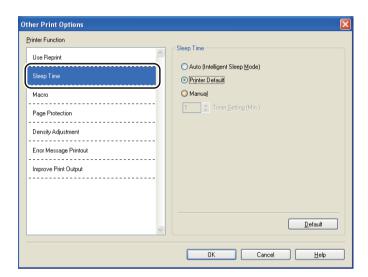
If you want to prevent other people from printing your data using the reprint function, uncheck the **Use Reprint** check box in the **Other Print Options...**.

Sleep Time

When the printer does not receive data for a certain period of time, it enters sleep mode. In sleep mode, the printer acts as though it were turned off. When you choose **Printer Default** the timeout setting will be 1 minute. Intelligent Sleep Mode automatically adjusts to the most suitable timeout setting depending on the frequency of your printer use.

While the printer is in sleep mode, Back light is off, the LCD shows SLEEP, but the printer can still receive data. Receiving a print file or document or pressing **Go** will automatically wake up the printer to start printing.

For more information about **Sleep Time** setting change, please visit the product page at http://solutions.brother.com/ and see "Information".



Macro

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

Page Protection

Page Protection refers to a setting that reserves extra memory for the creation of full-page images.

Selections are Auto, Off and Printer Default.

The page protection feature allows the printer to create the full-page image to be printed in memory before physically moving the paper through the printer. Use this function when the image is complicated and the printer has to wait to process the image before printing.

Density Adjustment

Increase or decrease the print density.



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

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 Paper** setting.

■ Improve Toner Fixing

If you choose this setting, the toner fixing on paper may be improved. If this selection does not provide enough improvement, select **Thicker Paper** in **Media Type** settings.

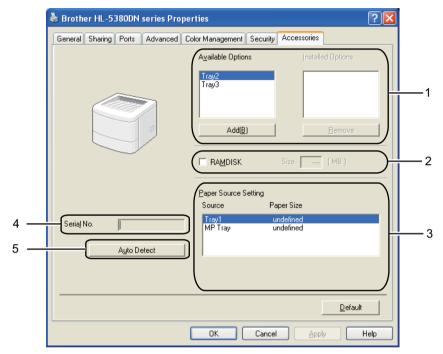
Accessories tab



From the **Start** menu, select **Control Panel** and then **Printers and Faxes** ¹. Right-click the **Brother HL-5380DN series** icon and select **Properties** to access the **Accessories** tab.

1 **Printers** for Windows[®] 2000 users.

When you install the optional accessories, you can add and choose their settings in the **Accessories** tab as follows.



■ Available Options (1)

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

■ RAMDISK (2)

You can detect the capacity of the RAMDISK that has been set using the control panel. To find the capacity of RAMDISK, check the **RAMDISK** check box and then click **Auto Detect**. For more information, see *Reprinting from RAM* on page 83.

■ Paper Source Setting (3)

This feature recognizes the paper size set from the control panel menu for each paper tray.

■ Serial No. (4)

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

■ Auto Detect (5)

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 printer will be listed in **Installed 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**.



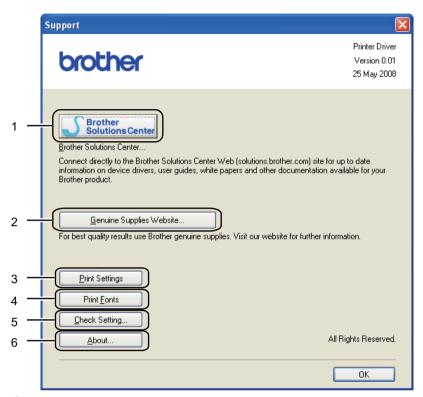
The **Auto Detect** function is not available under the following printer conditions:

- The printer power switch is off.
- The printer is in an error state.
- The printer is in a network shared environment.
- The cable is not connected to the printer correctly.

Support



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



■ Brother Solutions Center (1)

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

■ Genuine Supplies Website...(2)

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

■ Print Settings (3)

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

■ Print Fonts (4)

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

■ Check Setting...(5)

You can check the current driver settings.

■ About...(6)

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

Status Monitor

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

Click the **Start** button, **All Programs** ¹, **Brother**, your printer (Brother HL-5380DN), and then **Status Monitor**.

¹ **Programs** for Windows® 2000 users

Using the BR-Script3 printer driver (PostScript[®] 3[™] language emulation for Windows[®])

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



- To use the BR-Script3 printer driver you must install the driver using the Custom Install from the CD-ROM.
- The screens in this section are based on HL-5380DN with Windows® XP.
- The screens on your computer may vary depending on your operating system.

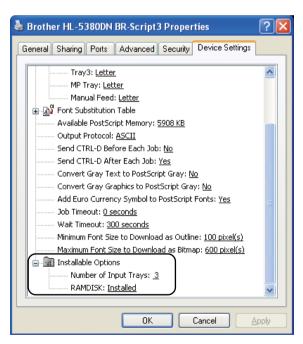
Device Settings tab



From the **Start** menu, select **Control Panel** and then **Printers and Faxes** ¹. Right-click the **Brother HL-5380DN BR-Script3** icon and select **Properties** to access the **Device Settings** tab.

Printers for Windows[®] 2000 users.

Choose the options you have installed.



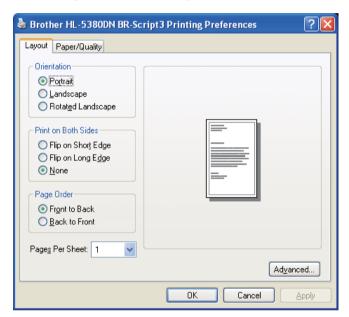
Printing Preferences



You can access the **Printing Preferences** dialog box by clicking **Printing Preferences...** in the **General** tab of the **Brother HL-5380DN 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 **Page 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

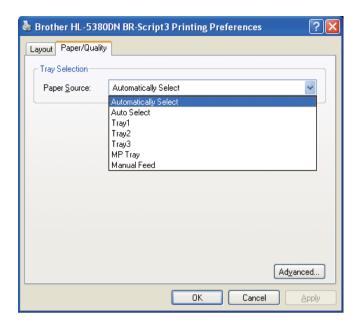
Specifies the order in which the pages of your document will be printed. **Front to Back** prints the document so that page 1 is on top of the stack. **Back to Front** prints the document so that page 1 is on the bottom of the stack.

■ Pages Per Sheet

Choose how many pages will appear on each side of the paper, or **Booklet**.

■ Paper/Quality tab

Choose the **Paper Source**.

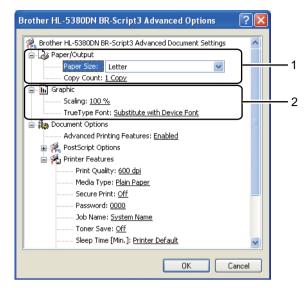


■ Paper Source

You can choose Automatically Select, Auto Select, Tray1, Tray2 1 , Tray3 1 , MP Tray or Manual Feed.

¹ Tray2 and Tray3 are options.

Advanced options



- 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.

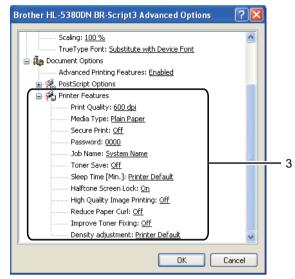
- Set the Scaling and True Type Font settings (2).
 - Scaling

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

■ True Type 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.





■ Print Quality

You can choose the following print quality settings.

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

■ Media Type

You can use the following types of media in your printer. 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
Env. Thick	Env. Thin	Recycled Paper	Envelopes	Transparencies

■ Secure Print

Secure Print allows you to secure documents that are password protected when they are sent to the printer. Only the people who know the password will be able to print them. Since the documents are secured at the printer, you must enter the password using the control panel of the printer. The secured document must have a **Password** and **Job Name**. (For more information about the **Secure Print** function, See *Printing Secure data* on page 85.)

■ Password

Choose the password for your secured document that you send to the machine from the drop-down box.

■ Job Name

Choose the Job name from the drop-down list for your secured document.

■ Toner Save

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



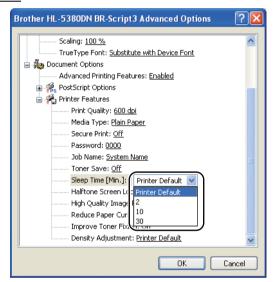
- We do not recommend Toner Save for printing Photo or Greyscale images.
- Toner Save mode is not available for 1200 dpi or HQ 1200 resolution.

■ Sleep Time

When the printer does not receive data for a certain period of time, it enters sleep mode. In sleep mode, the printer acts as though it were turned off. When you choose **Printer Default** the timeout setting will be 1 minute.

While the printer is in sleep mode, Back light is off, the LCD shows SLEEP, but the printer can still receive data. Receiving a print file or document or pressing **Go** will automatically wake up the printer to start printing.

For more information about **Sleep Time** setting change, please visit the product page at http://solutions.brother.com/ and see "Information".



■ 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 printing speed will be slower.

■ Reduce Paper Curl

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

■ Improve Toner Fixing

If you choose this setting, the toner fixing on paper may be improved. If this selection does not provide enough improvement, select **Thicker Paper** in **Media Type** settings.

■ Density Adjustment

Increase or decrease the print density.

Features in the printer driver (for Macintosh)

This printer supports Mac OS X 10.3.9 or greater.

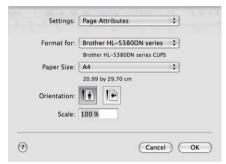


The screens in this section are based on Mac OS X 10.5. The screens on your Macintosh will vary depending on your operating system.

Choosing page setup options

You can set the Paper Size, Orientation and Scale.

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



- 2 From an application such as Apple TextEdit, click File, then Print to start printing.
 For Mac OS X 10.3 and 10.4.
 - Printer: Brother HL-5380DN series

 Presets: Standard

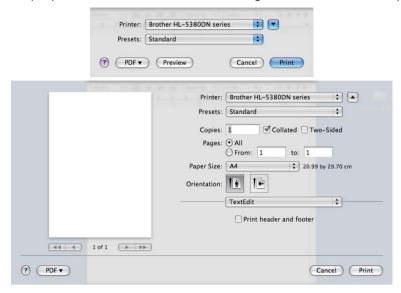
 Copies & Pages

 Copies: 1 Collated

 Pages: All

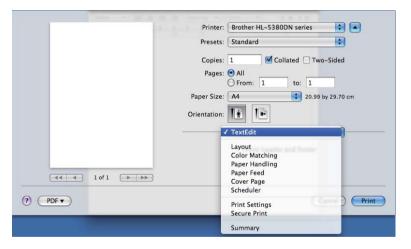
 From: 1 to: 1

■ For Mac OS X 10.5 For more page setup options, click the disclosure triangle beside the Printer pop-up menu.



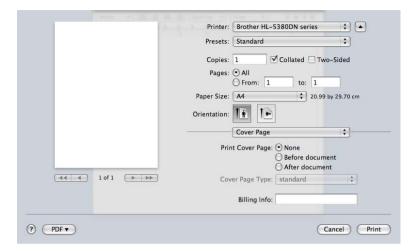
Choosing printing options

To control special printing features, choose the options in the Print dialog box.



Cover Page

You can make the following cover page settings:



■ Print Cover Page

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

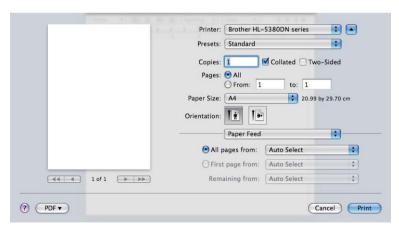
■ Cover Page Type

Choose a template for the cover page.

■ Billing Info

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

Paper Feed

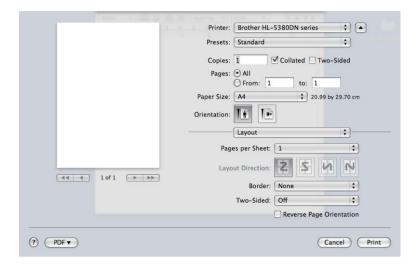


You can choose **Auto Select**, **Tray1**, **Tray2** ¹, **Tray3** ¹, **MP Tray** ² or **Manual**, and specify separate trays for printing the first page and for printing from the second page onwards.

¹ Tray2 and Tray3 are options.

² The printer automatically turns on the Manual Feed mode when you put paper in the **Multi-purpose Tray**.

Layout



■ Pages per Sheet

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

■ Layout Direction

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

■ Border

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

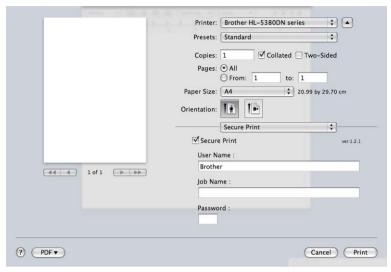
■ Two-sided

See Duplex Printing on page 64.

■ Reverse Page Orientation (For Mac OS X 10.5)

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

Secure Print



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

If you want to create a secure print job, check the **Secure Print**. Enter a user name, job name and password, then click **Print**.

(For more information about the Secure Print function, see *Printing Secure data* on page 85.)



Check the **Secure Print** check box if you want to prevent other people from printing your data.

Print Settings

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

Basic tab



■ Media Type

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

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

■ Resolution

You can choose the resolution as follows:

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

■ 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**.



- We do not recommend **Toner Save** for printing Photo or Greyscale images.
- Toner Save Mode is not available for 1200 dpi or HQ 1200 resolution.
- Reverse Print (For Mac OS X 10.3 and 10.4)

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

Advanced tab



■ Graphics Quality

You can change the print quality as follows:

■ Photo

This is a photograph mode (gradation priority). Choose this setting for printing photographs that have continuous gradation. You can represent soft contrasts between various shades of grey.

■ 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.

■ Chart/Graph

This is the best dither pattern for business documents such as presentations, that include words, graphs or charts. It is particularly suitable for solid colors.

■ 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.

■ Improve Toner Fixing

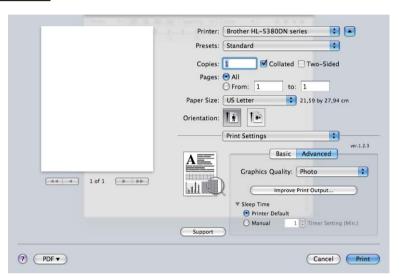
If you choose this setting, the toner fixing on paper may be improved. If this selection does not provide enough improvement, select **Thicker Paper** in **Media Type** settings.

■ Sleep Time

When the printer does not receive data for a certain period of time, it enters sleep mode. In sleep mode, the printer acts as though it were turned off. The default setting for timeout is 1 minute. If you want to change the sleep time, choose **Manual** and then enter the time in the text box on the driver.

While the printer is in sleep mode, Back light is off, the LCD shows SLEEP, but the printer can still receive data. Receiving a print file or document or pressing **Go** will automatically wake up the printer to start printing.

For more information about **Sleep Time** setting change, please visit the product page at http://solutions.brother.com/ and see "Information".



■ Support



■ Brother Solutions Center

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

■ Visit the Genuine Supplies website

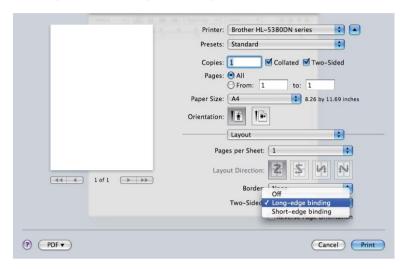
You can visit our website for original/genuine Brother supplies by clicking this button.

Duplex Printing

■ Use duplex unit.

Select Layout.

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



■ Manual duplex

Select Paper Handling.

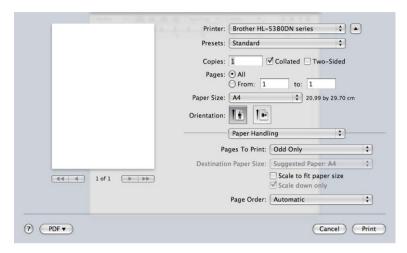
■ For Mac OS X 10.3 and 10.4

Choose **Odd numbered pages** and print. Turn the paper over and reload it in the tray, and then choose **Even numbered pages** and print.



■ For Mac OS X 10.5

Choose **Odd Only** and print. Turn the paper over and reload it in the tray, and then choose **Even Only** and print.



Status Monitor

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

- For Mac OS X 10.3 and 10.4
- 1 Run the **Printer Setup Utility** (from the **Go** menu, choose **Applications**, **Utilities**), then choose the printer.
- 2 Click the **Utility**, then **Status Monitor** will start up.
- For Mac OS X 10.5
- 1 Run the System Preferences, select Print & Fax, then choose the printer.
- Click the Open Print Queue..., then click the Utility. The Status Monitor will start up.

Using the BR-Script3 printer driver (Post Script[®] 3[™] language emulation for Macintosh)



- To use the BR-Script3 printer driver on a Network, see the Network User's Guide on the CD-ROM.
- To use the BR-Script3 printer driver, you need to set the EMULATION to BR-SCRIPT3 using the control panel or Web Based Management (web browser) before connecting the interface cable. (See *Menu table* on page 88.)

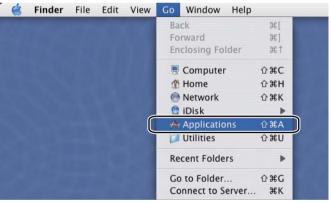
Installing the BR-Script3 printer driver

You need to install the BR-Script3 printer driver using the following instructions.



If you use a USB cable, only one printer driver per printer can be registered in the **Printer Setup Utility** (For Mac OS X 10.3 and 10.4) or **Print & Fax** (For Mac OS X 10.5). Before installing the BR-Script3 printer driver, delete from the Printer list any other Brother drivers that are for the same printer.

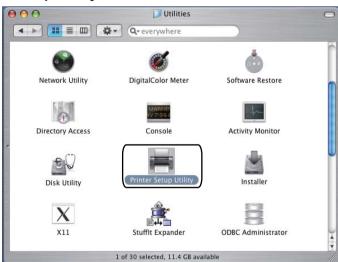
- For Mac OS X 10.3 and 10.4
- 1 From the Go menu, choose Applications.



2 Open the **Utilities** folder.



3 Double-click the Printer Setup Utility icon.



4 Click Add.



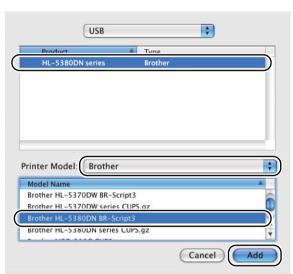
For Mac OS X 10.3 users, go to 6.

For Mac OS X 10.4 or greater users, go to 6.

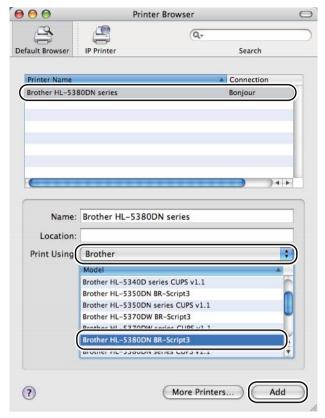
6 Choose USB.



6 Choose the model name and make sure that **Brother** is in **Printer Model** (Print Using), then select the model name that shows BR-Script in the Model Name (Model), and then click **Add**. For Mac OS X 10.3 users:



For Mac OS X 10.4 or greater users:



From the Printer Setup Utility menu, choose Quit Printer Setup Utility.





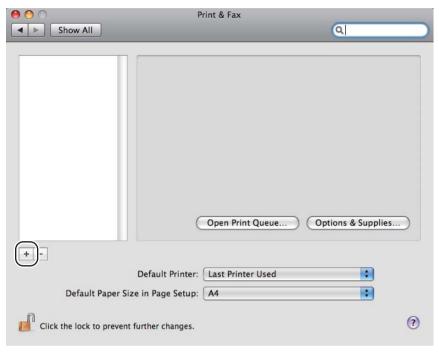
- For Mac OS X 10.5
- 1 From the Apple menu choose System Preferences.



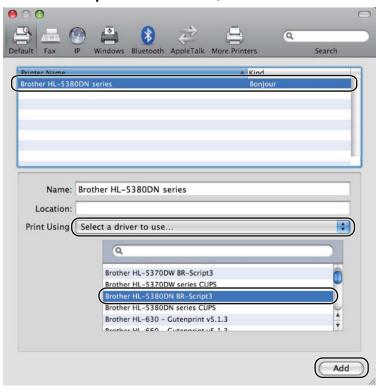
Select Print & Fax.



3 Click +.



4 Choose the **Printer Name** and choose **Select a driver to use...** in **Print Using**, and then choose the **Printer Name** that shows **BR-Script in Model Name**, and click **Add**.



5 Quit System Preferences.

Uninstalling the printer driver

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



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

Printer driver for Windows[®] and Windows Vista[®] and Windows Server[®] 2003/2008

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

Printer driver for Macintosh

For Mac OS X 10.3 and 10.4

- Disconnect the USB cable between the Macintosh and your printer.
- Restart the Macintosh.
- 3 Log in as an 'Administrator'.
- 4 Run the **Printer Setup Utility** (from the **Go** menu, choose **Applications**, **Utilities**), then choose the printer you want to remove and remove it by clicking the **Delete** button.
- 5 Drag the folder (from the **Macintosh HD** (Startup Disk), choose **Library**, **Printers**, **Brother**) into the Trash and then empty the Trash.
- 6 Restart the Macintosh.

For Mac OS X 10.5

- 1 Disconnect the USB cable between the Macintosh and your printer.
- Restart the Macintosh.
- 3 Log in as an 'Administrator'.
- 4 Run the **System Preferences**. Select **Print & Fax**, then choose the printer you want to remove and remove it by clicking the button.

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

- 5 Drag the folder (from the **Macintosh HD** (Startup Disk), choose **Library**, **Printers**, **Brother**) into the Trash and then empty the Trash.
- 6 Restart the Macintosh.

Software

Software for networks

BRAdmin Light

BRAdmin Light is a utility for initial setup of Brother network connected devices. This utility can search for Brother products on your network, view the status and configure basic network settings, such as IP address. The BRAdmin Light utility is available for Windows[®] 2000/XP, Windows Vista[®] and Windows Server[®] 2003/2008 and Mac OS X 10.3.9 (or greater) computers. For installing BRAdmin Light on Windows[®], please see the Quick Setup Guide we provided with the machine. For Macintosh users, BRAdmin Light will be installed automatically when you install the printer driver. If you have already installed the printer driver, you do not have to install it again.

For more information on BRAdmin Light, visit us at http://solutions.brother.com/.

BRAdmin Professional 3 (for Windows®)

BRAdmin Professional 3 is a utility for more advanced management of network connected Brother devices. This utility can search for Brother products on your network and view the device status from an easy to read explorer style window that changes colour identifying the status of each device. You can configure network and device settings along with the ability to update device firmware from a Windows[®] computer on your LAN. BRAdmin Professional 3 can also log activity of brother devices on your network and export the log data in an HTML, CSV, TXT or SQL format.

For users who want to monitor locally connected printers, install the BRPrint Auditor software on the client PC. This utility allows you to monitor printers that are connected to a client PC via USB or parallel from BRAdmin Professional 3.

For more information and downloading, visit us at http://solutions.brother.com/.

Web BRAdmin (for Windows®)

Web BRAdmin is a utility for managing network connected Brother devices on your LAN and WAN. This utility can search for Brother products on your network, view the status and configure the network settings. Unlike BRAdmin Professional 3, which is designed for Windows[®] only, Web BRAdmin is a server based utility that can be accessed from any client PC with a web browser that supports JRE (Java Runtime Environment). By installing the Web BRAdmin server utility on a computer running IIS ¹, connect to the Web BRAdmin server, which then communicates with the device itself.

For more information and downloading, visit us at http://solutions.brother.com/.

¹ Internet Information Server 4.0 or Internet Information Services 5.0/5.1/6.0/7.0

BRPrint Auditor (for Windows®)

The BRPrint Auditor software brings the monitoring power of Brother network management tools to locally connected machines. This utility allows a client computer to collect usage and status information from a machine connected via the parallel or USB interface. The BRPrint Auditor can then pass this information to another computer on the network running BRAdmin Professional 3 or Web BRAdmin 1.45 or greater. This allows the administrator to check items such as page counts, toner and drum status and the firmware version. In addition to reporting to Brother network management applications this utility can E-mail the usage and status information directly to a predefined E-mail address in a CSV or XML file format (SMTP Mail support required). The BRPrint Auditor utility also supports E-mail notification for reporting warning and error conditions.

Web Based Management (web browser)

Web Based Management (web browser) is a utility for managing network connected Brother devices, using the HTTP (Hyper Text Transfer Protocol). This utility can view the status of Brother products on your network and configure the machine or network settings using a standard web browser that is installed on your computer.

For more information, see Chapter 10 of the Network User's Guide on the CD-ROM we have supplied.

For increased security Web Based Management also support HTTPS. For more information see Chapter 14 of the Network User's Guide on the CD-ROM we have supplied.

Driver Deployment Wizard (for Windows®)

Driver Deployment Wizard is a utility for installation. It can be used to ease or even automate the installation of a locally connected or network connected printer. The Driver Deployment Wizard can also be used to create self running executable files which when run on a remote PC, completely automates the installation of a printer driver. The remote PC does not have to be connected to a network.

About emulation modes

This printer has the following emulation modes. You can change the setting by using the control panel or Web Based Management (web browser).

■ HP LaserJet Mode

The HP LaserJet mode (or HP mode) is the emulation mode in which this printer supports the PCL6 language of the Hewlett-Packard LaserJet laser printer. Many applications support this type of laser printer. Using this mode will allow your printer to run at its best with those applications.

■ BR-Script 3 Mode

BR-Script is an original Brother page description language and a PostScript[®] language emulation interpreter. This printer supports level 3. The BR-Script interpreter of this printer allows you to control text and graphics on pages.

For technical information about PostScript® commands, see the following manuals:

- Adobe Systems Incorporated. PostScript[®] Language Reference, 3rd edition. Addison-Wesley Professional, 1999. ISBN: 0-201-37922-8
- Adobe Systems Incorporated. PostScript[®] Language Program Design. Addison-Wesley Professional, 1988. ISBN: 0-201-14396-8
- Adobe Systems Incorporated. PostScript[®] Language Tutorial and Cookbook. Addison-Wesley Professional, 1985. ISBN: 0-201-10179-3
- EPSON FX-850 and IBM® ProPrinter XL Mode

The EPSON FX-850 and IBM ProPrinter XL modes are the emulation modes that this printer supports to meet the industry-standard for dot matrix printers. Some applications support these dot matrix printer emulations. Use these emulation modes so your printer will work well when printing from those types of applications.

Automatic emulation selection

This printer has an automatic emulation selection feature that is turned on by default. This lets it automatically change the emulation mode to suit the type of data it receives.

You can change the setting by using the control panel or Web Based Management (web browser).

The printer can choose from the following combinations:

Setting 1(default)	Setting 2
HP LaserJet	HP LaserJet
BR-Script 3	BR-Script 3
EPSON FX-850	IBM ProPrinter XL

Automatic interface selection

This printer has an automatic interface selection feature that is turned on by default. This lets it automatically change the interface to IEEE 1284 parallel, USB, or Ethernet depending on which interface is connected and receiving data.

When you use the parallel interface, you can turn the high-speed and bi-directional parallel communications on or off by using the control panel buttons to access PARALLEL in the INTERFACE menu. (See *Menu table* on page 88.)



This function takes a few seconds to work. If you want to speed up printing, choose the required interface manually by using the control panel to access SELECT in the INTERFACE menu.

4 Control Panel

Control panel

This printer has one back lit liquid crystal display (LCD), seven buttons and one Light Emitting Diode (LED) on the control panel. The LCD is a 16 character single line display.

The LCD light shows the current status of the printer.



Buttons

You can control the basic printer operations and change various printer settings with seven buttons (**Go**,**Job Cancel** , **Secure Print**, +, -, **Back**,**Set**).

button	Operations	
Go	Clear error messages.	
	Pause and continue printing.	
	Reprint the last job.	
Job Cancel	Stop and cancel the printing job in progress.	
Secure Print	Choose the Secure Print menu.	
+	Scroll forward through menus and the available options.	
	Enter numbers and increase the number.	
-	Scroll backward through menus and the available options.	
	Enter numbers and decrease the number.	
Back	Go back one level in the menu structure.	
Set	Choose the control panel menu.	
	Set the chosen menus and settings.	

Go

Pressing **Go** will exit the control panel menu and return the printer to the READY state, however, if there is an ERROR indication, the control panel will only change when the error is cleared.

You can pause printing by pressing **Go**. Pressing **Go** again restarts the print job. During a pause, the printer is offline.

If data remains in the printer memory, pressing **Go** will print that remaining data.

You can clear some error indications by pressing **Go**. Follow the control panel instructions or see *Identifying your problem* on page 126 to clear all other errors.



- The options you have chosen are shown with an asterisk at the end of the display. Since the asterisk shows what you have chosen, you can easily see the current settings as you look through the LCD.
- If the printer is in Pause mode and you do not want to print the data left, press **Job Cancel**. Once the job has been canceled, the printer will return to the READY state.

Job Cancel

You can cancel the processing or printing of data by pressing **Job Cancel**. The LCD shows CANCEL PRINTING until the job is cancelled. After canceling the job, the printer returns to the READY state.

To delete all jobs, press **Job Cancel** for about 4 seconds. The LCD shows CANCEL ALL JOBS. After canceling all jobs, the LCD shows READY.

When the printer is not receiving data or printing, the LCD shows No Data!!! and you cannot cancel the job.

Secure Print

If you want to print secure data protected by a password, press Secure Print.

For details, see Printing Secure data on page 85.

+ or - button

Moving through menus on the LCD

Pressing + or - when the printer is in the READY state, takes it offline and the LCD will show the control panel menu.

Press to scroll through the menus and options. Press the button until you see the setting you want.

Entering numbers

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 **Set**.

Back

Pressing **Back** when the printer is in the READY state takes it offline, and the LCD will show the control panel menu.

Pressing **Back** allows you to return to the previous level from the current menu level.

Back also allows you to choose the previous digit while setting numbers.

When you choose a setting and it does not have an asterisk (**Set** was not pressed), **Back** allows you to return to the previous menu level with the original setting unchanged.

Set

Pressing **Set** when the printer is in the READY state takes it offline, and the LCD will show the control panel menu.

Pressing **Set** allows you to choose the displayed menu or option. After changing a setting, an asterisk (*) appears briefly on the right-hand side of the message.



The options you have chosen are shown with an asterisk at the end of the display. Since the asterisk shows what you have chosen, you can easily see the current settings as you look through the LCD.

Data LED

The LED is a light which show the printer status.

Data LED (Yellow)

LED indication	Meaning	
On	Data is in the printer memory.	
Blinking	Receiving or processing data.	
Off	No remaining data in the memory.	

LCD

The LCD shows the current printer status. When you use the buttons on the control panel, the LCD will change.

If there are any problems, the LCD will show the error message, maintenance message or call service message so you will know that you need to take action. (For more information about these messages, see *LCD messages* on page 127.)

Back light

Light	Meaning	
Off	The printer is off or in sleep status.	
Green (General)	Ready to print	
	Printing	
	Warming up	
	Job canceling	
Red (Error)	There is a problem with the printer.	
Orange (Setting)	Choosing a menu (Control panel menu or Reprint menu)	
	Pause	

LCD messages

Printer status messages

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

Printer Status Message	Meaning	
IGNORE DATA	Printer is ignoring data processed using PS driver.	
CANCEL PRINTING	Canceling the job.	
CANCEL ALL JOBS	Canceling all jobs.	
Now initializing	The printer is setting up.	
PAUSE	The printer has suspended its operations. Press Go to start the printer again.	
PRESS SET TO PRINT	Press Set to start reprinting and printing secure data.	
PRINTING	Printing.	
PROCESSING	Busy processing data.	
RAM SIZE =XXMB	This printer has XX MB memory.	
READY	Ready to print.	
RESET TO FACTORY SETTINGS	The printer settings return to the default settings.	
RESET TO USER SETTINGS	The printer settings return to the user settings.	
RESOLUTION ADAPT	Printing with reduced resolution.	
SELF TEST	Performing self-diagnostics.	
SLEEP	In Sleep state.	
WARMING UP	The printer is warming up.	
COOLING DOWN	The printer is cooling down.	

Reprinting documents

Reprinting from RAM

You can reprint from random access memory (RAM). The reprint data in RAM will be deleted when the printer is turned off.

When you use RAM to reprint:

- 1 Press **Set** on the control panel.
- Press + or to choose SETUP. Press Set.
- 3 Press + or to choose RAMDISK SIZE. Press Set.
- 4 The present RAM disk is 0MB. Press + to increase the reprint RAM size in increments of 1MB.
- 5 Press Set.



When you increase the RAM size for secure printing, the work area of the printer is decreased and the printer performance will be reduced. Make sure that you reset the RAM disk size to 0MB after you finish using secure printing.

We recommend that you add more RAM if you want to be able to print a lot of secure data. (See *Installing extra memory* on page 102).

Reprinting the last job

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



- If the REPRINT setting is set to OFF on the control panel and you press **Go** for about 4 seconds, the LCD shows NO DATA STORED for a short time.
- If you want to cancel reprinting, press **Job Cancel**.
- If the printer does not have enough memory to spool the print job data, it will not reprint the document.
- Pressing + or makes the number of reprint copies increase or decrease. You can choose between 1 and 999 COPIES.
- For more information about the settings in the printer driver, see Other Print Options... on page 41.
- After turning the power switch off, the last job data will be deleted.

How to reprint the last job

1 Make sure that the REPRINT setting is ON by using the buttons on the control panel to enter the SETUP menu.



If you print with the printer driver we have supplied with the printer, the settings for **Use Reprint** in the printer driver will take priority over the settings made on the control panel. (For more information, see *Use Reprint* on page 41.)

Press Go for about 4 seconds.

COPIES =1

3 Press + to enter the number of copies you want.

COPIES =3

4 Press Set.
If you press Go, the LCD shows PRESS SET TO PRINT.

PRINTING

COPIES =1



- Pressing + or makes the number of reprint copies increase or decrease. You can choose between 1 and 999 COPIES.
- If you wait 30 seconds to continue the control panel operation, the LCD leaves the REPRINT setting automatically.

When there is no last job data in memory

If the printer does not have reprint data in the memory and you press **Go** for about 4 seconds, the LCD will show NO DATA STORED.

Canceling reprinting data

If you want to cancel the current reprint job, press **Job Cancel**. **Job Cancel** also allows you to cancel a paused reprint job.

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 printer will not print the document when you send it for printing. To print the document, you must use the control panel of the printer (with the password). Secure data will be deleted after printing once.

When the area to spool data is full, the earliest data is automatically deleted first. The order of deleting data is not connected to the order of reprinting.

If you want to delete the spooled data, you can carry out this operation using the control panel or the webbased management application.



- The secure data will be deleted when the printer is turned off.
- For more information about the settings in the printer driver and how to create secure data, see *Secure Print* on page 40 (For Windows[®] printer driver), *Advanced options* on page 51 (For Windows[®] BR-Script printer driver) or *Secure Print* on page 59 (For Macintosh printer driver).

How to print Secure data

- 1 Press Secure Print. If there is no data, the LCD shows NO DATA STORED.
- 2 Press + or to choose the user name. Press **Set**.

XXXXXX

3 Press + or - to choose the job. Press Set.

XXXXXX

4 Enter your password. Press **Set**.

PASS NO.=0000



The printer will exit this menu after a time-out period.

5 Press + or - to enter the number of copies you want. Press Set.

COPIES=1

6 Press Set or Secure Print.

If you press Go, the LCD shows PRESS SET TO PRINT.

PRINTING
↓
(COPIES=1

When there is no secure data in memory

If the printer does not have secure data in the memory and you press **Secure Print**, the LCD will show NO DATA STORED.

Canceling printing secure data

If you want to cancel the current secure print job, press **Job Cancel**. **Job Cancel** also allows you to cancel a paused secure print job.

Using the control panel LCD menu

When you use the Menu buttons (+, -, Set or Back), remember the following basic steps:

- When you press **Set** to choose a setting, an asterisk appears at the end of the LCD for a short time. After that, the LCD returns to the previous menu level.
- If no control panel operations are performed for 30 seconds, the LCD automatically returns to READY.
- After changing the status or a setting, pressing **Back** before you press **Set** will cause the LCD to return to the previous menu level with the original settings unchanged.
- There are two ways to input numbers. You can press + or to scroll up or down one number at a time, or you can hold down + or to scroll faster. The blinking number is the one that you can change.

For example: If you feed paper from the MP tray as a priority, change the MP FIRST setting to ON as follows.

The default setting is OFF. Turn this setting ON if you want to.

=0N *

1	Press any of the menu buttons (+, -, Set or Back) to take the printer offline.
	READY
	INFORMATION
2	Press + or - to choose PAPER.
	PAPER
3	Press Set to move to the next menu level.
	SOURCE
4	Press + or - to choose MP FIRST.
	MP FIRST
5	Press Set .
	=0FF *
6	Press + to choose ON.
	=0N
7	Press Set . An asterisk * briefly appears at the end of the LCD. The current setting is shown by an *.

Menu table

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



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

• Standard paper tray: TRAY1

• Multi-purpose tray: MP

• Optional lower tray: TRAY2, TRAY3

INFORMATION

Submenu	Menu Selections	Descriptions	
PRINT SETTINGS		Prints the Printer Settings page.	
PRINT TEST		Prints the test page.	
PRINT DEMO ¹		Prints the demonstration sheet.	
PRINT FILE LIST		Prints the list of data saved in the embedded memory.	
PRINT FONTS		Prints the font list and samples.	
VERSION	SER.NO=########	Shows printer serial number.	
	ROM VER.=####	Shows main firmware version.	
	ROM DATE##/##/##	Shows main firmware date.	
	NET VER=####	Shows network firmware version.	
	NET DATE##/##/##	Shows network firmware date.	
	RAM SIZE =###MB	Shows the size of memory in this printer.	
MAINTENANCE	PAGE COUNTER	Shows the current total printed pages.	
	DRUM COUNT	Shows the pages printed with drum unit.	
	REMAIN DRUM	Shows the pages left to print with drum unit.	
	REMAIN PF KITMP	Shows the pages left to print with PF kit MP. See Replacing the consumable items on page 104.	
	REMAIN PF KIT 1	Shows the pages left to print with PF kit 1. See Replacing the consumable items on page 104.	
	REMAIN PF KIT 2	Shows the pages left to print with PF kit 2. See Replacing the consumable items on page 104.	
	REMAIN PF KIT 3	Shows the pages left to print with PF kit 3. See Replacing the consumable items on page 104.	
	REMAIN FUSER	Shows the pages left to print with fuser unit.	
	REMAIN LASER	Shows the pages left to print with laser unit.	

¹ This menu is only for some regions.

PAPER

Submenu	Options	Descriptions	
SOURCE	AUTO*/MP/TRAY1/TRAY2/TRAY3	Chooses the tray that will be used.	
PRIORITY	MP>T1>T2>T3*/T1>T2>T3>MP/ T1>T2>T3	When SOURCE is chosen as AUTO: Chooses the order in which the printer uses the paper trays that contain paper of the same size.	
MP FIRST	OFF*/ON	Chooses whether to feed paper from the MP tray as a priority.	
MP SIZE	ANY*/LETTER/LEGAL/A4	Chooses the size of paper you put in the MP tray.	
MP MEDIA FIX	OFF*/PLAIN PAPER/THIN PAPER	Chooses the media type of paper you put in the MF tray. When you choose the media type here (excep OFF), the setting for Media Type selected in the printer driver will be ignored.	
MANUAL FEED	off*/on	Chooses whether you want to feed paper manually.	
TRAY1 SIZE	ANY*/LETTER/LEGAL/A4	Chooses the size of paper you loaded in the standard paper tray.	
TRAY2 SIZE 1	ANY*/LETTER/LEGAL/A4	Chooses the size of paper you loaded in the optional lower tray.	
TRAY3 SIZE 1	ANY*/LETTER/LEGAL/A4	Chooses the size of paper you loaded in the optional lower tray.	
DUPLEX	OFF*/ON (LONG BIND)/ON (SHORT BIND)	Chooses whether you want to automatically print on both sides of the paper.	

¹ Tray2 and Tray3 are options.

QUALITY

Submenu	Options	Descriptions	
RESOLUTION	300 /600*/ HQ1200 / 1200	Chooses a print resolution 300, 600 or 1200 dots per inch or HQ1200 (2400x600 dpi).	
TONER SAVE	OFF*/ON		
DENSITY	-6/-5/-4/-3/-2/-1/ 0* /1/2/3/4/5 /6	Increases or decreases the print density.	



The default settings are shown in Bold with an asterisk.

SETUP

Submenu	Menu Selections	Options	Descriptions
LANGUAGE		ENGLISH*/FRANÇAIS	Changes the LCD language for your country.

SETUP (Continued)

Submenu	Menu Selections	Options	Descriptions
PANEL CONTROL	LCD DENSITY	0*/1	Adjusts the density of the LCD.
	AUTO ONLINE	ON*/OFF	
	BUTTON REPEAT	0.1*/0.2/0.3/0.4/0.5/1.0 /1.5/2 SEC	Sets the time for the LCD message to change when holding + or - at intervals.
	MESSAGE SCROLL	LEVEL1*/LEVEL2/LEVEL1	Sets the time in seconds that an LCD message will scroll across the LCD. From Level 1=0.2 to Level 10=2.0.
SLEEP TIME		1 */2/3/4/5/MINUTE	Sets the time to return to Sleep mode.
AUTO CONTINUE		OFF*/ON	
LOCK PANEL	PASS NO.=###	OFF*/ON	Turns the lock panel settings ON or OFF.
REPRINT		OFF* /ON	Chooses whether you want to use Reprint functions.
PAGE PROTECTION		AUTO*/OFF/LETTER/A4/LEG AL	Chooses whether you want to create a full page copy of the printed page in the printer memory before the page is actually printed.
EMULATION		AUTO (EPSON) */AUTO (IBM)/HP LASERJET/	Chooses the emulation mode you want to use.
KEEP PCL		OFF*/ON	Chooses whether you want to save the current PCL settings.
RAMDISK SIZE		0* /1/2 MB	
DELETE STORAGE	SECURE FILE		Deletes the data in ROM.
	MACRO ID(ROM)		
	FONT ID (ROM)		
	FORMAT (ROM)		Formats the ROM.

The default settings are shown in Bold with an asterisk.

PRINT MENU

Submenu	Menu Selections	Options	Descriptions
MEDIA TYPE		PLAIN PAPER*/THICK PAPER/TRANSPARENCIES/T HICKER PAPER/THIN PAPER/BOND PAPER/ENVELOPES/ENV. THICK/ENV.THIN/RECYCLE D PAPER	Sets the type of paper.

Submenu	Menu Selections	Options	Descriptions
PAPER		LETTER*/LEGAL/A4*/EXECU TIVE/COM-10/DL/JIS B5/B5/A5/A5 L/B6/A6/MONARCH/C5/A4 LONG/FOLIO/DL L/HAGAKI	Sets the size of paper.
COPIES		1* /2/999	Sets the number of printed pages.
ORIENTATION		PORTRAIT*/LANDSCAPE	This printer can print pages in portrait or landscape orientation.
PRINT POSITION	X OFFSET	-500/-499/ 0* /+499/ +500	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/ 0* /+499/ +500	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 TIME		OFF* /1/2/3/99 (sec)	Allows you to print the remaining data without pressing Go .
FF SUPPRESS		OFF*/ON	Turns the feed suppress (PAUSE) setting ON or OFF.

Submenu	Menu Selections	Options	Descriptions
HP LASERJET	FONT NO.	I000#### (59)*	
	FONT PITCH	##.##(10.00/12.00)*	
	FONT POINT	##.##(10.00/12.00)*	
	SYMBOL SET	PC-8*	Sets the symbol set or the character set.
	TABLE PRINT		Prints code table.
	AUTO LF	OFF*/ON	ON: CR → CR+LF,OFF: CR → CR
	AUTO CR	OFF*/ON	ON: LF→LF+CR, FF→FF+CR, or VT → VT+CR OFF: LF → LF, FF → FF, or VT → VT
	AUTO WRAP	OFF*/ON	Chooses whether a line feed and carriage return will happen when the printer position reaches the right margin.
	AUTO SKIP	ON*/OFF	Chooses whether a line feed and carriage return will happen when the printer position reaches the bottom margin.
	LEFT MARGIN	####	Sets the left margin at column 0 to 70 columns at 10 cpi.
	RIGHT MARGIN	####	Sets the right margin at column 10 to 80 columns at 10 cpi.
	TOP MARGIN	####	Sets the top margin at a distance from the top edge of the paper: 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.5.
	BOTTOM MARGIN	####	Sets the bottom margin at a distance from the bottom edge of the paper - 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.33 (None-HP), 0.5 (HP).
	LINES	####	Sets the number of lines on each page from 5 to 128 lines.

Submenu	Menu Selections	Options	Descriptions
EPSON FX-850	FONT NO.	I000#### (59)*	
	FONT PITCH	##.##(10.00/12.00)*	
	FONT POINT	##.##(10.00/12.00)*	
	CHARACTER SET	PC-8(US ASCII)*	Sets the symbol set or the character set.
	TABLE PRINT		Prints code table.
	AUTO LF	OFF*/ON	ON: CR → CR+LF OFF: CR → CR
	AUTO MASK	OFF*/ON	
	LEFT MARGIN	####	Sets the left margin at column 0 to 70 columns at 10 cpi.
	RIGHT MARGIN	####	Sets the right margin at column 10 to 80 columns at 10 cpi.
	TOP MARGIN	###	Sets the top margin at a distance from the top edge of the paper - 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.33.
	BOTTOM MARGIN	####	Sets the bottom margin at a distance from the bottom edge of the paper - 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.33.
	LINES	####	Sets the number of lines on each page from 5 to 128 lines.

Submenu	Menu Selections	Options	Descriptions
IBM PROPRINTER	FONT NO.	I000####(59) *	
	FONT PITCH	##.##(10.00/12.00)*	
	CHARACTER SET	PC-8*	Sets the symbol set or the character set.
	TABLE PRINT		Prints code table.
	AUTO LF	OFF*/ON	ON: CR → CR+LF,OFF: CR → CR
	AUTO CR	OFF*/ON	ON: LF→LF+CR, FF→FF+CR, or VT → VT+CR OFF: LF → LF, FF → FF, or VT → VT
	AUTO MASK	OFF*/ON	
	LEFT MARGIN	####	Sets the left margin at column 0 to 70 columns at 10 cpi.
	RIGHT MARGIN	####	Sets the right margin at column 10 to 80 columns at 10 cpi.
	TOP MARGIN	####	Sets the top margin at a distance from the top edge of the paper - 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.33.
	BOTTOM MARGIN	####	Sets the bottom margin at a distance from the bottom edge of the paper - 0, 0.33, 0.5, 1.0, 1.5 or 2.0. The default setting is 0.33.
	LINES	####	Sets the number of lines on each page from 5 to 128 lines.
BR-SCRIPT3	ERROR PRINT	ON*/OFF	
CARBON MENU	CARBON COPY	OFF*/ON/AUTO/PARALLEL	
	COPIES	1/8	
	COPY 1 TRAY	AUTO/REMAINING/MP/TRAY 1/TRAY2/TRAY3	
	COPY 1 MACRO	(ID number)	
	COPY 2 TRAYCOPY 8 TRAY	AUTO/REMAINING/MP/TRAY 1/TRAY2/TRAY3	Appears when printing 2 pages or more.
	COPY 2 MACROCOPY 8 MACRO	(ID number)	Appears when printing 2 pages or more.

NETWORK

Submenu	Menu Selections	Options	Descriptions
TCP/IP	BOOT METHOD	AUTO*/STATIC/RARP/BOOTP /DHCP	Chooses the IP method that best suits your needs.
	IP ADDRESS=	[000-255].[000-255]. [000-255].[000-255]	Enter the IP address.
		[000-000]. [000-000]. [000-000]* ¹	
	SUBNET MASK=	[000-255].[000-255]. [000-255].[000-255]	Enter the Subnet mask.
		[000-000].[000-000]. [000-000].[000-000]* ¹	
	GATEWAY=	[000-255].[000-255]. [000-255].[000-255]	Enter the Gateway address.
		[000-000].[000-000]. [000-000].[000-000]*	
	IP BOOT TRIES	# (3)*	
	APIPA	ON*/OFF	Automatically allocates the IP address from the link-local address range. ¹
	IPV6	ON /OFF*	
ETHERNET		AUTO* /100B-FD/100B-HD/	Chooses Ethernet link mode.
		10B-FD/10B-HD	
FACTORY RESET		RESTART PRINTER?	

The default settings are shown in Bold with an asterisk.

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.

INTERFACE

Submenu	Menu Selections	Options	Description
SELECT		AUTO*/USB/PARALLEL/NETW ORK	
AUTO IF TIME		1/2/3/4/ 5 */99 (SEC)	You need to set the time-out period for the auto interface selection.
INPUT BUFFER		LEVEL 1/2/3*/ 15	Increases or decreases the input buffer capacity.
PARALLEL	HIGH SPEED	on*/off	Turns high-speed parallel communications ON or OFF.
	BI-DIR	ON*/OFF	Turns bi-directional parallel communications ON or OFF.
	INPUT PRIME	ON/OFF*	Turns prime signal ON or OFF.



The default settings are shown in Bold with an asterisk.

RESET MENU

Display Shows	Description
RESET PRINTER	Resets the printer and restores all printer settings (including command settings) to settings you have previously made with the control panel buttons.
FACTORY RESET	Resets the printer and restores all printer settings (including command settings) to the default settings.

Example of changing the menu setting

Setting IP Address

1 Press + or - to choose NETWORK (and to display each setting shown below).

[INFORMATION |

NETWORK

2 Press Set.

TCP/IP

3 Press **Set**.

BOOT METHOD

4 Press +.

IP ADDRESS=

5 Press **Set**.

The last digit in the first part of the number is blinking.

00**2**.000.000.000*)

6 Press + or - to increase or decrease the number. Press **Set** to go to the next number.

123.00**8**.000.192

Repeat this process until you have set your IP address.

123.045.067.08

8 Press **Set** to finish the IP address. An asterisk appears at the end of the LCD.

123.045.067.089

Default settings

The printer settings has three levels of default settings; the default settings have been set at the factory before shipment. (see *Menu table* on page 88).

- Network default settings
- Factory reset
- Settings reset



- You cannot modify the present default settings.
- · Page counter can never be changed.

Network default setting

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

- 1 Press any of the menu buttons (+, -, Set or Back) of the control panel on your machine.
- Press + or to choose NETWORK.
 Press Set.

NETWORK

3 Press + or - to choose FACTORY RESET.
Press Set.

FACTORY RESET

4 Press Set again.

RESTART PRINTER?

Factory Reset

You can partially reset the machine back to its default printer settings. The settings that will not be reset are the INTERFACE, LANGUAGE, PAGE PROTECTION, SCALABLE FONT, LOCK PANEL and the Network settings:

- 1 Press any of the menu buttons (+, -, Set or Back) of the control panel on your machine.
- 2 Press + or to choose RESET MENU. Press Set.

RESET MENU

3 Press + or - to choose FACTORY RESET. Press Set.

FACTORY RESET

4 Press **Set** again.

OK?

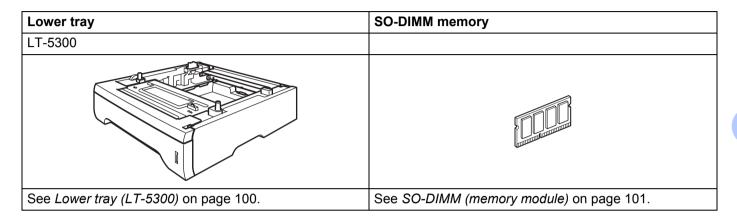
Settings Reset

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 printer; otherwise the network settings (such as IP address) will not be reset.
- 2 Turn off the printer.
- Make sure that the front cover is closed and the power cord is plugged in.
- 4 Hold down **Go** as you turn on the power switch. Keep **Go** pressed down until the LCD shows USERS MODE.
- 5 Release **Go**.
- 6 Press **Go** ten times. The printer will automatically restart.

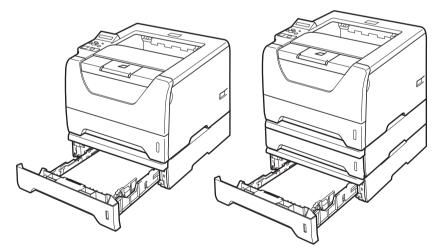
5 Options

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



Lower tray (LT-5300)

Two optional lower trays (Tray 2 and Tray 3) can be installed; each lower tray can hold up to 250 sheets of 80 g/m² (21 lb) paper. When both optional trays are installed, the printer can hold up to 800 sheets of plain paper. If you want to buy an optional lower tray unit, call the dealer you bought the printer from.



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

SO-DIMM (memory module)

The printer has 32 MB of standard memory and one slot for optional memory expansion. You can expand the memory up to 544 MB by installing dual in-line memory modules (SO-DIMMs).

SO-DIMM types

In general, the machine uses industry-standard SO-DIMM with the following specifications:

Type: 144 pin and 64 bit output

CAS latency: 2

Clock frequency: 100 MHz or more Capacity: 64, 128, 256 or 512 MB

Height: 31.75 mm (1.25 in.) Dram Type: SDRAM 2 Bank

SDRAM can be used.

For purchasing information and part numbers visit the Buffalo Technology website:

http://www.buffalo-technology.com/



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

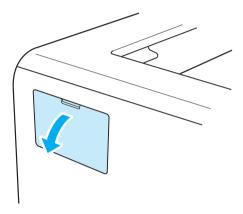
Installing extra memory

1 Turn off the printer power switch, and then unplug the printer. Disconnect the interface cable from the printer.

!MPORTANT

Be sure to turn off the printer power switch before you install or remove the DIMM.

2 Remove the DIMM cover.

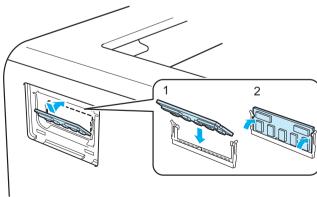


3 Unpack the DIMM and hold it by its edges.

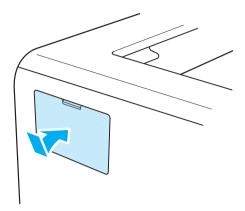
A CAUTION

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

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



5 Put the DIMM cover back on.



6 Reconnect the interface cable to your printer. Plug the printer back in, and then turn on the power switch.



To make sure that you have installed the DIMM properly, you can print the printer settings page that shows the current memory size. See *Menu table* on page 88.

Routine Maintenance

You will need to replace certain parts and clean the printer regularly.

Replacing the consumable items

You will need to replace the consumable items when the machine indicates that the life of the consumable is over.

CAUTION

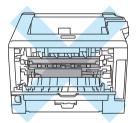
When you replace certain parts or clean the inside of the printer, remember the following:

If your clothes are smeared with toner, wipe off the toner with a dry cloth and immediately wash the clothes in cold water to avoid stains.

Be careful not to inhale toner.

After you have just used the printer, some internal parts of the printer will be extremely hot. To prevent injury, when you open the front cover or back cover (back output tray) of the printer, DO NOT touch the shaded parts shown in the illustration. If you do this, you may get burned.





LCD messages	Consumable item to replace	Approximate life	How to replace	Order No.
REPLACE TONER	Toner cartridge	3,000 pages ^{1 2}	See page 106	TN-3230 ¹²
		8,000 pages ^{1 3}		TN-3280 ^{1 3}
REPLACE DRUM	Drum unit	25,000 pages ⁴	See page 112	DR-3200

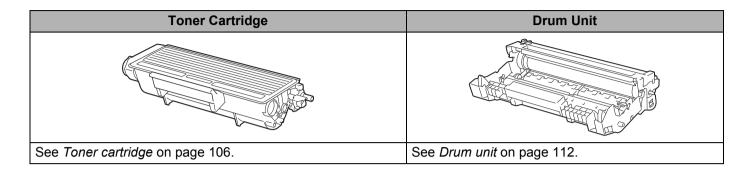
A4 or Letter-size single-sided pages. Approx. cartridge yield is declared in accordance with ISO/IEC 19752. The actual number of printed pages will vary depending on the print jobs and paper you use.

Standard toner cartridge.

High-capacity toner cartridge.

A4 or Letter size single-sided pages at 1 per/ job. The actual number of printed pages will vary depending on the print jobs and paper you use.

Consumables



Toner cartridge

The life of the original toner cartridge that came with the printer may be either a standard ¹ or high yield toner cartridge ², and depends on the model and country you bought the printer in.

- Standard toner cartridges print approximately 3,000 A4 or Letter-size single-sided pages. Approx. cartridge yield is declared in accordance with ISO/IEC 19752
- ² High yield toner cartridges print approximately 8,000 A4 or Letter-size single-sided pages. Approx. cartridge yield is declared in accordance with ISO/IEC 19752.



- The amount of toner used varies according to what is printed on the page and the print density setting.
- If you change the print density setting for lighter or darker printing, the amount of toner used will change.
- · Wait to unpack the toner cartridge until immediately before you put it into the printer.

TONER LOW message

(Appears at intervals.)

TONER LOW

If the LCD shows TONER LOW, the toner cartridge is near the end of its life. Buy a new toner cartridge and have it ready before you get a REPLACE TONER message. To replace the toner cartridge, see *Replacing the toner cartridge* on page 107.

REPLACE TONER message

REPLACE TONER

If the LCD shows REPLACE TONER, the toner cartridge is near the end of its life or the toner is not evenly distributed inside the cartridge.

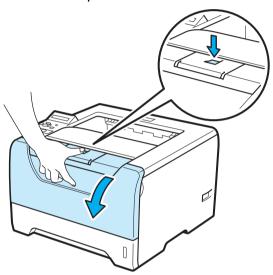
In both situations, the printer will stop printing until a new toner cartridge has been put into the printer.

REPLACE TONER can only be cleared by putting a new toner cartridge into the drum unit.

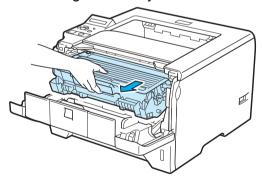
Replacing the toner cartridge



- To ensure high quality printing, we recommend that you use only genuine Brother toner cartridges. When you want to buy toner cartridges, call your dealer.
- We recommend that you clean the printer when you replace the toner cartridge. See *Cleaning* on page 117.
- 1 Make sure that the printer is turned on. Open the front cover.



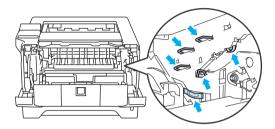
2 Take out the drum unit and toner cartridge assembly.



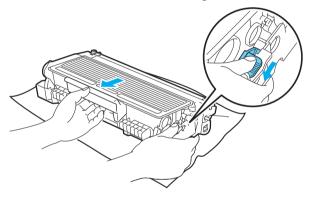
! IMPORTANT

We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.



3 Push down the blue lock lever and take the toner cartridge out of the drum unit.



WARNING

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

Use neutral detergents when cleaning the printer.

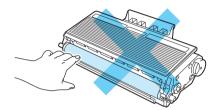
DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock.

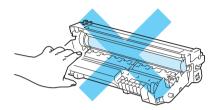
Be careful not to inhale toner.

! IMPORTANT

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

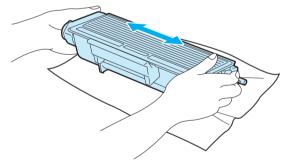
To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.







- Be sure to seal up the toner cartridge tightly in a bag so that toner powder does not spill out of the cartridge.
- Go to http://www.brother.eu/recycle/ 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.
- 4 Unpack the new toner cartridge. Gently shake it from side to side several times to distribute the toner evenly inside the cartridge.



! IMPORTANT

Wait to unpack the toner cartridge until immediately before you put it in the printer. If toner cartridges are 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.

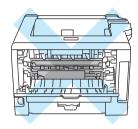


A CAUTION



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.





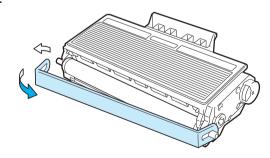
IMPORTANT

For UK and other countries

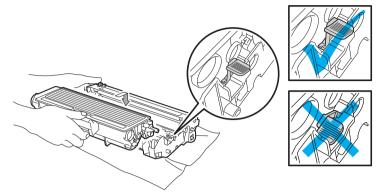
Brother machines are designed to work with toner of a particular specification and will work to a level of optimum performance when used with genuine Brother branded toner cartridges. Brother cannot guarantee this optimum performance if toner or toner cartridges of other specifications are used. Brother does not therefore recommend the use of cartridges other than genuine Brother branded cartridges with this machine.

If damage is caused to the drum unit or other part of this machine as a result of using other manufacturer's products with this machine, any repairs required as a result may not be covered by the warranty.

Pull off the protective cover.



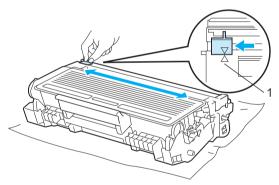
6 Put the new toner cartridge firmly into the drum unit until you hear it lock into place. If you put it in properly, the lock lever will lift automatically.





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

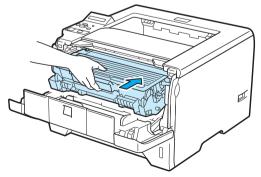
7 Clean the primary corona wire inside the drum unit by gently sliding the blue tab from right to left and left to right several times.





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

8 Put the drum unit and toner cartridge assembly back in the printer. Close the front cover.





DO NOT turn off the printer power switch or open the front cover until the LCD shows READY.

Drum unit

A new drum unit can print approximately 25,000 A4 or Letter size single-sided pages at 1 per/ job.



- 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 25,000 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 printer should be used only in a clean, dustfree environment with adequate ventilation.
- Printing with a third-party drum unit may reduce not only the print quality but also the quality and life of the printer itself. Warranty coverage therefore cannot apply to problems caused by the use of a thirdparty drum unit.

DRUM END SOON message

DRUM END SOON

If the LCD shows DRUM END SOON, it means the drum unit is near the end of its life. We recommend that you replace the drum unit with a new one before there is a noticeable deterioration in the print quality.

REPLACE DRUM message

REPLACE DRUM

If the LCD shows REPLACE DRUM, it means the drum unit should be replaced. Please replace it with a new drum unit.

Replacing the drum unit

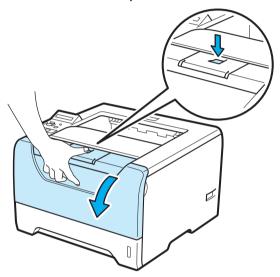
IMPORTANT

While removing the drum unit, handle it carefully because it may contain toner.

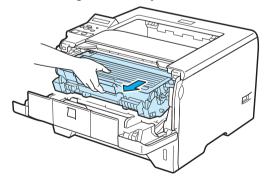
Every time you replace the drum unit, clean the inside of the printer. See Cleaning on page 117.

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

1 Press the front cover release button and then open the front cover.



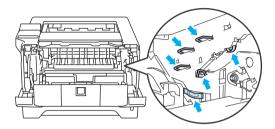
2 Take out the drum unit and toner cartridge assembly.



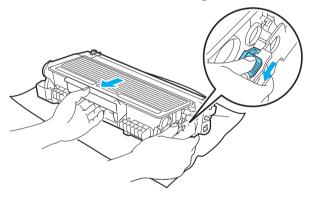
! IMPORTANT

We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.



3 Push down the blue lock lever and take the toner cartridge out of the drum unit.



WARNING

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

Use neutral detergents when cleaning the printer.

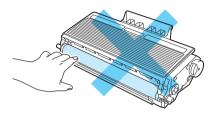
DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock.

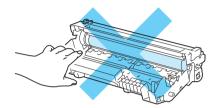
Be careful not to inhale toner.

! IMPORTANT

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

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



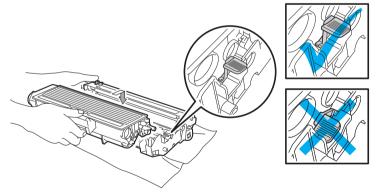


4 Unpack the new drum unit.

! IMPORTANT

Wait to unpack a drum unit until immediately before you put it in the printer. Exposure to direct sunlight or room light may damage the drum unit.

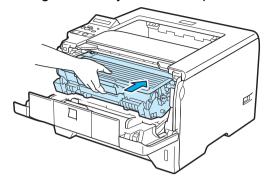
5 Put the toner cartridge firmly into the new drum unit until you hear it lock into place. If you put the cartridge in properly, the blue lock lever will lift automatically.



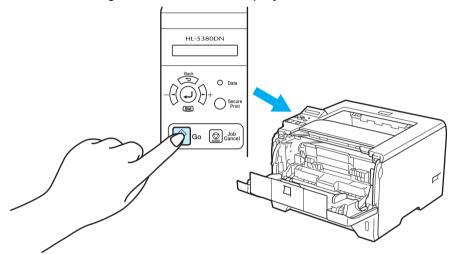


Make sure that you put in the toner cartridge properly, or it may separate from the drum unit.

6 Put the drum unit and toner cartridge assembly back in the printer.



7 Hold down Go until the message DRUM CLEAR is displayed on the LCD, then release Go.



! IMPORTANT

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

8 Close the front cover.

Cleaning

Clean the outside and inside of the printer 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 printer. If printed pages are stained with toner, clean the inside of the printer with a dry, lint-free cloth.

Cleaning the outside of the printer



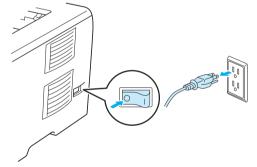
WARNING

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

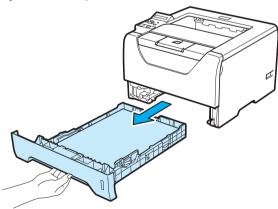
DO NOT use cleaning materials that contain ammonia.

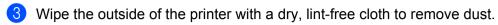
DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock.

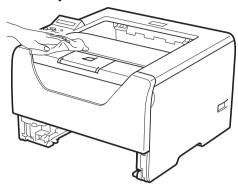
1 Turn off the printer power switch and then unplug the printer.



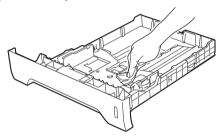
2 Pull the paper tray completely out of the printer.







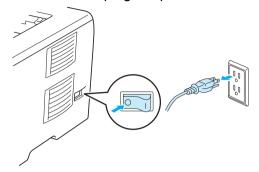
- 4 Remove anything that is stuck inside the paper tray.
- Wipe the inside of the paper tray with a dry, lint-free cloth to remove dust.



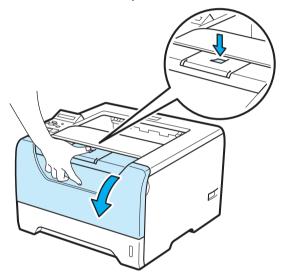
- 6 Put the paper tray back in the printer.
- Plug the printer back in, and then turn on the power switch.

Cleaning the inside of the printer

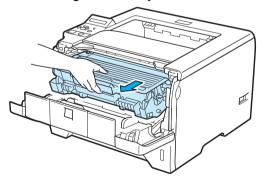
1 Turn off the printer power switch and then unplug the printer.



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

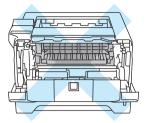


3 Take out the drum unit and toner cartridge assembly.



A CAUTION

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

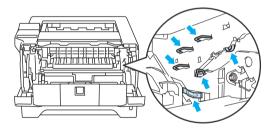


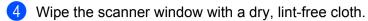
! IMPORTANT

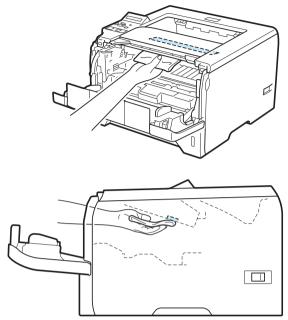
We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

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

To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.





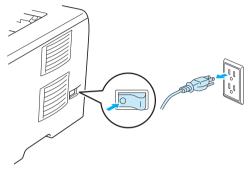


- 5 Put the drum unit and toner cartridge assembly back in the printer.
- 6 Close the front cover.
- Plug the printer back in, and then turn on the power switch.

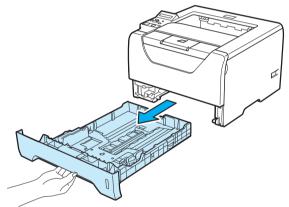
Cleaning the paper pick-up roller

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

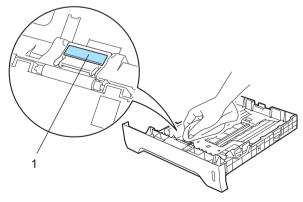
1 Turn off the power switch and unplug the printer.



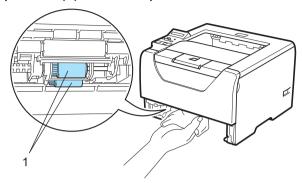
- 2 Unplug the power cord and interface cable from the printer.
- 3 Pull the paper tray out of the printer.



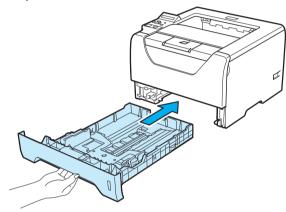
4 Dampen a soft cloth with lukewarm water and wipe the separator pad (1) in the paper tray with it.



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



6 Put the paper tray back in the printer.



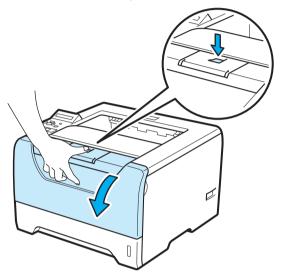
- 7 Make sure that you have turned off the power switch, and then connect the power cord and interface cable to the printer.
- 8 Plug in the power cord and turn on the power switch of the printer.

Cleaning the corona wires

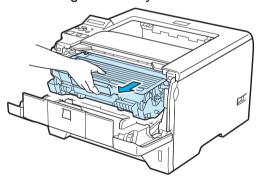
Cleaning the corona wire

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

1 Press the front cover release button and then open the front cover.



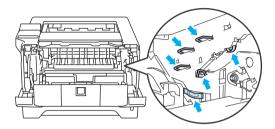
2 Take out the drum unit and toner cartridge assembly.



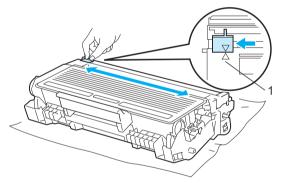
! IMPORTANT

We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.



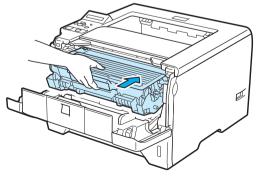
3 Clean the primary corona wire inside the drum unit by gently sliding the blue tab from right to left and left to right several times.





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

4 Put the drum unit and toner cartridge assembly back in the printer. Close the front cover.



7

Troubleshooting

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

Identifying your problem

First, check the following:

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

Printer does not print:

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

■ LCD Messages

See LCD messages on page 127.

■ Paper handling

See Paper handling on page 129 and Paper jams and how to clear them on page 130.

■ Other problems

See Other problems on page 149.

Pages are printed, but there are problems with:

■ Print quality

See *Improving the print quality* on page 141.

■ Printout is incorrect

See Solving print problems on page 148.

LCD messages

If any problems occur, the printer automatically stops printing, diagnoses the problem, and displays the resulting message on the LCD to alert you. Take the appropriate action, referring to the following tables. If you cannot clear the problem, call the dealer you bought the printer from or Brother Customer Service.



The LCD names for the paper trays are as follows.

• Standard paper tray: TRAY1

• Multi-purpose tray: MP

• Optional Lower tray: TRAY2, TRAY3

Error messages

Error message	Action	
BUFFER ERROR	Check the Interface settings.	
CARTRIDGE ERROR	Take out the drum unit assembly and put it back into the printer again.	
DIMM ERROR	Turn off the printer. Re-install the SO-DIMM correctly. Wait a few seconds, and then turn it on again. If this error message appears again, replace the SO-DIMM with a new one. See <i>Installing extra memory</i> on page 102.	
DOWNLOAD FULL	Add more memory. See Installing extra memory on page 102.	
DRUM ERROR	Clean the corona wires. (See <i>Cleaning the corona wire</i> on page 124.) If your LCD still shows the same error indication after you have cleaned the corona wire, replace the drum unit with a new one See <i>Replacing the drum unit</i> on page 113.	
DUPLEX DISABLED	Close the back cover of the printer and put the duplex tray back in.	
FONT FULL	Add more memory. See Installing extra memory on page 102.	
FRONT COVER OPEN	Close the front cover of the printer.	
FUSER COVER OPEN	Close the fuser cover located behind the back cover of the printer.	
JAM XXX	Carefully pull out the jammed paper from the area shown in <i>Paper jams and how to clear them</i> on page 130.	
MANUAL FEED	Put the same size of paper in the MP tray as is shown on the LCD. If the printer is 'paused', press Go .	
MEMORY FULL	Add more memory. See <i>Installing extra memory</i> on page 102 and <i>Solving print problems</i> on page 148.	

Error messages (Continued)

Error message	Action
NO PAPER XXX	Put paper in the indicated empty tray. If the problem is still unsolved, the paper pick-up roller may be stained. Clean the paper pick-up roller. See <i>Cleaning the paper pick-up roller</i> on page 122.
NO TONER	Open the front cover, then install the toner cartridge. See <i>Toner cartridge</i> on page 106.
NO TRAY XXX	Put the tray1 in the printer.
PRINT OVERRUN	Cut the resolution or add the optional memory. See <i>Installing extra memory</i> on page 102 and <i>Solving print problems</i> on page 148. Set Page Protection to the correct size. See <i>Page Protection</i> on page 42 and <i>Menu table</i> on page 88.
SIZE ERROR DX	You can only use A4 size for duplex printing. Check the printer driver setting. Put the correct size of paper, which is indicated on the second line of the LCD, in the tray. (See <i>About paper</i> on page 6.)
SIZE MISMATCH	Put the same size paper in the paper tray or MP tray that is selected in the printer driver, and then press Go , or select the size of paper you set in the TRAY SIZE setting from the control panel.
STORAGE FULL	The RAMDISK size is set to 0 MB. Increase the RAMDISK size. Or there is no space to store jobs. Delete unnecessary macros or fonts.
TOO MANY TRAYS	Maximum number of optional trays is two. Remove additional trays.

Maintenance messages

Maintenance message	Action
DRUM END SOON	The drum unit is near the end of its life. Buy a new drum unit to replace the current one. See <i>DRUM END SOON message</i> on page 112.
REPLACE DRUM	See REPLACE DRUM message on page 112 .
TONER LOW	Buy a new toner cartridge and have it ready before you get a REPLACE TONER message.
REPLACE TONER	See Replacing the toner cartridge on page 107.
REPLACE PF KITMP	Call your dealer or Brother Customer Service for a replacement paper feeding kit (paper pick up roller and separation plate) for the MP tray.
REPLACE PF KIT 1	Call your dealer or Brother Customer Service for a replacement paper feeding kit (paper feed roller, separation roller, separation pad, and separation pad spring) for Tray 1.
REPLACE PF KIT 2	Call your dealer or Brother Customer Service for a replacement paper feeding kit (paper feed roller, separation roller, separation pad, and separation pad spring) for Tray 2.
REPLACE PF KIT 3	Call your dealer or Brother Customer Service for a replacement paper feeding kit (paper feed roller, separation roller, separation pad, and separation pad spring) for Tray 3.
REPLACE FUSER	Call your dealer or Brother Customer Service for a replacement fuser unit.
REPLACE LASER	Call your dealer or Brother Customer Service for a replacement laser unit.

Call service messages

Call service message	Action
ERROR ###	Turn off the printer. Wait a few seconds, then turn it on again. If this does not clear the problem, call your dealer or a Brother Customer Service.

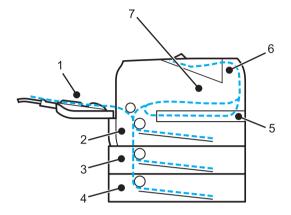
Paper handling

First, make sure that you are using paper that meets Brother recommended paper specifications. (See *About paper* on page 6.)

Problem	Recommendation
The printer does not feed paper.	■ If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten itbefore printing. Sometimes it is helpful to remove the paper. Turn the stack over and put it back in the paper tray.
	■ Reduce the amount of paper in the paper tray, and then try again.
	■ Make sure that manual feed mode is not chosen in the printer driver.
	■ Clean the paper pick-up roller. See Cleaning the paper pick-up roller on page 122.
The printer does not feed paper	■ Fan the paper well and put it back in firmly.
from the MP tray.	■ Make sure that you have chosen the MP Tray in the Paper Source of the printer driver.
The printer does not feed envelopes.	■ The printer can feed envelopes from the multi-purpose tray. You must set up your application to print on the size of envelopes you are using. This is usually done in the page setup or document setup menu of your software. (See your application manual.)
A paper jam has occurred.	■ Clear the jammed paper. (See <i>Paper jams and how to clear them</i> on page 130.)
The printer does not print.	■ Make sure that the cable is connected to the printer.
	Make sure the printer is powered on and that no error LEDs are lit on the printer control panel.
	■ Make sure that you have chosen the correct printer driver.
When printing on normal paper, it creases.	■ Change the printer driver setting in Media Type to a thin setting.
The paper slides off the top output tray.	Pull out and lift up the output tray support flap.

Paper jams and how to clear them

If paper jams inside the printer, the printer will stop. One of the following LCD messages will appear to tell you where to find the jammed paper.



■ JAM MP TRAY(1)

Paper jam in the MP tray. (See page 131.)

■ JAM TRAY1(2)

Paper jam in the standard paper tray (TRAY 1). (See page 132.)

■ JAM TRAY2(3)

Paper jam in the lower tray (TRAY 2). (see page 132.)

■ JAM TRAY3(4)

Paper jam in the lower tray (TRAY 3). (See page 132.)

■ JAM DUPLEX(5)

Paper jam in the duplex tray. (See page 134.)

■ JAM REAR(6)

Paper jam where the paper comes out of the printer. (See page 135.)

■ JAM INSIDE(7)

Paper jam inside the printer. (See page 138.)

Check where the jam is and clear the jammed paper as follows.

If the error message still appears on the LCD after you remove the jammed paper, there may be more paper jammed somewhere else. Check the printer thoroughly.

After you have removed all the jammed paper, open the front cover and then close it again to start printing.



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 printer at one time and prevents paper jams.

JAM MP TRAY (Paper jam in the MP tray)

JAM MP TRAY

If a paper jam occurs inside the MP tray, follow these steps:

- 1 Remove the paper from the MP tray.
- 2 Press the cover release button and then open the front cover.
- 3 Take out the drum unit and toner cartridge assembly.
- 4 Remove any paper from in and around the MP Tray, and then put the drum unit and toner cartridge assembly back in the printer and close the front cover.
- 5 Fan the paper stack, and then put it back in the MP tray.



- 6 When loading paper in the MP tray, make sure that it touches the back of the tray and stays under the maximum paper height guides on both sides of the tray.
- 7 If the printer does not automatically start printing, open the front cover and close it, or press **Go** to start printing.

JAM TRAY 1 / TRAY 2 / TRAY 3 (Paper jam inside the paper tray)



The LCD names for the paper trays are as follows.

- Standard paper tray: TRAY1
- Optional Lower tray: TRAY2, TRAY3

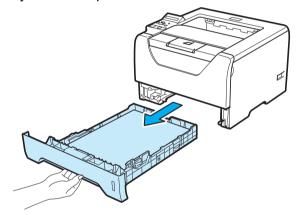
JAM TRAY1

JAM TRAY2

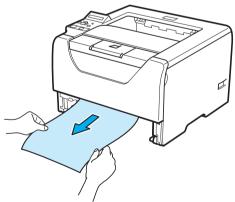
JAM TRAY3

If a paper jam occurs inside the paper tray, follow these steps:

1 Pull the paper tray completely out of the printer.



Use both hands to slowly pull out the jammed paper.



- 3 Put paper below the maximum paper mark. 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 printer.

6 Open the front cover and close it to resume printing.

! IMPORTANT

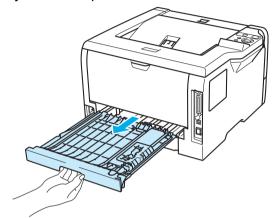
DO NOT take out the standard paper tray while paper is feeding from a lower paper tray as this will cause a paper jam.

JAM DUPLEX (Paper jam in the duplex tray)

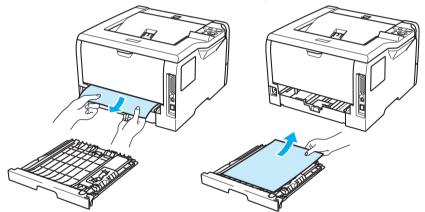
JAM DUPLEX

If a paper jam occurs inside the duplex tray, follow these steps:

1 Pull the duplex tray completely out of the printer.



2 Pull the jammed paper out of the printer or the duplex tray.



Out the duplex tray back in the printer.

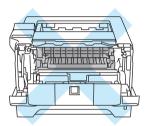
JAM REAR (Paper jam behind the back cover)

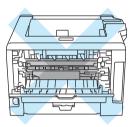
JAM REAR

CAUTION



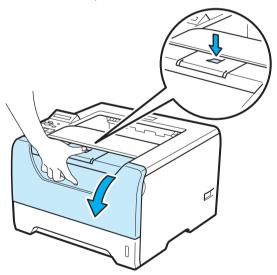
After you have just used the printer, some internal parts of the printer will be extremely hot. To prevent injury, when you open the front cover or back cover (back output tray) of the printer, DO NOT touch the shaded parts shown in the illustration. If you do this, you may get burned.



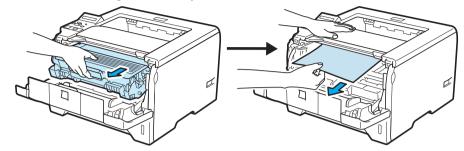


If a paper jam occurs behind the face-up output tray, follow these steps:

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



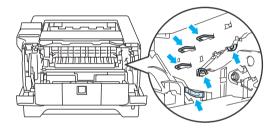
2 Slowly take out the drum unit and toner cartridge assembly. The jammed paper will be pulled out with the drum unit and toner cartridge assembly.



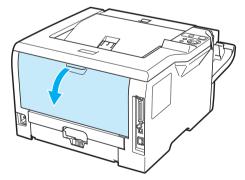
! IMPORTANT

We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

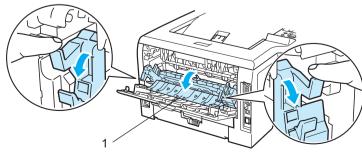
To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.



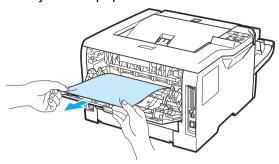
3 Open the back cover.



4 Pull the tabs at the left and right hand sides toward you to open the fuser cover (1).



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



CAUTION



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



- 6 Put the drum unit and toner cartridge assembly back in the printer (press firmly).
- Fully close the front and back covers.

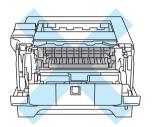
JAM INSIDE (Paper jam inside the printer)

JAM INSIDE

CAUTION



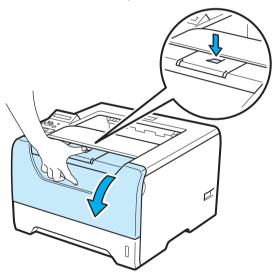
After you have just used the printer, some internal parts of the printer will be extremely hot. To prevent injury, when you open the front cover or back cover (back output tray) of the printer, DO NOT touch the shaded parts shown in the illustration. If you do this, you may get burned.



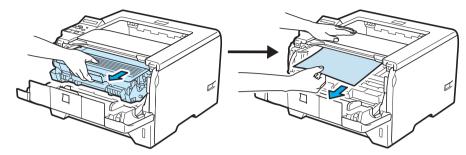


If a paper jam occurs inside the printer, follow these steps:

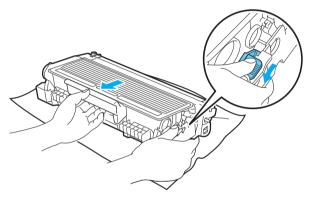
1 Press the front cover release button and then open the front cover.



2 Slowly take out the drum unit and toner cartridge assembly. The jammed paper will be pulled out with the drum unit and toner cartridge assembly.



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



! IMPORTANT

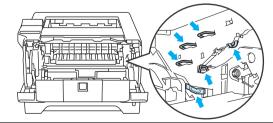
After you have removed the jammed paper, print a few test pages. This is to make sure that the printed pages have no toner stains on them before you restart the print job.

Remove the jammed paper carefully so you do not spread toner.

Take care not to stain your hands and clothes with toner. Wash toner stains at once with cold water.

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 the toner.

To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.

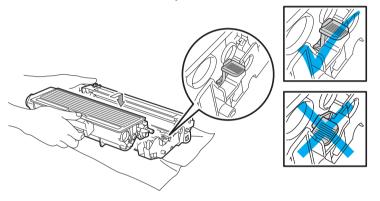


Handle the toner cartridge carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

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



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



5 Close the front cover.

Improving the print quality

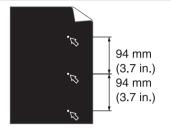
If you have a print quality problem, print a test page first (see *Menu table* on page 88). If the printout looks good, the problem is probably not the printer. Check the interface cable or try the printer on another computer.

This section gives information on the following topics.

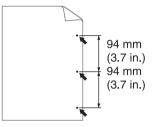
Examples of poor print quality	Recommendation
ABCDEFGH abcdefghijk	Check the printer's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault. See <i>Positioning the printer</i> on page 5.
A B C D a b c d e	■ If the whole page is too light, Toner Save Mode may be on. Turn off Toner Save Mode in the printer Properties tab of the driver.
01234	■ Put in a new toner cartridge. See <i>Replacing the toner cartridge</i> on page 107.
Faint	■ Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
Faint	■ You may clear the problem by wiping the scanner window with a soft cloth. See Cleaning the inside of the printer on page 119.
ABCDEFGH	Make sure that you use paper that meets our specifications. See About paper on page 6.
abcdefghijk ABCD abcde	Check the printer's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. See <i>Positioning the</i> printer on page 5.
01234	■ Put in a new toner cartridge. See <i>Replacing the toner cartridge</i> on page 107.
Gray background	■ Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
В	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper or thick print media may cause this problem. See <i>About paper</i> on page 6.
В	Make sure that the media type setting in the driver matches the type of paper you are using. See About paper on page 6.
	■ Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
В	■ The fuser unit may be contaminated. Call Brother Customer Service.
Ghost	
ABCDEFGH	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper may cause the problem. See <i>About paper</i> on page 6.
abcdefghijk ABCD	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
abcde 01234	■ The fuser unit may be contaminated. Call Brother Customer Service.
Toner specks	

Examples of poor print quality	Recommendation	
	Make sure that you use paper that meets our specifications. See About paper on page 6.	
	■ Choose Thick Paper mode in the printer driver, or use thinner paper than what you are now using.	
	Check the printer's environment. Conditions such as high humidity can cause hollow print. See <i>Positioning the printer</i> on page 5.	
Hollow print	■ The drum unit may be damaged. Put in a new drum unit. See Replacing the drum unit on page 113.	
	■ Clean the primary corona wire inside the drum unit by sliding the blue tab. Be sure to return the blue tab to the home position (▲). See Cleaning the corona wire on page 124.	
	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.	
	■ The fuser unit may be contaminated. Call Brother Customer Service.	
All black		
	Make sure that you use paper that meets our specifications. A rough surfaced paper or thick print media can cause problems.	
ABCDEFGH abcdefghijk	■ Make sure that you choose the proper media type in the printer driver.	
ABCD abcde	■ The problem may disappear by itself. Print multiple pages to clear this problem, especially if the printer has not been used for a long time.	
01234	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.	
White lines across the page		
ABC DEFGH	Clean the inside of the printer and the primary corona wire in the drum unit. See Cleaning the inside of the printer on page 119 and Cleaning the corona wires on page 124.	
ABCD abcdefghijk ABCD abcde	■ The drum unit may be damaged. Put in a new drum unit. See Replacing the drum unit on page 113.	
Lines across the page		
ADODET GIT abcdefghijk	■ Check the printer's environment. Conditions such as high humidity and high temperatures may cause this print quality problem. (See <i>Positioning the printer</i> on page 5.)	
ABCD abcde	■ If the problem is not solved after printing a few pages, put in a new drum unit. (See <i>Replacing the drum unit</i> on page 113.)	
White lines, bands or ribbing across the page		

Examples of poor print quality



White Spots on black text and graphics at 94 mm (3.7 in.) intervals



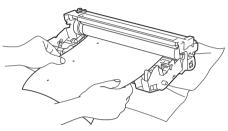
Black Spots at 94 mm (3.7 in.) intervals

Recommendation

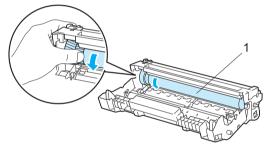
■ If the problem is not solved after printing a few pages, the drum unit may have glue from a label stuck on the OPC drum surface.

Clean the drum unit as follows:

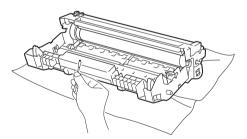
1) Put the print sample in front of the drum unit, and find the exact position of the poor print.



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



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



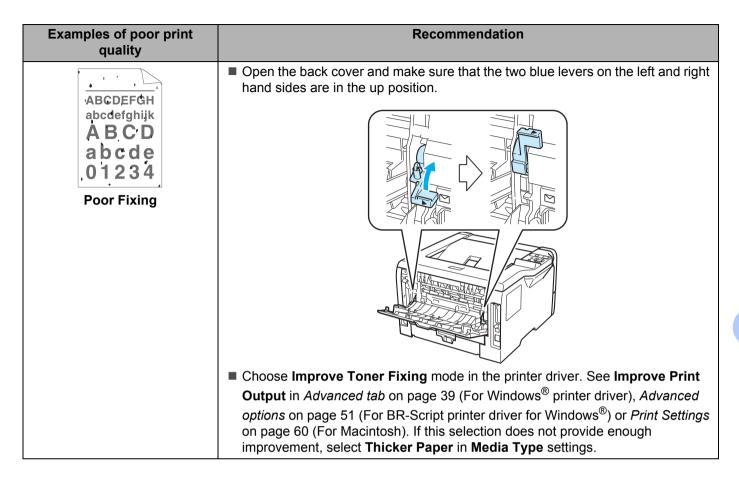
! IMPORTANT

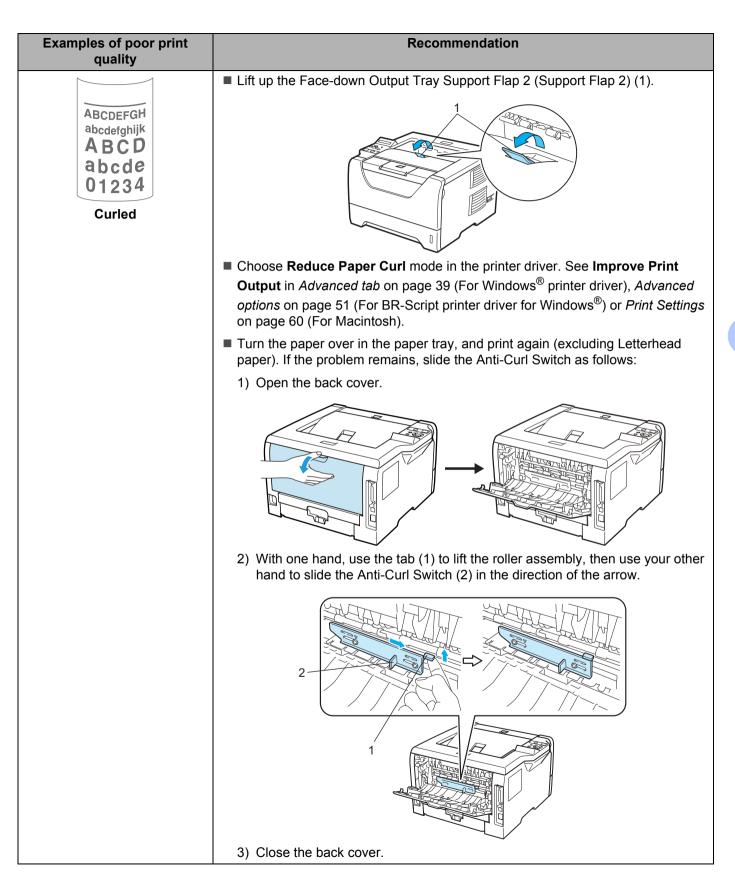
DO NOT clean the surface of the photosensitive drum with a sharp object.

■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 113.

Examples of poor print	Recommendation
quality	
ADODETON	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
ABCDEFGH abcdefghijk ABCD	■ The toner cartridge may be damaged. Put in a new toner cartridge. See Replacing the toner cartridge on page 107.
abcde 01234	■ Make sure that you use paper that meets our specifications. See <i>About paper</i> on page 6.
Black toner marks across the page	■ If you use label sheets for laser printers, the glue from the sheets may sometimes stick to the OPC drum surface. Clean the drum unit. See <i>Clean the drum unit as follows:</i> on page 143.
	Do not use paper that has clips or staples because they will scratch the surface of the drum.
	If the unpacked drum unit is in direct sunlight or room light, the unit may be damaged.
ABCDEFGH	■ Clean the primary corona wire inside the drum unit by sliding the blue tab. See Cleaning the corona wire on page 124.
abcdefghijk	■ Make sure the primary corona wire cleaner is at the home position (▲).
A B C D a b c d e	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
01234	■ The toner cartridge may be damaged. Put in a new toner cartridge. See Replacing the toner cartridge on page 107.
Black lines down the page Printed pages have toner stains down the page.	■ The fuser unit may be smudged. Call your dealer or Brother Customer Service.
	Make sure that a torn piece of paper is not inside the printer covering the scanner window.
ABCDEFGH abcdefghijk ABCD	■ Wipe the scanner window with a soft cloth. See Cleaning the inside of the printer on page 119.
abcde 01234	■ The toner cartridge may be damaged. Put in a new toner cartridge. See Replacing the toner cartridge on page 107.
White lines down the page	■ The drum unit may be damaged. Put in a new drum unit. See <i>Replacing the drum unit</i> on page 113.
ABCDEFGH ABCDEFGH	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.
A B C D	■ Set the paper guides correctly. See <i>Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3</i> on page 11.
abcde 01234	■ If you are using the multi-purpose tray, see <i>Printing on plain paper, bond paper or transparencies from the MP tray</i> on page 15.
Page skewed	■ The paper tray may be too full. See <i>Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3</i> on page 11.
	■ Check the paper type and quality. See <i>About paper</i> on page 6.

Examples of poor print quality	Recommendation
ABCDEFGH abcdefghijk ABCD abcde 01234	 Check the paper type and quality. High temperatures and high humidity will cause paper to curl. See <i>About paper</i> on page 6. If you do not use the printer 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.
ABCDEFGH abcdefghijk ABCD abcde 01234 Wrinkles or creases	 Make sure that the paper is loaded properly. See Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3 on page 11. Check the paper type and quality. See About paper on page 6. Turn over the stack of paper in the tray or try rotating the paper 180° in the input tray.
Envelope Creases	■ Make sure that the envelope levers inside the back cover is pulled down when you print the envelope. Note When you have finished printing, open the back cover and reset the two blue levers back to their original position.





Solving print problems

Problem	Recommendation
The printer prints unexpectedly or it prints garbage data.	■ Make sure that the printer cable is not too long. We recommend that you use a parallel or USB cable that is no longer than 2 meters (6.5 feet).
	■ Make sure that the printer cable is not damaged or broken.
	If you are using an interface-switching device, remove it. Connect your computer directly to your printer, and then try again.
	Make sure that you have chosen the correct printer driver with 'Set as Default Printer'.
	Make sure that the printer is not connected to the same port that is also connected to a storage device or scanner. Take away all other devices and connect the port only to the printer.
	■ Turn off the Status Monitor .
The printer cannot print full pages of a document. An error message MEMORY FULL	■ Press Go to print the remaining data in the printer memory. Cancel the print job if you want to delete the remaining data in the printer memory. (See <i>Buttons</i> on page 78.)
appears.	■ Reduce the complexity of your document or cut the print resolution.
	■ Add more memory. (See <i>Installing extra memory</i> on page 102.)
The printer cannot print full pages of a document. An error message PRINT OVERRUN	■ Press Go to print the remaining data in the printer memory. Cancel the print job if you want to delete the remaining data in the printer memory. See <i>Buttons</i> on page 78.
appears.	■ Reduce the complexity of your document or cut the print resolution.
	■ Add more memory. See <i>Installing extra memory</i> on page 102.
	■ Set page protection to Auto by using the supplied Windows [®] driver or control panel.
	■ Change the following settings in the supplied Windows [®] driver and try again. The best combination of these settings will vary depending on your document:
	■ Graphics ¹
	■ TrueType Mode ¹
	■ Use Printer TrueType [®] Fonts
	Choose the Basic tab, choose Manual in Print Settings , and then click Manual Settings .
The headers or footers appear when the document displays on the screen but they do not show up when it is printed.	■ Adjust the top and bottom margins of your document.

Network problems

For problems concerning using your printer on a Network, see the Network User's Guide on the CD-ROM we have supplied. Click **Documentation** on the menu screen.

The Network User's Guide in HTML format will be installed automatically when you install the driver. Click the **Start** button, **All Programs** ¹, your printer, and then User's Guide.

You can also view the manuals in PDF format by accessing the Brother Solutions Center (http://solutions.brother.com/).

Other problems

Problem	Recommendation
The printer cannot print. The	■ Make sure that the printer cable is not damaged or broken.
'There was an error writing to LPT1: (or BRUSB) for the printer' error message is displayed on your computer.	If you have an interface-switching device, make sure that you chose the correct printer.

For Macintosh with USB

Problem	Recommendation
The printer does not appear in Printer Setup Utility (Mac OS X 10.3 and 10.4) or Print & Fax in System Preferences (Mac OS X10.5).	 Make sure that the printer is turned on. Make sure that the USB interface cable is connected directly to the Macintosh. Make sure the printer driver is installed correctly.
Unable to print from the application.	■ Make sure that the supplied Macintosh printer driver is installed and that it is chosen with Printer Setup Utility (Mac OS X 10.3 and 10.4) or Print & Fax in System Preferences .

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

BR-Script 3

Problem	Recommendation	
The print speed slows down.	Add optional memory. (See Installing extra memory on page 102.)	
The printer cannot print EPS data that includes binary.	You need the following settings to print EPS data:	
	For Windows Vista [®] : Click Start button, Control Panel , Hardware and Sound , and then Printers .	
	For Windows [®] XP and Windows Server [®] 2003/2008: Click Start button, and select Printers and Faxes windows.	
	For Windows [®] 2000: Click Start button, and select Settings and then Printers .	
	 Right-click the Brother HL-XXXX BR_Script3 series icon and select Properties. 	
	 From the Device Settings tab, choose TBCP (Tagged binary communication protocol) in Output Protocol. 	

A Appendix

Printer specifications

Engine

	Model	HL-5380DN
Technology		Electrophotographic
Print speed ¹ (A4 size/ Letter size)	Standard (A4/Letter)	Up to 30 ppm (A4 size) ² ,Up to 32 ppm (Letter size) ²
	Auto Duplex (A4)	Up to 13 sides per minute (6.5 sheets per minute) (A4 size)
First print time		Less than 8.5 sec
Resolution	Windows® 2000/XP/ XP	1200 dpi ³
	Professional x64 Edition,	HQ1200
	Windows Vista [®] , Windows Server [®] 2003/ Windows	600 dpi
	Server® 2003 x64 Edition/	300 dpi
	Windows Server [®] 2008	
	DOS	600 dpi
	Mac OS X 10.3.9 or greater	1200 dpi ³
		HQ1200
		600 dpi
		300 dpi
	Linux	1200 dpi ³
		HQ1200
		600 dpi
		300 dpi

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

² From standard paper tray.

³ If you use the high quality 1200 dpi setting (1200 x 1200 dpi) the print speed will be slower.

Controller

M	odel	HL-5380DN
Processor		300MHz
Memory	Standard	32 MB
	Option	1 SO-DIMM (144pin) slot (64, 128, 256, 512MB); expandable up to 544 MB
Interface	Standard	IEEE 1284 Parallel, Hi-Speed USB2.0, 10/100BASE-TX Ethernet
Network	Protocols	TCP/IP (Standard 10/100BASE-TX Ethernet) ¹
Connectivity	Management	BRAdmin Light ²
	tool	BRAdmin Professional 3 ³
		Web BRAdmin ⁴
		Web Based Management ⁵
Emulation		PCL6, BR-Script3 ⁶ , IBM ProPrinter XL, EPSON FX-850
Resident	PCL	66 scalable fonts, 12 bitmap fonts, 13 bar codes ⁷
fonts	PostScript [®] 3™	66 fonts

¹ See the Network User's Guide locator on the CD-ROM for details on the supported network protocols.

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

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

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

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

⁶ PostScript[®] 3[™] language emulation.

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

Software

Mo	odel	HL-5380DN
Printer driver	Windows ^{® 1}	PCL driver for Windows [®] 2000 Professional, Windows [®] XP Home Edition, Windows [®] XP Professional Edition, Windows [®] XP professional x64 Edition, Windows Server [®] 2003, Windows Server [®] 2003 x64 Edition, Windows Vista [®] , Windows Server [®] 2008
		BR-Script 3 (PPD file for Windows [®] 2000 Professional, Windows [®] XP Home Edition, Windows [®] XP Professional Edition, Windows [®] XP professional x64 Edition, Windows Server [®] 2003, Windows Server [®] 2003 x64 Edition, Windows Vista [®] , Windows Server [®] 2008)
	Macintosh 1	Macintosh Printer Driver for Mac OS X 10.3.9 or greater
		BR-Script 3 (PPD file) for Mac OS® X 10.3.9 or greater
	Linux ²³	Linux driver for CUPS printing system (x86, x64 environment)
		Linux driver for LPD/LPRng printing system (x86, x64 environment)
Utilities		Driver Deployment Wizard ⁴

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

Control panel

Model	HL-5380DN
LED	1 LED: Data
LCD	1 line, 16 Digits, 3 colors
Button	7 buttons: Go, Job Cancel, Secure Print , Set, Back and 2 scroll buttons

Paper handling

Model		HL-5380DN		
Paper	Multi-purpose tray	50 sheets		
Input ¹	Paper tray (Standard)	250 sheets		
	Lower tray (Option)	250 sheets		
Paper	Face-down	150 sheets		
Output ¹	Face-up	1 sheet		
Duplex	Manual Duplex	Yes		
	Automatic Duplex	Yes		

¹ Calculated with 80 g/m² (20 lb) paper

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

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

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

Media specifications

	Model	HL-5380DN	
Media types Multi-purpose tray		Plain paper, Bond paper, Recycled paper, Envelopes ¹ , Labels, Transparencies ² , Thick paper, Thin paper	
	Paper tray	Plain paper, Bond paper, Recycled paper, Transparencies ² , Thin paper	
	Lower tray unit (Option)	Plain paper, Recycled paper, Bond paper, Thin paper	
	Automatic duplex printing	Plain paper, Recycled paper, Thin paper	
Media	Multi-purpose tray	60 to 163 g/m ² (16 to 43 lb)	
weights	Paper tray	60 to 105 g/m ² (16 to 28 lb)	
	Lower tray unit (Option) (LT-5300)	60 to 105 g/m ² (16 to 28 lb)	
	Automatic duplex printing	60 to 105 g/m ² (16 to 28 lb)	
Media sizes	Multi-purpose tray	Width: 69.8 to 216 mm (2.75 to 8.5 in.) Length: 116 to 406.4 mm (4.57 to 16 in.)	
	Paper tray (Standard)	A4, Letter, B5 (ISO), Executive, A5, A5 (Long Edge), A6, B6 (ISO)	
	Lower tray unit (Option) (LT-5300)	A4, Letter, B5 (ISO), Executive, A5, B6 (ISO)	
	Automatic duplex printing	A4	

¹ Up to 3 envelopes

Supplies

	Model	HL-5380DN	Order No.
Toner	Standard cartridge	Approx. 3,000 pages A4/Letter pages ¹	TN-3230
Cartridge	High yield cartridge	Approx. 8,000 pages A4/Letter pages ¹	TN-3280
Drum Unit		Approx. 25,000 pages A4/Letter pages	DR-3200

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

² Up to 10 sheets

Dimensions / weights

Model	HL-5380DN
Dimensions (W × D × H)	393× 384 × 259 mm (15.5 × 15.1 × 10.2 in.)
Weights	Approx. 9.5 kg (20.9 lb)

Other

Model			HL-5380DN	
Power consumption Printing		Printing	Average 675 W at 25 °C (77 °F)	
		Standby	Average 75 W at 25 °C (77 °F)	
		Sleep	Average 6 W	
Noise level Sound Pressure		Printing	LpAm = 52.6 dB (A)	
		Standby	LpAm = 21.4 dB (A)	
Sound power		Printing	LWAd = 6.8 Bell (A)	
			Office equipment with LWAd>6.3 Bell (A) is not suitable for use in rooms where people do primarily intellectual work. Such equipment should be placed in separate rooms because of the noise emission.	
		Standby	LWAd = 3.7 Bell (A)	
Ecology	Ecology Power save		Yes	
Toner save ¹			Yes	

¹ We do not recommend Toner Save for printing Photo or Grey Scale images.

Computer requirements

•	ter Platform & System Version	Processor Minimum Speed	Minimum RAM	Recomm ended RAM	Hard Disk Space to install	Supported PC Interface ²
Windows [®] Operating	Windows [®] 2000 Professional	Intel [®] Pentium [®] II or equivalent	64 MB	256 MB	50 MB	USB, 10/100BASE- TX(Ethernet),
System ¹	Windows [®] XP Home Edition		128 MB			IEEE802.11b/g, IEEE1284 Parallel
	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 Server [®] 2003	Intel [®] Pentium [®] III or equivalent				
	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		
Macintosh Operating	Mac OS X 10.3.9 - 10.4.3	PowerPC G4/G5, PowerPC G3 350MHz	128 MB	256 MB	80 MB	USB, 10/100BASE- TX(Ethernet),
System	Mac OS X 10.4.4 or greater	PowerPC G4/G5, Intel [®] Core™ Processor	512 MB	1 GB		IEEE802.11b/g

¹ Microsoft[®] Internet Explorer[®] 5.5 or greater

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

² Third party USB/Parallel ports are not supported.

Important information for choosing your paper

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



If you use paper that is not recommended, a paper jam or misfeed may occur in the printer. (See *Recommended paper* on page 8.)

Before you buy a large quantity of paper

Make sure that the paper is suitable for the printer.

Paper for plain paper copies

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

Basis weight

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

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

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 printer. Short grain paper is too weak for the paper transport of the printer.

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 printer.

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 indications on the paper package. Typically, the print side is indicated by an arrow.

Moisture content

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

Rough estimate of basis weight

g/m²	lb		
	Bond	Index	
60	16		
64	17		
75	20		
90	24		
105	28		
120	32		
135	36		
163	43	90	
200	53	110	

Paper size

Paper size	mm	in.
Letter		8.5 × 11 in.
Executive		7.25 × 10.5 in.
A4	210 × 297 mm	
A5	148 × 210 mm	
A5 (Long Edge)	210 × 148 mm	
A6	105 × 148 mm	
Envelope Monarch		3.875 × 7.5 in.
Envelope Com-10		4.12 × 9.5 in.
Envelope DL	110 × 220 mm	
Envelope C5	162 × 229 mm	

Paper size	mm	in.
B5 (JIS)	182 × 257 mm	
B5 (ISO)	176 × 250 mm	
B6 (ISO)	125 × 176 mm	
A4 Long	210 × 405 mm	
Envelope DL-L	220 × 110 mm	
3 × 5		3 × 5 in.

Symbol and character sets

For the HP LaserJet emulation modes, you can choose the symbol and character sets using a Web Based Management (web browser) or the control panel buttons.

How to use the Web Based Management (web browser)

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



We recommend Microsoft[®] Internet Explorer[®] 6.0 (or greater) or Firefox 1.0 (or greater) for Windows[®] and Safari 1.3 (or greater) for Macintosh. Please also make sure that JavaScript and cookies are always enabled in whichever browser you use. To use a web browser, you will need to know the IP address of the print server.

- 1 Start your web browser.
- Type http://printer_ip_address/ into your browser. (Where printer_ip_address is the IP address or the node name)
 - For example: http://192.168.1.2/ (if the printer's IP address is 192.168.1.2.)



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



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

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

Symbol and character sets list

OCR symbol sets

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

OCR A (00)

OCR B (10)

HP LaserJet mode

ABICOMP Brazil / Portugal (13P)

ABICOMP International (14P)

Desktop (7J) Greek8 (8G) HP German (0G) HP Spanish (1S) ISO Latin1 (0N) ISO Latin2 (2N) ISO Latin5 (5N) ISO Latin6 (6N) ISO2 IRV (2U) ISO4 UK (1E) ISO5 ASCII (0U) ISO10 Swedish (3S) ISO11 Swedish (0S) ISO14 JIS ASCII (0K) ISO15 Italian (01) ISO16 Portuguese (4S) ISO17 Spanish (2S) ISO21 German (1G)

ISO25 French (0F)ISO57 Chinese (2K)ISO60 Norwegian1 (0D)ISO61 Norwegian2 (1D)ISO69 French (1F)ISO84 Portuguese (5S)ISO85 Spanish (6S)ISO8859 / 7 Latin / Gree

ISO85 Spanish (6S) ISO8859 / 7 Latin / Greek (12N) ISO8859 / 15 Latin / Cyrillic (10N)

Legal (1U)
Math-8 (8M)
MC Text (12J)
MS Publishing (6J)
PC8 (10U)
PC8 Bulgarian (13R)

PC8 D/N (11U) PC8 Greek Alternate (437G) (14G)

PC8 Latin / Greek (12G) PC8 PC Nova (27Q)

PC8 Turkish (9T) PC775 (26U)

PC850 Multilingual (12U) PC851 Greece (10G)
PC852 East Europe (17U) PC853 Latin3 (Turkish) (18U)
PC855 Cyrillic (10R) PC857 Latin5 (Turkish) (16U)

PC858 Multilingual Euro (13U) PC860 Portugal (20U)

PC861 Iceland (21U) PC863 Canadian French (23U)

PC865 Nordic (25U)

PC866 Cyrillic (3R)

PC869 Greece (11G) PC1004 (9J)
Pi Font (15U) PS Math (5M)
PS Text (10J) Roman8 (8U)

Roman9 (4U) Roman Extension (0E)

Russian-GOST (12R) Symbol (19M)

Quick reference for bar code control commands

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

Print bar codes or expanded characters

 Code
 ESC i

 Dec
 27 105

 Hex
 1B 69

Format: ESC in ... n \

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

Definition of parameters

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

Bar code mode

CODE 39 (default)
Interleaved 2 of 5
FIM (US-Post Net)
Post Net (US-Post Net)
EAN 8, EAN 13, or UPC A
UPC E
Codabar
Code 128 set A
Code 128 set B
Code 128 set C
ISBN (EAN)
ISBN (UPC-E)
EAN 128 set A
EAN 128 set B
EAN 128 set C

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

Λ

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

n = 's0' or 'S0' 3: 1 (default)

n = 's1' or 'S1' 2: 1 n = 's3' or 'S3' 2.5: 1

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

Expanded Character

'S'

0 = White

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

For example 'S' n1 n2

n1 = Background fill pattern

n2 = Foreground fill pattern

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

Line block drawing & box drawing

'S'

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

Bar code

 $n = 'mnnn' or 'Mnnn' (nnn = 0 \sim 32767)$

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

Bar code human readable line ON or OFF

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

Preset: Human readable line ON

(1) 'T5' or 't5' (2) 'T6' or 't6' (3) 'T130' or 't130' (4) 'T131' or 't131'

Λ

Preset: Human readable line OFF

All others

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

Quiet zone

```
n = \text{'onnn'} \text{ or 'Onnn'} \text{ (nnn} = 0 \sim 32767)
```

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

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

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

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

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

n = 'xnnn' or 'Xnnn'

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

Bar code & expanded character offset in Y-axis

n = 'ynnn' or 'Ynnn'

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

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

n = 'hnnn', 'Hnnn', 'dnnn', or 'Dnnn'

- 1) EAN13, EAN8, UPC-A, ISBN (EAN13, EAN8, UPC-A), ISBN (UPC-E): 22 mm
- 2) UPC-E: 18 mm
- 3) Others: 12 mm

Expanded characters → 2.2 mm (preset)

Line block drawing and box drawing → 1 dot

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

Expanded character width, line block drawing and box drawing

n = 'wnnn' or 'Wnnn'

Expanded character → 1.2 mm

Line block drawing and box drawing → 1 dot

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

Expanded character rotation

n = 'a0' or 'A0' 'Upright (preset) n = 'a1' or 'A1' 'Rotated 90 degrees

n = 'a2' or 'A2' 'Upside down, rotated 180 degrees

n = 'a3' or 'A3' 'Rotated 270 degrees

Bar code data start

n = 'b' or 'B'

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

■ When CODE 39 is chosen with the parameter 't0' or 'T0'

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Eight digits ^{1 2} (standard format) The first character must be '0' and the data must end with a check digit.

Total eight digits = '0' plus 6 digits plus 1 check digit.

Six digits ² The first character and the last check digit are removed from the eight digit data.

- 1 '?' can be used instead of a check digit.
- ² Adding '+' and two-digit or five-digit number after the data creates an add-on code.
- When Codebar is chosen with the parameter 't9' or 'T9'

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

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

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

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

The same rules apply as for 't5' or 'T5'.

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

The same rules apply as for 't6' or 'T6'.

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

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

Box drawing

ESC i ... E (or e)

'E' or 'e' is a terminator.

Line block drawing

ESC i ... V (or v)

'V' or 'v' is a terminator.

Expanded character data start

n = 'l' or 'L'

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

Table of Code (EAN) 128 set C

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

No.	Code 128 Set C	Input command	Hex
0	00	NUL	0x00
1	01	SOH	0x01
2	02	STX	0x02
3	03	ETX	0x03
4	04	EOT	0x04
5	05	ENQ	0x05
6	06	ACK	0x06
7	07	BEL	0x07
8	08	BS	0x08
9	09	HT	0x09
10	10	LF	0x0a
11	11	VT	0x0b
12	12	NP	0x0c
13	13	CR	0x0d
14	14	SO	0x0e
15	15	SI	0x0f
16	16	DLE	0x10
17	17	DC1	0x11
18	18	DC2	0x12
19	19	DC3	0x13
20	20	DC4	0x14
21	21	NAK	0x15
22	22	SYN	0x16
23	23	ETB	0x17
24	24	CAN	0x18
25	25	EM	0x19
26	26	SUB	0x1a
27	27	ESC	0x1b
28	28	FS	0x1c
29	29	GS	0x1d
30	30	RS	0x1e
31	31	US	0x1f
32	32	SP	0x20
33	33	!	0x21
34	34	"	0x22
35	35	#	0x23
36	36	\$	0x24
37	37	%	0x25
38	38	&	0x26
39	39	,	0x27
40	40	(0x28
41	41)	0x29
42	42	*	0x2a
43	43	+	0x2b
44	44	,	0x2c
45	45	-	0x2d
46	46		0x2e
47	47	/	0x2f
48	48	0	0x30
49	49	1	0x31
50	50	2	0x32
51	51	3	0x33

No.	Code 128 Set C	Input command	Hex
52	52	4	0x34
53	53	5	0x35
54	54	6	0x36
55	55	7	0x37
56	56	8	0x38
57	57	9	0x39
58	58	:	0x3a
59	59	•	0x3b
60	60	, <	0x3c
61	61	=	0x3d
62	62	>	0x3d
63	63	?	0x3e 0x3f
64	64		0x40
	65	@	
65		A	0x41
66	66	В	0x42
67	67	С	0x43
68	68	D	0x44
69	69	E	0x45
70	70	F	0x46
71	71	G	0x47
72	72	Н	0x48
73	73	I	0x49
74	74	J	0x4a
75	75	K	0x4b
76	76	L	0x4c
77	77	M	0x4d
78	78	N	0x4e
79	79	0	0x4f
80	80	Р	0x50
81	81	Q	0x51
82	82	R	0x52
83	83	S	0x53
84	84	Т	0x54
85	85	U	0x55
86	86	V	0x56
87	87	W	0x57
88	88	Х	0x58
89	89	Y	0x59
90	90	Z	0x5a
91	91	[0x5b
92	92	//	0x5c5c
93	93	1	0x5d
94	94	٨	0x5e
95	95		0x5f
96	96	<u>,</u>	0x60
97	97	а	0x61
98	98	b	0x62
99	99	C	0x63
100	Set B	d	0x64
101	Set A	e	0x65
102	FNC 1	f	0x66
102	11101	'	0,000
	L		

Example Program Listings

```
WIDTH "LPT1:",255
'CODE 39
LPRINT CHR$(27); "it0r1s0o0x00y00bCODE39?\";
'Interleaved 2 of 5
LPRINT CHR$(27);"it1r1s0o0x00y20b123456?\";
'FIM
LPRINT CHR$(27);"it3r1o0x00y40bA\";
'Post Net
LPRINT CHR$(27);"it4r1o0x00y60b1234567890?\";
'EAN-8
LPRINT CHR$(27);"it5r1o0x00y70b1234567?\";
LPRINT CHR$(27);"it5r1o0x50y70b12345678901?\";
'EAN-13
LPRINT CHR$(27);"it5r1o0x100y70b123456789012?\";
'UPC-E
LPRINT CHR$ (27); "it6r1o0x150y70b0123456?\";
'Codabar
LPRINT CHR$(27);"it9r1s0o0x00y100bA123456A\";
'Code 128 set A
LPRINT CHR$(27); "it12r1o0x00y120bCODE128A12345?\";
'Code 128 set B
LPRINT CHR$(27);"it13r1o0x00y140bCODE128B12345?\";
'Code 128 set C
LPRINT CHR$(27); "it14r1o0x00y160b"; CHR$(1); CHR$(2); "?\";
'ISBN (EAN)
LPRINTCHR$ (27); "it130rlo0x00y180b123456789012?+12345\";
'EAN 128 set A
LPRINT CHR$(27);"it132r1o0x00y210b1234567890?\";
LPRINT CHR$ (12)
END
```



Appendix (for Europe and Other Countries)

Brother numbers

IMPORTANT

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

Register your product

By registering your Brother product, 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 to 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/

Frequently asked questions (FAQs)

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

http://solutions.brother.com/

You can check here for Brother driver updates.

Customer Service

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

Service center locations

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

Internet Addresses

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

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

Appendix (for USA and Canada)

Brother numbers

IMPORTANT

For technical and operational help, you must call the country where you bought the printer. 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 printer 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)

1-877-BROTHER In Canada:

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).

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.)

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-620 (Standard, prints approx. 3,000 pages) ¹
	TN-650 (High Yield, prints approx. 8,000 pages) ¹
Drum Unit	DR-620
Lower Tray	LT-5300

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

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