

PANTUM

P1000/P2000 Series
Laser Printer

User Guide



<http://www.pantum.com>

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Safety precautions

Laser safety statement

The device has a Class IIIB laser diode in the laser unit. You should not open the laser unit under any circumstances to avoid exposure to the laser beam. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

WARNING

Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

The label shown below is attached to the laser scanner unit inside the machine.



Safety information

These warnings and precautions are included in order to prevent injury to you and others, as well as preventing any potential damage to your machine. Be sure to read and understand all of these instructions before using the machine.

Use common sense for operating any electrical appliance and whenever using your machine. Also, follow all warnings and instructions marked on the machine and in the accompanying literature. After reading this section, keep it in a safe place for future reference

	<p>There is high voltage electric current in the equipment. Before servicing the printer, please turn the printer off and unplug the power cord from the AC power supply wall outlet.</p>	
	<p>Touching the power cord and AC power supply wall outlet with a wet hand can result in an electric shock.</p>	
	<p>Parts of the printer will be hot after printer operation. Do not touch the fuser unit when opening the front or rear covers.</p>	
	<p>The Caution label warns of areas that will get hot. Please do not remove or damage this label.</p>	

Please comply with the following general guide lines for operating electrical equipment:

1. Be familiar with the basic knowledge of operating electrical appliances.
2. Comply with all notices, cautions and instructions accompanied with the equipment.
3. If the operating instructions conflict with the safety information, please refer back to the safety information. If you cannot resolve the conflicts, please contact Pantum Customer Services for help.
4. Please turn the printer off and remove the power cord from the AC power supply wall outlet when cleaning the equipment. Do not use cleaning fluid or aerosol sprays, and clean the equipment only with a damp cloth.
5. Please make sure that the equipment is put on a stable desktop surface in order to avoid serious damage or personal injury caused by falling equipment.
6. Do not bend, step on, place or allow the power cord to be crushed by heavy objects. Nor allow the overload of the AC power supply wall outlets as this could result in a reduced performance, electric shock or fire.
7. Do not use this equipment in a power outlet not rated sufficiently for safe operation or overload wall outlets and extension cords. This can diminish performance, and could result in electric shock or fire.
8. Do not allow pets to chew on the AC power, telephone or PC interface cords. This could result in electric shock or fire/or injury to your pet.
9. Do not use the equipment if the power cord is damaged or if the electric outlet is not grounded. This could result in electric shock or fire.
10. Avoid exposing the equipment to any fluids or electric shock or fire could occur.
11. Do not disassemble the equipment in order to avoid electric shocks. In the event repairs are necessary use only a qualified professional maintenance person.
12. If any of following occurs, please disconnect the PC interface cable and pull out the power cord from the AC power supply wall socket, and consult with a qualified professional maintenance person:
 - the equipment is exposed to rain, water or other fluids.
 - the equipment falls, and the cover is damaged.
 - the performance of the equipment has obviously changed.
13. Please do not use the equipment in a thunderstorm in order to avoid electric shocks. If possible, pull out the power cord from the AC power supply wall socket.
14. Please retain this User Guide for future reference.

Regulatory Information



This symbol indicates that, at the end of your product life, it must not be discarded as domestic waste. Instead, you should dispose of your used equipment to a designated collection point for the recycling of waste electrical and electronic equipment. Ref: EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE). Please contact your distributor / supplier for further information.



This product is suitable for indoor use only.



European Community (EC) directives conformity

This product is in conformity with the protection requirements of EC Council directives 2004/108/EC and 2006/95/EC on the approximation and harmonization of the laws of the Member States relating to electromagnetic compatibility

and safety of electrical equipment designed for use within certain voltage limits.

The manufacturer of this product is: Zhuhai Seine Technology Co., Ltd., No. 63, Mingzhubei Road, Xiangzhou District, Zhuhai City, Guangdong, P.R. China.

A declaration of conformity to the requirements of the Directives is available upon request from the Authorized Representative.

This product satisfies the Class B limits of EN 55022 and safety requirements of EN 60950.

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3. Printing

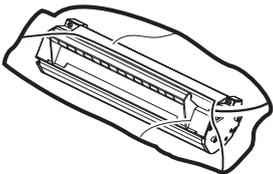
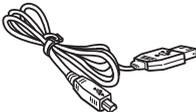
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1. Product information

1.1 What's in the box

Ensure the following parts are included in the box:

	Printer	1
	Print cartridge	1
	USB interface cable	1
	Power cord	1
	CD-ROM	1
	Quick setup guide	1

1.2 Product features

1) Long life

Pantum printers offer as much as four times the duty cycle of comparable products, and an incredible 100,000 page average engine life providing many years of satisfying use.

2) Exceptional print quality

Using Pantum original toner and printing with 1200x600 dpi resolution your Pantum printer will deliver crisp, clear lines and text plus solid blacks for impressive images.

3) Low operating costs

Economically priced printer cartridges and an impressive 2,300 page high yield printer cartridge option, provides low operating costs with minimal interruptions to the printing process.

4) Broad media support

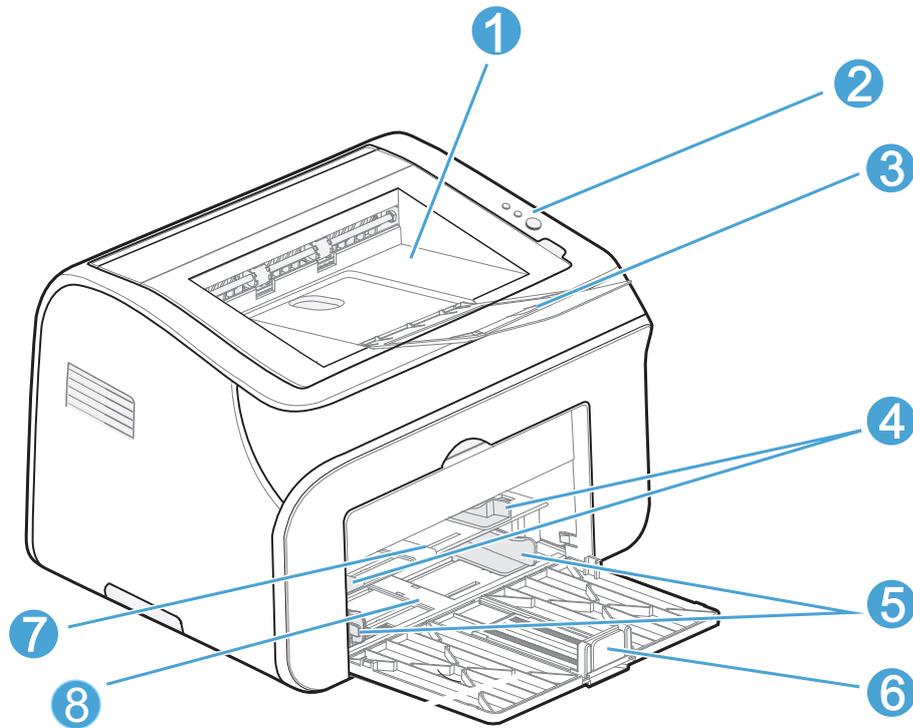
Support for a wide range of media weights and sizes means you can print almost any document easily and efficiently.

5) Create professional documents

Powerful driver features such as standard and user defined watermarks and multi-page printing on a single sheet of paper allows you to create professional looking documents direct from your desktop.

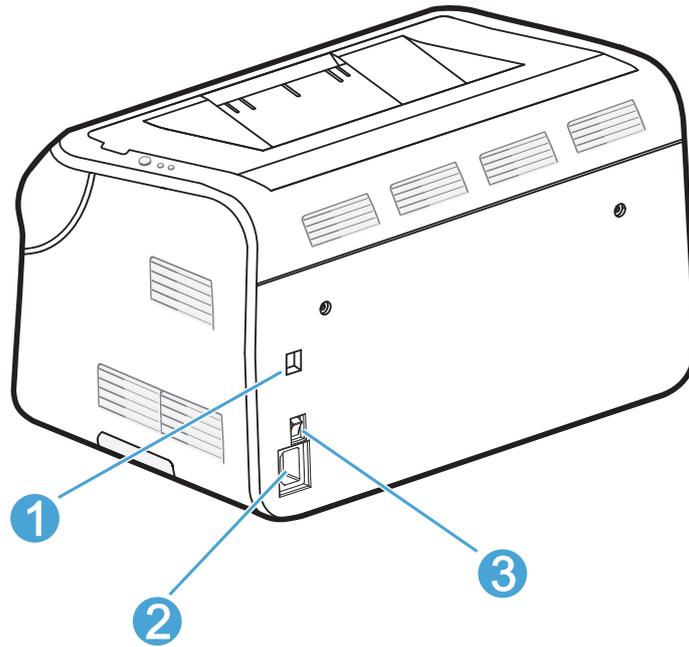
1.3 Overview

1.3.1 Front view



1	Output bin / Cartridge cover
2	Control panel
3	Paper output support
4	Manual feed guide
5	Automatic feed guide
6	Paper stop
7	Manual feed slot
8	Automatic paper tray

1. 3. 2 Rear view



1	USB interface connector
2	Power supply socket
3	Power switch

1. 4 Printer installation

1. 4. 1 Power supply

- The power voltage must be in the range of 100~127 VAC or 220~240 VAC depending on the model (See Rating power specifications at chapter 8.1.1.). Power voltage may vary according to different power standards in different countries.
- The printer power supply should not share the power circuit with other high power appliances (such as air-conditioners, copiers, shredders, etc.). If you must it is recommended that you use a voltage transformer or a high frequency noise filter.
- Please use a voltage regulator if the power voltage is unstable.
- The power cord, including extensions, should be no longer than 5 meters (16.5 feet).

1. 4. 2 Environment

Place the equipment on a flat, stable surface free of vibration and shock, for example a desk, near a standard AC power supply wall socket so it can be easily unplugged in the event of an emergency.

Only use the printer within the following temperature and humidity ranges:

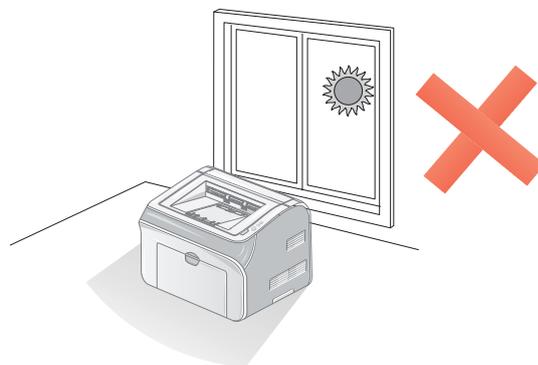
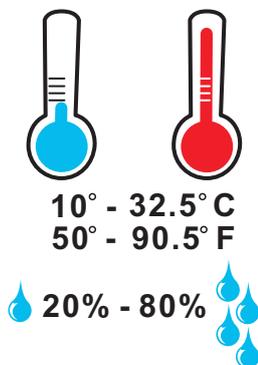
Temperature: 10°C to 32.5°C (50°F to 90.5°F)

Humidity: 20%-80% (without condensation).



Note: •Avoid placing the equipment near the following a heater, water, chemicals, or a refrigerator.

- Do not expose the equipment to direct sunlight, excessive heat, moisture or dust.
- Interrupting the power supply will cause the loss of information from the memory of the printer.
- Use the printer in a well ventilated room.



2. About paper

2.1 Paper types and sizes

Paper may be fed automatically from the paper tray or manually through the manual feed slot.

The following media types, supported trays and their respective driver settings are shown in the table below. Driver settings are accessed under the Paper tab using the Properties function in the driver.

Media type	Automatic paper tray	Manual feed slot	Manual duplex	Driver setting
Plain paper 75 g/m ² to 105 g/m ² (20 to 28 lb)	Yes	Yes	Yes	Plain
Thin 60 g/m ² to 75 g/m ² (16 to 20 lb)	Yes	Yes	No	Plain
Thick 105 g/m ² to 163 g/m ² (28 to 43 lb)	No	Yes	No	Thick
Cardstock	Yes	Yes	No	Cardstock
Preprinted	Yes	Yes	Yes	Preprinted
Transparency	Yes	Yes	No	Transparency
Label	No	Yes	No	Label

Print media supported by automatic paper tray and manual feed slot:

	Automatic paper tray	Manual feed slot
Paper media	A4, Letter, Legal, Folio, B5, B6, Executive, Statement, A5, A6	A4, Letter, Legal, Folio, B5, B6, Executive, Statement, A5, A6, Envelope, Label, Transparency, Card stock,
Number of sheets (80g/m ² /20lb)	150	1
Paper weight	60-105g/m ² (16 to 28lb)	60-163g/m ² (16 to 43lb)

2.2 Loading paper

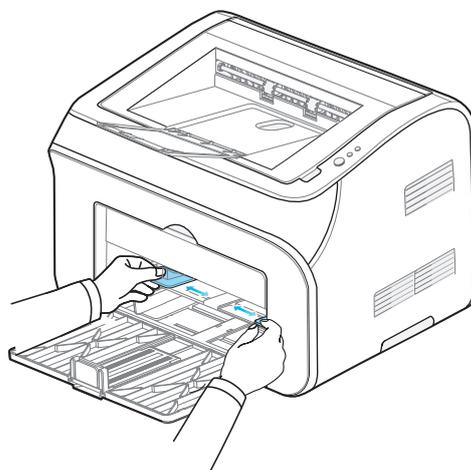
There are two ways of printing, one is by loading stacks of paper in the automatic paper tray, and the other is by feeding paper through the manual feed slot one sheet at a time.



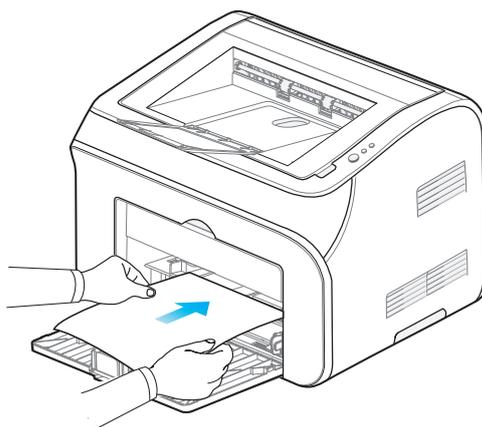
Note:

When loading paper

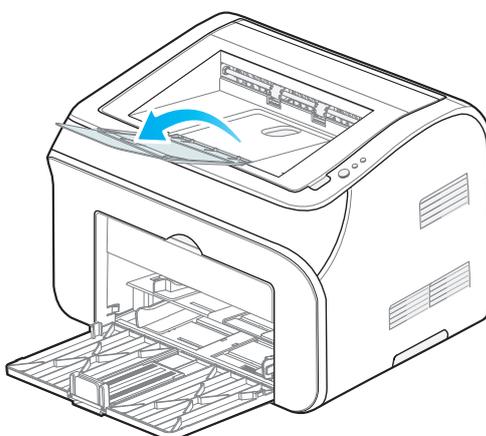
- 1) *Envelopes, card stock, labels and transparencies should be fed from the manual feed tray.*
- 2) *Before loading the paper into the automatic paper tray, fan, jiggle and smooth the stack so that it will lay flat in the tray. The Tray capacity is 150 sheets of 20lb bond / 80g/m² paper. Load less sheets if using heavier weighted paper.*
- 3) *After loading the paper into the automatic paper tray and manual feed slot, adjust the paper guides by sliding them against the side of the paper.*



- 4) Only load one piece of media into the manual feed slot at any one time.



- 5) Raise the paper output support before printing to avoid documents slipping from the output bin.



2.3 Paper options

Your printer supports various types and weights of print media, such as plain paper, envelopes, labels, transparencies and other special media listed in the paper type and weight tables above. Please ensure you only use a print medium in accordance with the tables in this User Guide.

The use of print media not in accordance with the User Guide may cause problems such as:

- Low quality printing
- Increase the frequency of paper jams
- Excessive abrasion of the internal parts of the printer

Many factors influence the printer's operation and output quality such as the type and weight of paper, the texture of the paper and the humidity level. Printing outside the specified temperature and humidity levels or using poorly manufactured media can result in paper jams or poor quality printing even when printing on paper within our paper specifications. Such problems are outside Zhuhai Seine Technology's control and are not covered under our warranty.

2.4 Printing on envelopes and transparencies

2.4.1 Printing on envelopes

When printing envelopes Zhuhai Seine Technology Co., Ltd. recommends using envelopes specifically designed for use in laser printers.



Note:

- *Insert envelopes making sure to carefully line them up in the paper guides to avoid paper jams and paper feed failure.*
- *Envelopes should be rectangular and smooth (but not glossy) without creases, folds or windows. If any embossed manufacturer's seal is present it should be where the seams cross in the back of the envelope. The feed edge should be square and flat, no thicker than two sheets of paper.*
- *Make sure you have selected the same size envelope in the driver as the envelopes you would like to print on.*
- *Do not use manual duplex printing with envelopes.*
- *Most envelopes will work properly in the printer. But some may have problems in feeding and printing due to different production methods.*

The printer may get damaged if you use envelopes in the following way:

- *Envelopes that are damaged, curved, folded or irregular shape, too smooth or too rough.*
- *Envelopes with buttons, sealing glue, convex surfaces.*
- *Envelopes that have been previously printed inside or out.*
- *Overweight envelopes.*
- *Envelopes with low-quality, rough or not squared edges.*
- *Envelopes with transparent windows, holes, incisions or perforations.*



WARNING

The printer may get damaged if you use any type of envelopes described above. Damage caused by improper envelopes will void the warranty.

Please remove the printed output immediately because stacked sheets of special media can lead to paper jams or paper stacking problems.

2. 4. 2 Printing on transparencies

When printing on transparencies only use transparencies specially designed for laser printers such as 3M type CG3300.



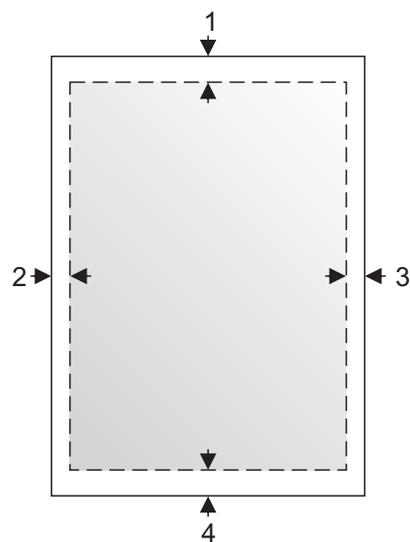
WARNING

Please remove the printed output immediately because stacked sheets of special media can lead to paper jams or paper stacking problems.

2.5 Printable area

You can print within the shadow area shown on the diagram to the left. The table below shows the non-printable margins.

	Envelopes	Others
1	10mm (0.4")	5mm (0.2")
2	10mm (0.4")	5mm (0.2")
3	10mm (0.4")	5mm (0.2")
4	10mm (0.4")	6mm (0.25")



Note: The page margins listed in the table are approximate numbers only; and may differ slightly in practice.

3. Printing

3.1 Printing Methods

There are two ways of printing, one is by feeding paper from the automatic paper tray, and the other is by printing from the manual feed slot one page at a time.

To print from the automatic paper tray: Load paper in the automatic paper tray and make sure there is no media in the manual feed slot, then print the document.

To print from the manual feed slot:

1) Load the first page of the media to be printed into the manual feed slot then print the document.



Note:

The printer starts in manual feed mode automatically when you place paper or other media in the manual feed slot. The manual feed slot has priority over the automatic paper tray. If any media is present in the manual feed slot the printer will always print to that media first.

2) For a multi-page document load additional media into the slot one page at a time as soon as the previous page has fed completely through the slot and until all pages have been completed.



Note:

Please make sure the printer driver has been installed before printing. Refer to Section 4 for instructions on installing the driver.

- Refer to Section 2 for notes about loading paper and the media type supported by the manual feed slot and the automatic paper tray.

-Make sure the paper output support is raised to avoid documents slipping from the output bin. We suggest you take each piece of media out of the document bin immediately if you do not raise the paper output support.

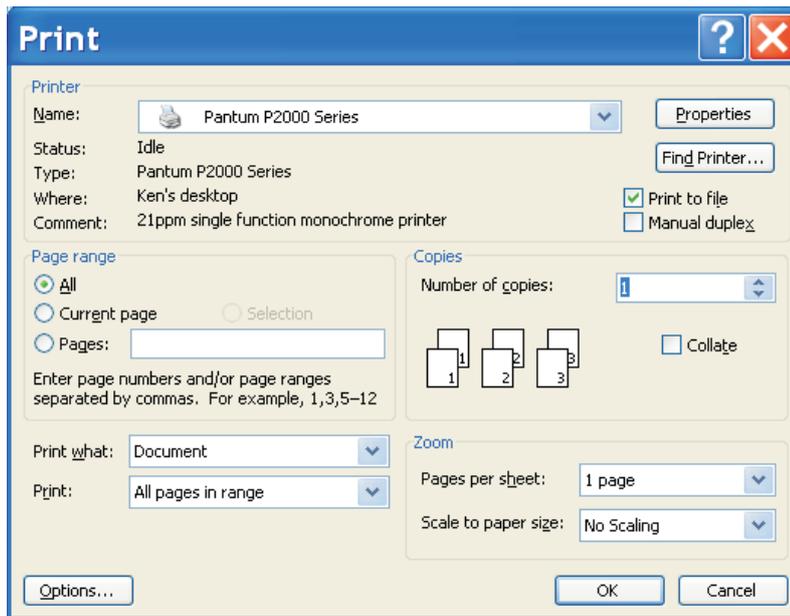
-When printing on transparencies please remove the printed output immediately because stacked sheets of transparencies can lead to paper jams or paper stacking problems.

3.2 Basic printing with Windows

3.2.1 To print a document with Windows

1) Open the document using the application program you want to print from if it is not already open.

- 2) From the File menu select Print and the Print dialog box appears.



- 3) Select the printer you want to print to using the Name: drop down box or the Find Printer button in the Printer area.
- 4) Make changes to the basic print functions directly from the Print Dialog box, or
- 5) For more advanced functions select Properties or Preferences to go to the printer driver and make desired changes to the advanced printer settings
- 6) Click OK to close the Properties or Printing Preferences menu if advanced printer settings were adjusted
- 7) Click OK in the Print Dialog box to send the document to the printer (or print a file if the Print to file option in the Print Dialog box was selected).

3. 2. 2 Setting the printing parameters in the Print dialog box



Note:

Each operating system and each application program may have their own unique Print dialog box. The following example describes how to use the print parameters in the Print dialog box using Microsoft Office Word 2003© and Windows XP©. For detailed instructions on the particular application program and operating system you are using please refer to that program's User Guide.

Using the Printer area functions

- 1) The **Name:** drop down box provides a list of printers attached to your computer. Using this box you select the printer you want to print to from the drop down list.



Note:

If the name of the printer you want to print to does not appear, but your printer is set up on a network, click the **Find Printer** button to search the network for the printer you are looking for.

- 2) If you want to create a print file of the document instead of printing directly to the printer click the **Print to file** box and the Print to file dialog box will appear. Select the location you would like to save the file to then type a name for the file in the **Name:** box. The file will be saved as a .PRN file that can be sent directly to the printer at a later point in time.
- 3) If you want to manually duplex the document you are printing click the Manual duplex box. Each application program may have its own steps to perform manual collation but they should be similar to the instructions shown below in Section 3.5.5.
- 4) Click **OK** in the Print dialog box to send the document to the printer (or print a file if the **Print to file** option in the Print dialog box was selected).



Note:

The Printer area also provides additional information on the printer you have selected to print to.

Status: indicates the status of the printer, such as *Busy* or *Idle*.

Type: identifies the selected printer.

Where: shows the location of the printer specified when the printer was installed or the port the printer uses to connect to the computer if no location is specified. The location can be accessed and modified through the **Printers and Faxes** dialog box (refer to your operating system help function for more information).

Comment: is additional information about the printer that is stored with the printer when it was set up and can be accessed and modified through the **Printers and Faxes** dialog box (refer to your operating system help function for more information).

Using the **Page range** area functions

The **Page range** area allows you to print partially or all of your document. The default is the **All** button that will print all the pages in your document. The **Current** button will print just the page on your screen. If you have multiple pages selected in your document the **Selection** button will be available to print all the pages you have selected. The **Page range** box allows you to specify a specific range of pages to be printed by typing in the pages you want to print using the format shown below the **Page range** box.

Using the **Copies** area functions

The **Copies** area allows you to make multiple copies of a document and to set the collation order of the copies. To make multiple copies:

- 1) In the **Copies** area, use the arrow buttons to adjust the number of copies or type the number of copies in the box. The default setting is 1.
- 2) Click the **Collate** check box to collate the copies. The default setting is unchecked. When unchecked all of the first page of the document will print, followed by all of the second page and so on, until all the pages of all the copies have been printed. If **Collate** is checked all of the first copy of the document will print, then all of the next copies and so on until all copies have been printed. How the copies will be printed is illustrated with the preview to the left of the **Collate** box.
- 3) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.

*Using the **Zoom** area functions*

The **Zoom** area allows you to zoom multiple pages onto one sheet of media or scale a document to a different size media than it was originally created for.

- 1) To zoom multiple pages onto one sheet of paper. Using the **Pages per sheet** drop down list select the number of pages you want to zoom onto a single sheet from one to sixteen. The pages will print with the first page starting at the top left hand side of the sheet and continue on across the sheet horizontally and so on.
- 2) To scale a page to a different size of media using the **Scale to paper size** box drop down list, select the paper size on which you want to print the document. For example, you can specify that a B4-size document prints on A4-size paper by decreasing the size of the font and the graphics.

Using the advanced functions

The **Print what** box drop down list allows you to specify the portion of the document to print. Select a portion of the document from the list. The portion in this case is not the page range, but includes many unseen portions of the document that Word maintains as the document is created and edited. For example, if you want to print only the document's properties, click Document Properties. The default is Document.

The **Print** box drop down list allows you to specify whether to print all the pages selected in the **Page range** area or just the odd or even numbered pages. This option is not available unless you select Document in the **Print what** list.

The **Options** button opens up a **Print** dialog box that allows you to change the print settings for Word. It does not change your printers print driver settings. Refer to Word's help function for more information on Word's print settings. To change your printer driver settings see Section 3.4 below.

To get help for any print option with Windows

Printer driver Help is separate from program Help. The printer driver help provides explanations for the buttons, check boxes, and drop-down lists that are in the printer driver. It also includes instructions for performing common printing tasks, such as printing on both sides, printing multiple pages on one sheet, and printing using different paper or media.

Activate the printer driver Help screens in one of the following ways:

- In the printer driver **Properties**, click the Help button.
- Press the **F1** key on the computer keyboard.
- Click the **question-mark symbol** in the upper-right hand corner of the printer driver.
- Right-click on any item in the driver.

3.3 Advanced printing using the printer driver settings

Your Pantum printer comes with software for Windows that allows the computer to communicate with the printer. This software is called a printer driver. Printer drivers provide access to product features, such as printing on custom-sized paper, resizing documents, and inserting watermarks. The specialised functions of your printer are accessed through different settings in the printer driver.

There are two ways to change the printer driver settings. Settings can be changed by clicking on the **Properties** button in the Print window when printing an individual file, or settings can be changed by opening the printer driver from the Printers and Faxes menus, selecting the printer to be modified and selecting the **Printing Preferences** function from the **File** menu. Either way of accessing the printer driver settings menus allows you to change the default setting for the printer to access special features.



Note:

*Different application programs and different versions of Windows can use different names for the same functions. For example, what is referred to as Page Setup in one application may be Print Setup in another, and the Properties button in one application or operating system may be the Preferences button in another. **The examples and illustrations in this section may vary from the application program and operating system version you are using.***

You should first be familiar with the different printing and page set up functions of your application programs and operating systems to fully understand the functions described below. Many of the basic printing functions such as printing multiple copies, zooming multiple pages onto a single sheet of paper and manually duplexing a document can be selected directly from the Print dialog box rather than going into the printer driver settings.

3.3.1 Priority of printer settings

Within the application program that created the document, such as Microsoft Word or Adobe Illustrator basic print functions can also be easily changed. These settings are unique to the application program and the document and do not change the default settings of the printer driver. When and where you make changes to basic printer settings can have an effect on the desired printed results. Changes to print settings are prioritised depending on where the changes are made:

- Changes made through the **Page Setup** dialog box accessed by clicking **Page Setup** or a similar command on the **File** menu of the application program you are working in to open this dialog box override settings changed anywhere else. For example, if you select the **Landscape** orientation in this manner your document will print in landscape even if the driver is set to print in **Portrait**. These settings are made through the application program and are usually stored with the document and will appear the next time the document is printed.
- Changes made to the **Print dialog box** accessed by clicking the **Print**, **Print Setup**, or a similar command on the **File** menu of the application program you are working in to open this dialog box have a lower priority and usually do not override changes made in the **Page Setup** dialog box. These settings will usually override changes made below in the printer driver.
- Changes made to the **Printer Properties dialog box** are accessed by clicking the **Properties** button in the **Print** dialog box, opening the printer driver will allow you to access special features of your printer. Settings changed in the **Printer Properties** dialog box usually do not override settings anywhere else in the printing software and are not stored with the document. Changes in the printer driver are often “sticky” settings, meaning they will remain in the driver until another user changes the settings again.
- The **Default printer driver settings** determines the settings used in all print jobs, *unless* settings are changed in the **Page Setup**, **Print**, or **Printer Properties** dialog boxes.

3.3.2 To change printer driver settings for Windows

Change the settings for all print jobs until the software program is closed	Change the default settings for all print jobs	Change the printer configuration settings
<p>1. On the File menu in the software program, click Print.</p> <p>2. Select the printer, and then click Properties or Preferences.</p> <p>The steps can vary; this procedure is most common.</p>	<p>1. Windows Vista and Windows 7: Click Start, click Control Panel, and then in the category for Hardware and Sound click Printer.</p> <p>-or-</p> <p>Windows XP, Windows Server 2003, and Windows Server 2008 (using the default Start menu view): Click Start, and then click Printers and Faxes.</p> <p>-or-</p> <p>Windows XP, Windows Server 2003, and Windows Server 2008 (using the Classic Start menu view): Click Start, click Settings, and then click Printers.</p> <p>2. Right-click the printer icon and then select Printing Preferences.</p>	<p>1. Windows Vista and Windows 7: Click Start, click Control Panel, and then in the category for Hardware and Sound click Printer.</p> <p>-or-</p> <p>Windows XP, Windows Server 2003, and Windows Server 2008 (using the default Start menu view): Click Start, and then click Printers and Faxes.</p> <p>-or-</p> <p>Windows XP, Windows Server 2003, and Windows Server 2008 (using the Classic Start menu view): Click Start, click Settings, and then click Printers.</p> <p>2. Right-click the printer icon and then select Properties.</p> <p>3. Click the Device Settings tab.</p>

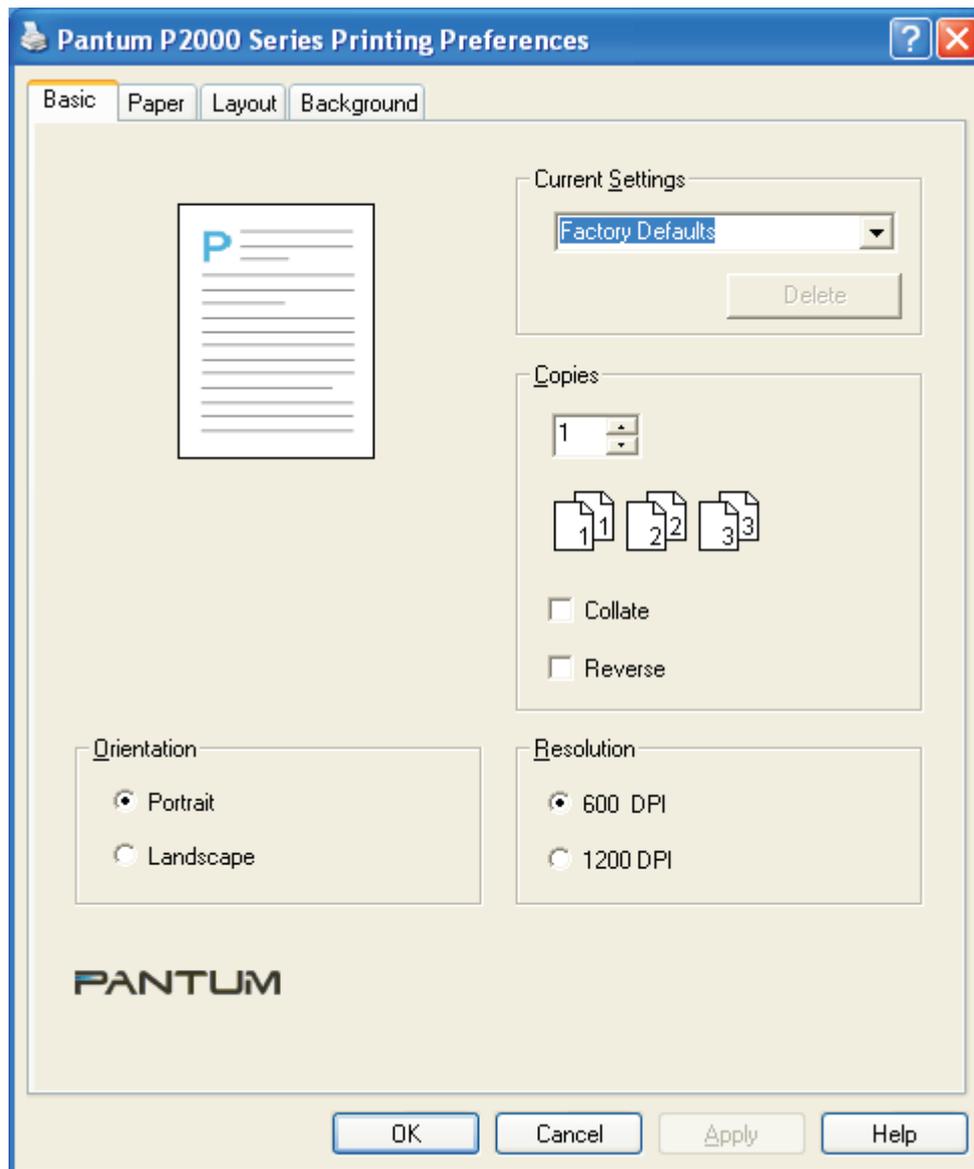
3.4 Using the Basic printer driver settings

This section assumes you have opened the Properties or Printing Preferences dialog box as described in the beginning of Section 3.3.

The **Basic** tab in the printer driver settings allows you to access and save Current Settings, change the number of copies to be printed and the order the pages will print, change the orientation of the page to the paper and change the print resolution.

The preview image in the printer driver shows some, but not necessarily all of the effects of the different settings selected.

For a description of the Current Settings function see Section 3.8 below.



3.4.1 To print multiple copies of a document

- 1) In the **Copies** area, use the arrow buttons to adjust the number of copies or type the number of copies in the box in the range 1 - 99. The default setting is 1.
- 2) Click the **Collate** check box to collate the copies. The default setting is unchecked. When unchecked all of the first page of the document will print, followed by all of the second page and so on until all the pages of all the copies have been printed. If **Collate** is checked all of the first copy of the document will print, then all of the next copy and so on until all copies have been printed. How the copies will be printed is illustrated with the preview to the left of the **Collate** box.
- 3) Click the OK button to close the Properties dialog box, then OK again (or Print from some applications) to print the document.

 **Note:**

- If the **Reverse** box is not selected the printer will print the document from the first page to the last when the document to be printed is more than one page. The default is unchecked.

3.4.2 To reverse the order the pages are printed

- 1) In the **Copies** area click the **Reverse** box. This will print the last page first and continue from the back of the document forward until all of the pages are printed. The default is unchecked.
- 2) Click the **OK** button to close the **Properties** dialog box, then **OK** again (or Print from some applications) to print the document.



Note:

Using a combination of the Collate and Reverse functions will result in the following printing order, assuming two copies of a three page document are printed

If no boxes are checked the printing order is:

P1, P1, P2, P2, P3, P3

*If **Collate** is checked and **Reverse** is unchecked the printing order is:*

P1, P2, P3, P1, P2, P3

*If **Collate** is unchecked and **Reverse** is checked the printing order is:*

P3, P3 P2, P2, P1, P1

*If both **Collate** and **Reverse** are checked the printing order is:*

P3, P2, P1, P3, P2, P1

3.4.3 To set the orientation of the page on the paper

- 1) In the **Orientation** area click the **Portrait** or **Landscape** button. The **Portrait** button will print the pages upright to the direction of the paper feed. This orients the pages vertically the way a typical portrait is shown with the up and down being the long dimension of the paper. The **Landscape** button prints the pages parallel to the direction of the paper feed. This orients the pages horizontally the way a typical landscape painting is shown with the up and down being the short dimension of the paper. The default is Portrait.
- 2) Click the OK button to close the Properties dialog box, then OK again (or Print from some applications) to print the document.

3.4.4 To set print resolution

- 1) In the **Resolution** area click the **600 DPI** or **1200 DPI** button. The printed output will print at either 600 dots per inch vertically and horizontally or 1200 dots per inch vertically and horizontally. The default is 600 DPI.
- 2) Click the OK button to close the **Properties** dialog box, then **OK** again (or Print from some applications) to print the document.



Note:

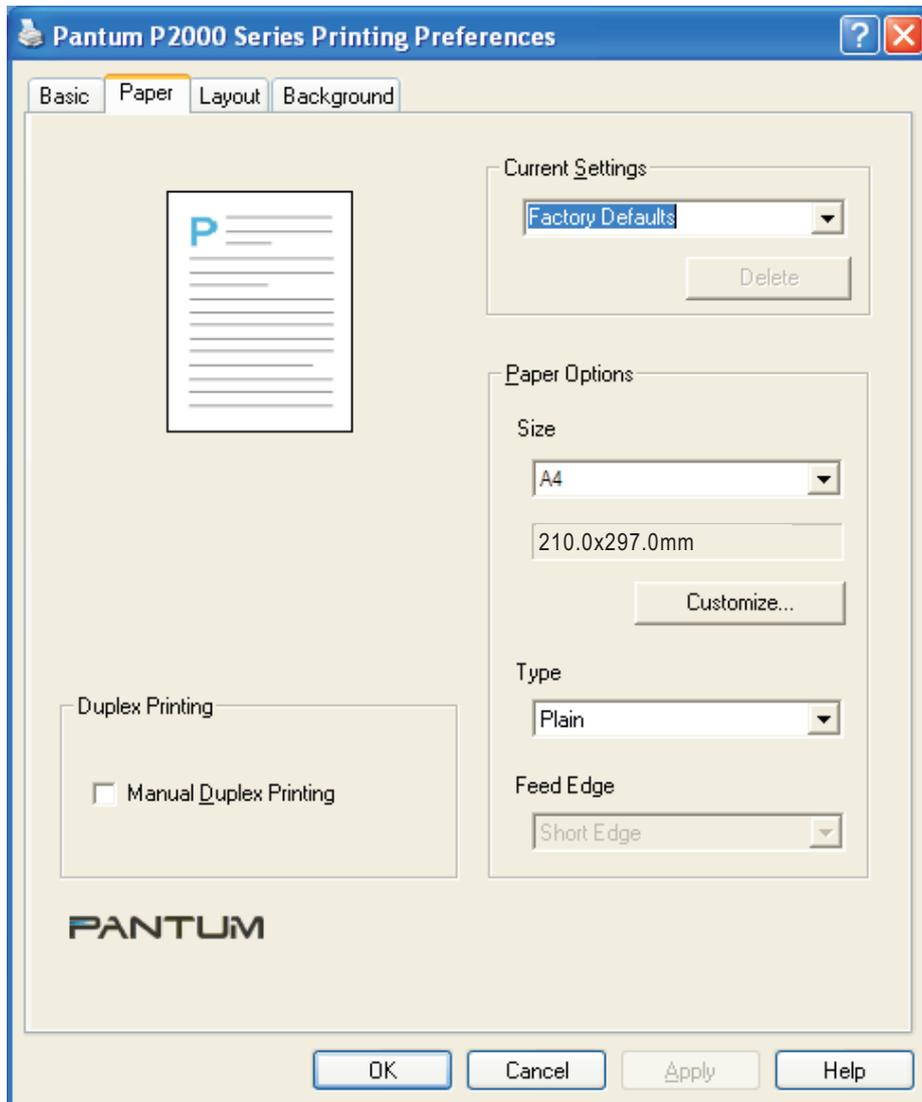
Printing resolution affects the quality of the printed page. Usually higher resolution means better quality output but that is not always the case. For most work 600 DPI is more than adequate to deliver good text and image quality and the difference between 600 DPI and 1200 DPI will not be discernable by the average person. Printing at 1200 DPI is recommended when the image has thin lines or large picture areas with smooth changes in image density where higher resolution can capture the thin lines and provide better gradation details for the image material.

3.5 Using the Paper printer driver settings

This section assumes you have opened the Properties or Printing Preferences dialog box as described in the beginning of Section 3.3.

The Paper tab in the printer driver settings allows you to access and save stored Current Settings, change the size and the type of media printed on and perform manual duplex printing.

The preview image in the printer driver shows some, but not necessarily all of the effects of the different settings selected.



For a description of the Current Settings function see Section 3.8 below.

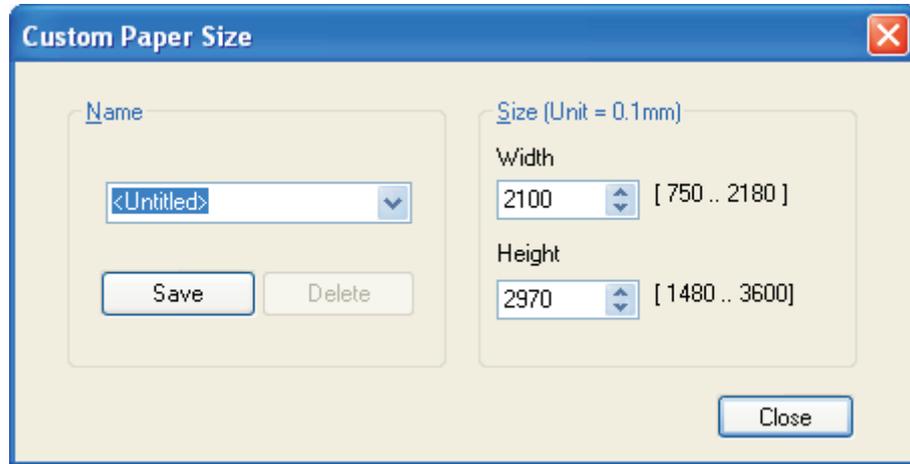
3.5.1 To set the size of the paper for standard or predefined custom paper sizes

- 1) In the **Size** box of the **Paper Options** area select the desired paper size from the available options using the drop down list. The list contains all standard paper sizes plus any custom paper sizes previously defined and saved. If the paper size you require is not shown in the drop down list you may use a custom size by clicking the Customize button. The default Size is Letter.
- 2) Click the **OK** button to close the **Properties** dialog box, then **OK** again (or Print from some applications) to print the document.

3.5.2 To define and manage custom paper sizes

The **Customize** button allows you to select, create and save a custom paper size in the range of 75mm (3") wide by 148mm (5.8") tall to 218mm (8.5") wide by 360mm (14") tall.

1) In the Size box of the **Paper Options** area click the **Customize** button and the Custom Paper Size dialog box will appear.



2) In the **Name** area you can select a predefined custom size from the drop down list or manage predefined custom paper sizes.

3) To create a new custom size enter the width and height of the media in the Width and Height boxes of the **Size** area using the up and down arrows or manually typing the sizes in the appropriate boxes.

4) To save the custom paper size for future use type the name you would like to use to describe the custom paper size in the **Name** box and click **Save**. If the name you want to use has already been used a pop up box will appear telling you the name is already in use and asking if you want to overwrite the existing name definition. Click **Yes** to overwrite the previously named definition or click **No** to return to the Custom Paper Size dialog box and give the custom size a new name.

5) When done click **Close** to return to the Paper tab of the printer settings menu.

6) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.



Note:

The **Delete** button in the **Name** area of the Custom Paper Size dialog box can be used to delete previously stored custom paper size names.

3.5.3 To print on different media types

1) In the **Type** box of the **Paper Options** area select the desired media type from the available options using the drop down list. The list contains different type of medias. Please refer to section 2.1 to identify the driver setting depending on your media. This will adjust printing parameters and ensure optimal output quality. It is mandatory to adjust media types for special medias such as labels or transparencies. The default media type is Plain.

2) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.

3.5.4 To change the feed edge of the paper

- 1) In the **Feed Edge** box of the **Paper Options** area select either short edge or long edge from the drop down list to tell the printer what side of the paper will be going into the printer first.
- 2) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.



Note: This option is only available when A5 paper size has been selected.

3.5.5 To manually duplex a document (print on both sides of the paper)

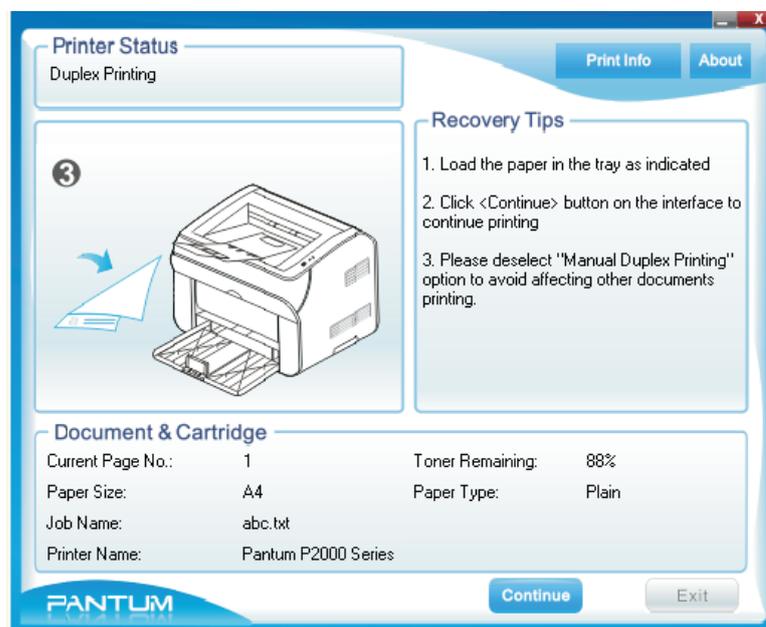


Note:

- Some paper media is not suitable for duplex printing. Attempts to duplex media other than those specified in Section 2.1 can cause damage to the printer, especially when the media is thick paper or transparencies.
- When you select printing a **2x2 poster** in the **Properties** or **Printing Preferences** dialog box manual duplex printing is not supported.
- Thin paper can lead to paper curling. If the paper is curled, flatten it before inserting it back into the printer,
- Using the manual duplex printing function can lead to paper jams or poor printing quality. For information about how to deal with paper jams refer to **Section 7**.

- 1) Load the appropriate media into the automatic paper tray before printing.
- 2) Check the **Manual Duplex Printing** box in the **Duplex Printing** area. The default setting is unchecked.
- 3) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.

The printer will print all the back pages of the document first. When it has finished printing the back pages the printer will show a Status Alert on the computer screen as shown below:



- 4) Remove the documents from the output bin then put them into the automatic paper tray with the back side up and the leading edge (top of the page) feeding into the printer first.



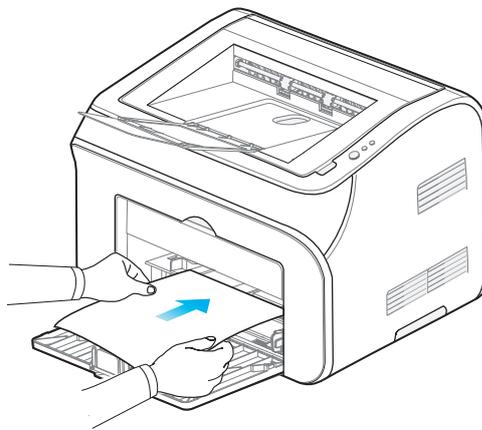
Note:

Do not change the order of the documents when you remove the stack of paper from the output bin, turn the stack over and put it into the automatic paper tray in the same order and in the same direction as the stack was originally removed from the output bin.

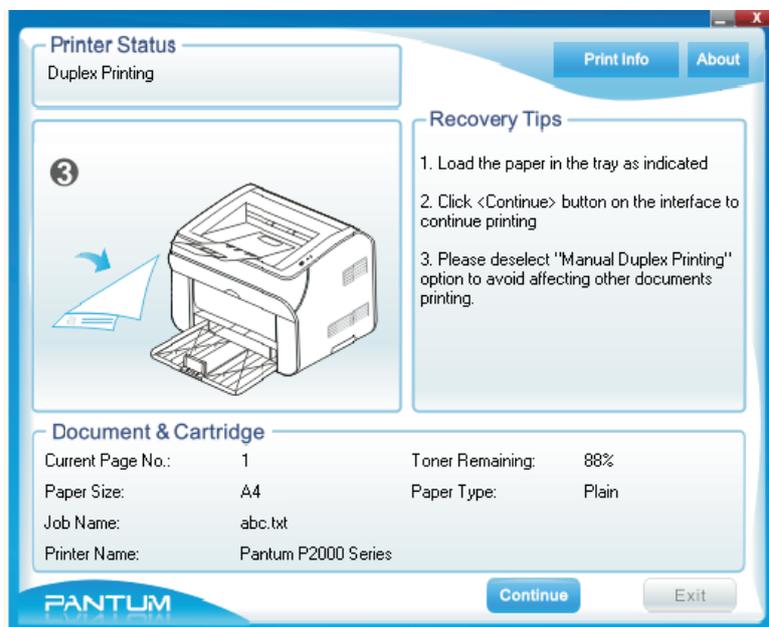
- 5) Click **Continue** on the Status Monitor.
- 6) The printer will print the front pages of the document in order on the reverse side of the paper.

Using the manual feed slot

- 1) Load the appropriate media into the manual feed slot before printing. The printer will start in manual feed mode automatically when you complete this step.



- 2) Check the **Manual Duplex Printing** box in the **Duplex** area. The default setting is unchecked.
- 3) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.
- 4) The printer will start printing all the back pages of the document first. Feed each sheet of media into the manual feed slot; once the previous sheet of media has completely cleared the slot and continue until all the back pages of the document have been printed.
- 5) When it has finished printing the back pages the printer will show a Status Alert on the computer screen as shown below:



- 6) Remove the documents from the output bin then put the first sheet from the stack into the manual feed slot with the back side up and the leading edge (top of the page) feeding into the printer first.
 - 7) Click **Continue** on the Status Monitor.
 - 8) Continue feeding each sheet of paper one page at a time with the back side up and the leading edge (top of the page) feeding into the printer first. The printer will print the front side of the pages in order on the reverse side of the paper.
- For a description of the Current Settings function see Section 3.8 below.

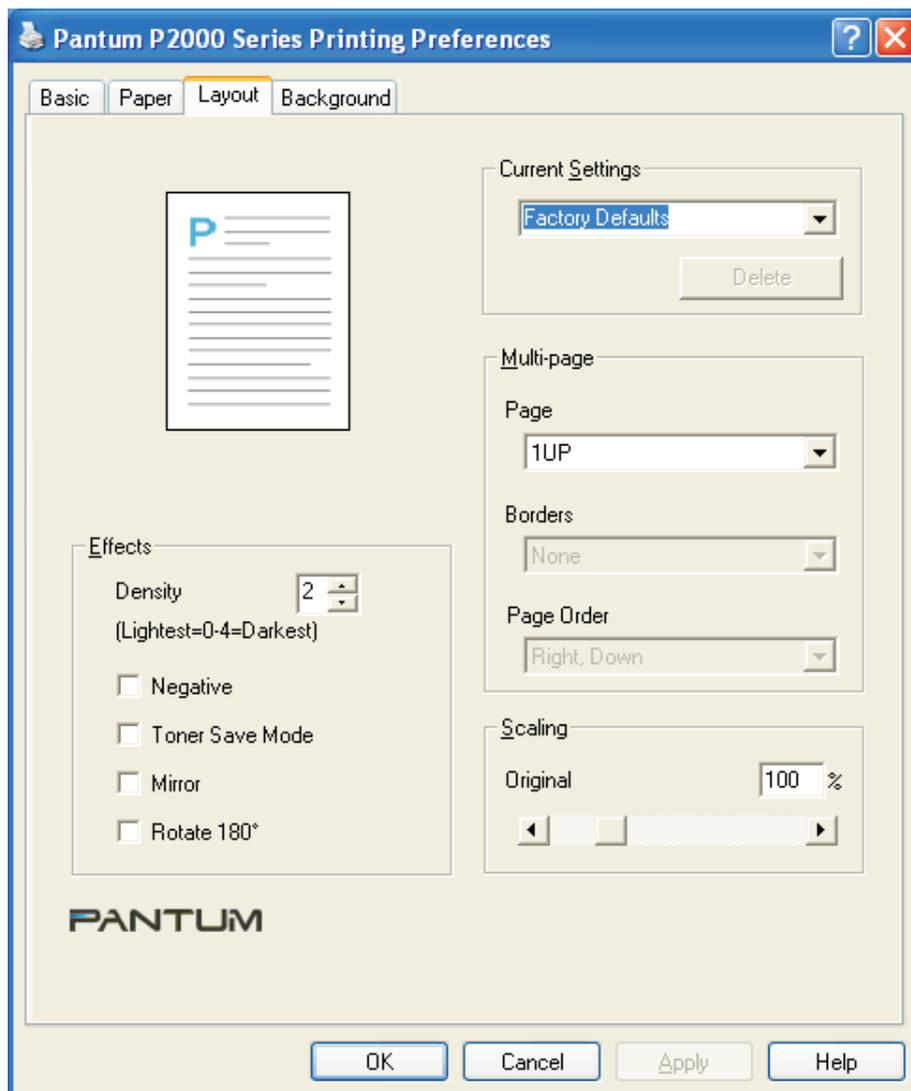
3.6 Using the Layout printer driver settings

This section assumes you have opened the Properties or Printing Preferences dialog box as described in the beginning of Section 3.3.

The Layout tab in the printer driver setting allows you to access and save stored Current Settings, print multiple pages on a single sheet of paper or print one page on four sheets of paper, scale pages to different size media and create several special effects such as mirror images of the page and inverted images of the page.

The preview image in the printer driver shows some, but not necessarily all of the effects of the different settings selected.

For a description of the Current Settings function see Section 3.8 below.



3.6.1 Printing multiple pages on one sheet of paper

- 1) Select the number of pages to be printed on one sheet (1UP, 2UP, 4UP or 9UP) from the **Page** drop-down list in **Multi page** area. The default is 1UP.
- 2) To put a border or frame around each page image on the sheet select Solid Line or Dashed Line from the **Borders** drop down list. The default is None.



Note: Borders are not available with 1UP printing.

- 3) Specify the order the pages will be printed on the sheet by selecting the required option from the **Page Order** drop down list. The default is Right, down.



Note: The page order setting is not available with 1UP printing.

- 4) Click the **OK** button to close the **Properties** dialog box, then **OK** again (or Print from some applications) to print the document.



Note:

When printing multiple pages on one sheet of paper the image of the page will be reduced in size in order to fit the number of page images you specify on a single sheet.

3.6.2 To print a poster (one page on four sheets of paper)

- 1) Select **2x2 Poster** from the **Page** drop-down list in the Multipage area.
- 2) Click the **OK** button to close the **Properties** dialog box, then **OK** again (or Print from some applications) to print the document.

3.6.3 To scale a document

You can scale a page from 25% of its original size to 400% of its original size in one of two ways:

- 1) In the **Scaling** box type the percent size of the original document into the Original box, or
- 2) Use the slider to change the value.

The default value is 100%. The page will be printed starting from the top right hand corner according to the size specified.



Note:

- If the document is scaled up beyond 100% page content outside the printable area will not be printed on the page.
 - The scaling setting is available only when 1UP is selected in the Page drop-down box.
-

3.6.4 To create different printing effects

Different printing effects can be created by adjusting the parameters in the **Effects** area.

The **Density** box will change the printing density (weight of the characters, lines and dots) from a range of 1 (being the lightest) to 4 (the heaviest). The value can be changed by using the up and down arrows or typing a new value into the box. This changes the amount of toner that is used to print the page. The default is 2.

The **Negative Image** check box will reverse the printing and the non-printing areas of the page so that all the areas that would have been printed are blank, and all non-blank areas on the page are printed. This creates an effect similar to a photograph negative. The default is unchecked.

The **Toner Saver Mode** check box uses the least amount of toner while still creating a readable image. This will save on the amount of toner consumed but it will also result in a lower print quality. The default is unchecked.

The **Mirror** check box will rotate the page image 180° along the vertical axis, creating an effect like looking at the page in a mirror. The default is unchecked.

The **Rotate 180°** check box will rotate the page image 180° along the horizontal axis, effectively flipping the page from top to bottom. The default is unchecked.

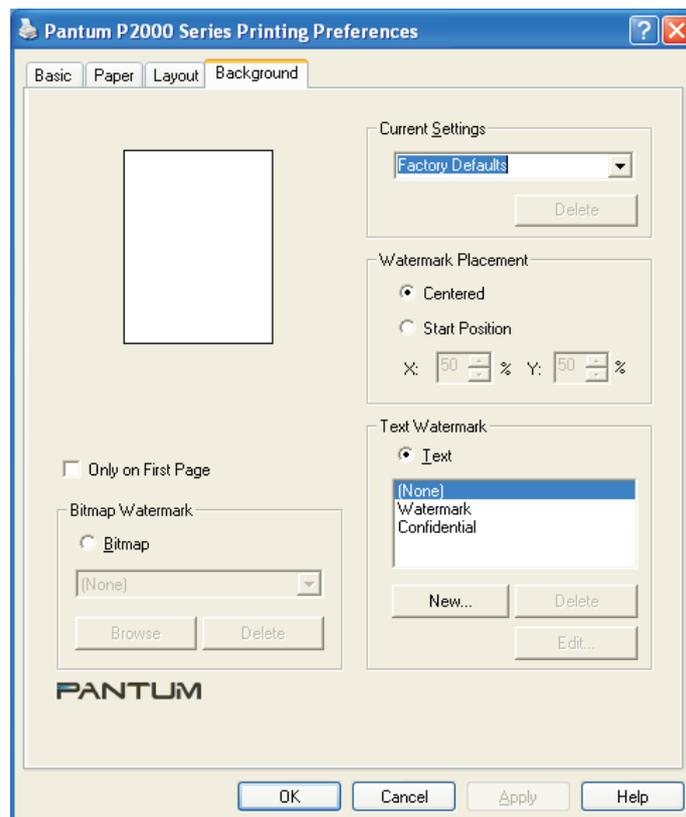
3.7 Using the Background printer driver settings

This section assumes you have opened the Properties or Printing Preferences dialog box as described in the beginning of Section 3.3.

The Background tab in the printer driver settings allows you access and save Current Settings and place a text or bitmap watermark as a background for your document.

The preview image in the printer driver shows some, but not necessarily all of the effects of the different settings selected.

For a description of the Current Settings function see Section 3.8 below.



3.7.1 Printing a watermark

Watermarks are images or text placed on the page before the document is printed, providing a background to the page. Watermarks can be bitmap images or text. The steps for printing a watermark are:

- 1) For a text watermark either select an existing watermark from the drop down list or create a new watermark. See Section 3.7.2 for information on creating and managing text watermarks. Text watermarks are the default setting for watermarks. If not selected click on the **Text** button in the **Text Watermark** area. The default for text watermarks is (None).
- 2) Establish where the watermark should be printed in the **Watermark Placement** area. Click **Centered** to center the watermark on the page, or click **Start Position** to establish the starting location for printing the watermark. The X co-ordinate specifies the horizontal position and the Y coordinate specifies the vertical position of the starting point starting from the top left hand corner of the page. The co-ordinates specify the percent of the page to offset from the top left hand corner from 1% through 99%.
- 3) For a bitmap watermark click the **Bitmap** button in the **Bitmap Watermark** area, then select the bitmap you want to use from the drop down list.



Note:

If the bitmap image you want to use does not appear in the drop down list you may add it to the list by:

- a) Click **Browse** to search for the bitmap image
- b) Select the image you want and click **Open**

*The driver will automatically add the bitmap to the **Bitmap** drop-down list and save the link to that bitmap for future use. If the source corresponding to the chosen bitmap is changed the changed bitmap will be used. If the source is deleted the printer will print without a watermark when you select this bitmap in the Bitmap drop-down list.*

- 4) To print the watermark on the first page only, click the **Only on First Page** button above the **Bitmap Watermark** area.
- 5) Click the **OK** button to close the Properties dialog box, then **OK** again (or Print from some applications) to print the document.



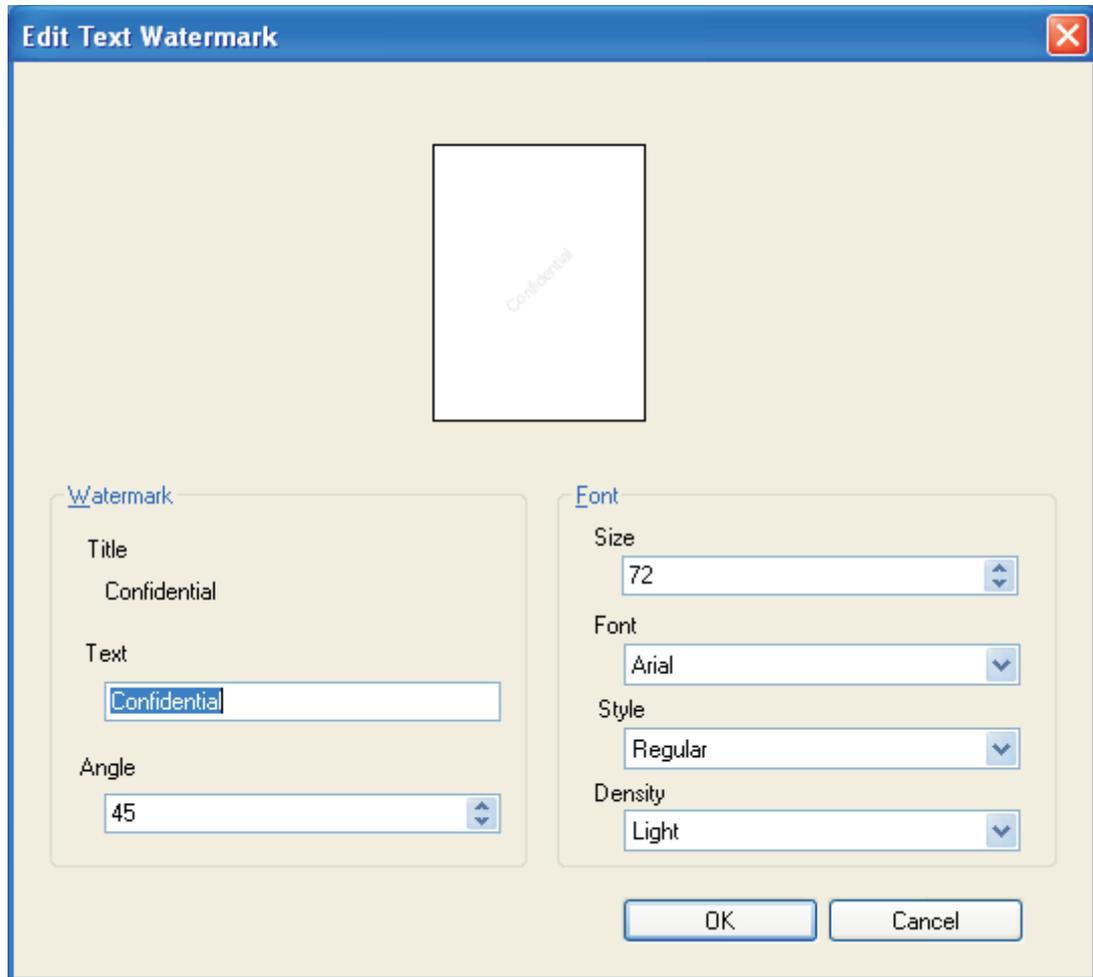
Note:

- You can use a text watermark or a bitmap watermark, but not both on the same document.
 - Bitmap watermarks are always placed on the center of the page. Offsetting the image using the Designated Start Co-ordinates does not apply to bitmap watermarks.
 - If you select "**2x2 Poster**" from **Layout** tab, you cannot print a watermark.
 - The Delete button in the **Bitmap Watermark** area will delete the selected bitmap watermark in the drop down list.
 - Only standard BMP image files may be used as bitmap watermarks. Non-standard BMP files are not supported.
-

3.7.2 Creating and managing text watermarks

To create a new text watermark

1) Click **New** in the Text Watermark area and the Edit Text Watermark dialog box appears.



2) Type the text for the watermark in the **Text** box in the **Watermark** area. The text for the watermark will be used as the title of the watermark. The default for the watermark text is No Title.



Note: - There is a 63 character limit for the text in the Text box.

3) In the **Angle** box in the Watermark area enter the angle of the watermark on the page in the range 0° through 360° or use the up and down arrows to input the angle. The default angle is 45°.

4) In the **Font** box in the Font area enter the size of the text in the **Size** box in the range 12 point through 288 point or use the up and down arrows to input the size. The default for the type size is 72.

5) In the **Style** box in the Font area select the style of the text from the drop down list. The default is Regular.

6) In the **Density** box in the Watermark area select the density of the text from the drop down list. This is how heavy the text will appear from the Lightest (very light grey) through to the Darkest (solid black). The default is Light.

7) Click the **OK** button to close the Edit Text Watermark dialog box and save your new text watermark in the text watermark drop down list.

·To edit a text watermark

1) Select a text watermark from the drop down list in the Text Watermark area.

2) Click **Edit** and the Edit Text Watermark dialog box will appear.

3) Follow steps 2 through 7 under *To create a new text watermark* above to change the parameters of the existing watermark.

·To delete an existing text watermark

1) Select a text watermark from the drop down list in the Text Watermark area.

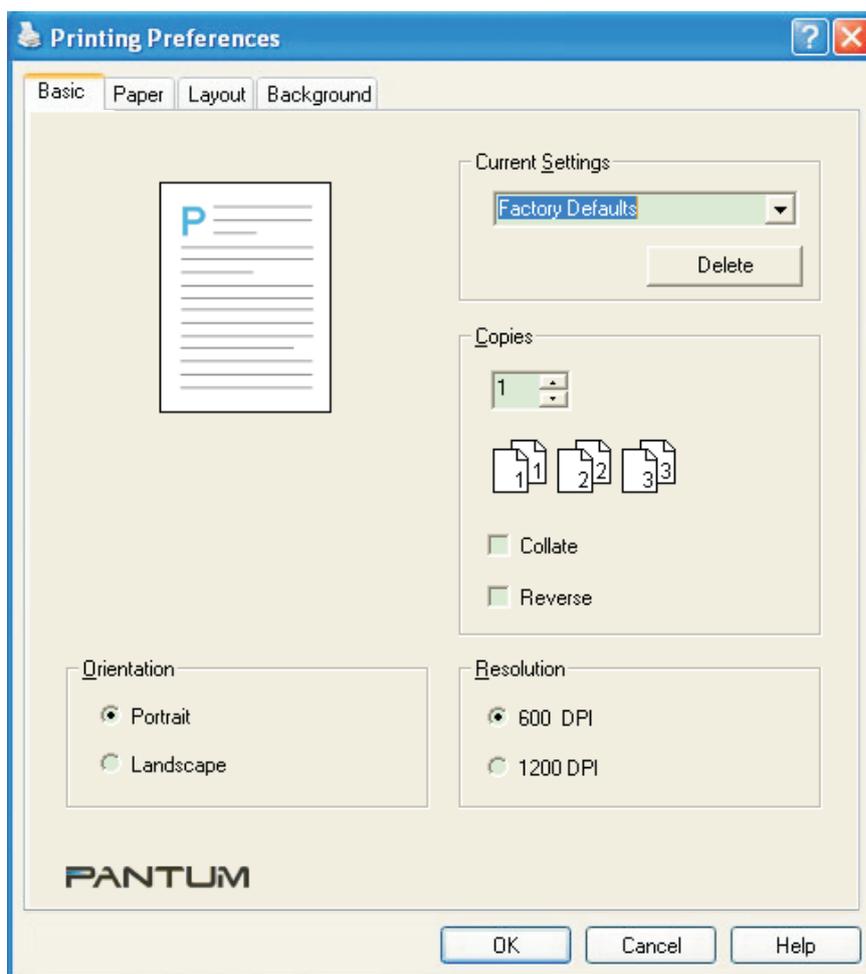
2) Click **Delete** and the text watermark will be deleted.

3.8 Using the Current Settings function

This section assumes you have opened the Properties or Printing Preferences dialog box as described in the beginning of Section 3.3.

The Current Settings function allows you to name, save and select customized printer driver settings from any tab in the print driver.

3.8.1 To use a previously saved Current Settings



1) In the box in the Current Settings area select a previously saved setting. Clicking on the name of the setting will change all the tabs settings to those saved under that name.



Note:

- *Factory Defaults returns the printer driver settings to those shipped with the printer as the default settings.*

2) Click the OK button to close the Properties dialog box, then OK again (or Print from some applications) to print the document using the new printer driver settings.

3.8.2 To save a new set of Current Settings

- 1) Make all the changes you want to make to all four tabs of the printer driver tabs.
- 2) Enter the name you want to give to this set of printer driver settings into the box in the Current Settings area of any of the printer driver tabs.
- 3) Click the **Save** button in the Current Settings area.



Note:

- *If the name of the custom settings you want to save has been used, the system will tell you the name is currently in use and will ask if you want to replace the settings or not.*
- *The **Delete** button may be used to delete previously saved Settings.*

3.9 Managing printer tasks (the print queue)

When a print job is sent to the printer it first enters a print queue managed by the operating system. In most cases sending the job to the printer is done by the operating system in the background in order to let the user continue working on other tasks while the job is being printed. Jobs in the print queue can be viewed, canceled and reordered to manage the flow of print jobs to the printer.



Note:

Each operating system may have their own unique print queue. The following examples describe how to manage the print queue using Windows XP®. For detailed instructions on the particular operating system you are using please refer to your operating system help function.

If you manage a printer, you can control certain operations from the print queue. For example, you can pause or resume

You can also manage documents you send to the printer. You can pause, resume, or cancel the printing of a document; restart the printing of a document; or you may view and change the job settings, such as the priority and the person notified when the job is done. For documents waiting to print, you can view, but not change, settings such as the page orientation, paper source, and number of copies.

By default, all users can pause, resume, restart, and cancel the printing of their own documents. However, to manage documents printed by other users, you must have the Manage Documents access, which is one of several printer access levels.

The print queue can typically be accessed in one of two ways. If there are documents in the print queue a printer icon is usually opened in the Quick Launch area of the task bar. Rolling the cursor over the icon will show the number of documents pending for all the printers connected to the computer. Double clicking on the icon will bring up a window like the one shown below showing the print queue for all printers with jobs pending. The second way to access the print queue is to click **Start**, then **Printers and Faxes**, then double click on the printer whose print queue you want to open.



The print queue shows the documents that are waiting to be printed. For each item on the list, information, such as the print status and the number of pages, is provided. The following table shows the information displayed for each print job :

Column	Description
Document Name	The file name of the document
Status	The current status of the document, such as Spooling, Paused, or Printing
Owner	The user name of the person who sent the document to the printer
Pages	The number of pages that have printed and the total number of pages in the document
Size	The size of the document in kilobytes
Submitted	The time and date that the document was sent to the printer
Port	The port being used by the printer

3.9.1 To view documents waiting to print

You may view all the documents pending for a particular printer by following these steps:

- 1) Open the print queue using one of the two methods described above.
- 2) Double-click the printer for which you want to view the documents waiting to print. This opens the print queue.

3.9.2 To pause or resume printing a document

You may suspend printing a document by pausing it, or restart a paused document by resuming it. To pause or resume printing a document:

- 1) Open the print queue using one of the two methods described above.
- 2) Right-click the document for which you want to pause or resume printing.
- 3) Do one of the following:
 - To pause printing, click **Pause**. The document will not print until you resume printing.
 - To resume printing, click **Resume**. The document will begin printing. However, if higher priority documents are waiting to print, they will print first.



Note: - *In general, once a document has started printing, it will finish printing even if you pause it.*

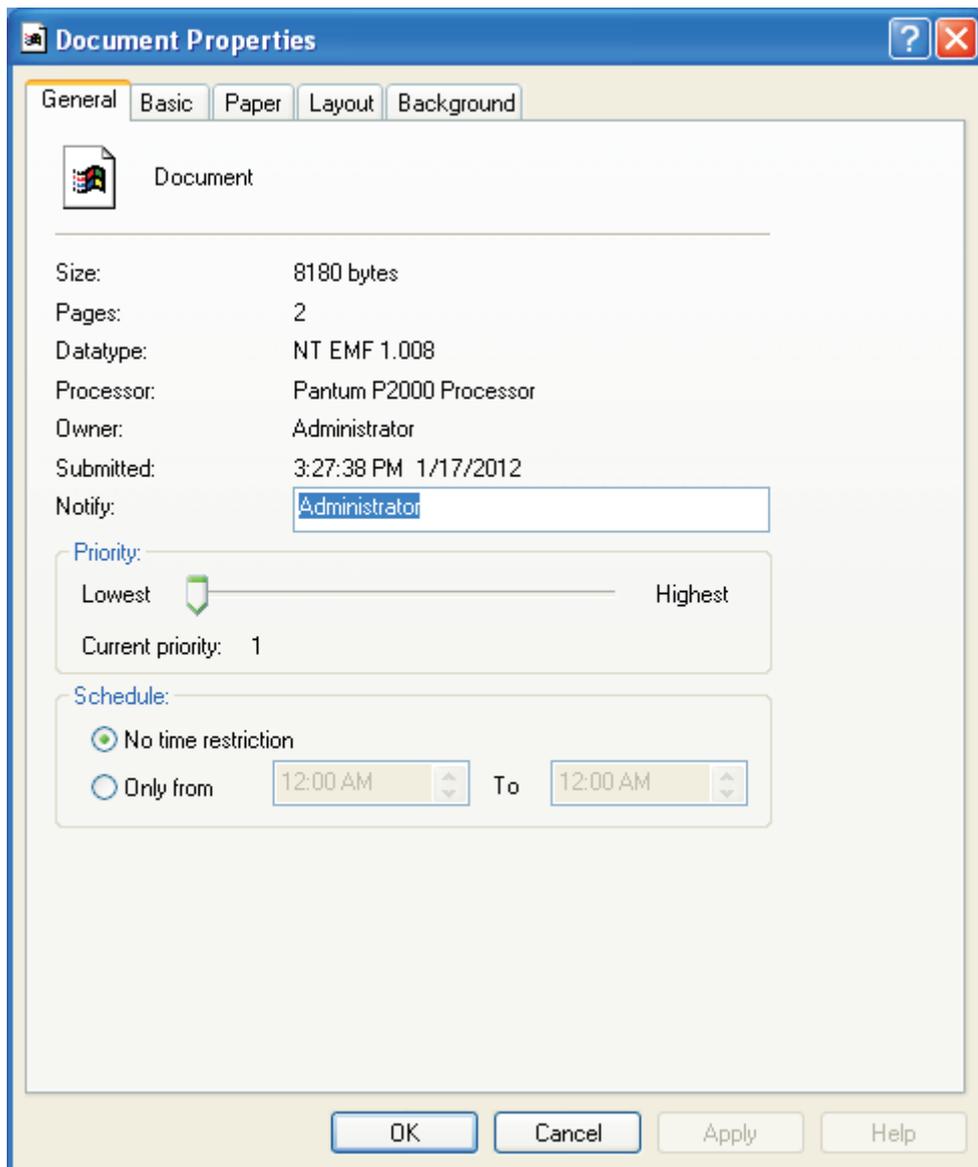
3.9.3 To restart printing a document

When you restart printing a document, it starts printing again from the beginning. If higher priority documents are in the print queue, they will print first. To restart printing a document:

- 1) Open the print queue using one of the two methods described above.
- 2) Right-click the document for which you want to restart printing, and then click **Restart**.

3.9.4 To change the printing priority of a document

Documents sent to the print queue are given a priority of 1 out of 1 through 99 by default, where 1 is the lowest priority and 99 is the highest priority. Since all documents have the same priority by default they are printed in the order they are sent to the printer. When multiple documents are in the print queue and you would like to have a document sent to the printer later than one of the documents above it in the print queue you can change the later document's print priority in order to have it print before the document that is above it in the print queue. To change a document's priority:



- 1) Open the print queue using one of the two methods described above.
- 2) Right-click the document you want to move in the print order, and then click **Properties**.
- 3) On the General tab, drag the Priority slider to raise or lower the document's priority. The higher the number, the higher the priority.
- 4) Click **OK**. The documents will print in the order you want even though your changes may not be reflected in the list of documents.



Note:

- Once a document has started printing, any printing priority changes you make will not affect that document.
- In addition to a document's priority you may also set up time restrictions on when a document will print using the **Only from** and **To** boxes drop down lists. The default is no time restrictions.

3.9.5 Other changes to documents in the print queue

Using the same procedure described above you may change any of the printer driver settings for documents pending in the print queue by opening the Properties dialog box and following the procedures shown in this section.

4. Installation and removal of the driver

4.1 Driver installation



Note: Do not turn the printer on until prompted to do so by the driver installation wizard.

To install the printer driver:

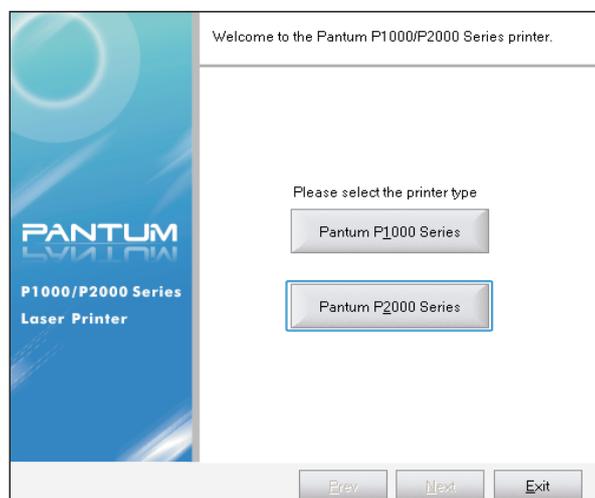
- 1) Put the CD-ROM that came with your printer into the CD drive of your PC. The setup window will appear automatically.
- 2) For Windows 7, Windows Vista and Windows Server 2008 users:
 - a) When you see the *User account control* prompt, click **Allow** or **Yes**.
 - b) If the PANTUM P1000/P2000 Installation screen does not appear click **My Computer**, open the installation CD-ROM and double click **Setup.exe** then follow the installation steps on the screen.

The installation steps are:

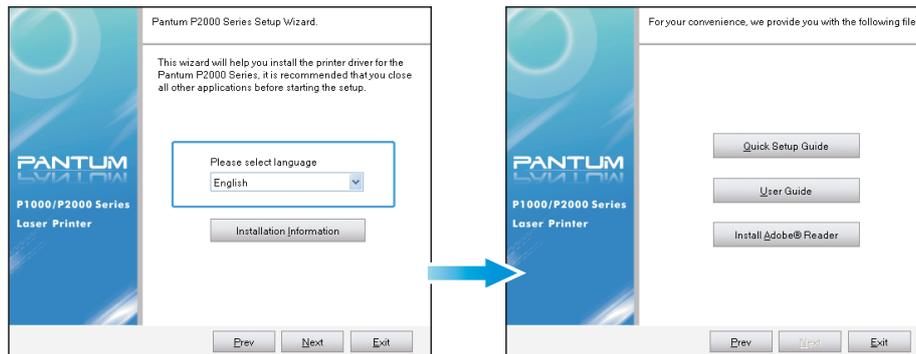
- (1) Click the **Printer Driver** button to begin the installation.



- (2) Select the printer type. If you select a printer type different than the printer being installed the driver installation will fail.



- (3) Select the language from the drop down list then click **Next**. Before clicking **Next** you can click the Installation Information button to see the printer's **User Guide** and **Quick Setup Guide**.



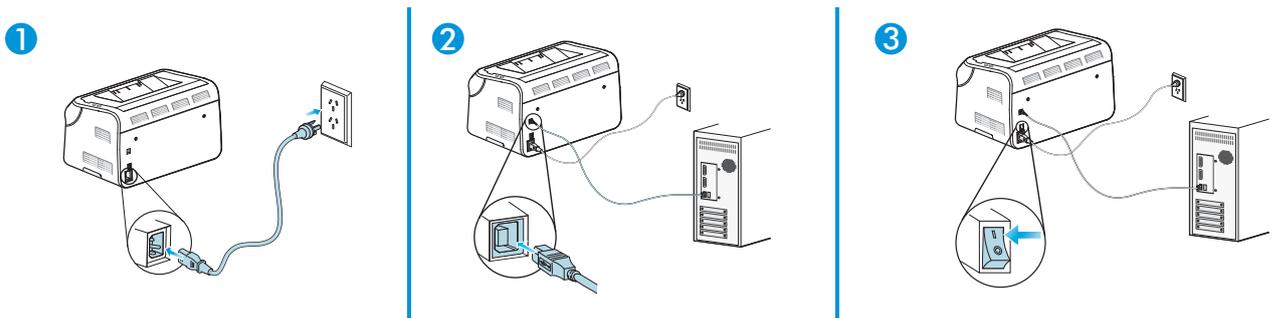
- (4) The End User License Agreement window will appear. Please read and accept the agreement by choosing **I Agree** and **Next**. If you choose **I Disagree** the installation will terminate.



- (5) The installation will begin copying files to your computer. Do not turn off the computer or run other operations while the driver is copying files to your computer.



- (6) When all the files have been copied you will be prompted to plug in the power cord, connect the USB cable between the printer and the PC, and then switch on the printer.



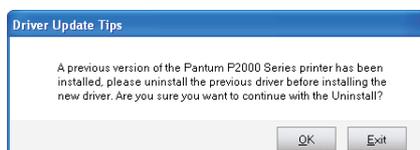
- (7) When you have powered on and have connected the printer click **Next**.



- (8) Click **Done** to exit set-up, or select **Register product online** to go the product registration website. We recommend registering your product in order to be notified about the latest driver updates and any other alerts to keep your printer up to date.



If you want to reinstall or update the driver, remove the old driver first. If you do not remove the previous driver before installation, the following window will appear during the reinstallation. Click **OK** to remove the old driver. We suggest you restart your computer after removal of the previously installed driver and installation of a new driver or reinstallation of the previous driver.



4.2 Driver removal

When installing a new or updated driver remove the old driver first. To remove the old driver:

- (1) Click **Start** then **All Programs**, select **Pantum P1000 Series** or **Pantum P2000 Series**, then select **Uninstall** as illustrated below.

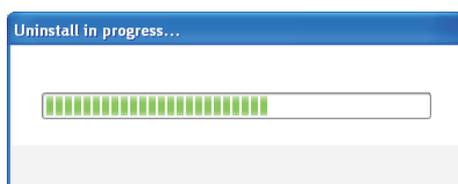


Alternatively you may go to the **Control Panel**, click **Add or Remove Programs**, select the appropriate driver and click **Remove**.

- (2) Choose **OK** in the pop-up window to begin driver removal.



- (3) The pop-up bar displays the removal progress.



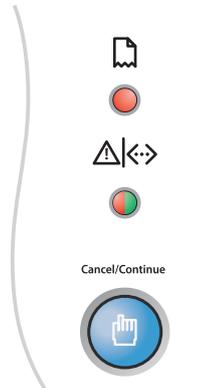
- (4) After removal, please restart your computer.



5. Control panel operation

5.1 Control panel instructions

The control panel includes an ATTENTION multi-colored LED indicator (LED indicator will display red, green and orange), a PAPER OUT red LED light and a Cancel/Continue button as shown in the figure below.



1) The Cancel/Continue button

The Cancel/Continue button is used to cancel a print job or to continue a job that may have been interrupted due to a paper out condition or other similar reasons, or to resume the printing of the second side of a manual duplex job.

2) The LED indicators.

The Paper Out indicator shows that a paper out condition, paper jam error or some other problem relating to paper has occurred.

The ATTENTION indicator can display different colors :

- Red indicates an error;
- Orange indicates that the print cartridge is installed incorrectly, or the print cartridge is low on toner, or some other problem relating to the print cartridge;
- Green indicates normal.

5.2 The meaning of the LED indicators

State		Description
Paper (the red LED indicator)	Data/print cartridge (the multi-color LED indicator) print	
		Ready
		Printer warming up
		Standby mode. Press the key to change the printer from Standby mode to Warming up mode. After warm up the printer is in the Ready state.
		Receiving data. Printer is receiving data from the computer, processing data in memory, or printing.
		Data has been transferred to the printer but it is not printing. If the Ready LED indicator is flashing continually with no output, press the Continue/cancel button to print the data currently residing in its memory.
		There is no paper in the paper tray, or the paper in the tray does not match the paper specified in the driver and the single red indicator and the multi-color (green) indicator light is flashing.
		Paper jam. The single red indicator stays on, and the multi-color (green) indicator flashes.
		The flashing orange indicator when the printer is in ready mode means the printer is low on toner.
		Print cartridge error or toner cartridge is empty.
		Other printer errors.

6. Routine maintenance

6.1 Consumables

6.1.1 Print cartridge maintenance

- (1) Use only genuine Pantum print cartridges in your PANTUM printer.
- (2) Do not refill print cartridges. Damage caused by the use of a refilled print cartridge will void the printer warranty.
- (3) Print cartridges should be stored in the same normal office environment as the printer.
- (4) The life of the original print cartridge that came with the printer may be either a starter, standard or high yield print cartridge depending on the model and country you bought the printer in.



Note :

- *The amount of toner used per page varies according to the content printed on the page and the print density settings. 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 insert it into the printer and do not expose the drum to more light than is necessary.*
-

6.1.2 How to replace the print cartridge

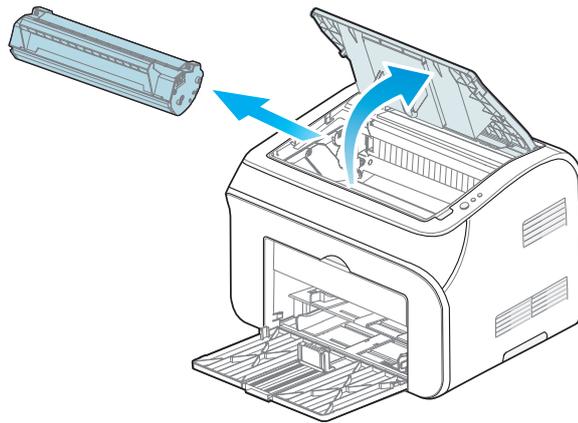
The print cartridge is empty and needs to be replaced when the multi-colored LED indicator shows orange.



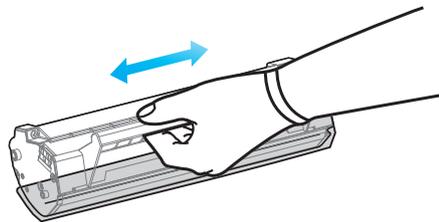
The steps to replacing the print cartridge are:

- (1) Switch off the printer.

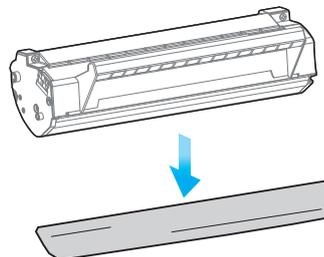
- (2) Open the cartridge cover to access the print cartridge and lift the print cartridge out along the guide slots on the inside of the printer.



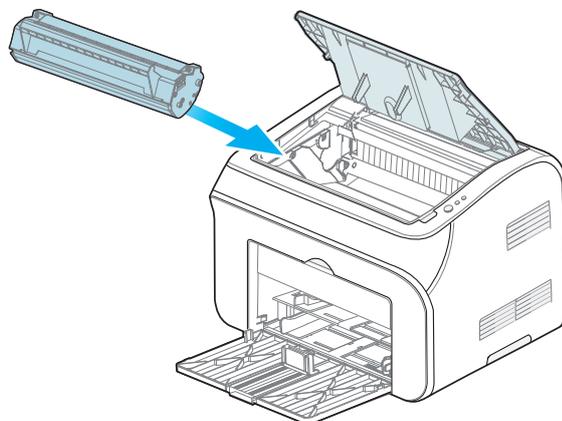
- (3) Open the new print cartridge package, hold the print cartridge handle, and rock it gently side to side 5 or 6 times to make sure the toner in the cartridge is dispersed evenly.



- (4) Remove the protective cover (transport lock) on the bottom of the cartridge.



- (5) Use the guides along the sides inside the printer to insert the new print cartridge. When seated, push firmly until you hear a click assuring you the print cartridge is fully inserted.



- (6) Close the cartridge cover and power on the printer. The orange indicator light should now be off.
(7) Print a test page.

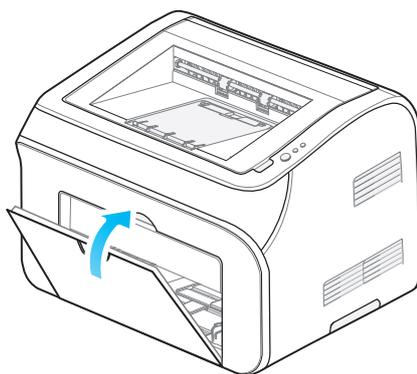


Note:

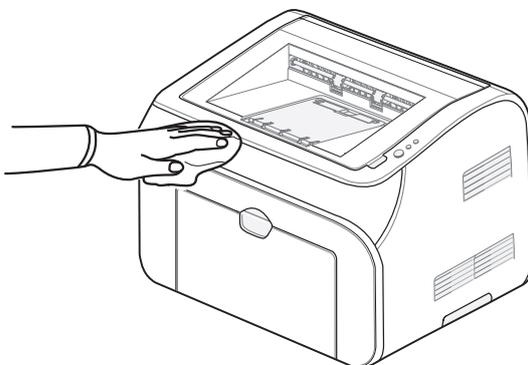
- Because the print cartridge may contain residual toner, take it out carefully to avoid spilling any toner.
- Place the empty cartridge on some paper so as not to accidentally spill toner onto the work surface.
- During installation, do not touch the green surface of the drum in order to avoid scratching the surface of the drum.

6.2 Cleaning the printer

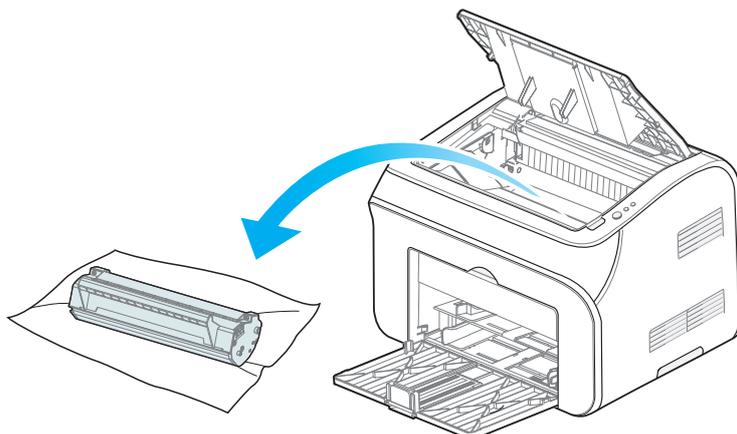
- (1) Close the automatic paper tray.



- (2) Use a soft cloth with mild detergent to wipe the outside of the printer clean.

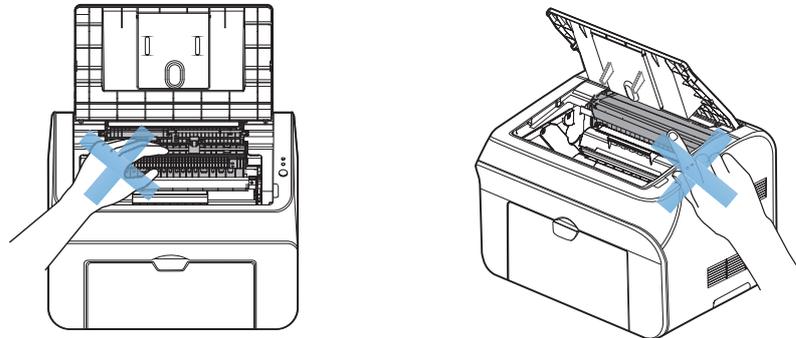


- (3) Open the cartridge cover and remove the print cartridge. Place the print cartridge on a piece of paper in a shady location to avoid direct sunlight or bright room light..

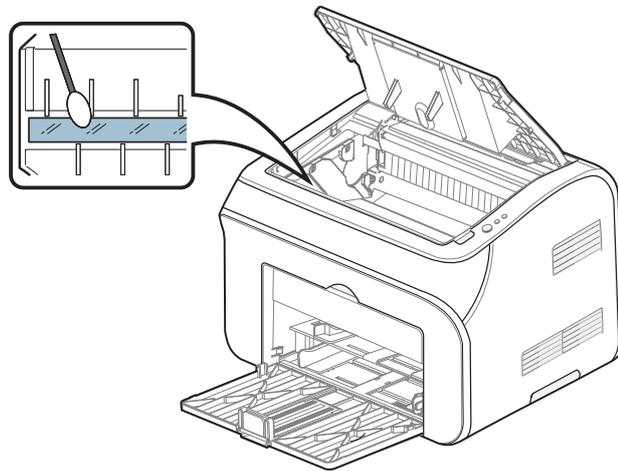


! WARNING

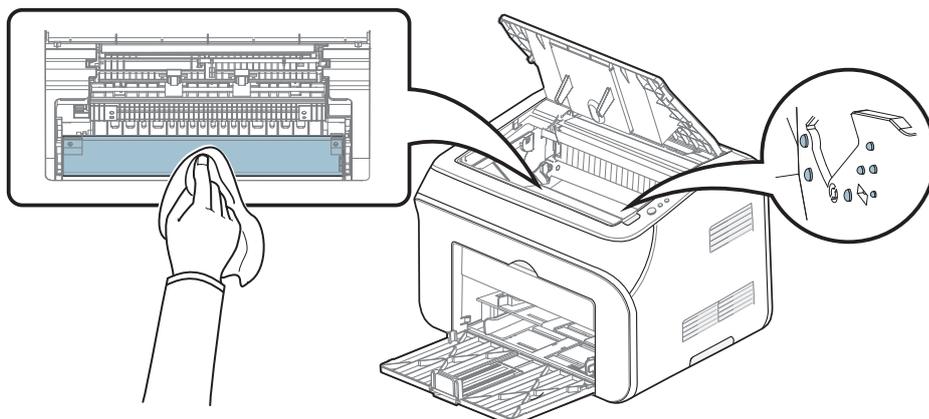
When cleaning the inside of the printer some components may still be hot. When you open the cartridge cover to clean the parts in the printer, please do not touch the grey shaded parts in the following pictures.



- (4) Wipe the surface of the laser scanning unit's dustproof surface gently with a dry lint-free cotton swab or soft cloth with a little alcohol.



- (5) Gently clean the areas of the interior of the printer highlighted in light blue with a dry lint-free cloth as shown below.



! WARNING

- Please use a mild detergent.
- Do not use strong corrosive cleaners such as benzene as it may damage the surface.
- Do not use cleaning materials with ammonia.
- Do not use isopropyl alcohol to clean any area but the laser scanning surface.

7. Troubleshooting

You can correct most problems by yourself. If you need additional help, Pantum Customer Services provides the latest answers to frequently asked questions and troubleshooting tips.

7.1 Identification

First, check that:

- The power cord is connected correctly and the printer is powered on;
- The print cartridge is installed correctly;
- The cartridge cover is fully closed;
- The paper is inserted correctly;
- The USB cable is connected between the printer and computer correctly;
- The correct printer driver is properly installed;
- The correct computer port has been selected and is properly configured.

7.2 Indicators

Refer to Section 5.2.

7.3 Common troubleshooting tips

7.3.1 Common trouble resolution

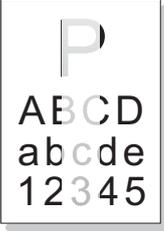
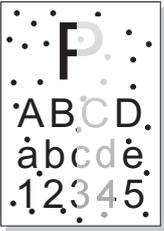
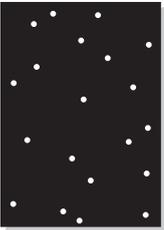
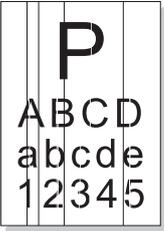
Status	Check and Causes	Solutions
Feed paper failure	The paper is placed incorrectly in the automatic paper tray or manual feed slot.	Reload the paper correctly. Check whether the adjustable feed guides are set up correctly.
	There are too many sheets in the paper tray.	Remove excess paper.
	The paper is too thick.	Use paper specified for use with the printer.
Continuous paper jams	There are too many sheets in the paper tray.	Remove excess paper. Special print media should be loaded through the manual feed slot.
	The paper doesn't match.	Make sure qualified paper is used. If using special media feed it through the manual feed slot.
	There is paper residue in the paper path.	Open the cartridge cover and clean the paper path.
	The feed roller is contaminated.	Open the cartridge cover and clean the feed roller. Please contact Pantum Customer Services if this problem continues.

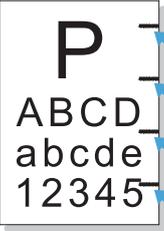
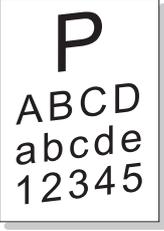
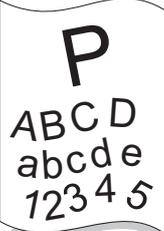
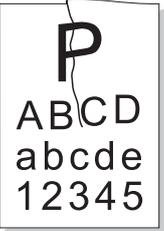
The printed output is incorrect, it appears to be gibberish or incomplete	The printer cable is loose or broken.	Unplug and reconnect the printer cable. Try to print a previously printed document you know prints correctly. Next, try a different USB cable. Then, if possible, connect the printer to another computer and attempt to print a previously printed document.
	Printer driver errors.	Check that the correct printer has been selected in the <i>Name</i> area in the Print menu.
	Software application errors.	Attempt to print the document from a different application program.
Pages seem to print but the result is blank pages.	The print cartridge is out of toner or incorrectly installed.	Remove the print cartridge and rock it gently as described in Section 6.1.2, step 3. Replace the print cartridge as described in Section 6.1.2.
	There may be blank pages in the print job.	Check the document to ensure there are no blank pages.
Multiple paper feeds.	Excessive electrostatic charge on the media, often found in very dry environments.	Fan the media to remove the electrostatic buildup.
	Printing media is damp and sticks together, often found in excessively humid environments.	Fan the media to lessen the adhesion caused by dampness.
Paper doesn't match.	Different media is placed in the paper tray than specified in the driver.	Change to the correct paper as specified in the driver or change the driver specification to match the media in the tray.
	The media used is not supported by the printer.	Use a media that is supported by the printer.

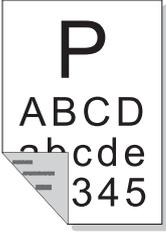
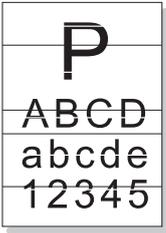
7.3.2 Trouble shooting the driver installation

State	Suggest Solutions
<p>Unable to click NEXT to continue the installation after the printer has been powered on and connected to the PC.</p>	<p>Make sure the printer series selected for installation is the same as the printer being installed.</p> <p>Make sure the USB cable is connected correctly.</p> <p>Download the latest version of the driver from www.pantum.com and reinstall it.</p> <p>If the problem remains, please contact Pantum Customer Services.</p>
<p>The message '<i>Pantum P1000/P2000 series printer driver has not been installed successfully, please reinstall it</i>' is displayed during the installation.</p>	<p>There are two versions of the setup.exe file, a 32 bit version and a 64 bit version. If you are installing the driver manually make sure you have selected the correct version for your system, or quit the setup process and click on the autorun.exe file to start the driver installation wizard and proceed as described in Section 4.1.</p> <p>Then repeat the driver installation steps.</p> <p>If the above operations does not fix the problem:</p> <ol style="list-style-type: none"> 1. Click the right mouse button on the My computer icon on your desktop, select Manage, then Services and Applications and then Services. 2. Look at the Print spooler line and check that the Status is Started. If not, select Print spooler in the pop up menu, check that the Startup type is <i>Automatic</i> and click the Start button in the Service status area. <p>Restart the autorun.exe file and finish the installation following the wizard.</p>
<p>After completing the driver installation the printer still does not work.</p>	<p>Installation files may be damaged.</p> <p>Remove the driver as described above; download the latest driver corresponding to the printer from www.pantum.com, then install the new driver as described above.</p>

7.3.3 Troubleshooting image defects

State	Suggest Solutions
<p>There is an area of lightly exposed image on the page</p> 	<p>If there is vertical bar or area on the page where it is faded:</p> <ul style="list-style-type: none"> • Toner is low. Change to a new print cartridge. • Paper outside of prescribed specifications has been used and may not feed through the printer properly. Change to paper that meets the paper specifications. • If the characters on the page seem to be print light the print resolution may be set too low. Please select a higher print resolution. Refer to the help function in the properties section of the print driver or instructions in this User Guide. • If the print is faded and stains appear on the page clean the print cartridge. • If the problem remains, please contact a qualified service representative.
<p>Toner spots</p> 	<p>Paper may not be feeding though the printer properly.</p> <ul style="list-style-type: none"> • Paper outside of prescribed specifications has been used or the operating environment is outside of the specifications. Change to paper that meets the paper specifications or operate within the proper environmental specifications. <p> Note: <i>Paper stored outside of the proper environmental specifications will take at least 24 hours to return to normal after being returned to the proper environmental specifications.</i></p> <ul style="list-style-type: none"> • The paper path may need cleaning. • If the problem remains, please contact a qualified service representative.
<p>White spots</p> 	<p>If there are white spots on a dark background:</p> <ul style="list-style-type: none"> • The paper is too rough or dust has fallen onto the internal components of the printer, making the conveyor belt dirty. Please contact a qualified service representative to clean the internal parts of the printer affected. • The paper path may need cleaning. Please contact a qualified service representative.
<p>Vertical stripes</p> 	<p>If vertical white upright stripes appear (illustrated with black stripes in the accompanying picture):</p> <ul style="list-style-type: none"> • The surface of the laser scanning unit in the printer may be dirty. Clean the dustproof glass surface of the laser scanning unit as described in Section 6.2, step 4. If the problem continues please contact a qualified service representative.

<p>Black background</p> 	<p>If the shade of the background is poor:</p> <ul style="list-style-type: none"> • If the paper has an off color shade, choose a brighter paper. • Check the printer's operating environment. Operating outside of the specified operating conditions can result in a poor background. • The print cartridge may have been damaged, replace the print cartridge.
<p>Uniform horizontal streaks</p> 	<p>If uniform horizontal streaks or lines appear on the printed page:</p> <ul style="list-style-type: none"> • The print cartridge may have been damaged. Print several blank pages to clean the print cartridge. If the problem continues, replace the print cartridge. • There may be toner dust left on the internal components of the printer. If the traces appear on the back, print several pages and the problem should disappear. • The fixing unit may be damaged, please contact a qualified service representative.
<p>Skewed page</p> 	<ul style="list-style-type: none"> • Make sure the paper is being fed into the printer correctly. • Check that the type and quality of paper meet specifications. • Make sure paper or other media is being fed into the printer correctly and the feed guide is not too tight or too loose.
<p>Frizzy or wavy</p> 	<ul style="list-style-type: none"> • Make sure the paper is being fed into the printer correctly. • Check that the type and quality of paper meet specifications. • Either high temperature or high humidity could cause this type of defect. • Turn the paper in the paper tray over and rotate it 180°.
<p>Wrinkled or folded</p> 	<ul style="list-style-type: none"> • Make sure the paper is being fed into the printer correctly. • Check that the type and quality of paper meet specifications. • Turn the paper in the paper tray over and rotate it 180°.

<p>The back of the sheet is dirty</p> 	<p>Check whether toner is leaking from the print cartridge and clean the internal parts of the printer as described in Section 6.2.</p>
<p>Whole page dark</p> 	<ul style="list-style-type: none"> • The print cartridge may be installed incorrectly or not properly seated. Please take it out and insert it again. • The print cartridge may be damaged, replace it. • If the above does not correct the problem contact a qualified service representative.
<p>The toner does not adhere to the paper</p> 	<p>Clean the internal parts of the printer as described in Section 6.2.</p> <ul style="list-style-type: none"> • Check that the type and quality of paper meet specifications. • Replace the print cartridge. • If the above does not correct the problem contact a qualified service representative.
<p>Partially formed characters</p> 	<p>Incomplete characters means the area which should be black are blank.</p> <ul style="list-style-type: none"> • Poor quality transparencies may cause this problem when printing transparencies. • Some special media, such as transparencies, can only be printed on one side. If you are printing on special media make sure the media is loaded with the print side up. • Check that the type and quality of paper meet specifications.
<p>Horizontal stripes</p> 	<p>If there are black stripes or spots on the page:</p> <ul style="list-style-type: none"> • The print cartridge may be incorrectly installed. Remove and reinstall the print cartridge. • The print cartridge may be damaged. Remove and reinstall the print cartridge. • If the above does not correct the problem contact a qualified service representative.

7.4 Clearing paper jams

To clear paper jams remove any paper in the paper tray or manual feed slot, raise the cartridge cover and remove any jammed paper inside the printer, then re-insert the print cartridge into the printer, close the cartridge cover and reload the paper.

The printer should recover and automatically begin printing. If it doesn't automatically recover press the Continue/Cancel button. If it still doesn't start to print check whether all the jammed paper has been completely removed.

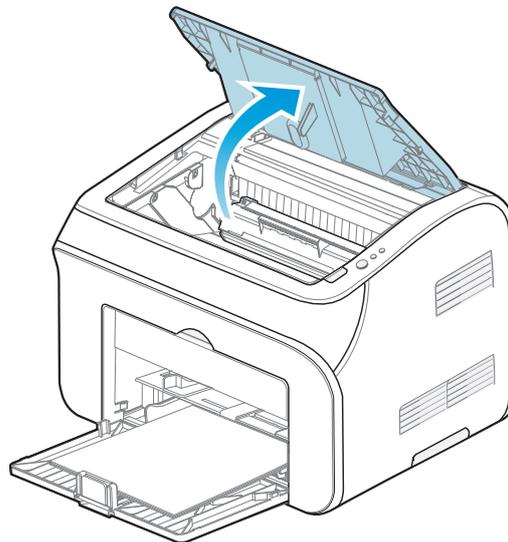


Note:

Take out all the paper in the paper tray and check it before loading new paper. Overfilling the automatic paper tray can result in paper jams.

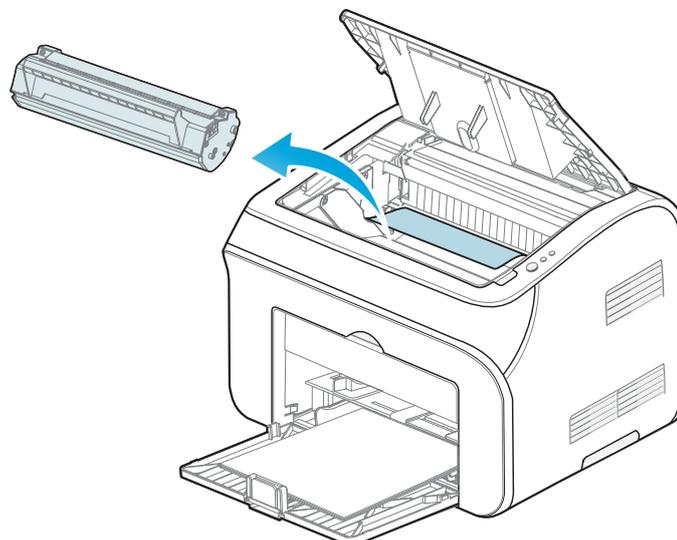
i. Dealing with internal paper jams

- (1) Open the cartridge cover.

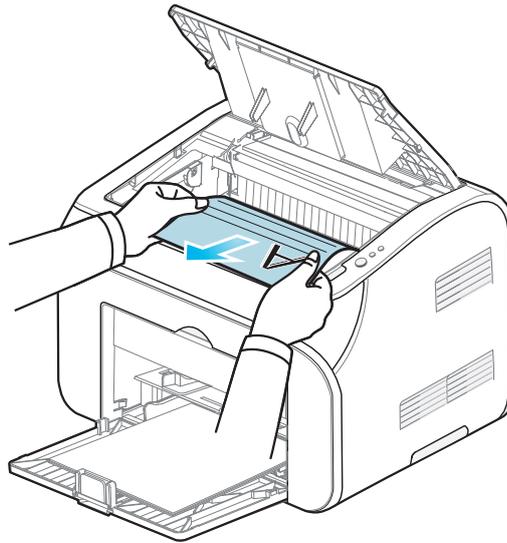


- (2) Remove the print cartridge.

Put the removed print cartridge from the printer in the black sealable bag or cover the print cartridge with a piece of lightproof paper to avoid damaging the print cartridge by exposing it to too much light.



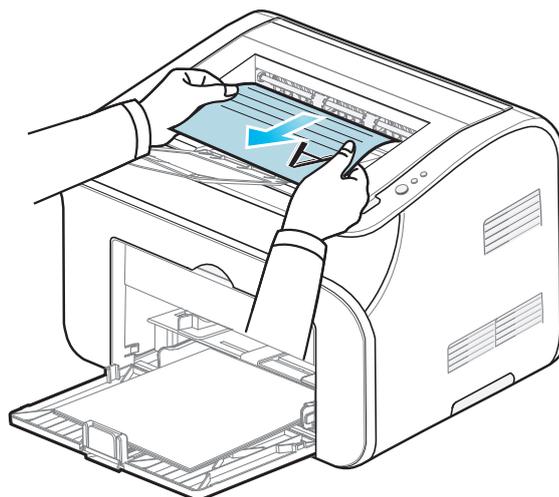
- (3) Remove the jammed paper slowly in the feed direction to avoid tearing the paper.



- (4) After removing the jammed paper reinstall the print cartridge as directed in Section 6.1.2.
- (5) Replace the paper in the automatic paper tray and continue printing.

ii. Dealing with paper jams near the output bin

Slowly remove the jammed paper from the fusing unit in the feed direction to avoid tearing the paper. If necessary open the cartridge cover and remove the print cartridge before taking the jammed paper out in order to make it easier to remove.



8. Product specifications and safety information

8.1 Product specifications

8.1.1 Common specifications

Print technology	Monochrome electro photographic laser	
Maximum printing size	75mm x 148mm to 216mm x 356mm (3" x 5.8" to 8.6" x 14.2")	
Memory	8MB (Cannot be extended)	
Rated power	Model depends on the country of purchase : 110-Volt Model: 100~127 VAC,60Hz,6.0A. 220-Volt Model: 220~240 VAC,50/60Hz,3.0A. (This product is only suitable for the power supply and voltage printed on the product data label at the back of the printer.)	
Power consumption	Average: 350 watt; in Stand-by mode: <6 watt	
Noise	Printing	54 dB
	Stand-by	35 dB
Operating conditions	Temperature: 10°C - 32°C (50°F - 90°F), Humidity: 20%-80%	
Size (W×D×H)	380mm x 261mm x 236 mm (15" x 10.3" x 9.3")	
Weight	6.1kg (13.4lbs) with print cartridge	
Engine life	5 years or 100,000 pages	
Monthly duty cycle	Up to 20,000 pages	

8.1.2 Media specifications

Automatic paper tray	Media type	Plain, Preprinted
	Media size	Letter, A4, A5, A6, JISB5, ISOB5, B6, Executive, Statement, Folio, Oficio, Legal, Big 32k, Big16k, 32k, 16k, Custom (105mm x 148mm to 216mm x 356mm (4.1" x 5.8" to 8.6" x 14.2"))
	Media weight	60~105g/m ² (16lb bond ~ 28lb bond)
	Paper input	150 pages (standard paper 80g/m ² (20lb bond))
Manual feed slot	Media type	Plain, Preprinted, Recycled, Transparency, Card stock, Label, Envelope, Kraft paper
	Media size	75mm x 148mm to 216mm x 356mm (3" x 5.8" to 8.6" x 14.2")
	Media weight	60~163g/m ² (16lb bond ~ 43lb bond)
	Paper input	1 page

8.1.3 Printings specifications

Supported OS	Windows: 2000/XP(32bit/64bit)/Vista(32bit/64bit)/7(32bit/64bit)/2003 Server(32bit/64bit)/2008 Server(32bit/64bit)	
Resolution	600×600DPI (can be increased to 1200×600DPI)	
Print speed	P1000series	16PPM (A4) / 17PPM (Letter)
	P2000series	20PPM (A4) / 21PPM (Letter)
Connectivity	High-speed USB (USB Cable length of no more than 2 meters (6' 7") is recommended)	



Note: Print speed varies depending on different types of documents.

8.1.4 Consumables

Consumable capacity (declared yield value in accordance with ISO/IEC 19752)

Starter cartridge	From 700 pages to 2300 pages depending on model and country of purchase
Standard capacity: PA-110	1500 pages
High capacity: PA-110H	2300 pages

- The capacity of consumables are subject to change without notice.
- The consumable capacity will vary depending on the content of the pages, the printing density and other usage and environmental factors.



Note: - Use only Genuine Pantum Supplies with your Pantum printer. Damages caused by not using Genuine Pantum Supplies are not covered by warranty.

8.2 Safety specification information

8.2.1 Radio interference

The printer meets the EN55022 (CISPR Publication 22)/B standard.

8.2.2 Laser Safety Information

The device has a Class IIIB laser diode in the laser unit. Please do not open the laser unit under any circumstances in order to avoid exposure to the laser beam. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation. Please do not open the laser unit for any reason in order to avoid potential exposure to the laser beam.

8.2.3 Internal laser radiation

Maximum radiation power	300 μ W (the maximum power of the laser beam on the OPC drum)
Wavelength	770-800nm
Laser grade	IIIB category

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