LJ3600D
LJ3650DN

激光打印机

LASER PRINTER

用户手册

User's Guide

lenovo

Statement

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Technical Consulting hotline: 010-82879600

Service Website: http://www.lenovo.com/

Using this guide

Symbols used in this guide

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

WARNING	Warnings tell you what to do to prevent possible personal injury.
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.
Note	Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

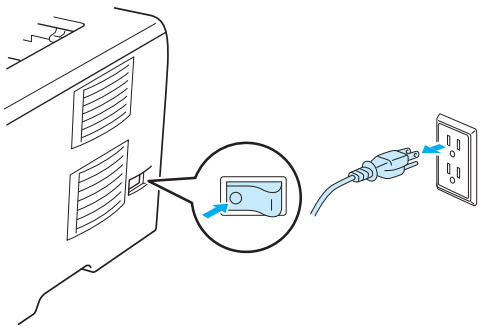
Safety precautions

To use the printer safely

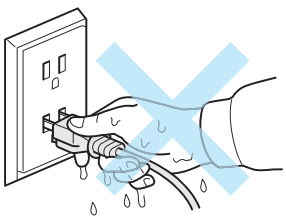
If you DO NOT follow these safety instructions, there is a possibility of a fire, electrical shock, burn or suffocation. Please keep these instructions for later reference and read them before attempting any maintenance.

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 100 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:

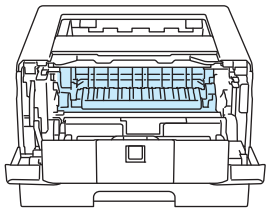
Make sure that you have unplugged the printer from the AC power outlet.

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

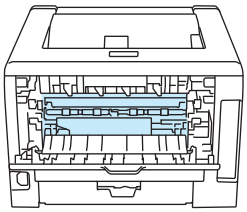
DO NOT use cleaning materials that contain ammonia.

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.



Inside the printer (Front View)



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.

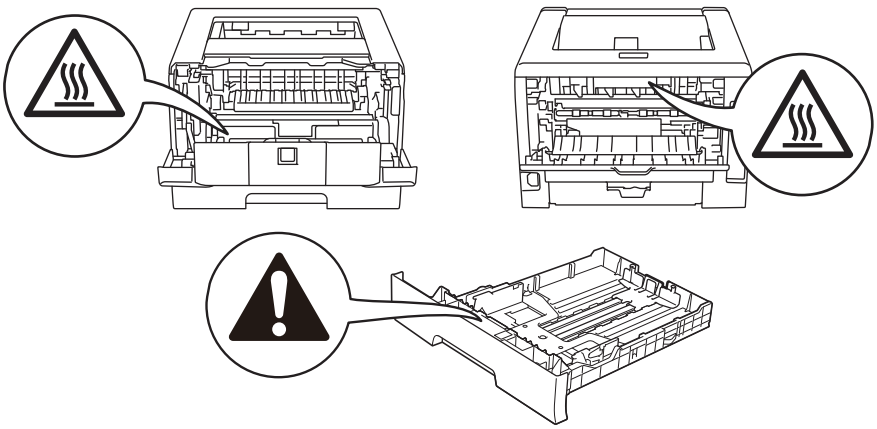
DO NOT connect your machine to an AC power outlet on the same circuit as large appliances or other equipment that might disrupt the power supply.

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.

Note

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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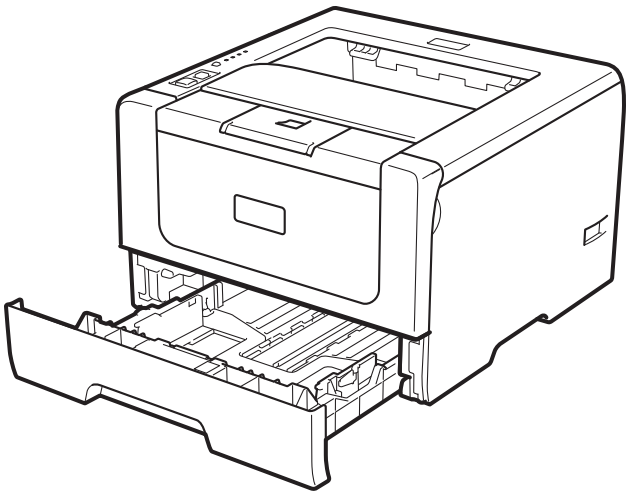
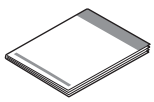
1 About this Printer

Carton components

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



Printer

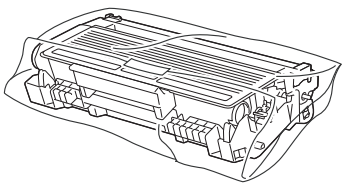


Quick Setup Guide

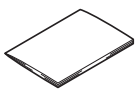
CD-ROM

AC Power Cord

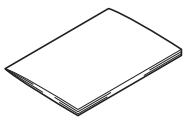
USB Cable



Drum Unit and Toner Cartridge Assembly



Warranty Card



Service Shop List

Interface cable

The network interface cable is not standard accessories. Please purchase them, if you intend to use.

■ 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

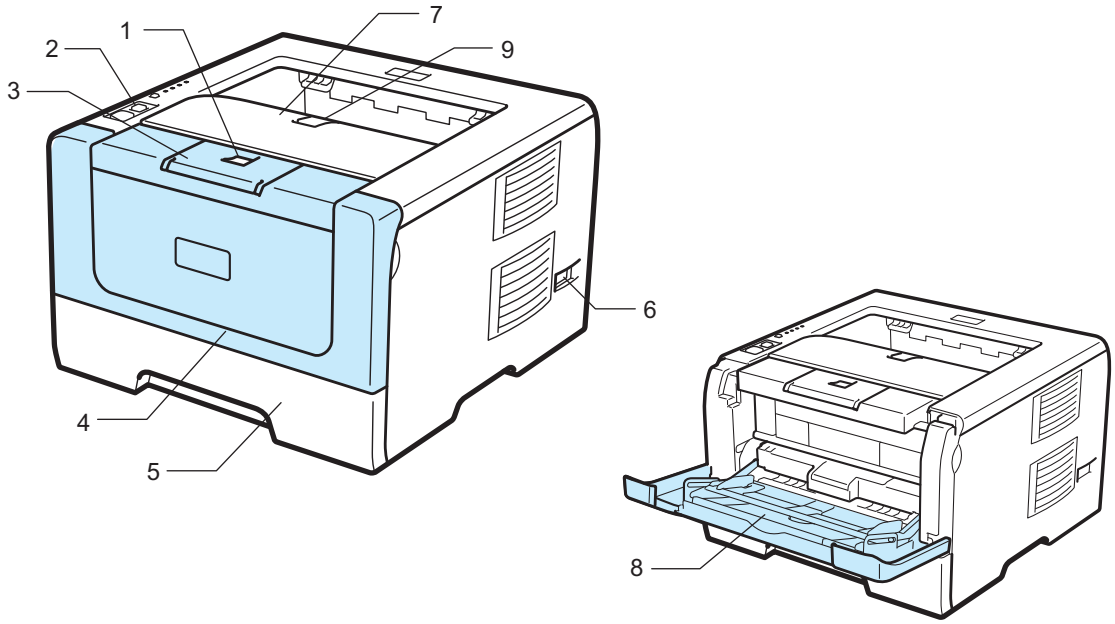
  DO NOT use a parallel interface cable that is longer than 6 feet (2.0 meters).

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

- Network cable (For LJ3650DN only)

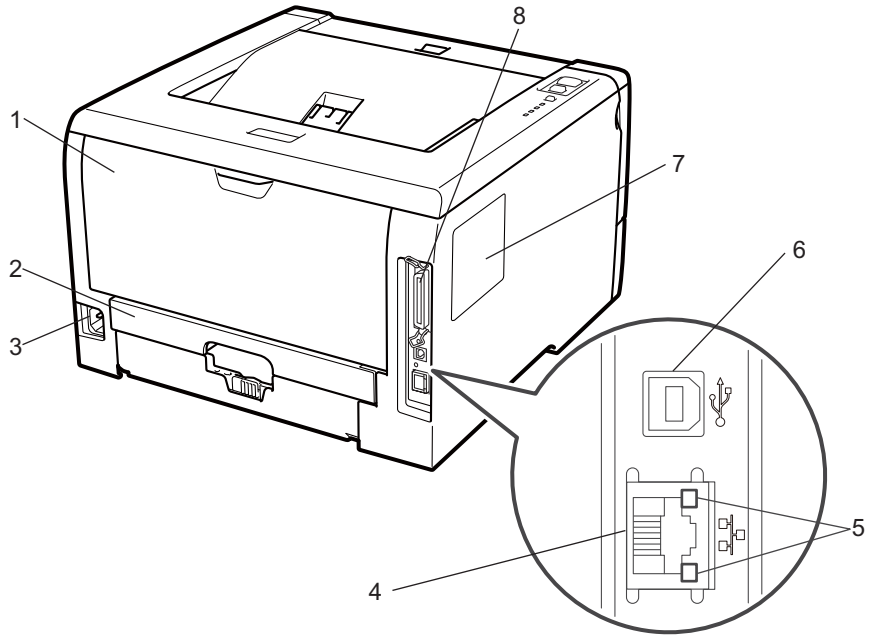
  Use a straight-through Category5 (or greater) twisted-pair cable for 10BASE-T or 100BASE-TX Fast Ethernet Network.

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 **10BASE-T / 100BASE-TX (Ethernet) Port (LJ3650DN only)**
5 **Network Activity LEDs (Light Emitting Diodes) (LJ3650DN only)**
6 **USB Interface Connector**
7 **SO-DIMM (memory) Cover**
8 **Parallel Interface Connector**

Note

The printer illustration is based on LJ3650DN.

Positioning the printer

Read the following before you use the printer.

Power supply

Use the printer within the recommended power range.

Power source: 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.

2 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 ⓘ in the table.

Media type	Tray 1	Tray 2/ Tray 3	MP Tray	DX	Choose the media type from the printer driver
Plain paper 70 g/m^2 to 105 g/m^2 (20 to 28 lb)	ⓘ	ⓘ	ⓘ	ⓘ	**Plain Paper**
Recycled paper	ⓘ	ⓘ	ⓘ	ⓘ	**Recycled Paper**
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)		**Bond Paper**
Thin paper 60 g/m^2 to 70 g/m^2 (16 to 20 lb)	ⓘ	ⓘ	ⓘ	ⓘ	**Thin Paper**
Thick paper 105 g/m^2 to 163 g/m^2 (28 to 43 lb)			ⓘ		**Thick Paper** or **Thicker Paper**
Transparency	ⓘ Up to 10 sheets A4 or Letter		ⓘ Up to 10 sheets A4 or Letter		**Transparencies**
Labels			ⓘ A4 or Letter		**Thicker Paper**

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

Plain paper	APP Blue Flag Ship 70 g/m^2 APP Gold Flag Ship 80 g/m^2 Advanced Agro Double A 80 g/m^2

To get the best print quality, we suggest using paper that meets the conditions mentioned below.

- Paper that is made for plain-paper copying
- Paper that is 70 to 90g/m^2 (20 to 24lb)
- Neutral paper. Do not use acidic or alkaline paper
- Long-grain paper
- Use paper with a moisture content of approximately 5%.

We recommend using “3M Transparency Film” when you print on transparencies.

IMPORTANT

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.

Especially when paper that satisties the conditions mentioned above is not available in your country, we recommend testing various papers before purchasing large quantities.

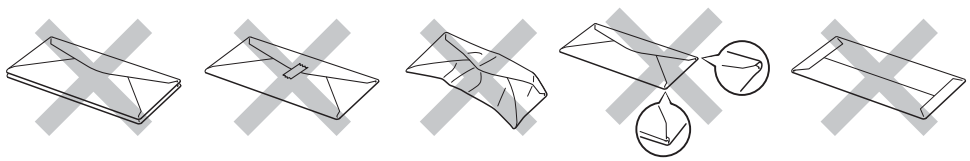
To help you choose which paper to use with this printer, see *Important information for choosing your paper* on page 139.

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.

Lenovo 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 Lenovo warranty or service agreement.

Note

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

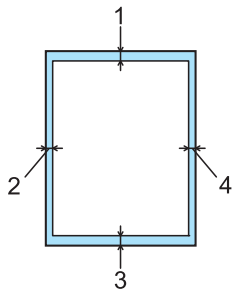
Unprintable area

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

Note

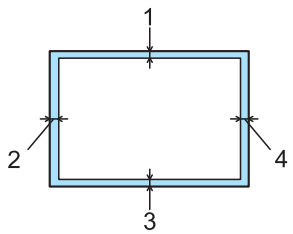
When using BR-Script emulation, the edges of the paper that cannot be printed on are 4.32 mm (0.17 in).

Portrait



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

Landscape



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

Printing methods

Printing on plain paper, bond paper and transparencies

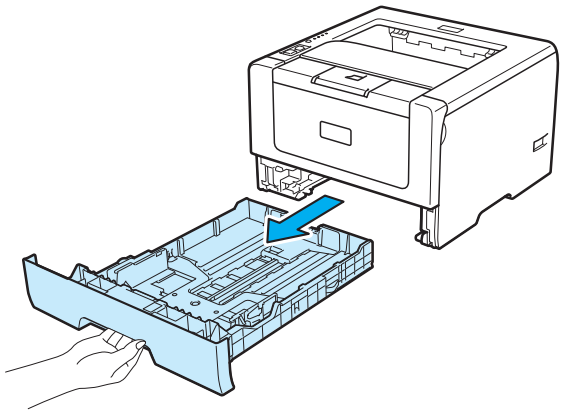
Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3

Note

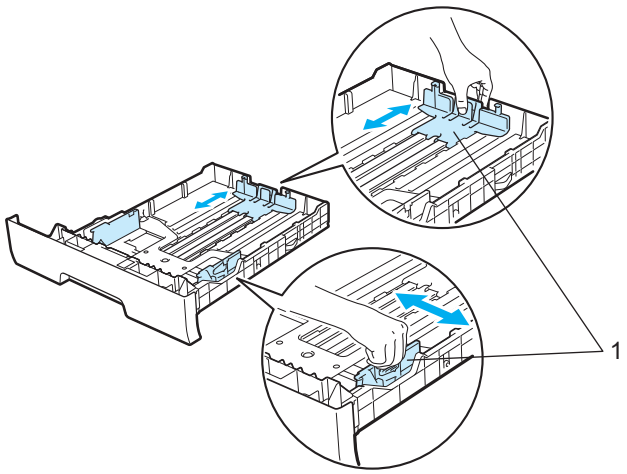
Transparencies are only for Tray1.

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

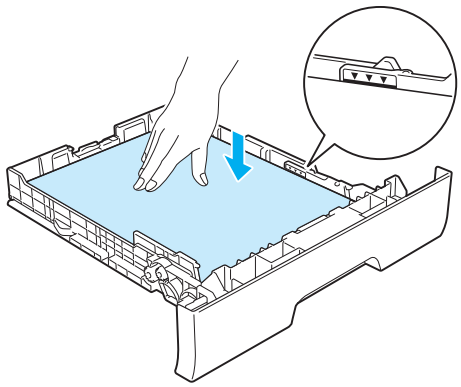
1. Pull the paper tray completely out of the printer.



2. 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.

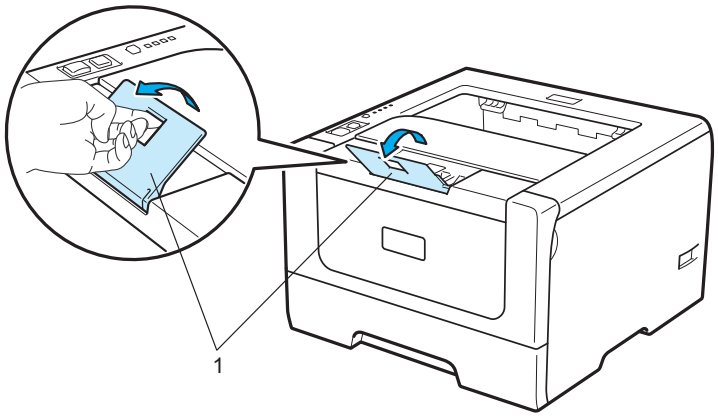


IMPORTANT

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

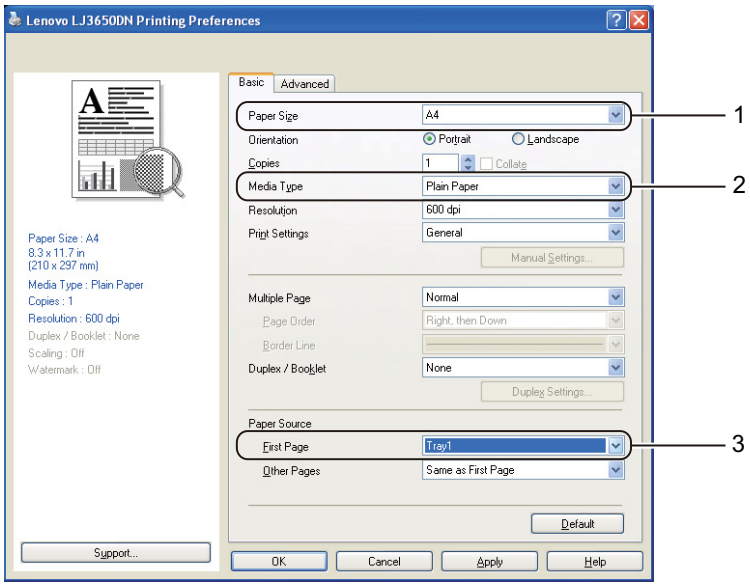
4 Put the paper tray firmly back in the printer. Make sure that it is completely inserted into the printer.

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.

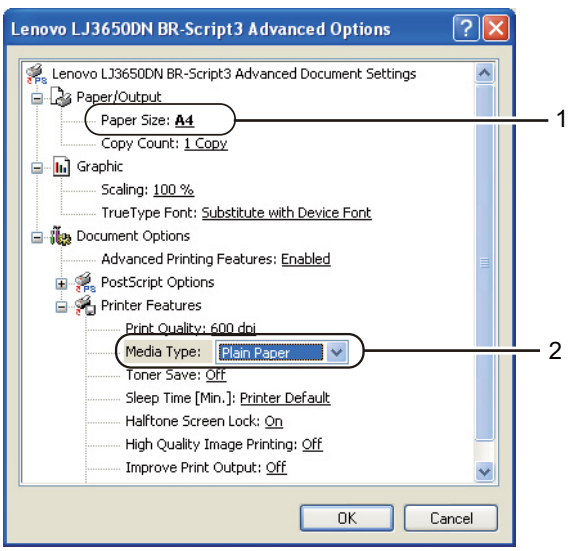


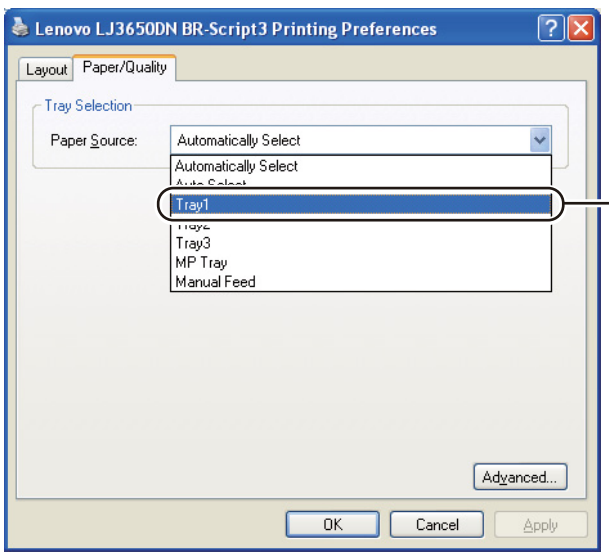
6 Choose the following from the printer driver:
Paper Size.....(1)
Media Type.....(2)
Paper Source.....(3)
and any other settings you may want to make. (See *Chapter 3: Driver and Software*.)

■ **Windows® printer driver**



■ **BR-Script printer driver for Windows®**

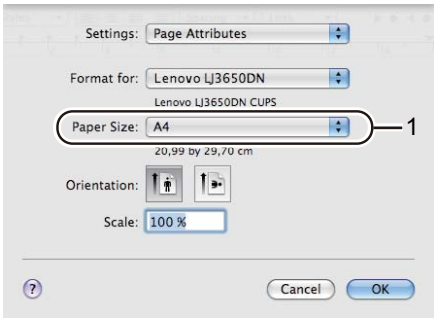


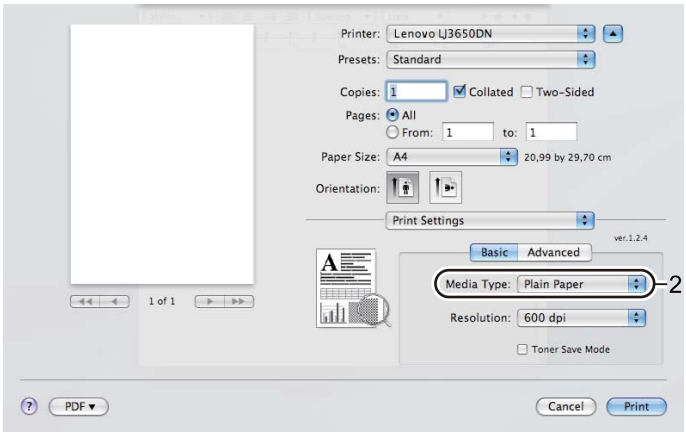


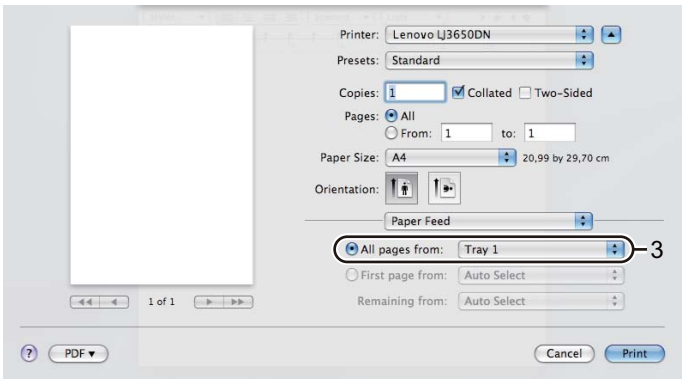
Note

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







7 Send the print data to the printer.

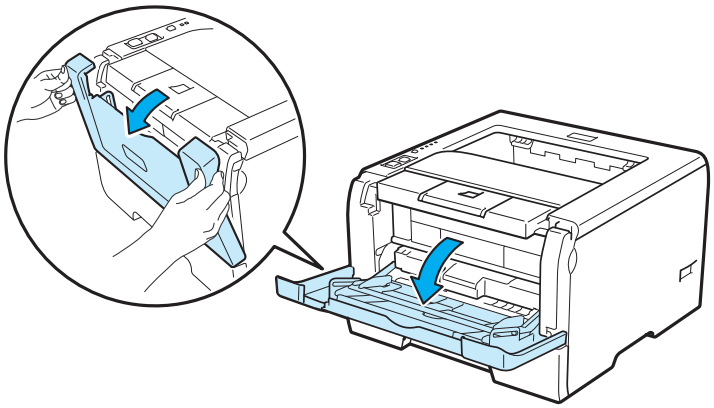
IMPORTANT

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.

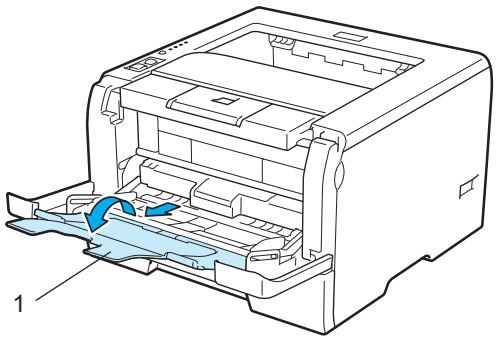
Printing on plain paper, bond paper or transparencies from the MP tray

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

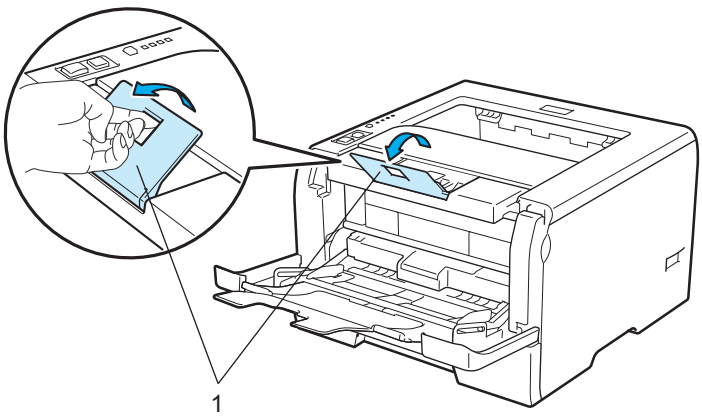
1. Open the MP tray and lower it gently.



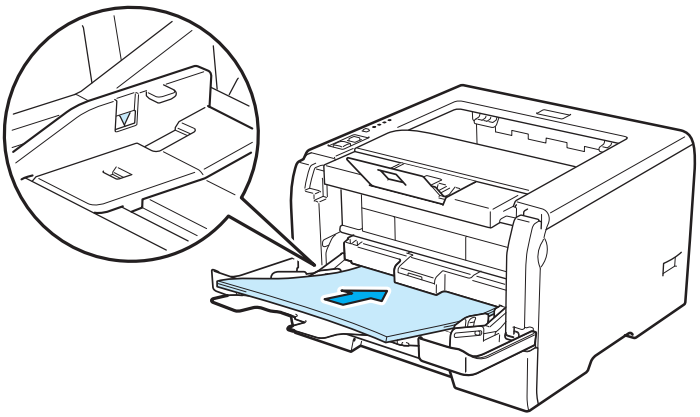
2. Pull out the MP tray support flap (1).



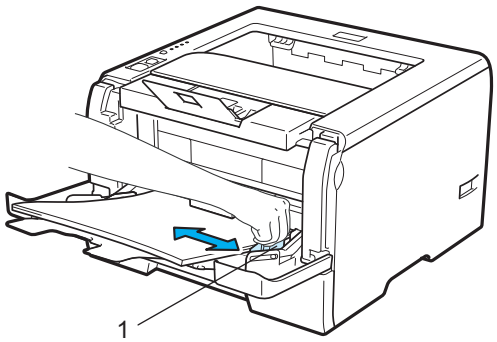
3. Lift up the support flap to prevent paper from sliding off the face-down output tray, or remove each page as soon as it comes out of the printer.



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.

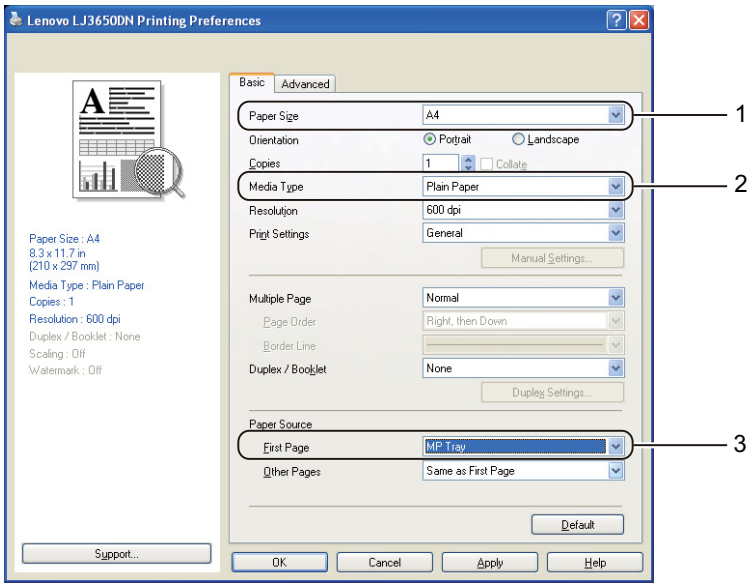


5 While pressing the paper-guide release lever (1), slide the paper guide to fit the paper size.

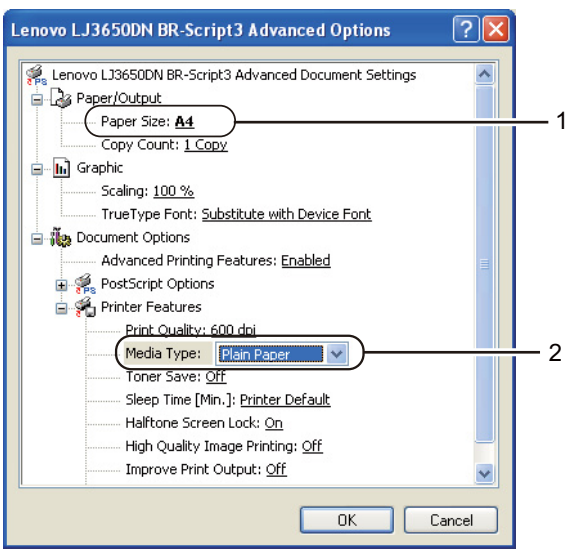


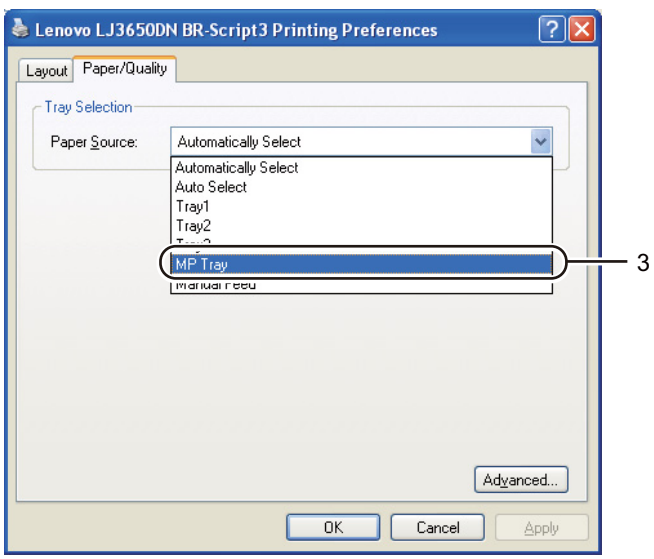
6 Choose the following from the printer driver:
Paper Size.....(1)
Media Type.....(2)
Paper Source.....(3)
and any other settings you may want to make. (See *Chapter 3: Driver and Software*.)

■ **Windows® printer driver**



■ **BR-Script printer driver for Windows®**

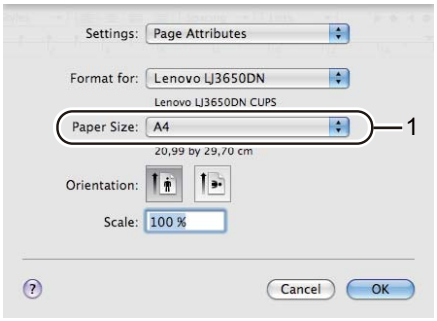


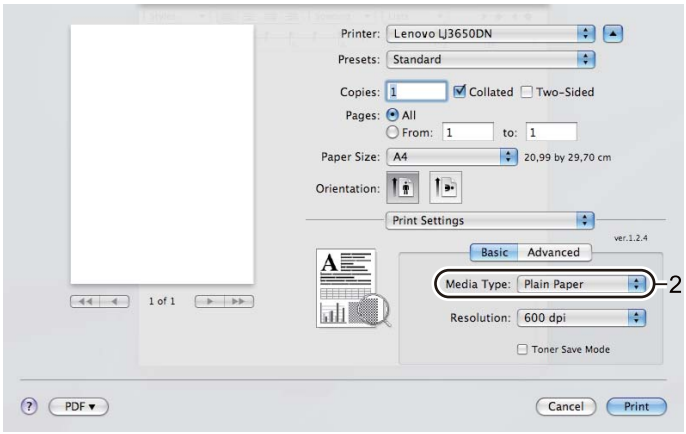


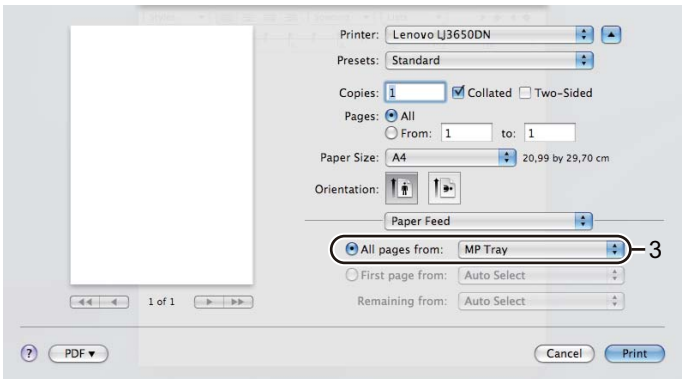
Note

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







7 Send the print data to the printer.

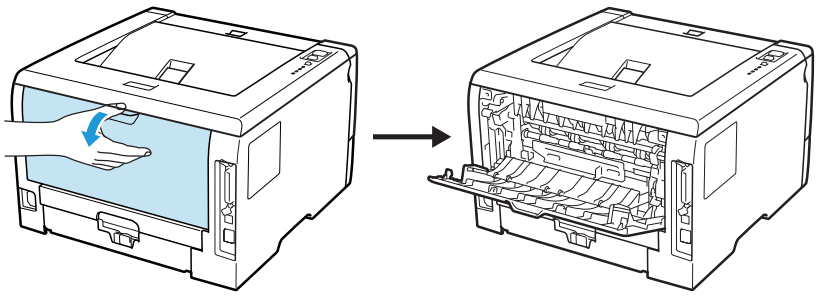
IMPORTANT

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.

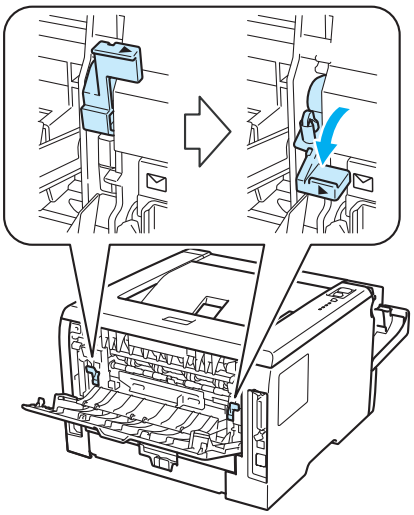
Printing on thick paper, labels and envelopes

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.)

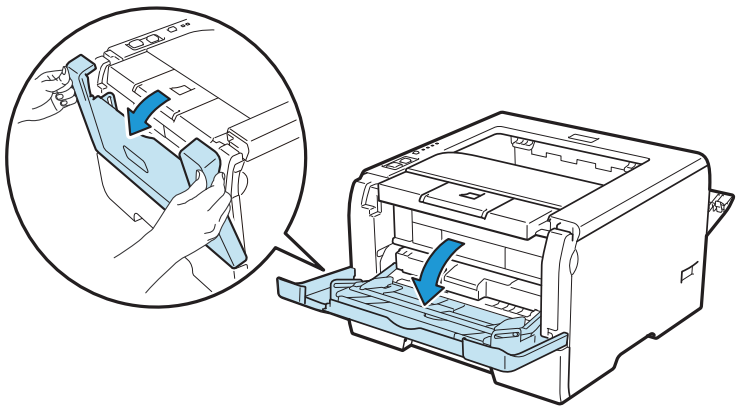
1. Open the back cover (back output tray).



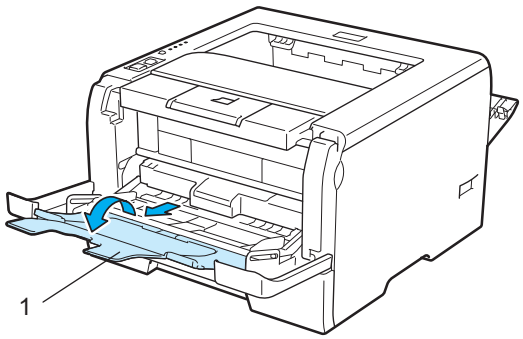
2. <For printing envelopes only>
Pull down the two blue levers, one on the left-hand side and one on the right-hand side, toward you as shown in the illustration below.



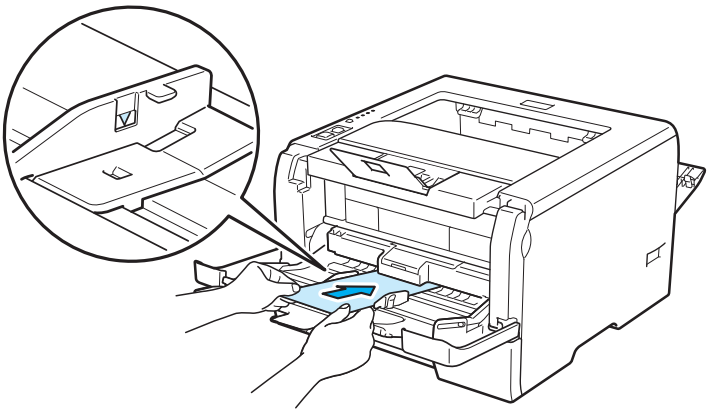
3. Open the MP tray and lower it gently.



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



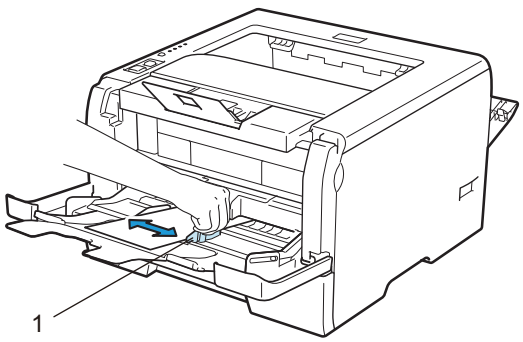
5 Put paper in the MP tray. Make sure that the paper stays under the maximum paper mark (▼).



Note

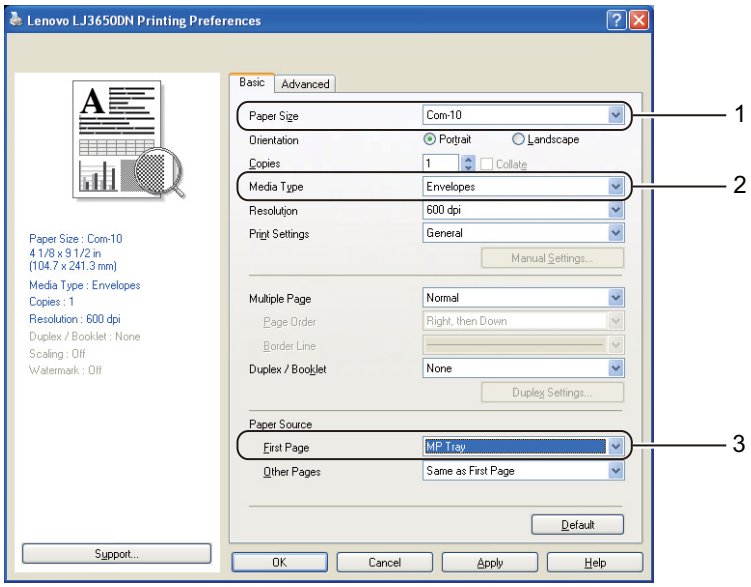
- DO NOT put more than 3 envelopes in the MP tray.
- Envelope joints that are sealed by the manufacturer should be secure.
- The side to be printed on must be face up.
- All sides of the envelope should be properly folded without wrinkles or creases.

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

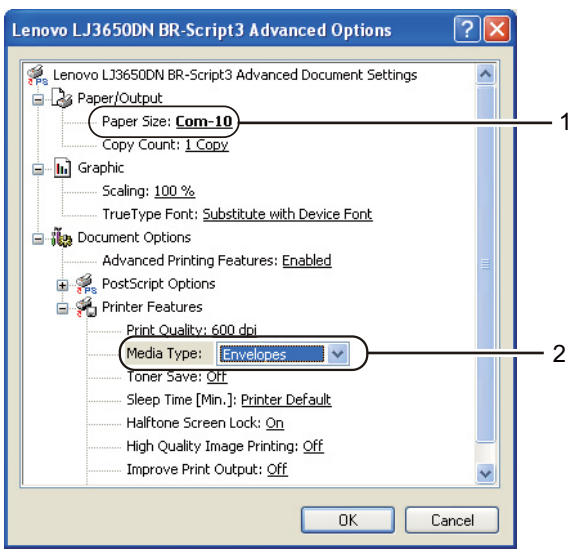


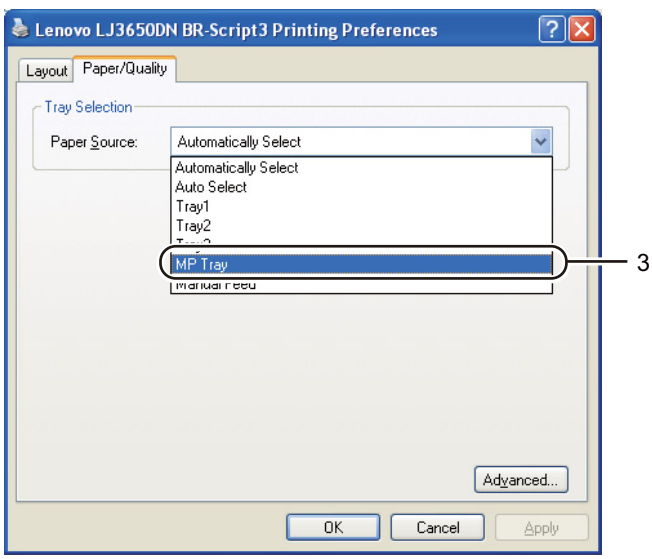
7 Choose the following from the printer driver:
Paper Size.....(1)
Media Type.....(2)
Paper Source.....(3)
and any other settings you may want to make. (See *Chapter 3: Driver and Software*.)

■ **Windows® printer driver**



■ **BR-Script printer driver for Windows®**

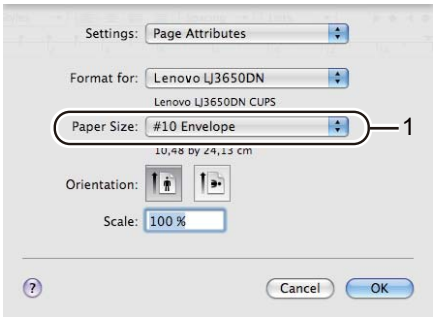


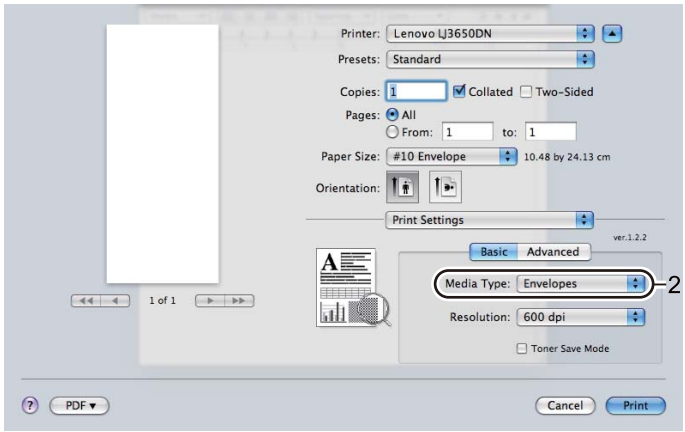


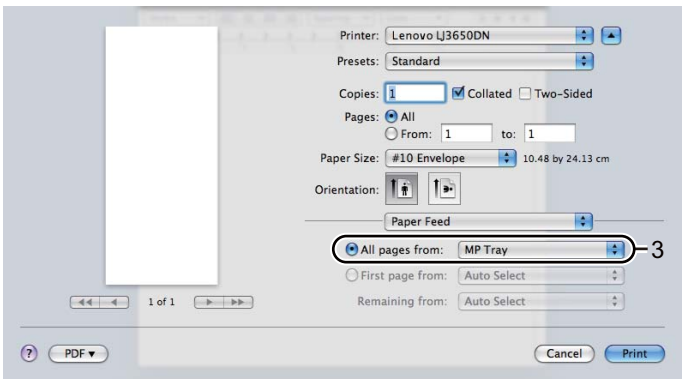
Note

- 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 140.)

■ Macintosh printer driver







Note

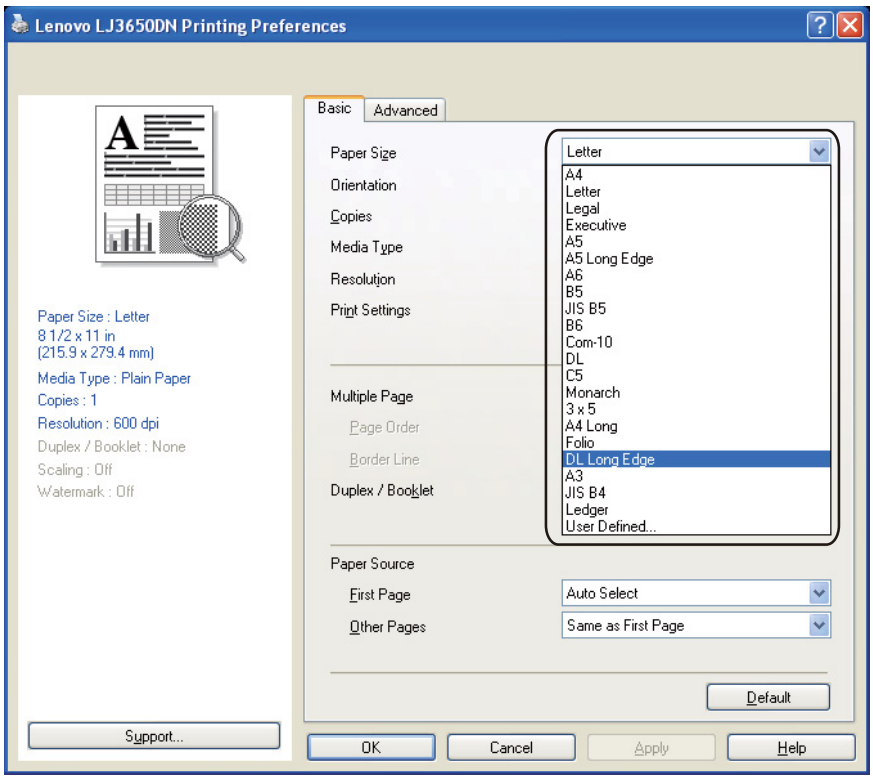
For other envelopes which are not listed in the printer driver, such as Envelope #9 or Envelope C6, choose **Custom Page Sizes**. (For more information on envelope sizes, see *Paper size* on page 140.)

8 Send the print data to the printer.

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

Note

- 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 123.
- (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 - 10.5.x 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 114. If you have a print quality problem, see *Improving the print quality* on page 123.)

Note

- 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.

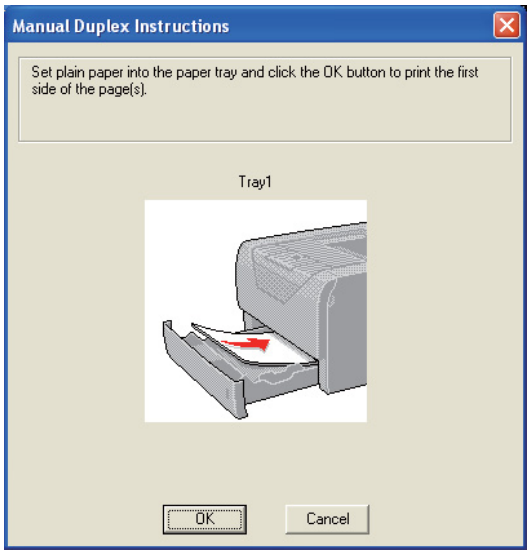
Manual duplex printing

- 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 58.

Manual duplex printing from the paper tray

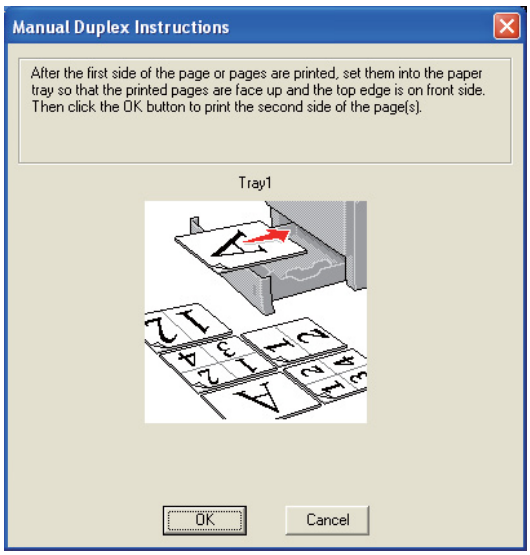
1. In the printer driver choose the **Basic** tab, and choose the **Duplex** printing mode from the **Duplex / Booklet** setting, and then from the **Basic** tab choose the Paper Source to be **Tray1**.
2. Click the **Duplex Settings...** button, the **Duplex Settings** will appear.
3. Choose **Manual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

4 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.

Note

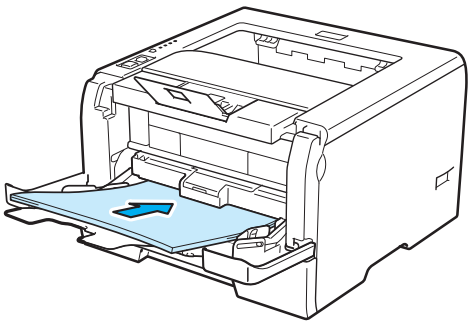
- If you choose the **Paper Source** to be **Auto Select**, put the printed even-numbered pages in the MP tray.
- When you put paper in the paper tray, first empty the tray. Next, put the printed pages in the tray, with the printed side face up. (DO NOT add the printed pages to the top of a stack of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

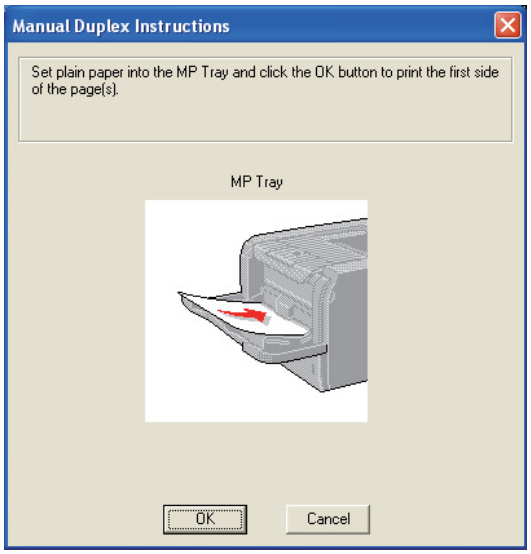
Manual duplex printing from the MP tray

Note

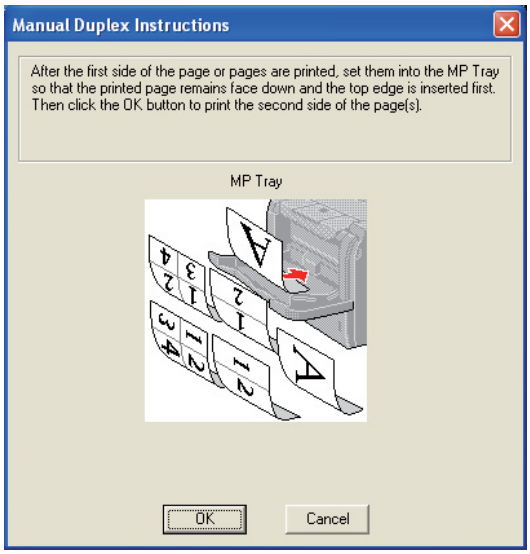
Before putting the sheets back in the MP tray, you will have to straighten them, or you may get paper jams.

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.

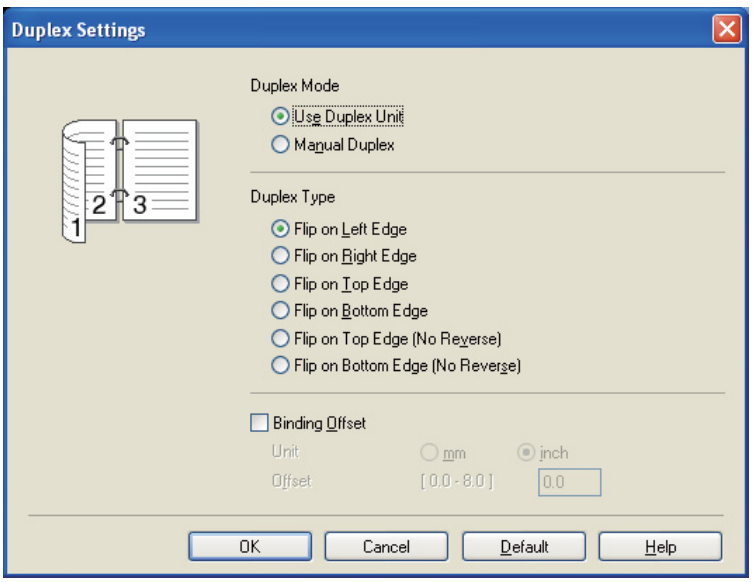
When doing manual duplex printing, the paper must be put in the paper tray in the following way:

- 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 58.

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 **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.



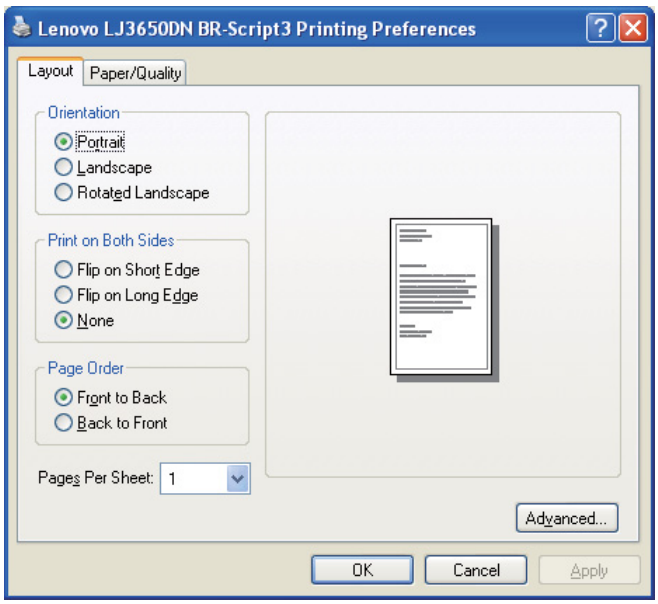
For the BR-Script printer driver

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.

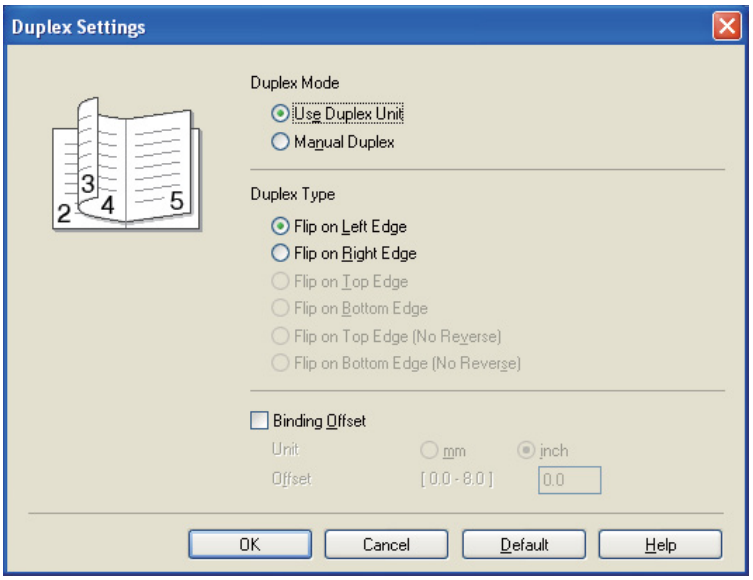
2 From the **General** tab, click the **Printing Preferences** button.

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.

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 our site at http://www.lenovo.com/. Install the drivers by following the Quick Setup Guide. The latest printer driver can be downloaded from our site at http://www.lenovo.com/.

(If you want to uninstall the printer driver, see *Uninstalling the printer driver* on page 66.)

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 60.

	Windows® printer driver	BR-Script printer driver	Macintosh printer driver
Windows® 2000 Professional	ⓘ	ⓘ	
Windows® XP Home Edition	ⓘ	ⓘ	
Windows® XP Professional	ⓘ	ⓘ	
Windows Vista®	ⓘ	ⓘ	
Windows Server® 2003	ⓘ	ⓘ	
Windows Server® 2008	ⓘ	ⓘ	
Windows® XP Professional x64 Edition	ⓘ	ⓘ	
Windows Server® 2003 x64 Edition	ⓘ	ⓘ	
Mac OS X 10.3.9 - 10.5.x		ⓘ	ⓘ

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** [4]
- **Use Watermark** [1 3]
- **Header-Footer Print** [3]
- **Toner Save Mode**
- **Administrator** [3]
- **Use Reprint** [1 3]
- **Sleep Time**
- **Page Protection** [1 3]
- **Density Adjustment** [2]
- **Error Message Printout** [1 3]
- **Improve Print Output**

1 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.

4 These settings are not available with the BR-script printer driver for Windows® and Macintosh.

Features in the printer driver (for Windows®)

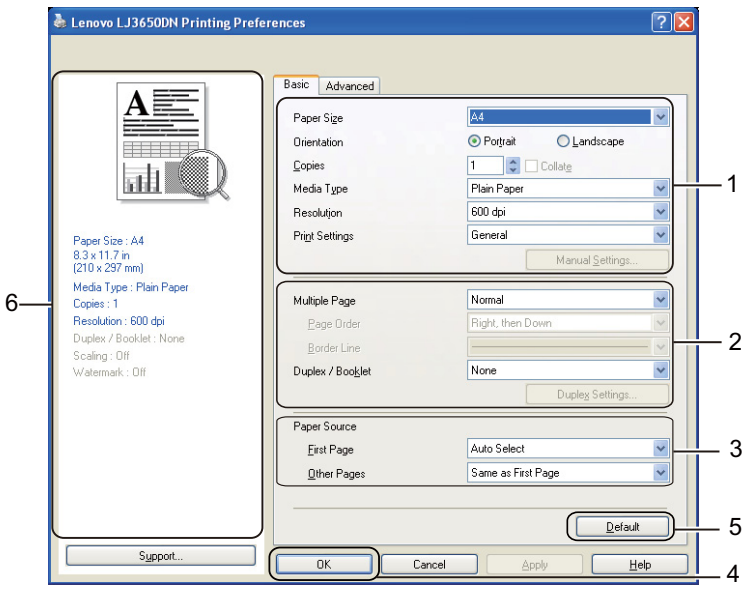
(For more information, see the **Help** text in the printer driver.)

Note

- The screens in this section are 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).
2. 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)

Note

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

Note

- 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**

Note

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**

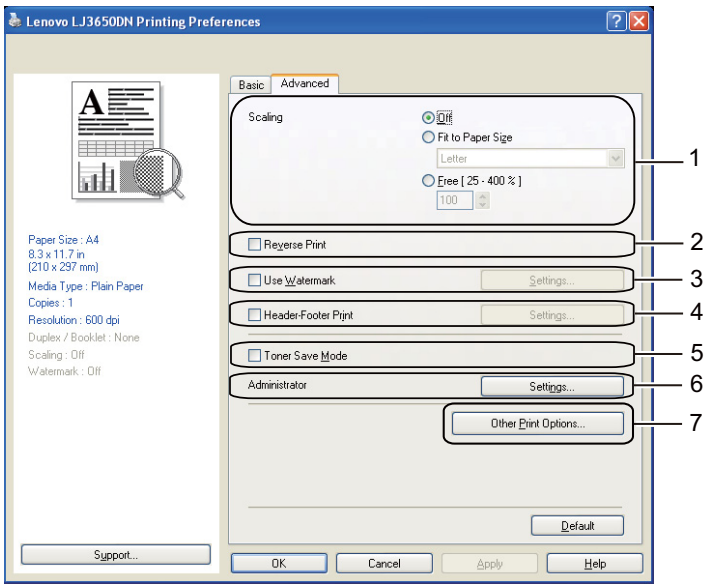
  If you check the Binding Offset option, you can also specify the offset for binding in inches or millimeters.

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.

[1] 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 42.)

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)
- **Administrator** (6)
- **Other Print Options** (7)

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.

Note

- 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.

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**
- **Page Protection**
- **Density Adjustment**
- **Error Message Printout**
- **Improve Print Output**

Use Reprint

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

To reprint the last document, press **Go** and hold it down for about 4 seconds until all the LEDs light up, and then release **Go**.

Within 2 seconds press **Go** the number of times you want to reprint.

If you don’t press **Go** within 2 seconds, a single copy will be printed.

Note

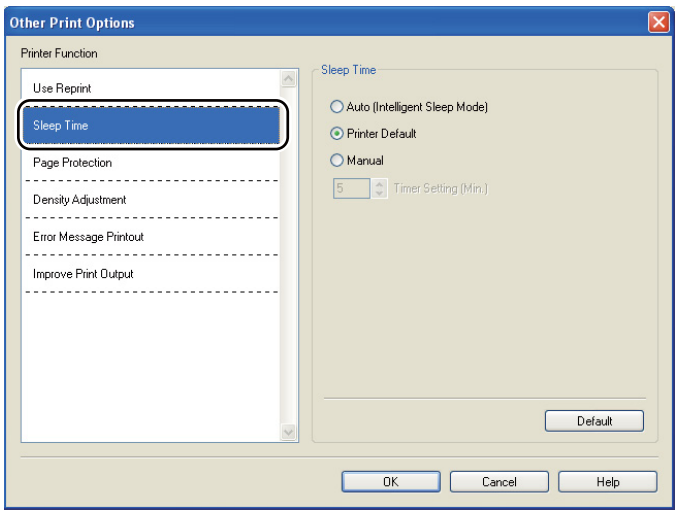
If you want to prevent other people from printing your data using the reprint function, uncheck the **Use Reprint** check box in the **Other Print Options...**.

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, all the LEDs are off, the **Status** LED lights up slightly, 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.

To turn sleep mode off, from the **Advanced** tab, click the **Other Print Options...** and choose **Sleep Time**. Double-click the word **Timer Setting (Min.)**, and the Sleep Time Off function will appear. Click **Off** to stop the printer going into sleep mode. The Sleep Time Off function can be hidden by double-clicking the word **Timer Setting (Min.)** again. We recommend that you keep sleep mode on to save power.



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.

Note

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

Error Message Printout

You can choose whether the printer reports problems by printing an error page. For details, see *Error message printout* on page 112.

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

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.

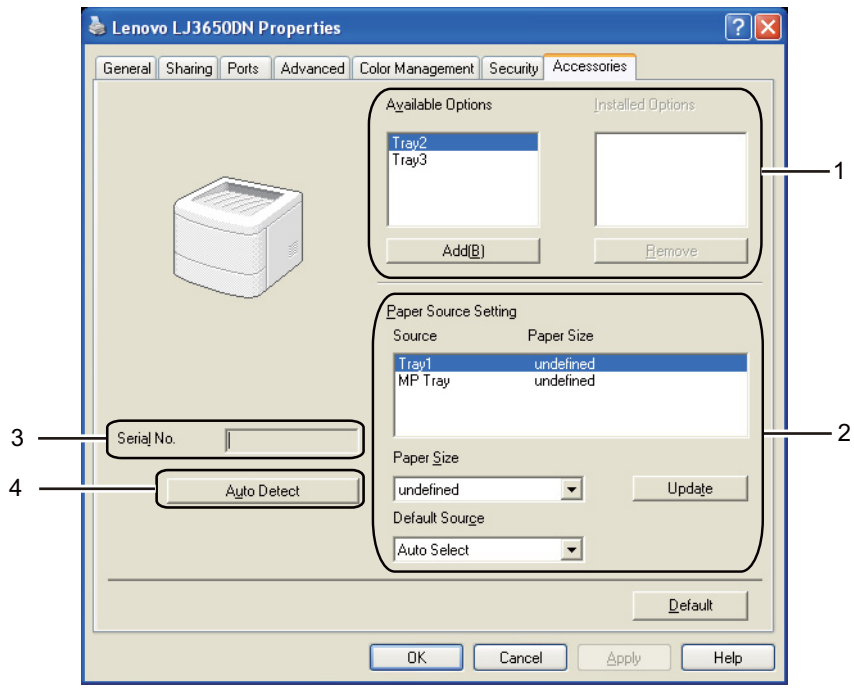
Accessories tab

Note

From the **Start** menu, select **Control Panel** and then **Printers and Faxes** [1]. Right-click the **Lenovo LJ3600D/LJ3650DN 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.

■ **Paper Source Setting** (2)

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

- **Paper Size**

  This setting allows you to define which paper size is used for each tray. Highlight the tray you want to define and then choose the paper size from the pull-down menu. Click **Update** to apply the setting to the tray. When using more than one paper size you must define the paper size for each tray so the paper is pulled from the correct tray.

- **Default Source**

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

■ **Serial No.** (3)

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** (4)

The **Auto Detect** function finds the currently installed optional devices and shows the available settings in the printer driver. When you click **Auto Detect**, options that are installed on the 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**.

Note

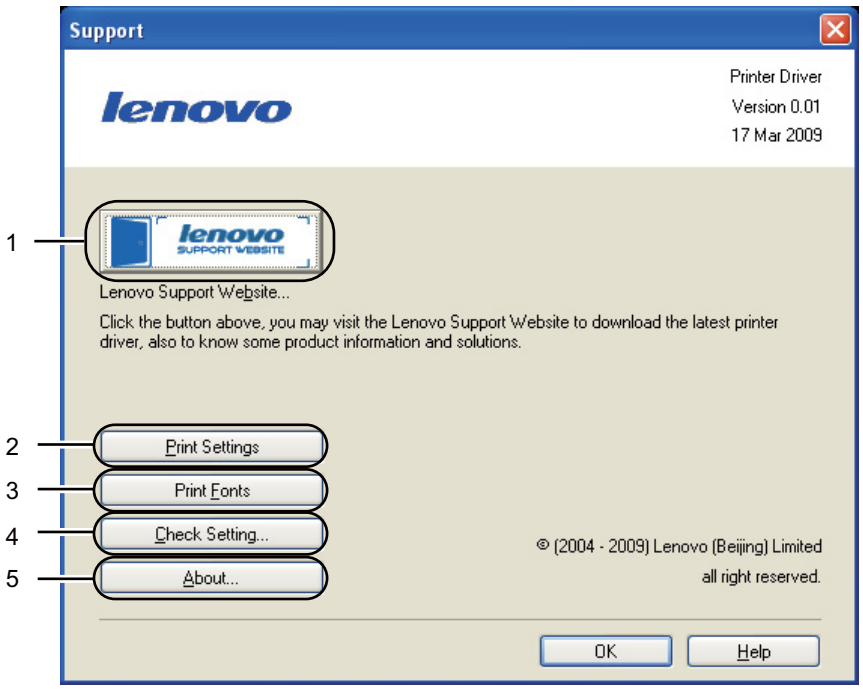
The **Auto Detect** function is not available under the following printer conditions:

- 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

Note

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



- **Lenovo Support Website**(1)

  Lenovo Support Website (http://www.lenovo.com/) is a website offering information about your Lenovo product including driver updates and tips for using your printer.

- **Print Settings** (2)

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

- **Print Fonts** (3)

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

- **Check Setting...**(4)

  You can check the current driver settings.

- **About...**(5)

  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], your printer (e.g. Lenovo LJ3650DN), 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.)

Note

- 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 LJ3650DN with Windows® XP.
- The screens on your computer may vary depending on your operating system.

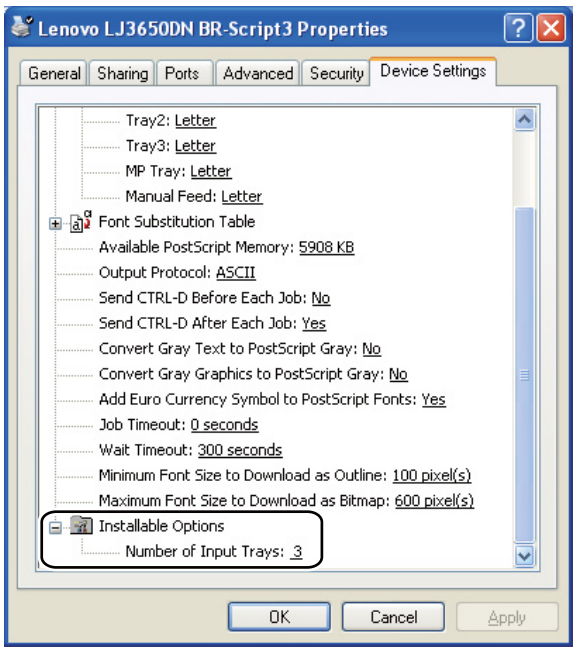
Device Settings tab

Note

From the **Start** menu, select **Control Panel** and then **Printers and Faxes** [1]. Right-click the **Lenovo LJ3600D/LJ3650DN** icon and select **Properties** to access the **Device Settings** tab.

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

Choose the options you have installed.



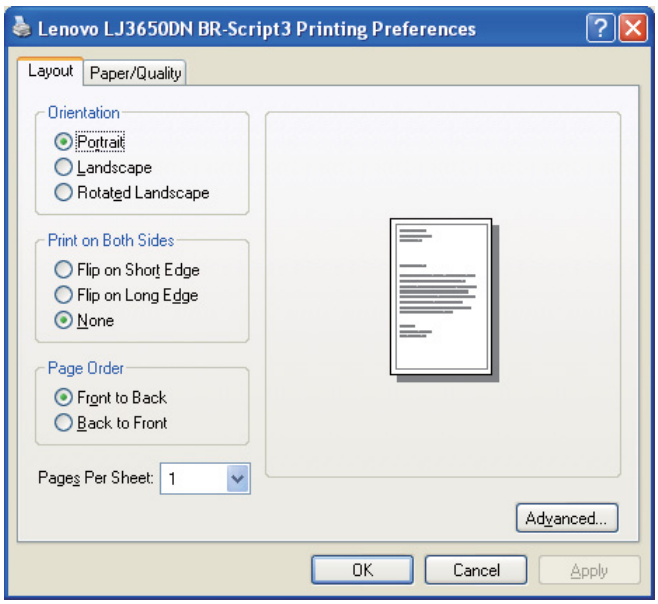
Printing Preferences

Note

You can access the **Printing Preferences** dialog box by clicking **Printing Preferences...** in the **General** tab of the **Lenovo LJ3600D/LJ3650DN 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**

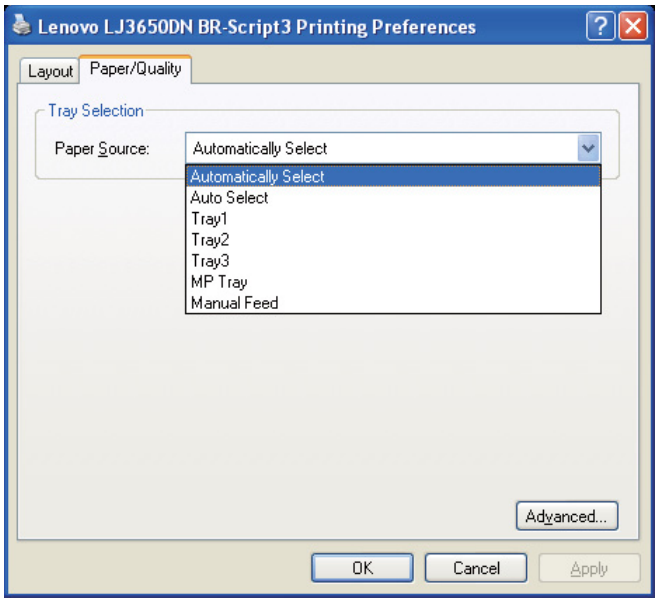
Specifies the order in which the pages of your document will be printed. **Front to Back** prints the document so that page 1 is on top of the stack. **Back to Front** prints the document so that page 1 is on the bottom of the stack.

■ **Pages Per Sheet**

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

■ **Paper/Quality** tab

Choose the **Paper Source**.

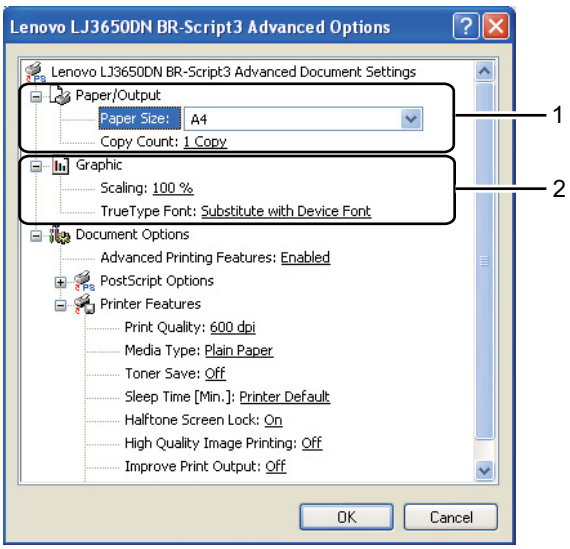


■ **Paper Source**

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.

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

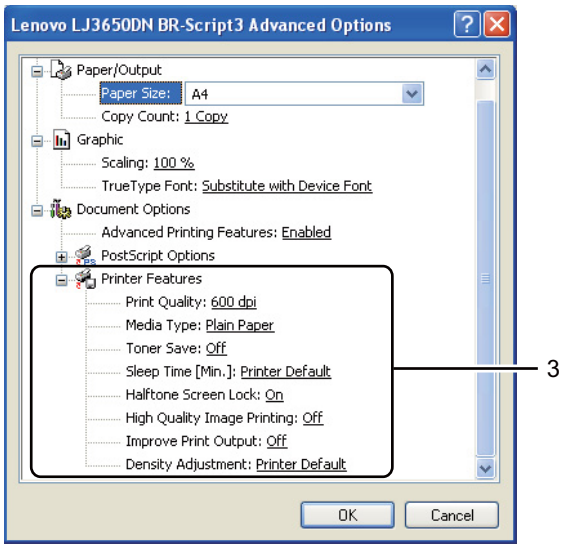
   ■ **Scaling**

   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.

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



■ Print Quality

You can choose the following print quality settings.

- **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**

■ Toner Save

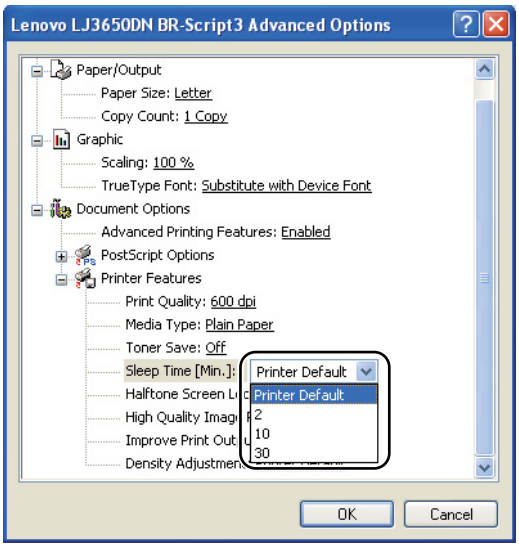
You can conserve toner use with this feature. When you set **Toner Save** mode to **On**, print appears lighter. The default setting is **Off**.

Note

- 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, all the LEDs are off, the **Status** LED lights up slightly, 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.



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.

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.

Density Adjustment

Increase or decrease the print density.

Features in the printer driver (for Macintosh)

This printer supports Mac OS X 10.3.9 - 10.5.x.

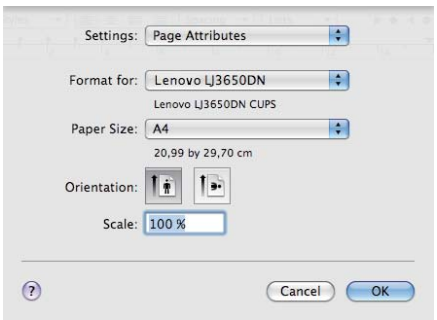
Note

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

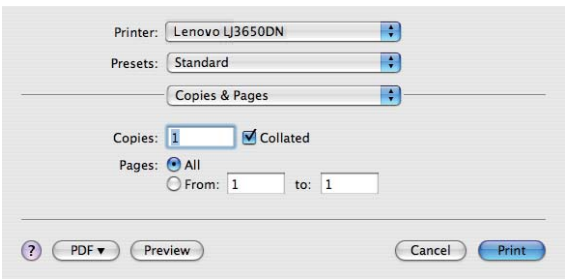
Choosing page setup options

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

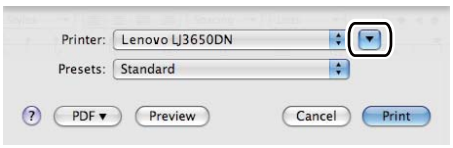
1. From an application such as Apple TextEdit, click **File**, then **Page Setup**. Make sure Lenovo LJXXXX (where XXXX is your model name.) is chosen in the **Format for** pop-up menu. You can change the settings for **Paper Size**, **Orientation** and **Scale**, then click **OK**.

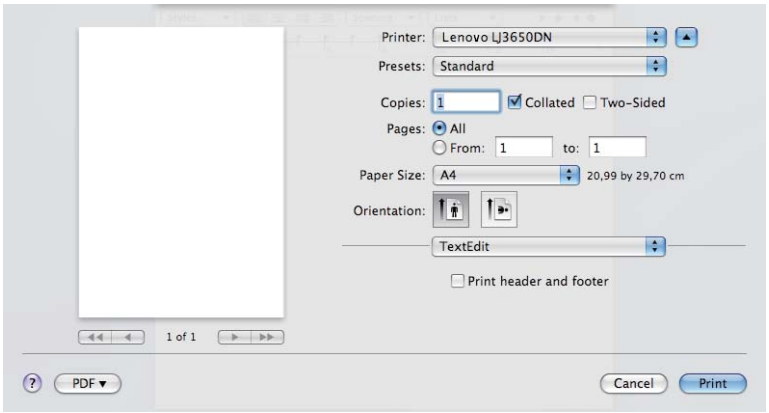


2. From an application such as Apple TextEdit, click **File**, then **Print** to start printing.
   - For Mac OS X 10.3.9 and 10.4.x.



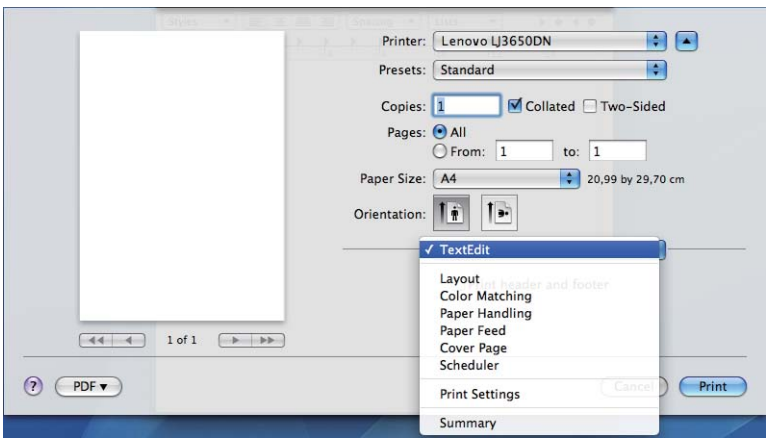
■ For Mac OS X 10.5.x
For more page setup options, click the disclosure triangle beside the Printer pop-up menu.





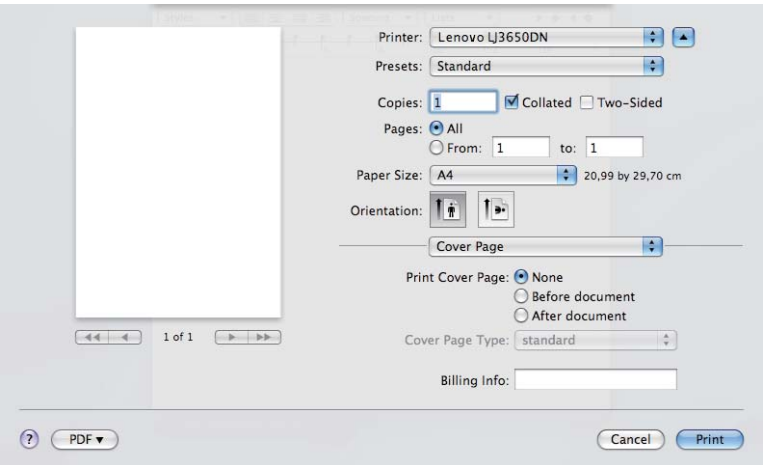
Choosing printing options

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



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.

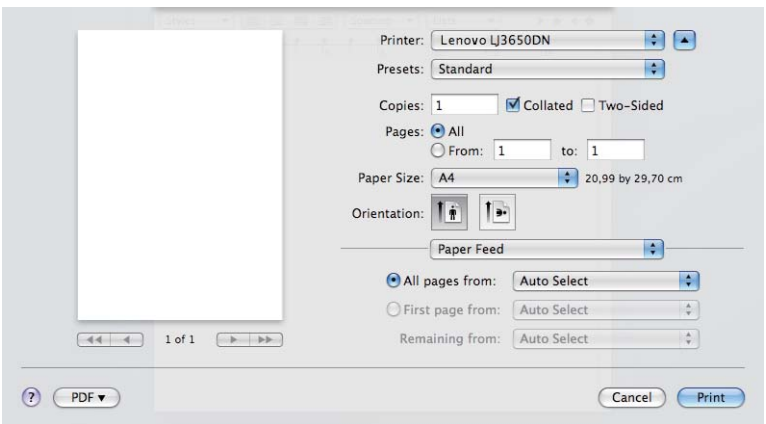
- **Cover Page Type**

  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

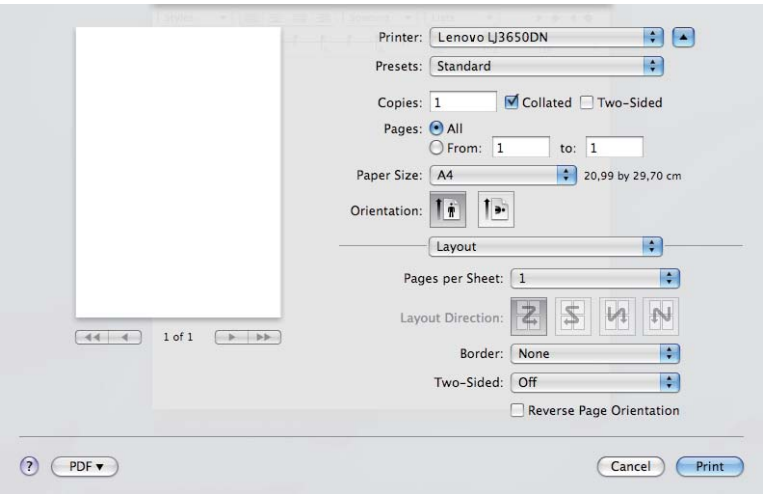


You can choose **Auto Select**, **Tray1**, **Tray2** [1], **Tray3** [1], **MP Tray** [2] or **Manual**. Mac 10.3.9 and 10.4.x users can also specify separate trays for printing the first page and for printing from the second page onwards.

[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 58.

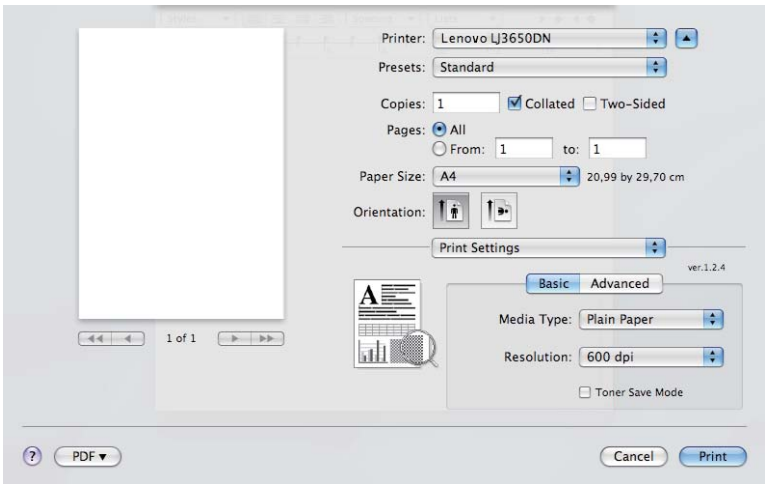
- **Reverse Page Orientation** (For Mac OS X 10.5.x)

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

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**.

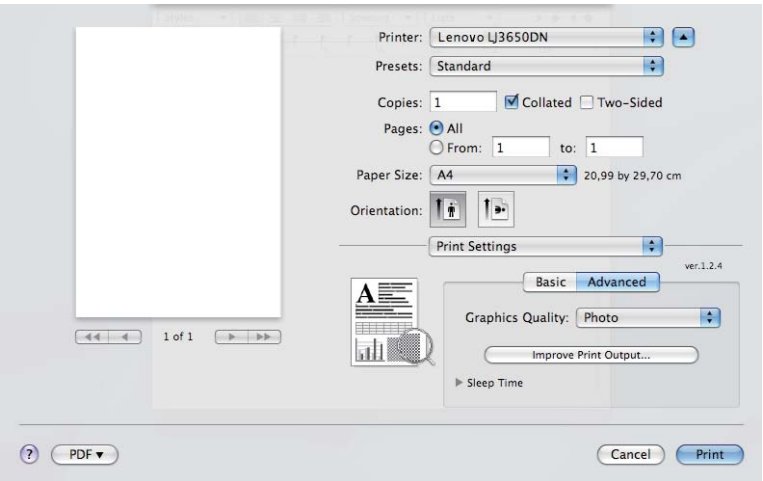
Note

- 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 10.3.9 and 10.4.x)

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.

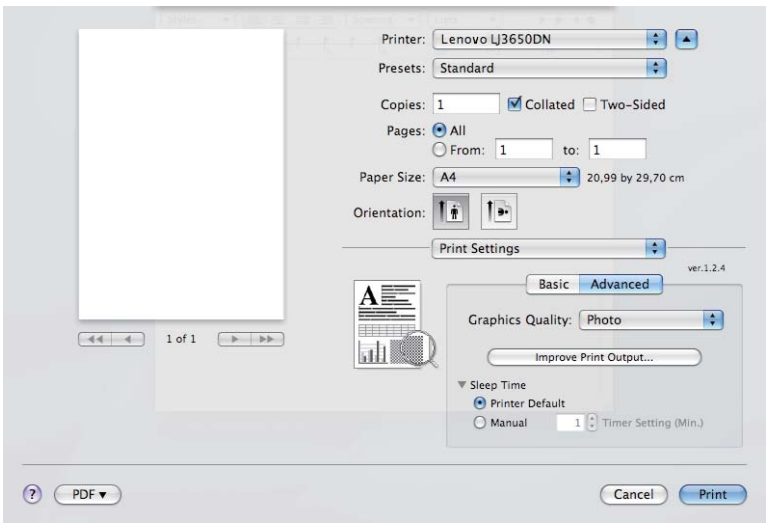
Improve Toner Fixing

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, all the LEDs are off, the **Status** LED lights up slightly, 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.

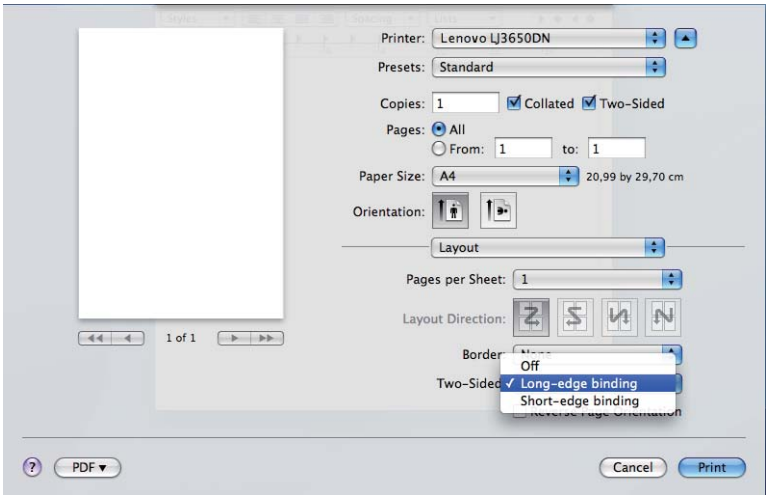


Duplex Printing

■ **Use duplex unit.**

Select **Layout**.

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

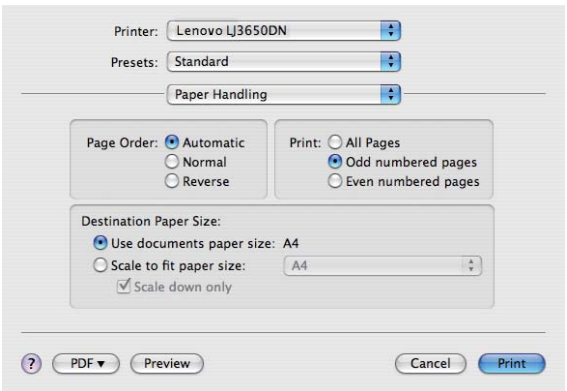


■ **Manual duplex**

Select **Paper Handling**.

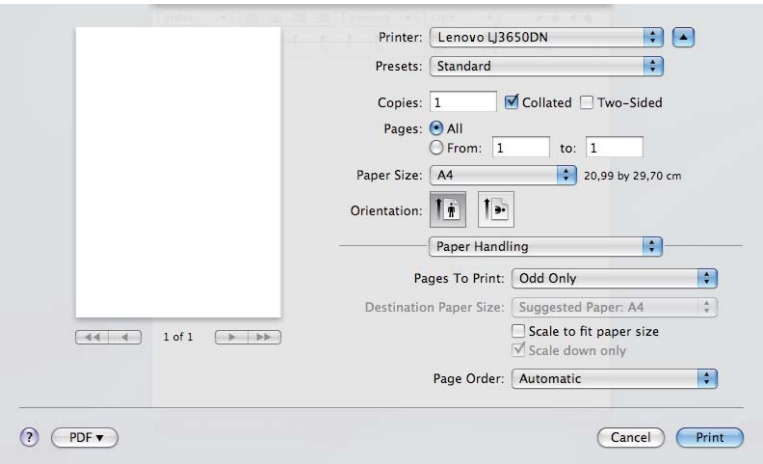
■ For Mac OS X 10.3.9 and 10.4.x

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.x

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 10.3.9 and 10.4.x

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.x

1. Run the **System Preferences**, select **Print & Fax**, then choose the printer.
2. 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)

Note

- To use the BR-Script3 printer driver on a Network, see *the Network User's Guide on the CD-ROM*.

Installing the BR-Script3 printer driver

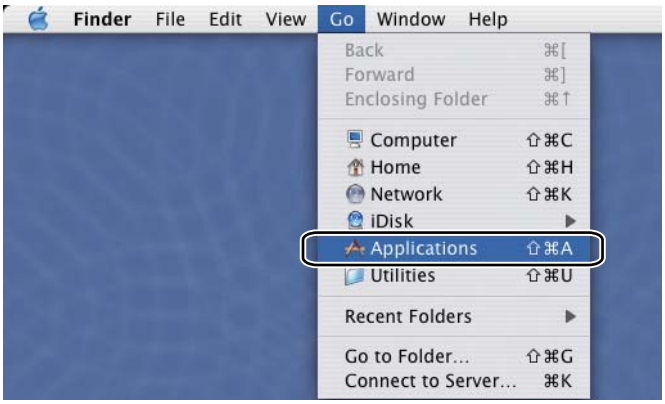
You need to install the BR-Script3 printer driver using the following instructions.

Note

If you use a USB cable, only one printer driver per printer can be registered in the **Printer Setup Utility** (For Mac OS X 10.3.9 and 10.4.x) or **Print & Fax** (For Mac OS X 10.5.x). Before installing the BR-Script3 printer driver, delete from the Printer list any other Lenovo drivers that are for the same printer.

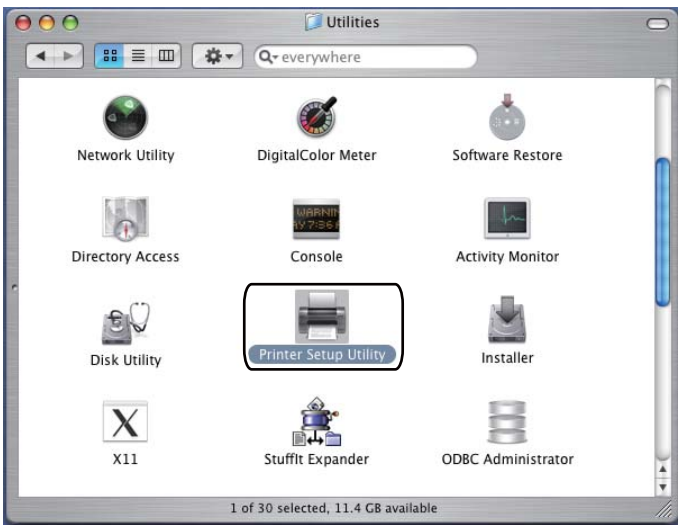
■ For Mac OS X 10.3.9 and 10.4.x

1. From the **Go** menu, choose **Applications**.

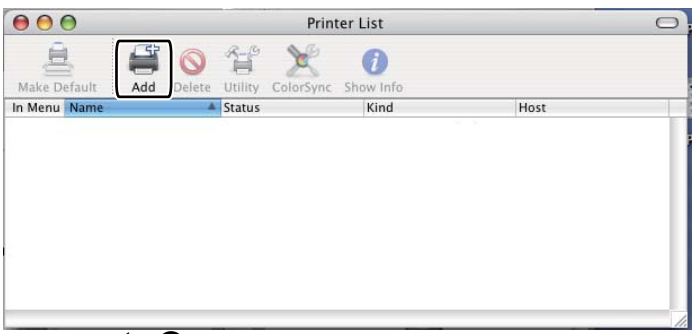


2 Open the **Utilities** folder.

3 Double-click the **Printer Setup Utility** icon.

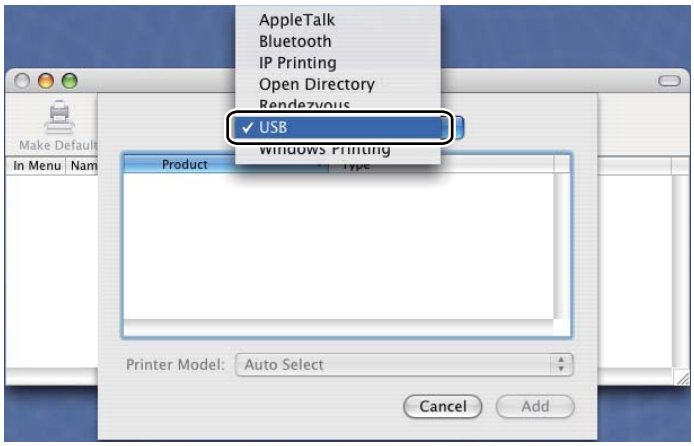


4 Click **Add**.

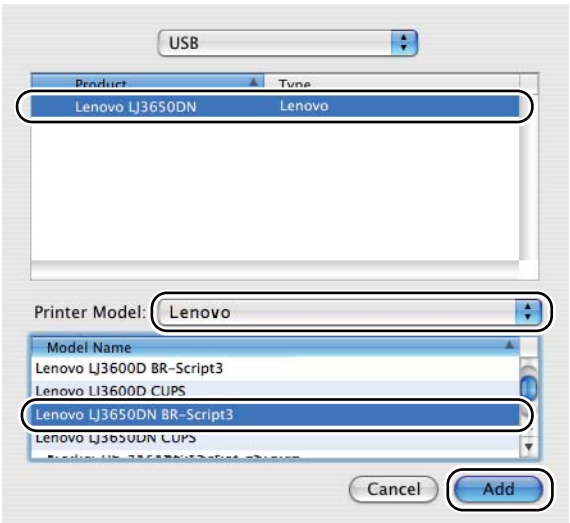


For Mac OS X 10.3.9 users, go to ❺.
For Mac OS X 10.4.x users, go to ❻.

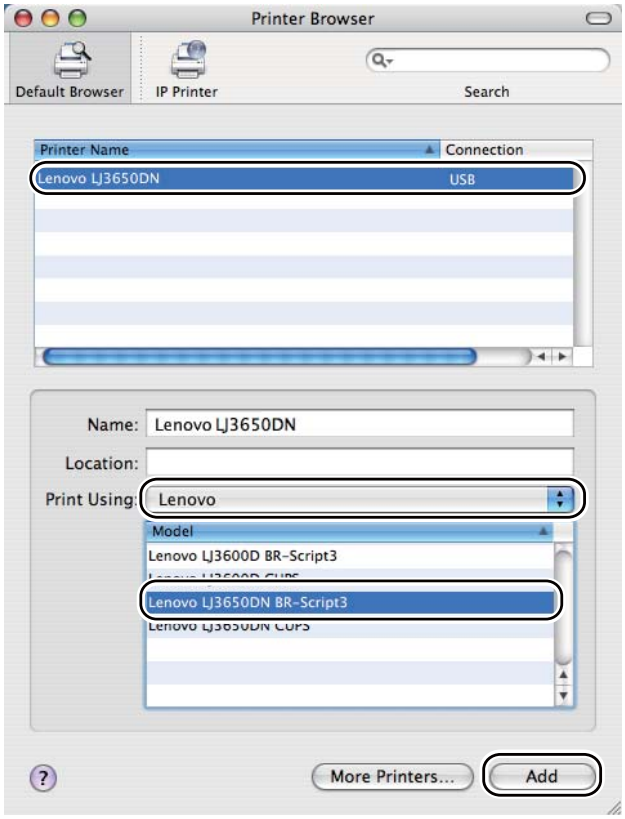
5 Choose **USB**.



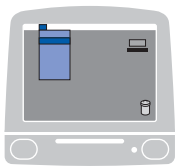
6 Choose the model name and make sure that **Lenovo** is in **Printer Model** (Print Using), then select the model name that shows BR-Script in the Model Name (Model), and then click **Add**.
For Mac OS X 10.3.9 users:

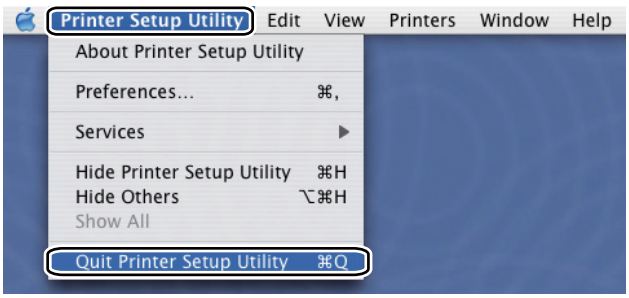


For Mac OS X 10.4.x users:



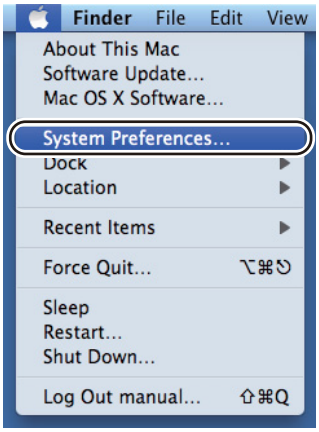
7 From the **Printer Setup Utility** menu, choose **Quit Printer Setup Utility**.





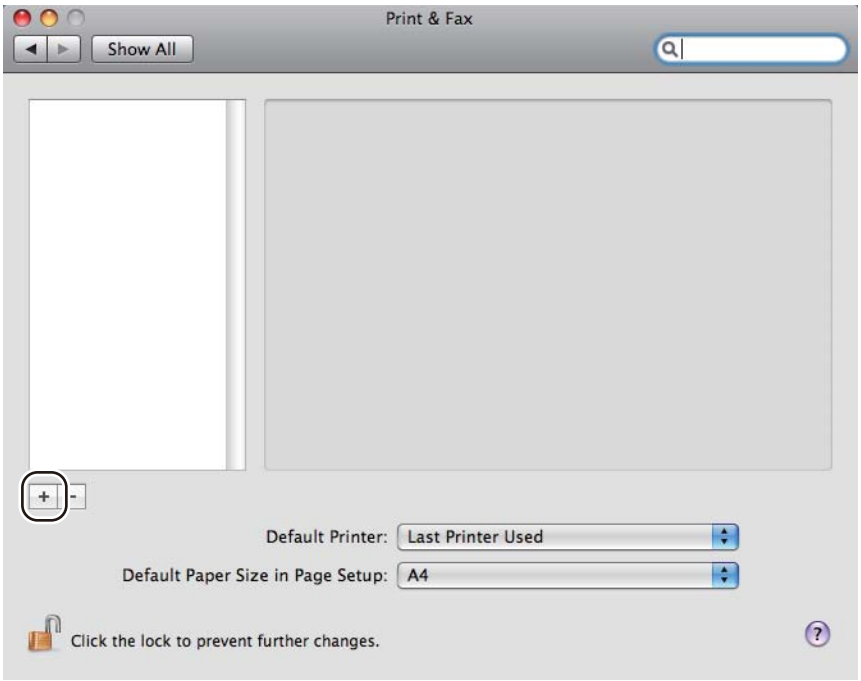
■ For Mac OS X 10.5.x

1. From the Apple menu choose **System Preferences**.

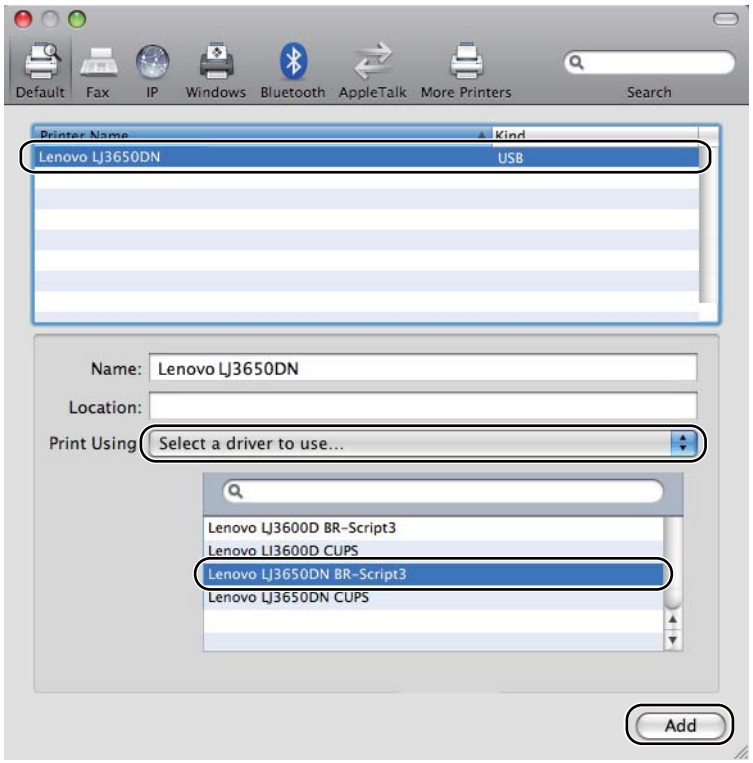


2. Select **Print & Fax**.

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 From the **System Preferences** menu, choose **Quit System Preferences**.

Uninstalling the printer driver

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

Note

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

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

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

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

Printer driver for Macintosh

For Mac OS X 10.3.9 and 10.4.x

1. Disconnect the USB cable between the Macintosh and your printer.
2. 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**, **Lenovo**) into the Trash and then empty the Trash.
6. Restart the Macintosh.

For Mac OS X 10.5.x

1. Disconnect the USB cable between the Macintosh and your printer.
2. 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.

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

6 Restart the Macintosh.

Software

Software for networks (For LJ3650DN)

BRAdmin Light

BRAdmin Light is a utility for initial setup of Lenovo network connected devices. This utility can search for Lenovo 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 - 10.5.x 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.

Web Based Management (web browser)

Web Based Management (web browser) is a utility for managing network connected Lenovo devices, using the HTTP (Hyper Text Transfer Protocol). This utility can view the status of Lenovo 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 4 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 8 of the Network User's Guide on the CD-ROM we have supplied.

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 Lenovo 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 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.

4 Control Panel

LEDs (Light Emitting Diodes)

This section refers to five LEDs **Back Cover**, **Toner**, **Drum**, **Paper**, **Status** and two buttons **Job Cancel** and **Go** on the control panel.

1) **Back Cover** LED

   The Back Cover LED indicates when errors occur in the back of the printer.

2) **Toner** LED

   The Toner LED indicates when the Toner is low or at the end of its life.

3) **Drum** LED

   The Drum LED indicates when the Drum is nearing the end of its life.

4) **Paper** LED

   The Paper LED indicates when the printer is in one of the following states: No paper / Paper jam / Cover open

5) **Status** LED

   The Status LED will flash depending on the printer status.

6) **Job Cancel** button

   1 Job Cancel / ALL Job Cancel

7) **Go** button

   Wake-up / Error recovery / Form feed / Reprint

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

	LED is off.
	The LED is dimmed.
or or	LED is on.
or or	LED is blinking.

LED	Printer status
	Sleep mode The printer is in sleep mode. Pressing **Go** wakes up the printer from sleep mode to ready mode.
	Ready to print The printer is ready to print.
	Warming up The printer is warming up. The **Status** LED will turn on for 1 second and off for 1 second.

LED	Printer status
	Receiving data The printer is either receiving data from the computer, processing data in memory or printing the data. The **Status** LED will turn on for 0.5 seconds and off for 0.5 seconds.
	Cooling down The printer is cooling down. Wait for a few seconds until inside of the printer has cooled down. The **Status** LED will turn on for 1 second and off for 1 second.
	Data remaining in memory There is remaining print data in the printer memory. If the yellow **Status** LED is on for a long time and nothing has printed, press **Go** to print the remaining data in memory.
	Toner low Indicates that the toner cartridge is near the end of its life. Buy a new toner cartridge and have it ready for when **Replace Toner** is indicated. The **Toner** LED will turn on for 2 seconds and off for 3 seconds.
	Replace toner Replace the toner cartridge with a new one. See *Replacing the toner cartridge* on page 89.
	Cartridge error The drum unit assembly is not installed correctly. Take the drum unit out of the machine and put it back in.
	No toner Open the front cover, install the toner cartridge. See *Toner cartridge* on page 88.

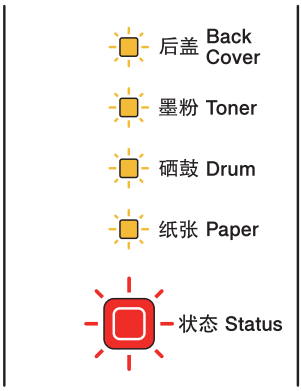
LED	Printer status
	Drum life will end soon The drum unit is near the end of its life. We recommend that you get a new drum unit to replace the current one. See *Replacing the drum unit* on page 96. The **Drum** LED will turn on for 2 seconds and off for 3 seconds.
	Replace drum Replace the drum with a new one. See *Replacing the drum unit* on page 96.
	No paper Put paper in the tray. Then press **Go**. See *Printing on plain paper, bond paper and transparencies* on page 11, *Printing on thick paper, labels and envelopes* on page 19 or *Cleaning the paper pick-up roller* on page 105.

LED	Printer status
	No tray The paper tray was not detected, install it, or ensure it is inserted correctly.
	Paper jam Clear the paper jam. See *Paper jams and how to clear them* on page 114. If the printer does not start printing, press **Go**. The **Paper** LED will turn on for 0.5 seconds and off for 0.5 seconds.
	Incorrect paper size for auto DX Press **Go** or **Job Cancel**. Set the correct paper that you want to use, or load the same size paper that you selected in the current driver setting. The paper size you can use for automatic duplex printing is A4. The **Paper** LED will turn on for 0.5 seconds and off for 0.5 seconds.
	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**.
	Paper jam (back cover or duplex tray) Clear the paper jam. See *Paper jams and how to clear them* on page 114. If the printer does not start printing, press **Go**. The **Back Cover** LED will turn on for 0.5 seconds and off for 0.5 seconds.
	Duplex disabled Close the back cover of the printer and put the duplex tray back in.
	Fuser cover is open Close the fuser cover which can be found behind the back cover of the printer. The **Back Cover** LED will turn on for 0.5 seconds and off for 0.5 seconds.

LED	Printer status
	Front cover is open Close the front cover of the printer.
	Too many trays Maximum number of optional trays is two. Remove additional trays.
	Buffer error Check the cable connection between the PC and printer.
	Memory full The printer memory is full and the printer cannot print full pages of a document. See *Solving print problems* on page 130.
	Print overrun A print overrun occurred and the printer cannot print full pages of a document. See *Solving print problems* on page 130.
	Download full The download buffer of the printer is full. Add more memory to the printer. See *Installing extra memory* on page 85.
	Font full The font memory area is full. Delete fonts or add more memory to the printer. See *Installing extra memory* on page 85.
	Drum error The corona wire needs to be cleaned. See *Cleaning the corona wire* on page 107. If your LED's still shows the same error indication after you have cleaned the corona wire, replace the drum unit with a new one. See *Replacing the drum unit* on page 96.

Service call indications

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



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

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

LED error indication

LEDs	Fuser unit failure [1]	Main PCB failure	Laser unit failure	Main motor failure	High voltage failure	DIMM error	FAN Failure
Back Cover	☐	☐	☐	☐	☐	☐	☐
Toner	■	■	☐	☐	☐	■	☐
Drum	☐	■	■	☐	■	☐	☐
Paper	☐	☐	☐	■	■	■	☐
Status	■	■	■	■	■	■	■

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

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

Make a note of the indication, referring to the table on page 76, and report the error status to your dealer or Lenovo Customer Service.

Note

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

Control panel buttons

The control panel buttons have the following functions:

- Cancel printing

  Cancel only the printing job:

  If you press **Job Cancel** while printing, the printer will immediately stop printing and will then eject the paper.

  Cancel all the received jobs:

  To delete all jobs, press and hold **Job Cancel** for about 4 seconds. The **Status** LED will flash green, red and yellow until all jobs are canceled.

- Wake-up

  If the printer is in sleep mode, press **Go** or **Job Cancel** to wake the printer up and go to the Ready state.

- Error recovery

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

- Form feed

  If the yellow **Status** LED is on for a long time, press **Go**. The printer will print any remaining data in the printer memory.

- Reprint

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

  If you want to use the reprint function open the driver's **Properties** dialog box and go to the Advanced tab, select the **Other Print Options...** icon and click **Use Reprint** and then check the **Use Reprint** check box. See *Other Print Options...* on page 39.

Print a test page

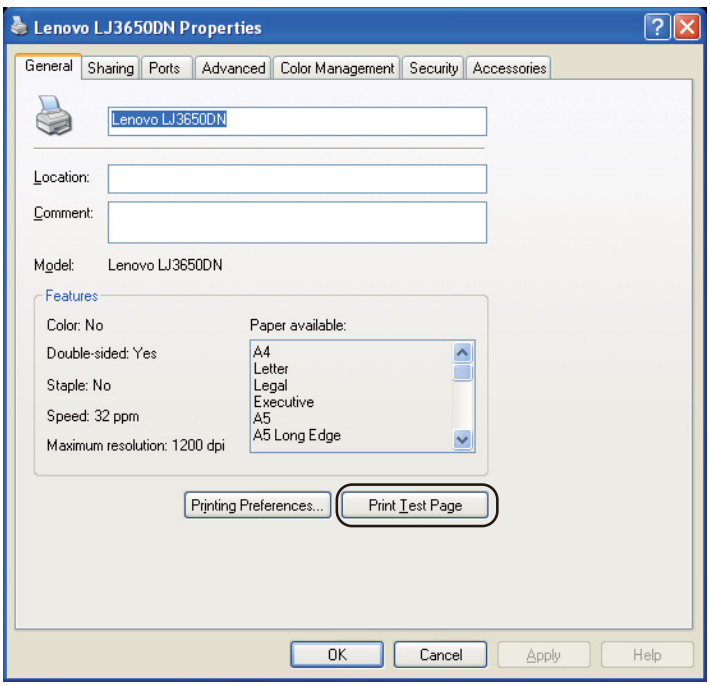
You can use the **Go** button or the printer driver to print a test page.

Using the Go button

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

Using the printer driver

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



Print the Printer Settings page

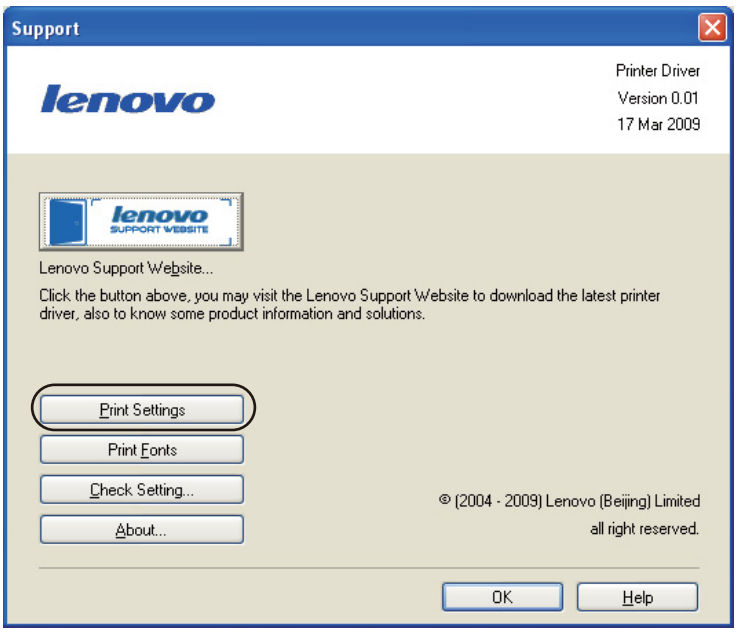
You can print the current settings using the control panel button or printer driver.

Using the Go button

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

Using the printer driver

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



Print Fonts

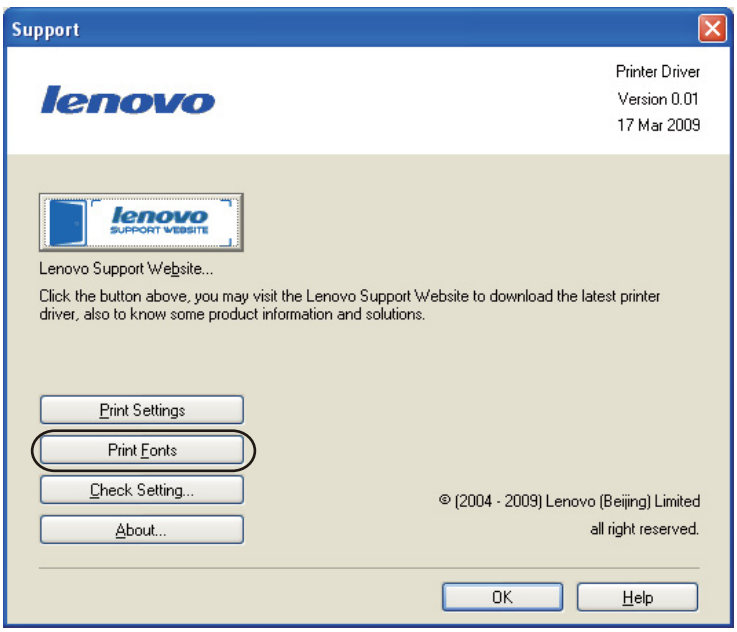
You can print a list of the internal fonts using the control panel button or printer driver.

Using the Go button

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

Using the printer driver

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



Default settings

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:

Network default settings (LJ3650DN only)

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

Factory Reset

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

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

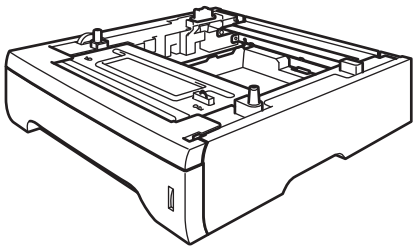
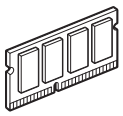
Settings Reset

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

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

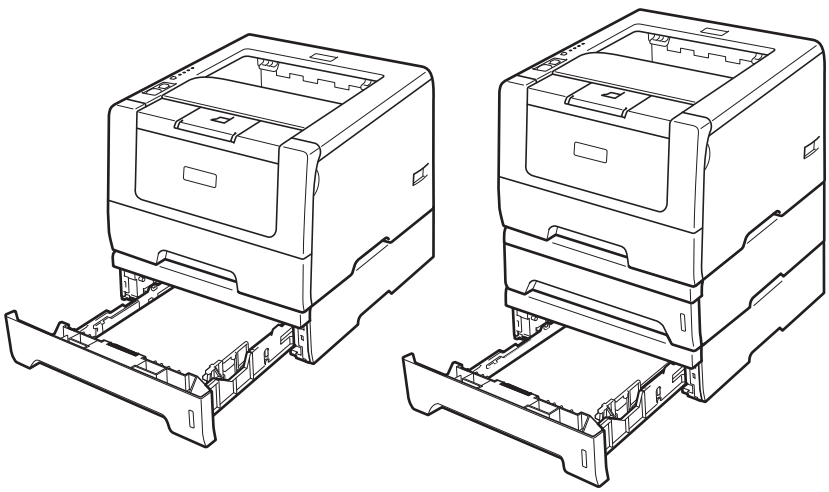
5 Options

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

Lower tray	SO-DIMM memory
LT-5300	
	
See *Lower tray (LT-5300)* on page 83.	See *SO-DIMM (memory module)* on page 84.

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/m^2 (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)

For LJ3600D

The printer has 16 MB of standard memory and one slot for optional memory expansion. You can expand the memory up to 528 MB by installing dual in-line memory modules (SO-DIMMs).

For LJ3650DN

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.

Note

- 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 Lenovo Customer Service.

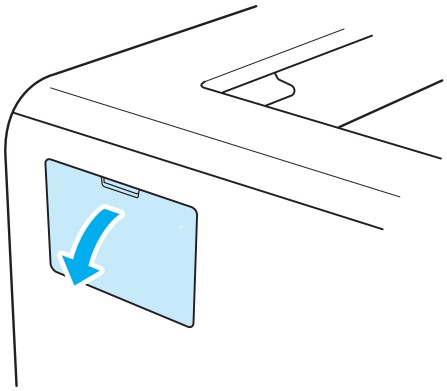
Installing extra memory

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

IMPORTANT

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

2. Remove the DIMM cover.

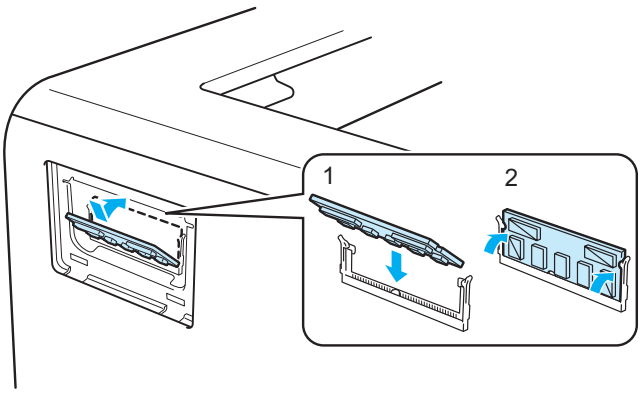


3. Unpack the DIMM and hold it by its edges.

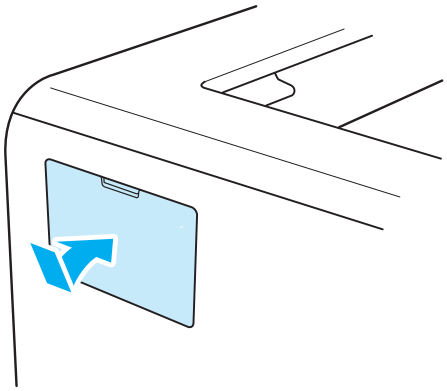
CAUTION

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.

Note

To make sure that you have installed the DIMM properly, you can print the printer settings page that shows the current memory size. See *Print the Printer Settings page* on page 80.

6 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.

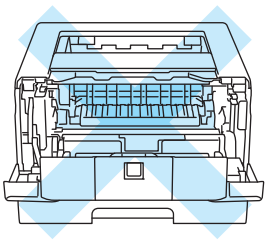
⚠ CAUTION

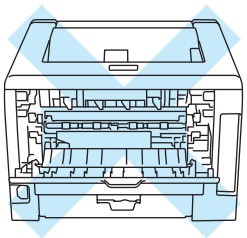
When you replace certain parts or clean the inside of the printer, remember the following:

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.

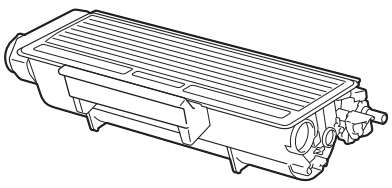
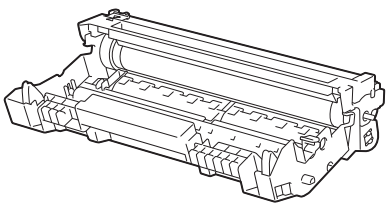
Be careful not to inhale toner.

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.





Consumables

Toner Cartridge	Drum Unit
	
See *Toner cartridge* on page 88.	See *Drum unit* on page 95.

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.

[1] 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.

Note

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

Toner Low message

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

If the LED shows this message, 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 89.

Note

The **Toner** LED will blink continuously if the toner cartridge is near the end of its life.

Replace Toner message

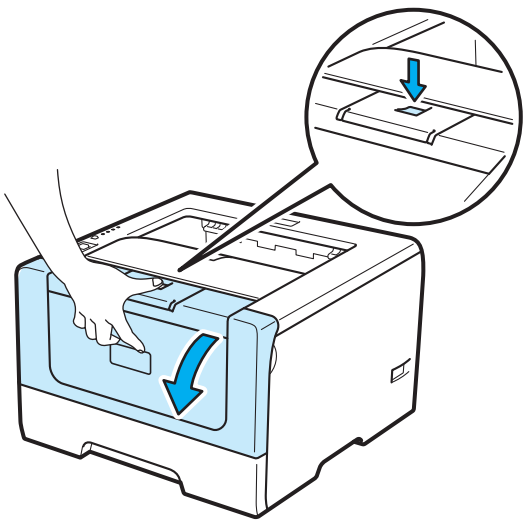
The printer will stop printing until you replace the toner cartridge with a new one.

Replacing the toner cartridge

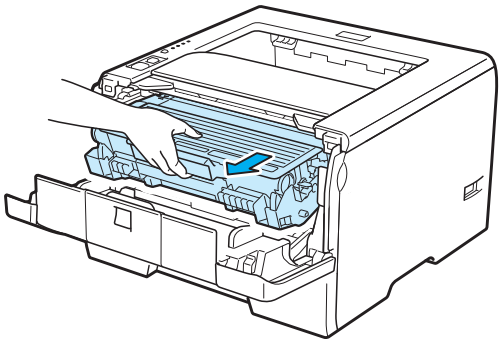
Note

- To ensure high quality printing, we recommend that you use only genuine Lenovo toner cartridges. When you want to buy toner cartridges, call your dealer or Lenovo Customer Service.
- We recommend that you clean the printer when you replace the toner cartridge. See *Cleaning* on page 100.

1. Make sure that the printer is turned on. Open the front cover.



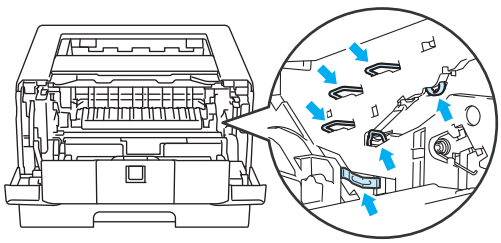
2 Take out the drum unit and toner cartridge assembly.



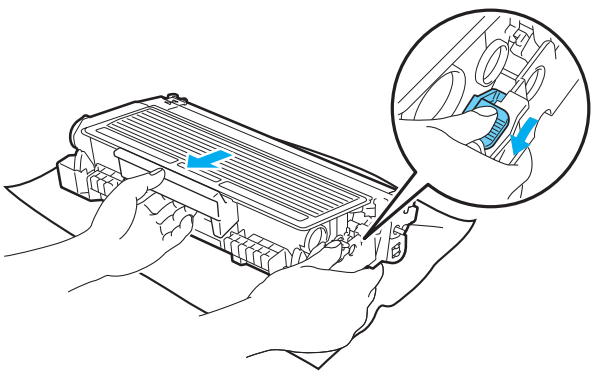
IMPORTANT

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.

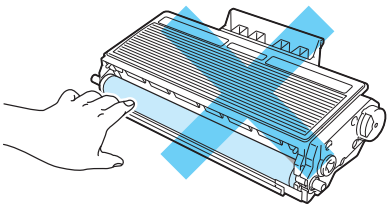
DO NOT use cleaning materials that contain ammonia, alcohol, any type of spray, or any type of flammable substance to clean the outside or inside of the machine. Doing this may cause a fire or electrical shock.

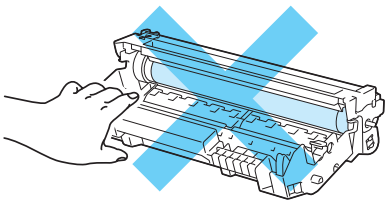
Be careful not to inhale toner.

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.

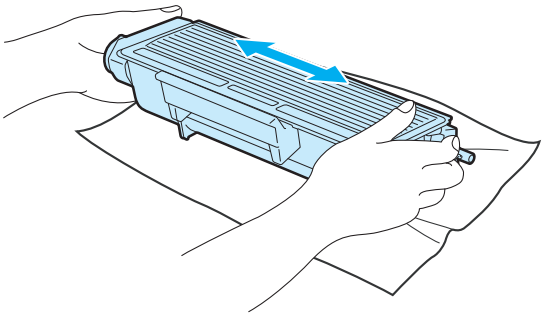




Note

- Be sure to seal up the toner cartridge tightly in a bag so that toner powder does not spill out of the cartridge.
- 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.



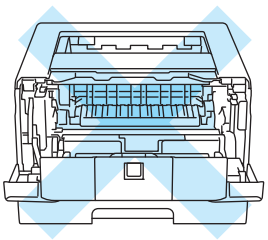
IMPORTANT

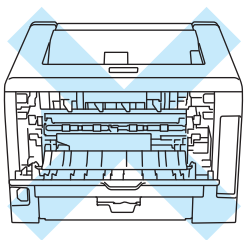
Wait to unpack the toner cartridge until immediately before you put it in the printer. If toner cartridges are left unpacked for a long time the toner life will be shortened.

If an unpacked drum unit is put in direct sunlight or room light, the unit may be damaged.

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.



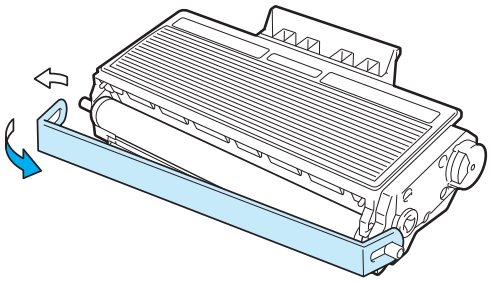


IMPORTANT

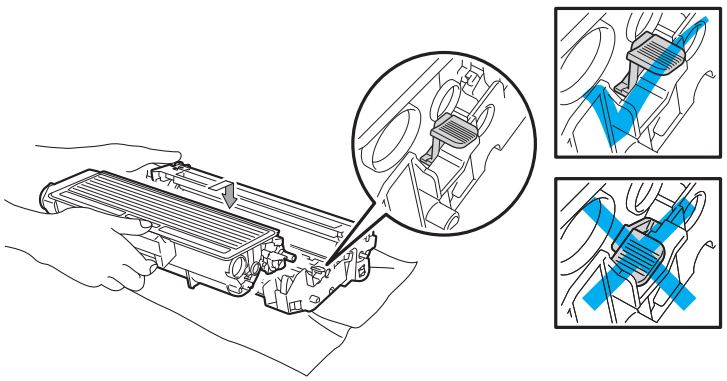
Lenovo machines are designed to work with toner of a particular specification and will work to a level of optimum performance when used with genuine Lenovo branded toner cartridges. Lenovo cannot guarantee this optimum performance if toner or toner cartridges of other specifications are used. Lenovo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

5 Pull off the protective cover.



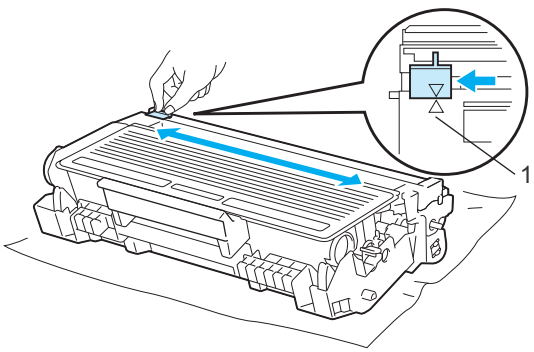
6 Put the new toner cartridge firmly into the drum unit until you hear it lock into place. If you put it in properly, the lock lever will lift automatically.



Note

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

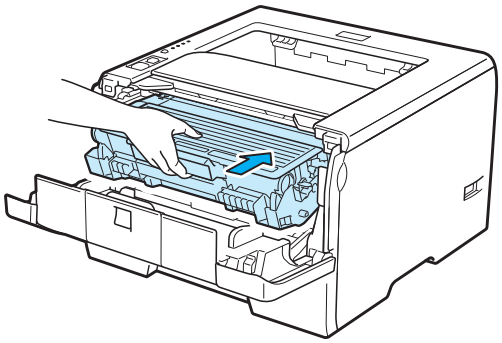
7 Clean the primary corona wire inside the drum unit by gently sliding the blue tab from right to left and left to right several times.



Note

Be sure to return the tab to the home position (▲) (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.



Note

DO NOT turn off the printer power switch or open the front cover until the **Status** LED lights up.

Drum unit

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

Note

- 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 Lenovo toner. The printer should be used only in a clean, dust-free 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 third-party drum unit.

Drum End Soon message

If Drum LED blinks, 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

If Drum LED lights, it means the drum unit should be replaced. Please replace it to a drum unit.

Replacing the drum unit

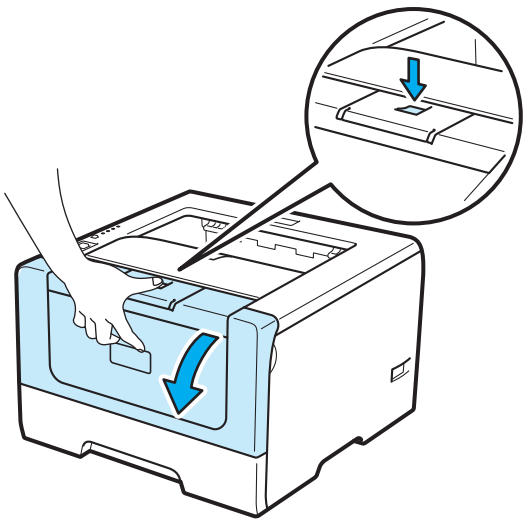
IMPORTANT

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

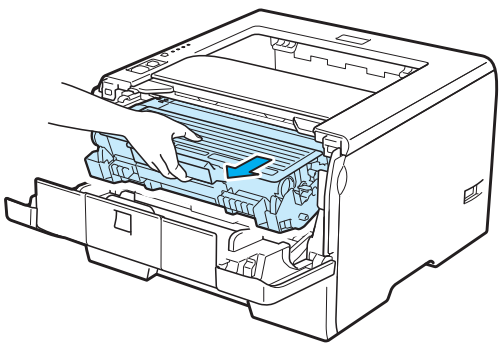
Every time you replace the drum unit, clean the inside of the printer.See *Cleaning* on page 100.

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

1. Make sure that the printer is turned on. Open the front cover.



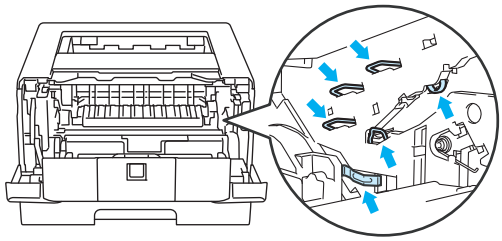
2. Take out the drum unit and toner cartridge assembly.



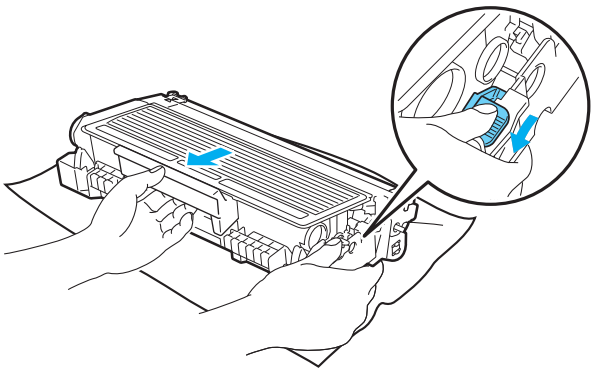
IMPORTANT

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

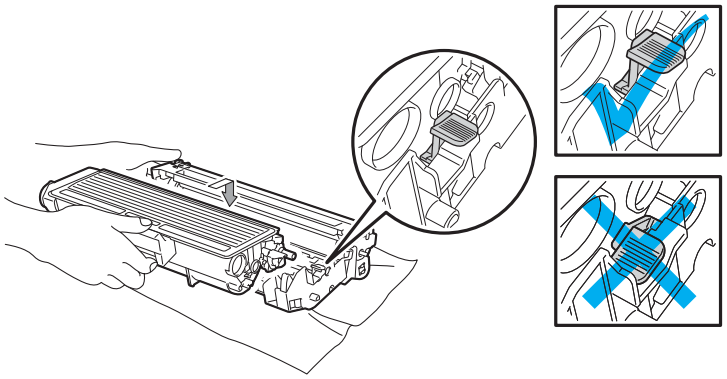
To avoid print quality problems, DO NOT touch the shaded parts shown in the illustrations.

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.

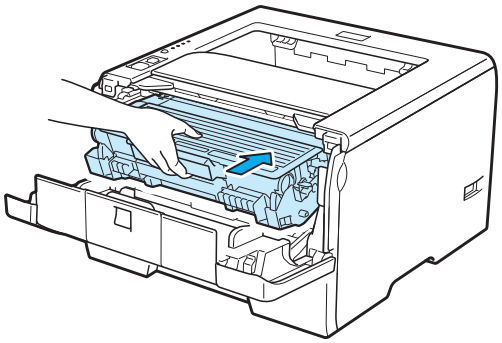
5 Put the toner cartridge firmly into the new drum unit until you hear it lock into place. If you put the cartridge in properly, the blue lock lever will lift automatically.



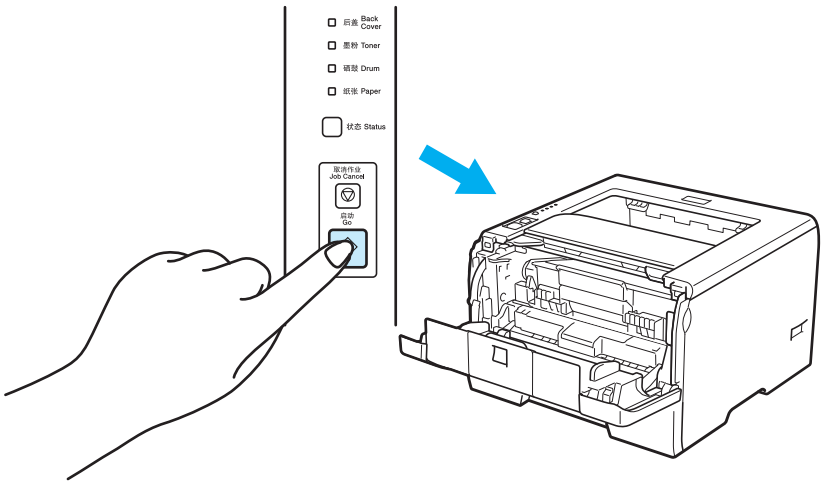
Note

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



IMPORTANT

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

8 Close the front cover.

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

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

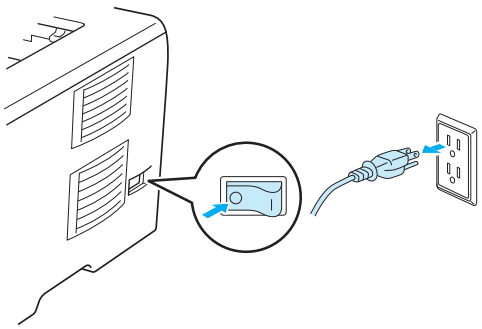
WARNING

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

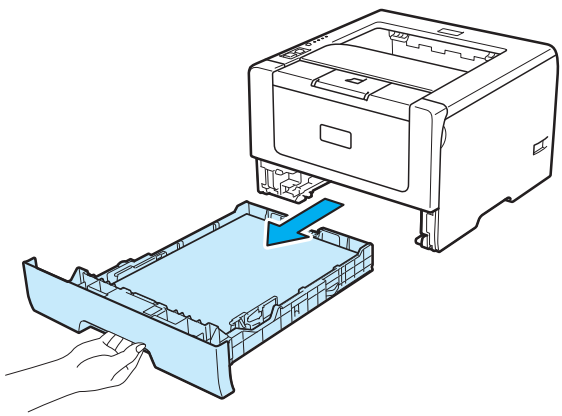
DO NOT use cleaning materials that contain ammonia.

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.

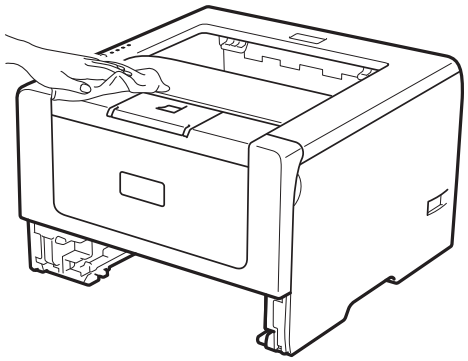
1. Turn off the printer power switch and then unplug the printer.



2. Pull the paper tray completely out of the printer.

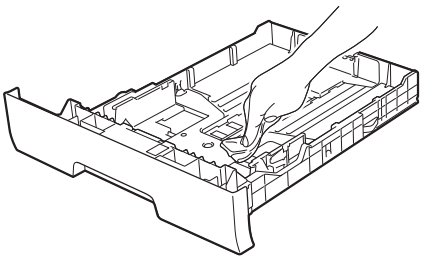


3. Wipe the outside of the printer with a dry, lint-free cloth to remove dust.



4. Remove anything that is stuck inside the paper tray.

5. Wipe the inside of the paper tray with a dry, lint-free cloth to remove dust.

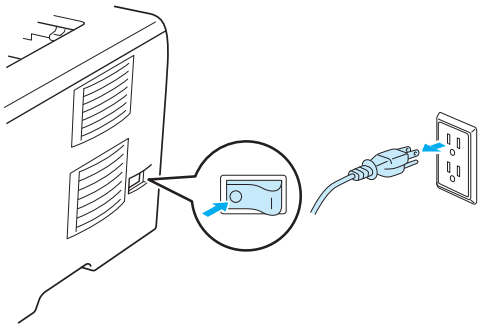


6. Put the paper tray back in the printer.

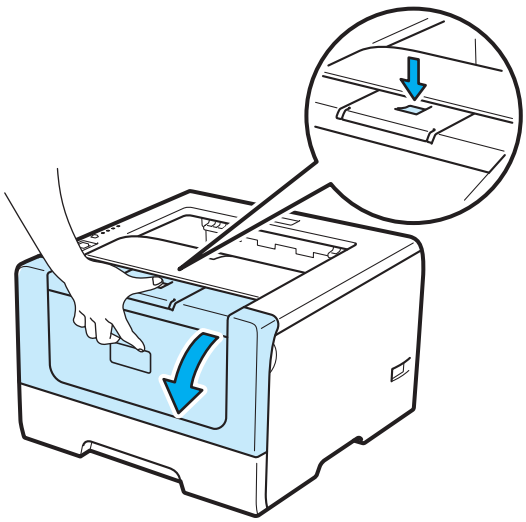
7. Plug the printer back in, and then turn on the power switch.

Cleaning the inside of the printer

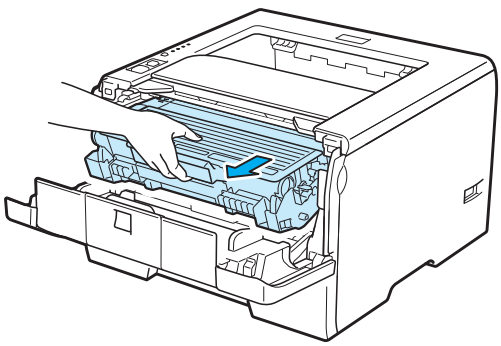
1. Turn off the printer power switch and then unplug the printer.



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

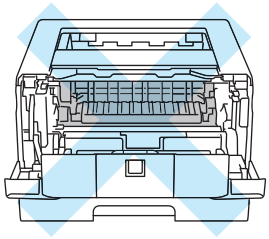


3. Take out the drum unit and toner cartridge assembly.



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.

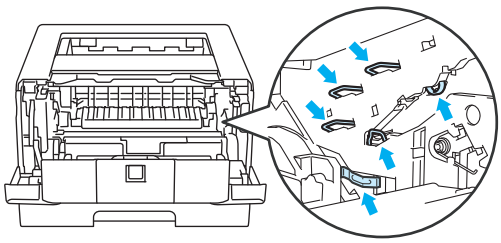


IMPORTANT

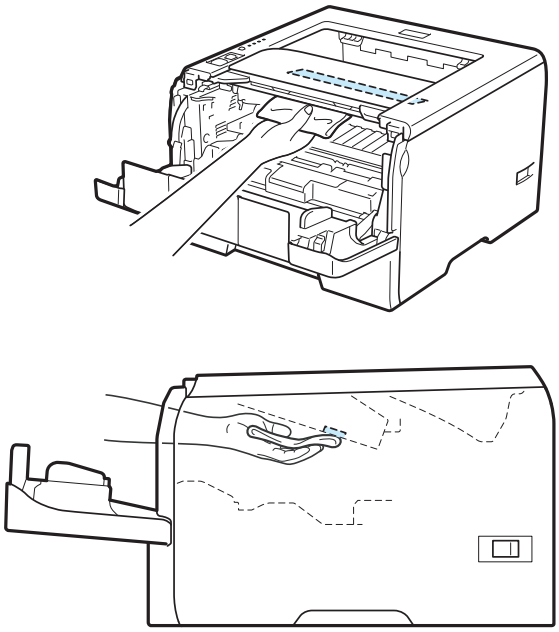
We recommend that you put the drum unit and toner cartridge assembly on a piece of disposable paper or cloth in case you accidentally spill or scatter toner.

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.



4 Wipe the scanner window with a dry, lint-free cloth.



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

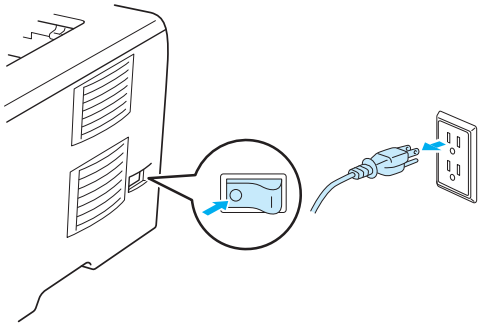
6 Close the front cover.

7 Plug the printer back in, and then turn on the power switch.

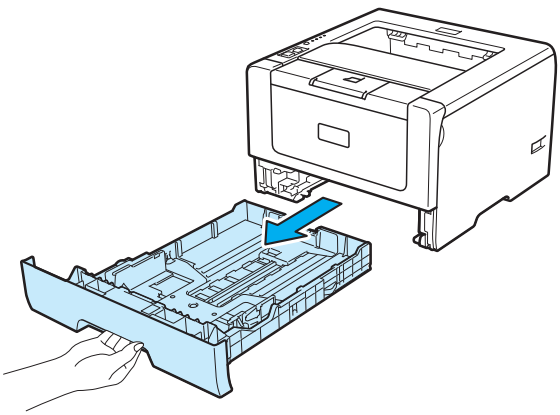
Cleaning the paper pick-up roller

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:

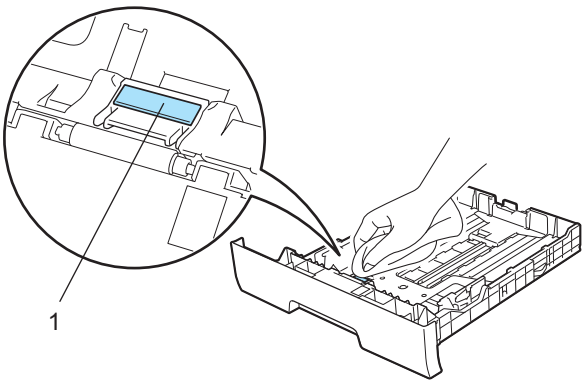
1. Turn off the power switch and unplug the printer.



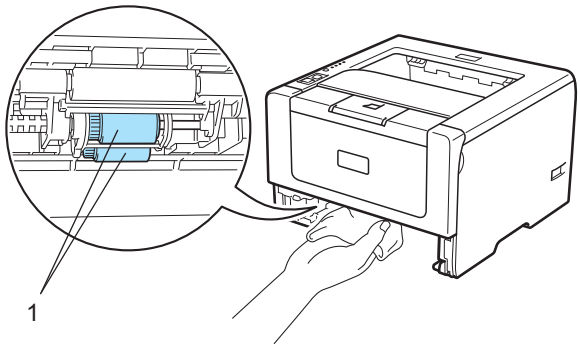
2. Unplug the power cord and interface cable from the printer.
3. Pull the paper tray out of the printer.



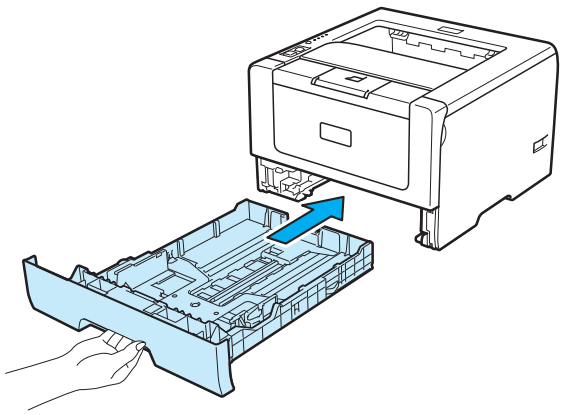
4. Dampen a soft cloth with lukewarm water and wipe the separator pad (1) in the paper tray with it.



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.

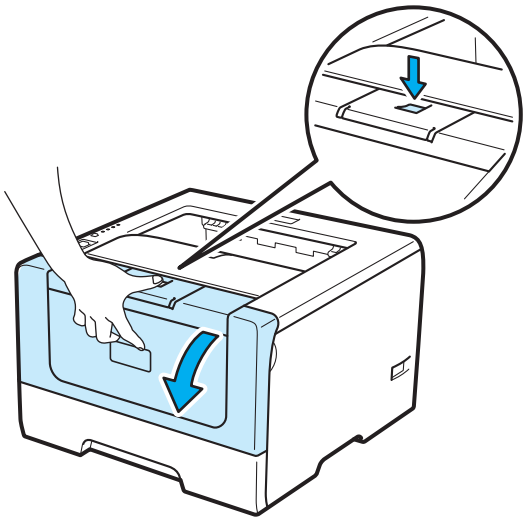
8 Plug in the power cord and turn on the power switch of the printer.

Cleaning the corona wires

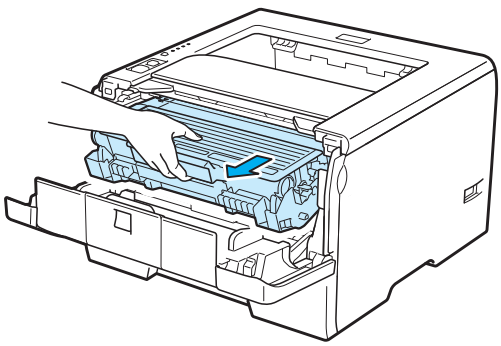
Cleaning the corona wire

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.



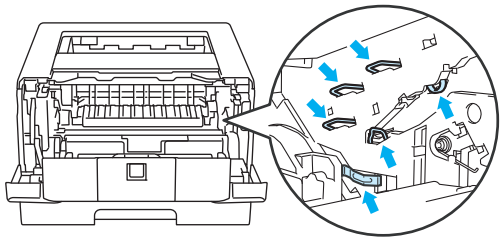
2. Take out the drum unit and toner cartridge assembly.



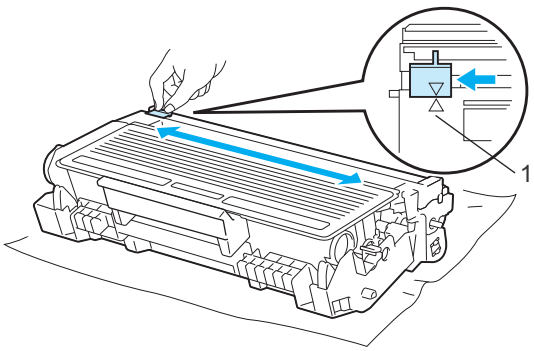
IMPORTANT

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.



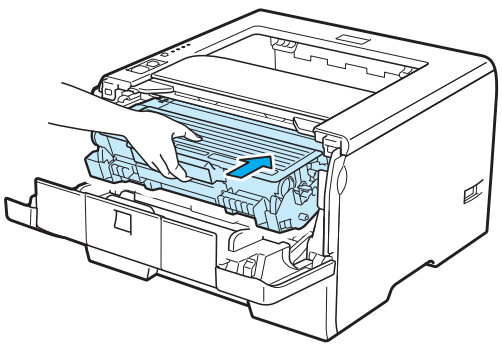
3 Clean the primary corona wire inside the drum unit by gently sliding the blue tab from right to left and left to right several times.



Note

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

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



7 Troubleshooting

You can correct most problems by yourself. If you need additional help, our website offers the latest FAQs and troubleshooting tips. Visit us at http://www.lenovo.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.

- **Printer LED is blinking**

  See *LEDs (Light Emitting Diodes)* on page 70.

- **Status Monitor Error Message appears**

  See *Error messages in the Status Monitor* on page 110.

- **Paper handling**

  See *Paper handling* on page 113 and *Paper jams and how to clear them* on page 114.

- **Other problems**

  See *Other problems* on page 131.

Pages are printed, but there are problems with:

- **Print quality**

  See *Improving the print quality* on page 123.

- **Printout is incorrect**

  See *Solving print problems* on page 130.

Error messages in the Status Monitor

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

If you want to turn the status monitor on, see *Status Monitor* on page 44 (For Windows® user) or *Status Monitor* on page 59(For Macintosh users).

Error message	Action
Cartridge Position Error	■ Put the drum unit assembly back in.
Drum End Soon	■ The drum unit is near the end of its life. Buy a new drum unit to replace the current one. See *Replacing the drum unit* on page 96.
Replace Drum	■ See *Replacing the drum unit* on page 96
Duplex Disabled	■ Close the back cover of the printer and put the duplex tray back in.
Drum Error	■ See *Cleaning the corona wire* on page 107.
Front Cover is Open	■ Close the front cover of the printer.
Fuser Cover is Open	■ Close the fuser cover located behind the back cover of the printer.
Incorrect paper size for auto DX	■ Press **Go** or **Job Cancel**. Set the correct paper that you want to use, or load the same size paper that you selected in the current driver setting. The paper size you can use for automatic duplex printing is A4.
Jam MP Tray **Jam Tray 1** **Jam Tray 2** **Jam Tray 3** **Jam Inside** **Jam Rear** **Jam Duplex**	■ Clear the jammed paper from the indicated area. See *Paper jams and how to clear them* on page 114.
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 *Control panel buttons* on page 78. ■ Reduce the complexity of your document or cut the print resolution. ■ Add more memory. See *Installing extra memory* on page 85.
No Toner	■ Open the front cover, then install the toner cartridge.

Error message	Action
No Paper **No Paper for Manual Feed** **No Paper MP or Size Mismatch** **No Paper in Tray 1 or Size Mismatch** **No Paper in Tray 2 or Size Mismatch** **No Paper in Tray 3 or Size Mismatch**	■ The paper tray may be out of paper or not properly installed. If it is empty, put a new stack of paper in the paper tray and then press **Go**. If the problem is still unsolved, the paper pick-up roller may be stained. Clean the paper pick-up roller. See *Cleaning the paper pick-up roller* on page 105. ■ If there is paper in the paper tray, make sure it is straight. If the paper is curled, straighten it before printing. Sometimes it is helpful to remove the paper, turn the stack over and put it back in the paper tray. ■ Cut the amount of paper in the paper tray, and then try again. ■ Make sure you use paper that meets Lenovo's recommended paper specifications. See *About paper* on page 6. ■ Load the same size paper that you selected in the current driver setting.
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 *Control panel buttons* on page 78. ■ If this does not clear the error, reduce the complexity of your document or cut the print resolution. ■ Add more memory. See *Installing extra memory* on page 85. ■ 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 mode ■ TrueType mode ■ Use Printer TrueType® Fonts [1] Choose the **Advanced** tab, click the **Print Quality** icon, and then choose **Manual** in **Print Settings** and click the **Setting...** button.
Service call error	■ Check the LED indication to identify the error. See *Service call indications* on page 76.
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.
Replace PF KitMP	Call your dealer or Lenovo Customer Service for a replacement paper feeding kit (paper pick up roller and separation plate) for the MP tray.
Replace PF Kit1	Call your dealer or Lenovo Customer Service for a replacement paper feeding kit (paper pick up roller and separation plate) for Tray 1.
Replace PF Kit2	Call your dealer or Lenovo Customer Service for a replacement paper feeding kit (paper pick up roller and separation plate) for Tray 2.
Replace PF Kit3	Call your dealer or Lenovo Customer Service for a replacement paper feeding kit (paper pick up roller and separation plate) for Tray 3.
Replace Fuser Unit	Call your dealer or Lenovo Customer Service for a replacement fuser unit.
Replace Laser Unit	Call your dealer or Lenovo Customer Service for a replacement laser unit.
Replace Toner	■ See *Replacing the toner cartridge* on page 89.
Toner Low	■ Buy a new toner cartridge and have it ready for when the **Replace Toner** status is indicated.

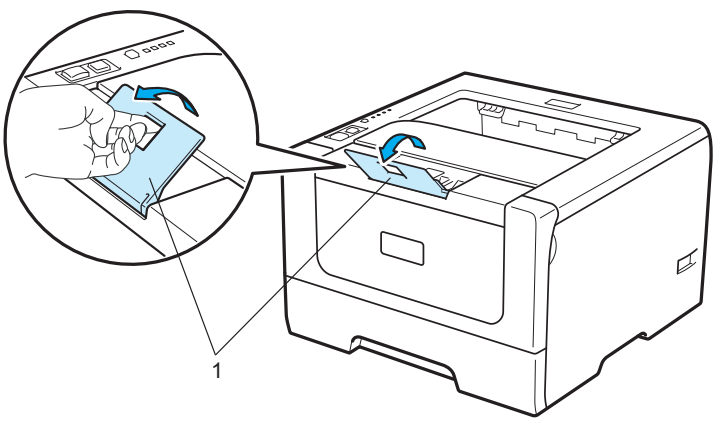
Error message printout

The printer can also report problems by printing an error message. Use the table below to identify and clear the error message. The default setting for the error message printout is off. If you want to turn the error message printout on, from the **Advanced** tab of the Windows® printer driver click the **Other Print Options...**, and then choose **Error Message Printout**.

Error message	Action
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 *Control panel buttons* on page 78. ■ Reduce the complexity of your document or cut the print resolution. ■ Add more memory. See *Installing extra memory* on page 85.
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 *Control panel buttons* on page 78. ■ If this does not clear the error, reduce the complexity of your document or cut the print resolution. ■ Add more memory. See *Installing extra memory* on page 85. ■ Set page protection to **Auto** by using the supplied Windows® driver or the 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 [1] Choose the **Basic** tab, choose **Manual** in **Print Settings**, and then click **Manual Settings...**.
Resolution Adapted	■ Reduce the complexity of your document before you print to prevent automatic reduction in the resolution.

Paper handling

First, make sure that you are using paper that meets Lenovo's 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 105.
The printer does not feed paper from the MP tray.	■ Fan the paper well and put it back in firmly. ■ 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 *Paper jams and how to clear them* on page 114.)
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. 

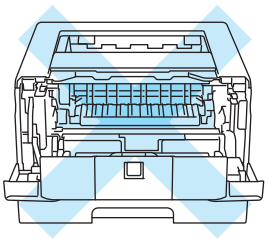
Paper jams and how to clear them

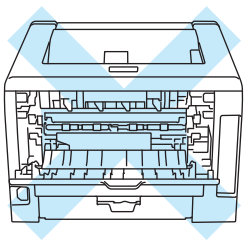
Jam MP tray / Tray1 / Tray2 / Tray3 / Inside

If a paper jam occurs inside the MP tray or paper tray, the printer will flash the **Paper** LED as shown below.

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.





Clear the jammed paper as follows.

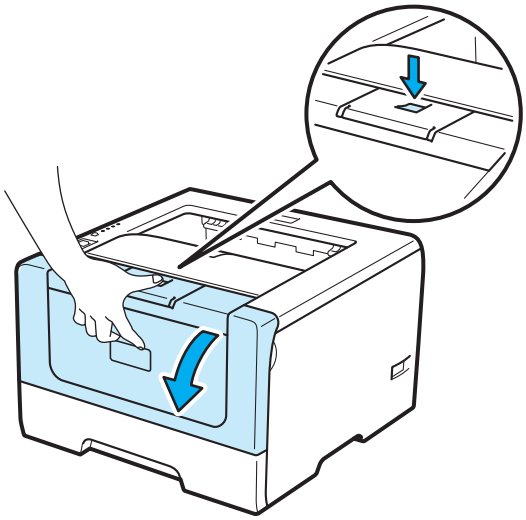
If the jammed paper is removed completely by following the steps below, you can install the paper tray, and then close the front cover. The printer will resume printing automatically.

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

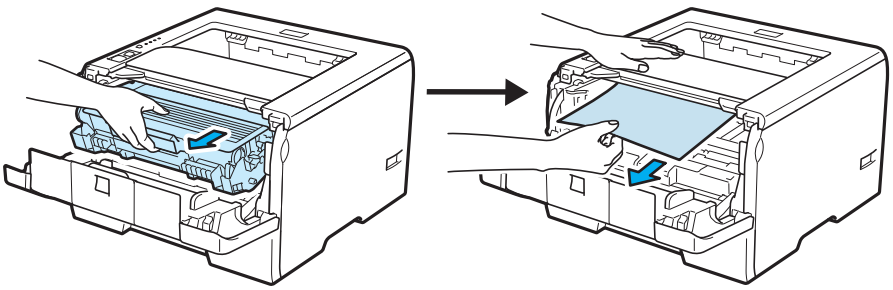
Note

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

1. Open the front cover.



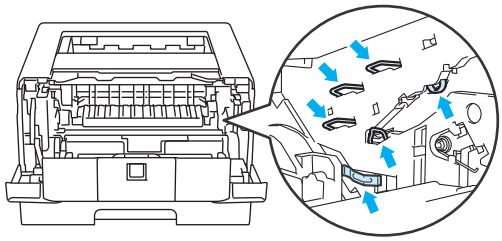
2. Slowly take out the drum unit and toner cartridge assembly. The jammed paper will be pulled out with the drum unit and toner cartridge assembly.



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.

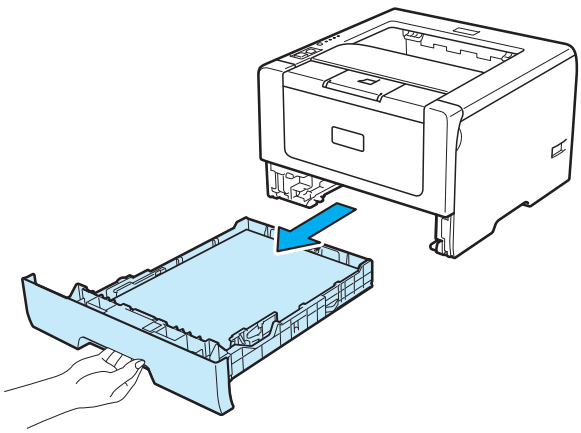


3 Close the front cover.

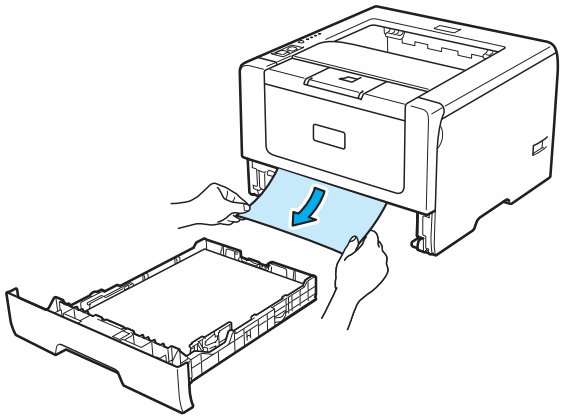
Note

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

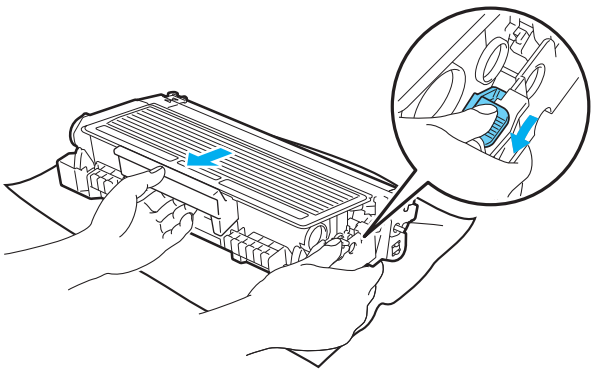
4 Pull the paper tray completely out of the printer.



5 Pull the jammed paper down and out of the printer.



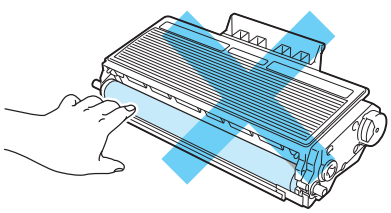
6 Push down the blue lock lever and take the toner cartridge out of the drum unit. Clear the jammed paper if there is any inside the drum unit.

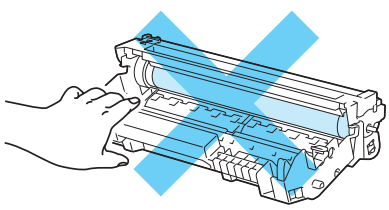


IMPORTANT

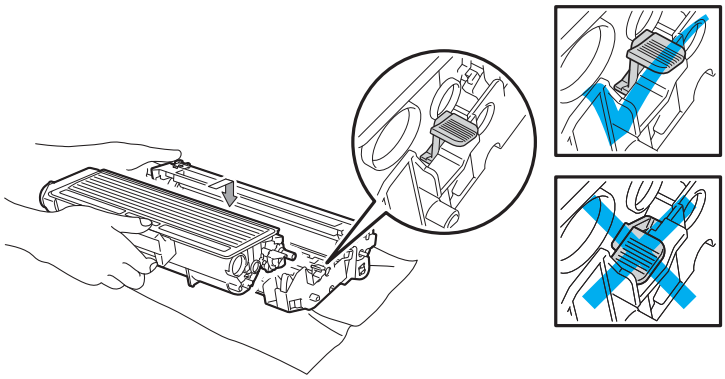
Handle the toner cartridge carefully. If toner scatters on your hands or clothes, wipe or wash it off with cold water at once.

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

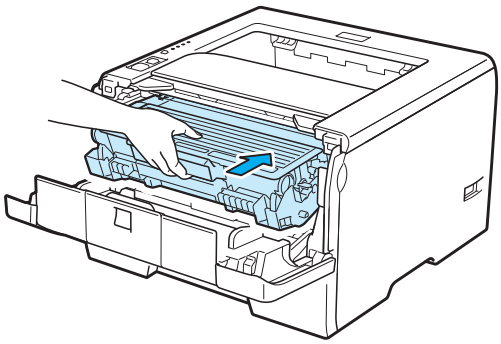




7 Put the toner cartridge back into the drum unit until you hear it lock into place. If you put the cartridge in properly, the blue lock lever will lift automatically.



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



9 Put the paper tray firmly back in the printer.

10 Close the front cover.

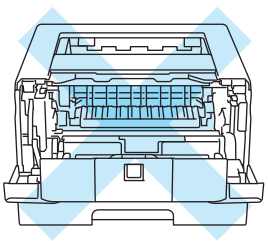
11 Make sure that the **Paper** LED is off and then, the **Status** LED lights green.

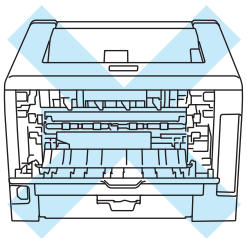
Jam Rear / Duplex

If a paper jam occurs behind the back cover (back output tray) or inside the duplex tray, the printer will flash the **Back Cover** and **Paper** LED as shown below.

CAUTION

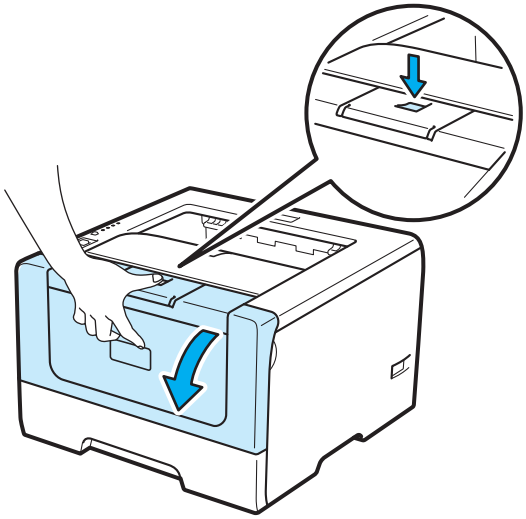
After you have just used the printer, some internal parts of the printer will be extremely hot. To prevent injury, when you open the front cover or back cover (back output tray) of the printer, DO NOT touch the shaded parts shown in the illustration. If you do this, you may get burned.



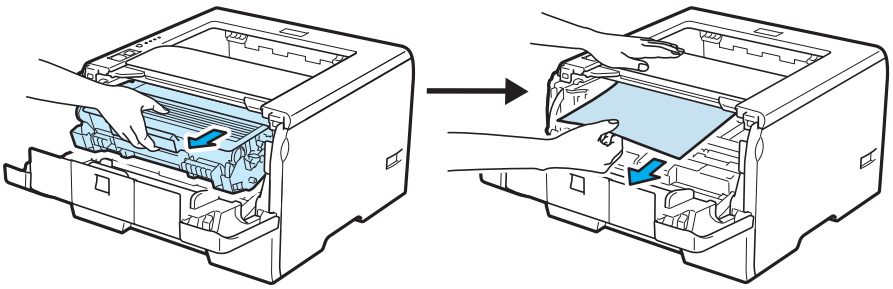


Clear the jammed paper as follows.

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



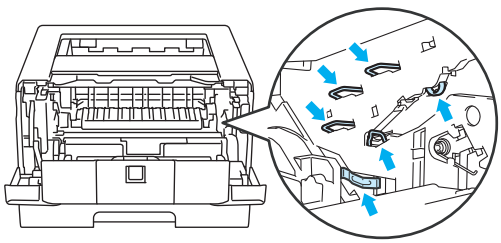
2. Slowly take out the drum unit and toner cartridge assembly. The jammed paper will be pulled out with the drum unit and toner cartridge assembly.



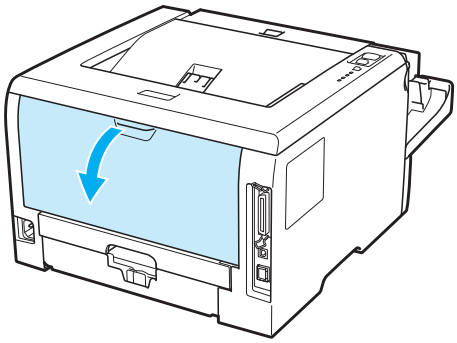
IMPORTANT

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.

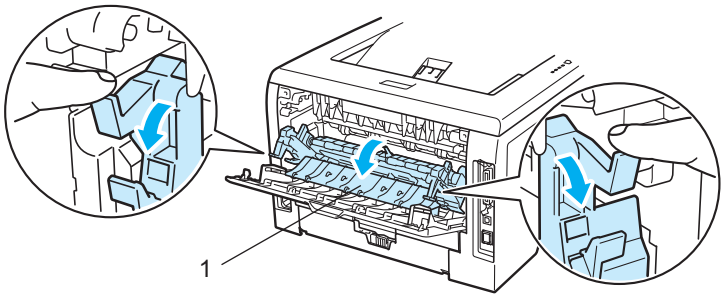
To prevent damage to the printer caused by static electricity, DO NOT touch the electrodes shown in the illustration.



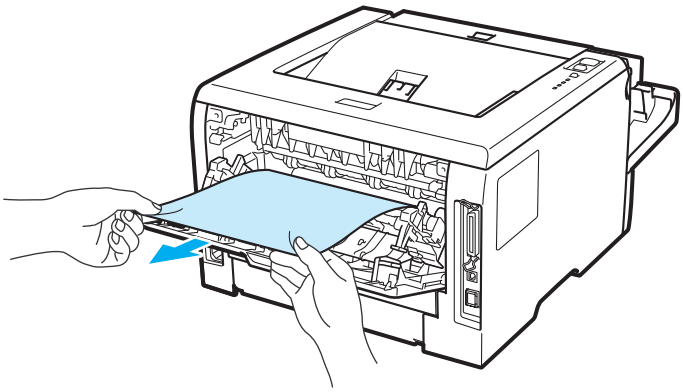
3 Open the back cover.



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

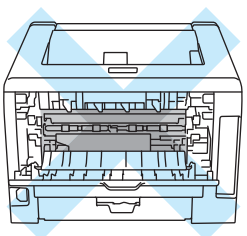


5 Using both hands, gently pull the jammed paper out of the fuser unit.

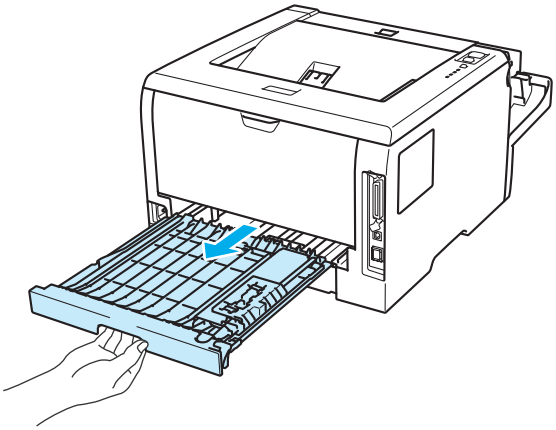


CAUTION

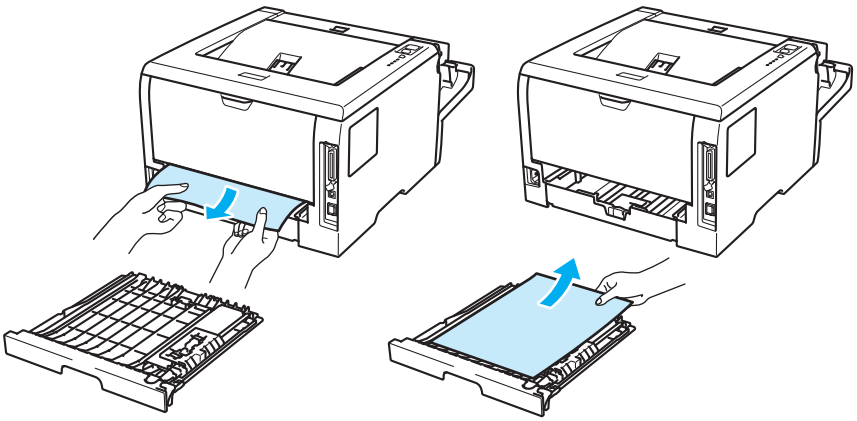
After you have just used the printer, some internal parts of the printer will be extremely hot. Wait for the printer to cool down before you touch the internal parts of the printer.



6. Put the drum unit and toner cartridge assembly back in the printer (press firmly).
7. Fully close the front and back covers.
8. Pull the duplex tray completely out of the printer.



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

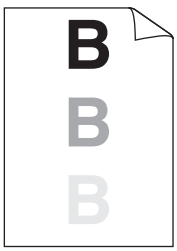


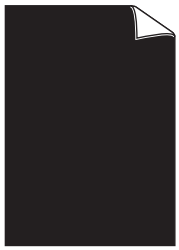
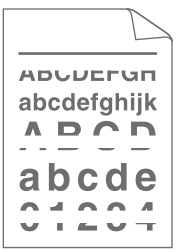
10. Put the duplex tray back in the printer.
11. Make sure that the **Back Cover** and **Paper** LED are off and then, the **Status** LED lights green.

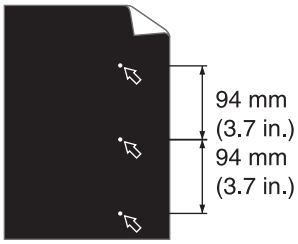
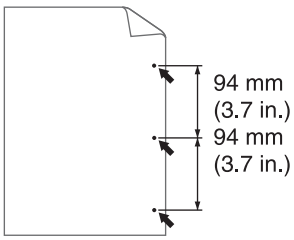
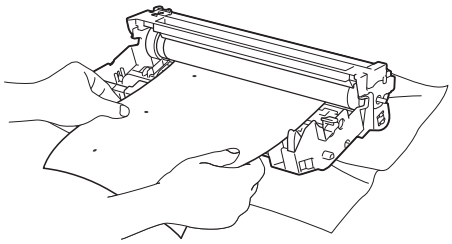
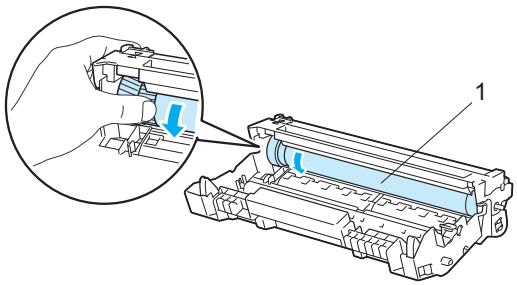
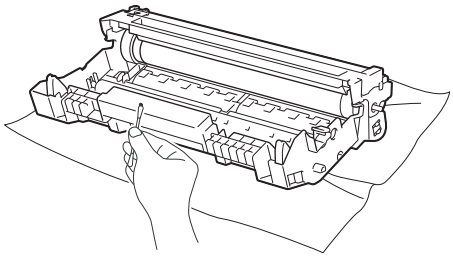
Improving the print quality

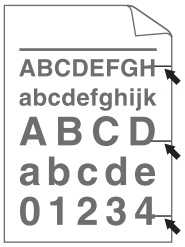
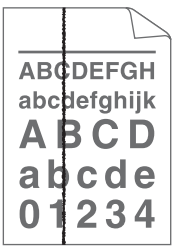
If you have a print quality problem, print a test page first (see *Print a test page* on page 79). If the printout looks good, the problem is probably not the printer. Check the interface cable or try the printer on another computer.

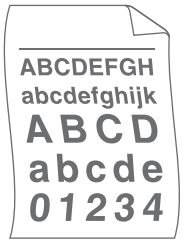
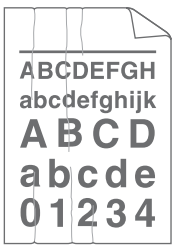
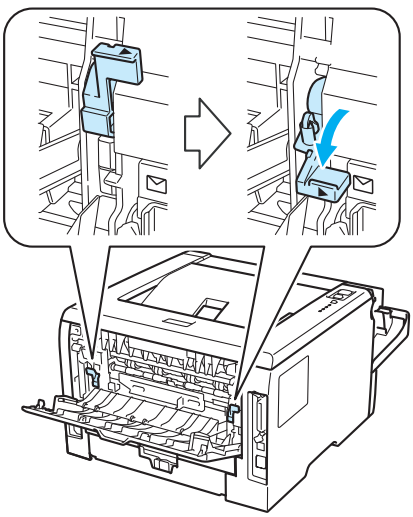
This section gives information on the following topics.

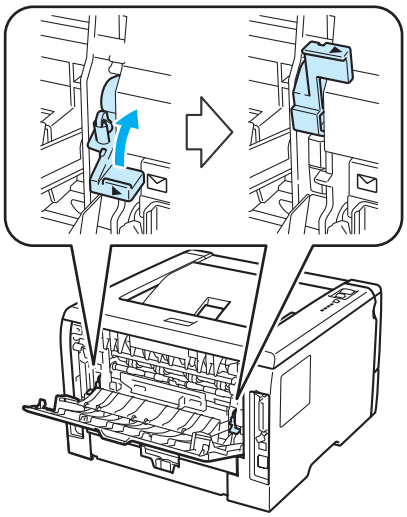
Examples of poor print quality	Recommendation
 Faint	■ Check the printer's environment. Conditions such as humidity, high temperatures, and so on, may cause this print fault. See *Positioning the printer* on page 5. ■ If the whole page is too light, **Toner Save Mode** may be on. Turn off **Toner Save Mode** in the printer **Properties** tab of the driver. ■ Put in a new toner cartridge. See *Replacing the toner cartridge* on page 89. ■ Put in a new drum unit. See *Replacing the drum unit* on page 96. ■ You may clear the problem by wiping the scanner window with a soft cloth. See *Cleaning the inside of the printer* on page 102.
 Gray background	■ Make sure that you use paper that meets our specifications. See *About paper* on page 6. ■ Check the printer's environment. Conditions such as high temperatures and high humidity can increase the amount of background shading. See *Positioning the printer* on page 5. ■ Put in a new toner cartridge. See *Replacing the toner cartridge* on page 89. ■ Put in a new drum unit. See *Replacing the drum unit* on page 96.
 **Ghost**	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper or thick print media may cause this problem. See *About paper* on page 6. ■ 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 *Replacing the drum unit* on page 96. ■ The fuser unit may be contaminated. Call Lenovo Customer Service.
 Toner specks	■ Make sure that you use paper that meets our specifications. Rough-surfaced paper may cause the problem. See *About paper* on page 6. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96. ■ The fuser unit may be contaminated. Call Lenovo Customer Service.

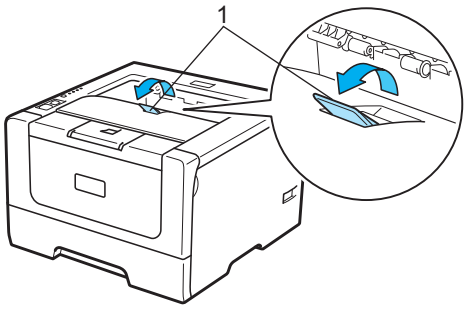
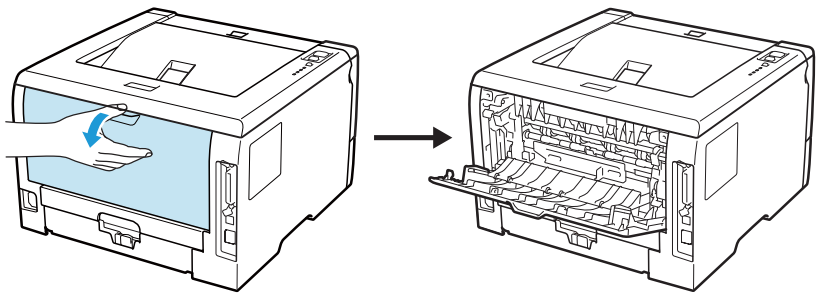
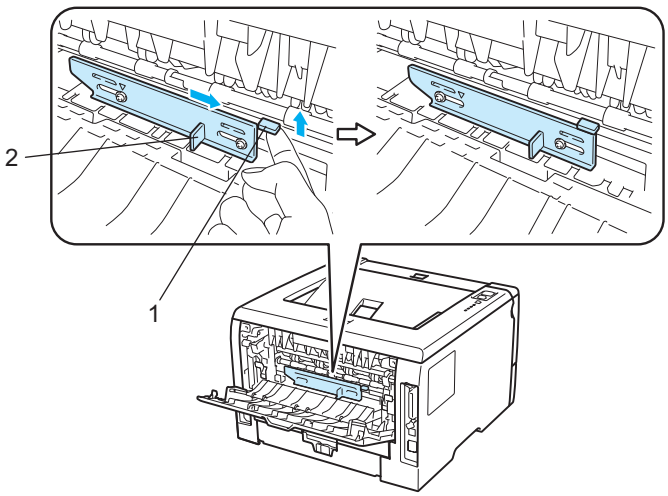
Examples of poor print quality	Recommendation
 Hollow print	■ Make sure that you use paper that meets our specifications. See *About paper* on page 6. ■ Choose **Thick Paper** mode in the printer driver, or use thinner paper than what you are now using. ■ Check the printer's environment. Conditions such as high humidity can cause hollow print. See *Positioning the printer* on page 5. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96.
 **All black**	■ 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 107. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96. ■ The fuser unit may be contaminated. Call Lenovo Customer Service.
 White lines across the page	■ Make sure that you use paper that meets our specifications. A rough surfaced paper or thick print media can cause problems. ■ Make sure that you choose the proper media type in the printer driver. ■ 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. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96.
 Lines across the page	■ Clean the inside of the printer and the primary corona wire in the drum unit. See *Cleaning the inside of the printer* on page 102 and *Cleaning the corona wires* on page 107. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96.
 **White lines, bands or ribbing across the page**	■ Check the printer's environment. Conditions such as high humidity and high temperatures may cause this print quality problem. (See *Positioning the printer* on page 5.) ■ If the problem is not solved after printing a few pages, put in a new drum unit. (See *Replacing the drum unit* on page 96.)

Examples of poor print quality	Recommendation
 **White Spots on black text and graphics at 94 mm (3.7 in.) intervals**  **Black Spots at 94 mm (3.7 in.) intervals**	■ 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 96.

Examples of poor print quality	Recommendation
 **Black toner marks across the page**	■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96. ■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 89. ■ Make sure that you use paper that meets our specifications. See *About paper* on page 6. ■ 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 *Clean the drum unit as follows:* on page 125. ■ 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.
 **Black lines down the page** Printed pages have toner stains down the page.	■ Clean the primary corona wire inside the drum unit by sliding the blue tab. See *Cleaning the corona wire* on page 107. ■ Make sure the primary corona wire cleaner is at the home position (▲). ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96. ■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 89. ■ The fuser unit may be smudged. Call your dealer or Lenovo Customer Service.
 White lines down the page	■ Make sure that a torn piece of paper is not inside the printer covering the scanner window. ■ Wipe the scanner window with a soft cloth. See *Cleaning the inside of the printer* on page 102. ■ The toner cartridge may be damaged. Put in a new toner cartridge. See *Replacing the toner cartridge* on page 89. ■ The drum unit may be damaged. Put in a new drum unit. See *Replacing the drum unit* on page 96.
 Page skewed	■ Make sure that the paper or other print media is loaded properly in the paper tray and that the guides are not too tight or too loose against the paper stack. ■ Set the paper guides correctly. See *Printing on plain paper, bond paper or transparencies from Tray 1, 2 or 3* on page 11. ■ If you are using the multi-purpose tray, see *Printing on plain paper, bond paper or transparencies from the MP tray* on page 15. ■ The paper tray may be too full. 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.

Examples of poor print quality	Recommendation
 **Curled or wavy**	■ Check the paper type and quality. High temperatures and high humidity will cause paper to curl. See *About paper* 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.
 **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.

Examples of poor print quality	Recommendation
 Poor Fixing	■ Open the back cover and make sure that the two blue levers on the left and right hand sides are in the up position.  ■ Choose **Improve Toner Fixing** mode in the printer driver. See **Improve Print Output** in *Advanced tab* on page 37 (For Windows® printer driver), *Advanced options* on page 48 (For BR-Script printer driver for Windows®) or *Print Settings* on page 55 (For Macintosh). If this selection does not provide enough improvement, select **Thicker Paper** in **Media Type** settings.

Examples of poor print quality	Recommendation
 Curled	■ Lift up the Face-down Output Tray Support Flap 2 (Support Flap 2) (1).  ■ Choose **Reduce Paper Curl** mode in the printer driver. See **Improve Print Output** in *Advanced tab* on page 37 (For Windows® printer driver), *Advanced options* on page 48 (For BR-Script printer driver for Windows®) or *Print Settings* on page 55 (For Macintosh). ■ Turn the paper over in the paper tray, and print again (excluding Letterhead paper). If the problem remains, slide the Anti-Curl Switch as follows: 1) Open the back cover.  2) With one hand, use the tab (1) to lift the roller assembly, then use your other hand to slide the Anti-Curl Switch (2) in the direction of the arrow.  3) Close the back cover.

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** appears.	■ 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 *Control panel buttons* on page 78.) ■ Reduce the complexity of your document or cut the print resolution. ■ Add more memory. (See *Installing extra memory* on page 85.)
The printer cannot print full pages of a document. An error message **PRINT OVERRUN** appears.	■ 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 *Control panel buttons* on page 78. ■ Reduce the complexity of your document or cut the print resolution. ■ Add more memory. See *Installing extra memory* on page 85. ■ Set page protection to **Auto** by using the supplied Windows® driver. ■ Change the following settings in the supplied Windows® driver and try again. The best combination of these settings will vary depending on your document: ■ Graphics [1] ■ TrueType Mode [1] ■ Use Printer TrueType® Fonts [1] 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 LJ3650DN)

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.

Other problems

Problem	Recommendation
The printer cannot print. The '**There was an error writing to LPT1: (or BRUSB) for the printer'** error message is displayed on your computer.	■ Make sure that the printer cable is not damaged or broken. ■ Make sure the printer is turned on and that no error LEDs are lit on the printer. ■ 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 10.3.9 and 10.4.x) or **Print & Fax** in **System Preferences** (Mac OS X 10.5.x).	■ 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.x and 10.4.x) or **Print & Fax** in **System Preferences**.

BR-Script 3

Problem	Recommendation
The print speed slows down.	Add optional memory. (See *Installing extra memory* on page 85.)
The printer cannot print EPS data that includes binary.	You need the following settings to print EPS data: 1) 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**. 2) Right-click the **Lenovo LJXXXX BR-Script3** icon and select **Properties**. 3) From the **Device Settings** tab, choose **TBCP** (Tagged binary communication protocol) in **Output Protocol**.

A Appendix

Printer specifications

Engine

Model		LJ3600D	LJ3650DN
Technology		Electrophotographic	
Print speed [1]	Standard (A4/Letter)	Up to 30 ppm (A4) [2], Up to 32 ppm (Letter) [2]	
	Auto Duplex (A4)	Up to 13 sides per minute (6.5 sheets per minute)	
First print time		Less than 8.5 sec	
Resolution	Windows® 2000/XP/ XP Professional x64 Edition, Windows Vista®, Windows Server® 2003/ Windows Server® 2003 x64 Edition/ Windows Server® 2008	1200 dpi [3] HQ1200 600 dpi 300 dpi	
	DOS	600 dpi	
	Mac OS X 10.3.9 - 10.5.x	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

Model		LJ3600D	LJ3650DN
Processor		300MHz	
Memory	Standard	16 MB	32 MB
	Option	1 SO-DIMM (144pin) slot (64, 128, 256, 512MB); expandable up to 528 MB	1 SO-DIMM (144pin) slot (64, 128, 256, 512MB); expandable up to 544 MB
Interface	Standard	IEEE 1284 Parallel, Hi-Speed USB2.0	IEEE 1284 Parallel, Hi-Speed USB2.0, 10/100BASE-TX Ethernet
Network Connectivity	Protocols	N/A	TCP/IP (Standard 10/100BASE-TX Ethernet) [1]
	Management tool	N/A	BRAdmin Light [2] Web Based Management [3]
Emulation		PCL6, BR-Script3 [4], IBM ProPrinter XL, EPSON FX-850	
Resident fonts	PCL	66 scalable fonts, 12 bitmap fonts, 13 bar codes [5]	
	PostScript® 3™	66 fonts	

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

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

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

4 PostScript® 3™ language emulation.

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

Software

Model		LJ3600D	LJ3650DN
Printer driver	Windows®	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	Macintosh Printer Driver for Mac OS X 10.3.9 - 10.5.x	
		BR-Script 3 (PPD file) for Mac OS X 10.3.9 - 10.5.x	

Control panel

Model	LJ3600D	LJ3650DN
LED	5 LEDs: Back Cover, Toner, Drum, Paper and Status	
Button	2 buttons: Job Cancel and Go	

Paper handling

Model		LJ3600D	LJ3650DN
Paper Input [1]	Multi-purpose tray	50 sheets	
	Paper tray (Standard)	250 sheets	
	Lower tray (Option)	250 sheets	
Paper Output [1]	Face-down	150 sheets	
	Face-up	1 sheet	
Duplex	Manual Duplex	Yes	
	Automatic Duplex	Yes	

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

Media specifications

Model		LJ3600D	LJ3650DN
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 weights	Multi-purpose tray	60 to 163 g/m^2 (16 to 43 lb)	
	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

2 Up to 10 sheets

Supplies

Model		LJ3600D	LJ3650DN	Order No.
Toner Cartridge	Standard cartridge	Approx. 3,000 pages A4/Letter pages [1]		LT4636
	High yield cartridge	Approx. 8,000 pages A4/Letter pages [1]		LT4636H
Drum Unit		Approx. 25,000 pages A4/Letter pages		LD4636

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

Dimensions / weights

Model	LJ3600D	LJ3650DN
Dimensions (W × D × H)	371 × 384 × 246 mm (14.6 × 15.1 × 9.7 in.)	
Weights	Approx. 9.5 kg (20.9 lb)	

Other

Model			LJ3600D	LJ3650DN
Power consumption		Printing	Average 675 W at 25 °C (77 °F)	Average 675 W at 25 °C (77 °F)
		Standby	Average 75 W at 25 °C (77 °F)	Average 75 W at 25 °C (77 °F)
		Sleep	Average 6 W	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)	
		Standby	LWAd = 3.7 Bell (A)	
Ecology	Power save		Yes	
	Toner save [1]		Yes	

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

A

Computer requirements

Computer Platform & Operating System Version		Processor Minimum Speed	Minimum RAM	Recommended RAM	Hard Disk Space to install	Supported PC Interface [2]
Windows® Operating System [1]	Windows® 2000 Professional	Intel® Pentium® II or equivalent	64 MB	256 MB	50 MB	USB, 10/100BASE-TX(Ethernet), IEEE802.11b/g, IEEE1284 Parallel
	Windows® XP Home Edition		128 MB			
	Windows® XP Professional					
	Windows® XP Professional x64 Edition	64-bit (Intel® 64 or AMD64) supported CPU	256 MB	512 MB		
	Windows Vista®	Intel® Pentium® 4 or equivalent 64-bit (Intel® 64 or AMD64) supported CPU	512 MB	1 GB		
	Windows Server® 2003	Intel® Pentium® III or equivalent	256 MB	512 MB		
	Windows Server® 2003 x64 Edition	64-bit (Intel® 64 or AMD64) supported CPU				
	Windows Server® 2008	Intel® Pentium® 4 or equivalent 64-bit (Intel®64 or AMD64) supported CPU	512 MB	2 GB		
Macintosh Operating System	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), IEEE802.11b/g
	Mac OS X 10.4.4 - 10.5.x	PowerPC G4/G5, Intel® Core™ Processor	512 MB	1 GB		

1 Microsoft® Internet Explorer® 5.5 or greater

2 Third party USB/Parallel ports are not supported.

A

Important information for choosing your paper

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

Note

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
lb		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/m^2	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) software.

How to use the Web Based Management (web browser)

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

Note

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

Note

- If you have edited the hosts file on your computer or are using a Domain Name System, you can also enter the DNS name of the print server. 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 "BRNxxxxxxxxxxx" 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.
- The current printer IP Address is found on the Print Settings. For that instructions, See *Print the Printer Settings page* on page 80.

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

Note

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

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

Symbol and character sets list

OCR symbol sets

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

OCR A (0O)

OCR B (1O)

HP LaserJet mode

ABICOMP Brazil / Portugal (13P)
Desktop (7J)
HP German (0G)
ISO Latin1 (0N)
ISO Latin5 (5N)
ISO2 IRV (2U)
ISO5 ASCII (0U)
ISO11 Swedish (0S)
ISO15 Italian (0I)
ISO17 Spanish (2S)
ISO25 French (0F)
ISO60 Norwegian1 (0D)
ISO69 French (1F)
ISO85 Spanish (6S)
ISO8859 / 15 Latin (9N)
Legal (1U)
MC Text (12J)
PC8 (10U)
PC8 D/N (11U)
PC8 Latin / Greek (12G)
PC8 Turkish (9T)
PC850 Multilingual (12U)
PC852 East Europe (17U)
PC855 Cyrillic (10R)
PC858 Multilingual Euro (13U)
PC861 Iceland (21U)
PC865 Nordic (25U)
PC869 Greece (11G)
Pi Font (15U)
PS Text (10J)
Roman9 (4U)
Russian-GOST (12R)
ABICOMP International (14P)
Greek8 (8G)
HP Spanish (1S)
ISO Latin2 (2N)
ISO Latin6 (6N)
ISO4 UK (1E)
ISO10 Swedish (3S)
ISO14 JIS ASCII (0K)
ISO16 Portuguese (4S)
ISO21 German (1G)
ISO57 Chinese (2K)
ISO61 Norwegian2 (1D)
ISO84 Portuguese (5S)
ISO8859 / 7 Latin / Greek (12N)
ISO8859 / 15 Latin / Cyrillic (10N)
Math-8 (8M)
MS Publishing (6J)
PC8 Bulgarian (13R)
PC8 Greek Alternate (437G) (14G)
PC8 PC Nova (27Q)
PC775 (26U)
PC851 Greece (10G)
PC853 Latin3 (Turkish) (18U)
PC857 Latin5 (Turkish) (16U)
PC860 Portugal (20U)
PC863 Canadian French (23U)
PC866 Cyrillic (3R)
PC1004 (9J)
PS Math (5M)
Roman8 (8U)
Roman Extension (0E)
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 i n ... n \

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

Definition of parameters

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

Bar code mode

n = ‘t0’ or ‘T0’	CODE 39 (default)
n = ‘t1’ or ‘T1’	Interleaved 2 of 5
n = ‘t3’ or ‘T3’	FIM (US-Post Net)
n = ‘t4’ or ‘T4’	Post Net (US-Post Net)
n = ‘t5’ or ‘T5’	EAN 8, EAN 13, or UPC A
n = ‘t6’ or ‘T6’	UPC E
n = ‘t9’ or ‘T9’	Codabar
n = ‘t12’ or ‘T12’	Code 128 set A
n = ‘t13’ or ‘T13’	Code 128 set B
n = ‘t14’ or ‘T14’	Code 128 set C
n = ‘t130’ or ‘T130’	ISBN (EAN)
n = ‘t131’ or ‘T131’	ISBN (UPC-E)
n = ‘t132’ or ‘T132’	EAN 128 set A
n = ‘t133’ or ‘T133’	EAN 128 set B
n = ‘t134’ or ‘T134’	EAN 128 set C

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

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

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

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

Expanded Character

‘S’

0 = White

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

For example ‘S’ n1 n2

n1 = Background fill pattern

n2 = Foreground fill pattern

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

Line block drawing & box drawing

‘S’

1 = Black

2 = Vertical stripes

3 = Horizontal stripes

4 = Cross hatch

Bar code

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

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

Bar code human readable line ON or OFF

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

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

Preset: Human readable line OFF

All others

This parameter shows whether the 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 = ‘onnn’ or ‘Onnn’ (nnn = 0 ~ 32767)

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

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

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

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

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

n = ‘xnnn’ or ‘Xnnn’

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

Bar code & expanded character offset in Y-axis

n = ‘ynnn’ or ‘Ynnn’

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

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

n = ‘hnnn’, ‘Hnnn’, ‘dnnn’, or ‘Dnnn’

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

2) UPC-E: 18 mm

3) Others: 12 mm

Expanded characters → 2.2 mm (preset)

Line block drawing and box drawing → 1 dot

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

Expanded character width, line block drawing and box drawing

n = ‘wnnn’ or ‘Wnnn’

Expanded character ⟶ 1.2 mm

Line block drawing and box drawing ⟶ 1 dot

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

Expanded character rotation

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

Bar code data start

n = ‘b’ or ‘B’

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

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

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

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

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

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

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

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

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

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

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

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

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

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

A number of characters other than those stated above will cause a data error that results in the bar code data being printed as normal print data. If the check digit is not correct, the 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 ‘l’ or ‘L’ is read as expanded character data (or labeling data). Expanded character data must end with the ‘ \ ’ code (5CH), which also ends this command.

Table of Code (EAN) 128 set C

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

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	>	0x3e
63	63	?	0x3f
64	64	@	0x40
65	65	A	0x41
66	66	B	0x42
67	67	C	0x43
68	68	D	0x44
69	69	E	0x45
70	70	F	0x46
71	71	G	0x47
72	72	H	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	O	0x4f
80	80	P	0x50
81	81	Q	0x51
82	82	R	0x52
83	83	S	0x53
84	84	T	0x54
85	85	U	0x55
86	86	V	0x56
87	87	W	0x57
88	88	X	0x58
89	89	Y	0x59
90	90	Z	0x5a
91	91	[	0x5b
92	92	\\	0x5c5c
93	93	]	0x5d
94	94	^	0x5e
95	95	_	0x5f
96	96	`	0x60
97	97	a	0x61
98	98	b	0x62
99	99	c	0x63
100	Set B	d	0x64
101	Set A	e	0x65
102	FNC 1	f	0x66

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$(27);"it5r1o0x00y70b1234567?\";
'UPC-A
LPRINT CHR$(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$(27);"it130r1o0x00y180b123456789012?+12345\";
'EAN 128 set A
LPRINT CHR$(27);"it132r1o0x00y210b1234567890?\";
LPRINT CHR$(12)
END
```

B Appendix

Lenovo website

IMPORTANT

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

FAQs (frequently asked questions)

The Lenovo website 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 Lenovo product.

http://www.lenovo.com/

You can check here for Lenovo driver updates.

Customer Service

Visit http://www.lenovo.com/ contact information on your local Lenovo office.

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