Maintenance Manual

PANTUM

WWW.PANTUM.COM

Maintenance Manual for Pantum M6200-M6500 Series Multi-functional Laser Printer

It is recommended that you read this Guide carefully before repairing the printer

Maintenance Manual of Pantum Multi-functional Laser Printer

Model： M620*/M650* ("*"represent any number or letter)

Legal Notice

Trademark

Pantum and Pantum logos are registered trademarks of Zhuhai Seine Technology Co., Ltd.

Microsoft®, Windows®, Windows server® and Windows Vista® are trademarks registered by Microsoft Corporation in the United States and/or other countries/regions.

The ownership to the names of the software in this manual belongs to the companies taking possession of them, respectively, in accordance with corresponding license agreement.

The other products and brand names herein are the registered trademarks, logos, or service marks of their respective owners.

Copyright

The copyright of this manual is owned by Zhuhai Seine Technology Co., Ltd.

It is prohibited to copy, translate, modify and transmit this manual by any means or forms without the prior written consent of Zhuhai Seine Technology Co., Ltd.

Version: V 1.0

Disclaimer

Zhuhai Seine Technology Co., Ltd. reserves the right to make changes to this manual. The information contained herein is subject to change without notice.

Users are responsible for any damage arising from failure to follow this manual. Meanwhile, apart from the express warranty made in the product maintenance manual or service commitment, Zhuhai Seine Technology Co., Ltd. hasn't made any express or implied warranty or guarantee in relation to this manual (including type setting or words).

Copying, printing, scanning (or reproduction by other means) of this product to create certain documents or images may be prohibited by the local laws. If you are uncertain about the legality of using this product to create certain documents or images, you should consult your legal advisor in advance.

Safety Information

Please read the following safety warnings carefully and make sure you understand them before starting maintenance procedures.

Important Precautions

To avoid the possible risk of damage to the product, it is strongly recommended that maintenance be carried out by trained technicians from Pantum, rather than untrained personnel. User must bear the responsibility for any personal injury or product damage occurring during maintenance of the product and the components specified in this manual. Therefore, you must read this manual carefully before performing the maintenance in order to carry out correct operation and maintenance of this product.

Please keep this manual for future maintenance purposes.

Hazard warnings, notices, and annotated instructions:

* To avoid personal injury, please pay attention to all warnings.

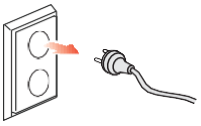
* To maintain the printer properly and avoid damage, please follow the warnings.

* Please note the relevant prompts while maintaining the printer.

* Warnings listed in this manual are as follows:

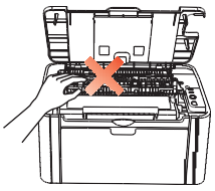
Warning

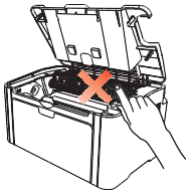
There is high-voltage electrode inside the printer. Before cleaning the printer, make sure the power is turned off!



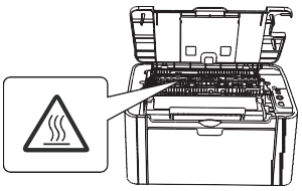
Plugging and unplugging the power cord plug with a wet hand can result in an electric shock.

The fuser unit is hot when and after printing. Touching the fuser unit (the shaded area as shown) may cause burns!





The fuser unit is attached with a high temperature warning label. Please do not remove or damage this label.



Installation

Place the machine on a flat, stable surface that is difficult to vibrate and move, such as a desktop. Place the machine next to a standard and grounded electrical socket. The ambient temperature of the installation site should be between 50 to 90 °F (10 to 32.5 °C), with relative humidity between 20% and 80%.

Note:

- Do not install the printer in crowded areas.
- Do not place the printer near heaters, refrigerators, air conditioners, or fluid and chemical products.
- The printer must not be exposed to direct sunlight or installed in overheated, damp, and dusty areas.
- Do not connect the printer to a wall socket or power supply outlet controlled by an autotimer.
- A power failure will cause loss of the device memory.
- Do not connect the printer to a power supply outlet that shares the same circuit with high-power appliances or other devices which could cause an overload.
- Avoid placing the printer near speakers or cordless telephone docks.
- Ensure adequate ventilation while using the printer for long periods or printing in bulk in a poorly ventilated room.

Laser Safety

Laser radiation is harmful to the human body. To avoid laser radiation, please do not disassemble the printer without reading the Maintenance Manual!

The printer follows the provisions of Class 1 laser products under the CFR standard. The printer has a Class III b laser diode, which has no laser radiation among the laser components.

The following label is attached to the laser components inside the printer.

Regulatory Information

This symbol indicates that this product cannot be thrown away together with other waste. Used electrical and electronic equipment must be sent to a designated collection point for recycling.

This product is only suitable for indoor use.

CE

European Community (EC) Directive Compliance.
This product complies with the protection requirements related to the electromagnetic compatibility and safety of electrical equipment (designed for use within certain voltage limits), as issued in the Member States Approximate and Coordinative Regulations of EU Directives 2004/108/EC and 2006/95/EC.
This product is manufactured by: Zhuhai Seine Technology Co., Ltd., No. 63 North Pearl Road, Xiangzhou District, Zhuhai City, Guangdong Province, People's Republic of China.
For information about the Compliance Statement for the requirements in these directives, please obtain these from an authorized representative.
This product complies with the Class B range of EN 55022 and the safety requirements of EN 60950.

This printer is fully compliant with ROHS Directive 2009/95/EC and the revised directive 2011/65/EU's requirements for managing toxic and hazardous substances.

This product is intended for safe use in non-tropical areas.

This product may only be safely used at altitudes of approx. 6,500 ft. (2,000 meters) and below.

Table of Contents

1. An Introduction to the Product 1-2
   1.1. Overview 1-2
      1.1.1. Front View (1) 1-2
      1.1.2. Front View (2) 1-3
      1.1.3. Rear View 1-4
      1.1.4. Overview of the Control Panel 1-5
   1.2. Product Specifications 1-6
      1.2.1. General Specifications 1-6
      1.2.2. Scanning Specifications 1-7
      1.2.3. Printing Specifications 1-8
      1.2.4. Copy Specifications 1-9
      1.2.5. Consumables Specifications 1-10
2. Installation and Basic Instructions 2-2
   2.1. Packing List 2-2
   2.2. Machine Installation 2-3
   2.3. Process of Using the Paper and the Manuscript 2-8
   2.4. Driver Installation and Uninstallation 2-9
      2.4.1. Based on Windows® System 2-9
      2.4.2. Uninstallation 2-19
      2.4.3. Mac-based Driver 2-21
   2.5. Print a Test Page 2-25
      2.5.1. Print an Offline Self-test Page 2-25
      2.5.2. Print a Windows Test PageOnline 2-26
3. Operating Principles 3-2
   3.1. Overview of Components 3-2
   3.2. Mechanical Device 3-3
   3.3. Feeder Circuit Diagram 3-4
   3.4. Print Principles 3-5
      3.4.1. Charging 3-5
      3.4.2. Exposure 3-5
      3.4.3. Print Transfer 3-6
      3.4.4. Separation 3-7
      3.4.5. Fusing 3-7
      3.4.6. Cleaning 3-7
   3.5. Scanning/Copying Principles 3-8
4. Disassembly and Installation 4-2
   4.1. Parts 4-2
   4.2. Step-by-Step Disassembly Diagram 4-3
   4.3. Disassembly Steps 4-4
      4.3.1. Preparation for Disassembly 4-4
      4.3.2. Rear Cover 4-6
      4.3.3. Left Cover 4-6
      4.3.4. Right Cover 4-6
      4.3.5. Scanning Platform 4-7
      4.3.6. Engine Board 4-7
      4.3.7. High-Voltage Power Board 4-8
      4.3.8. Data Board 4-9
      4.3.9. Fuser Unit 4-9
      4.3.10. Electromagnet 4-11

4.3.11. Paper Feed Clutch 4-11
4.3.12. Pickup Roller 4-11
4.3.13. Separator Component 4-12
4.3.14. Transfer Roller 4-12
4.3.15. Upper Cover 4-13
4.3.16. Front Cover 4-13
4.3.17. Base Board of the Control Panel 4-14
4.3.18. Laser 4-15
4.3.19. Main Motor 4-15
4.3.20. Scanning Platform Disassembly 4-16
5. Maintenance 5-2
5.1. Cleaning 5-2
5.2. Consumables 5-5
5.2.1. About Consumables 5-5
5.2.2. Replacement of Consumables 5-5
6. Error Display and Troubleshooting 6-2
6.1. Pre-maintenance Check 6-2
6.2. Error Information 6-3
6.3. Error Code 6-4
6.4. Clearing Jammed Paper 6-6
6.5. Troubleshooting 6-9
6.5.1. Feeder Paper Failure 6-9
6.5.2. Common Problems 6-10
6.6. Image Defects 6-15
6.6.1. Printing 6-15
6.6.2. Scanning and Copying 6-18
7. Appendix 7-2
Appendix 1. Circumference of each roller in this deviceI 7-2
Appendix 2. Product Serial Numbers 7-3
Appendix 3. Terminology 7-4

An Introduction to the Product

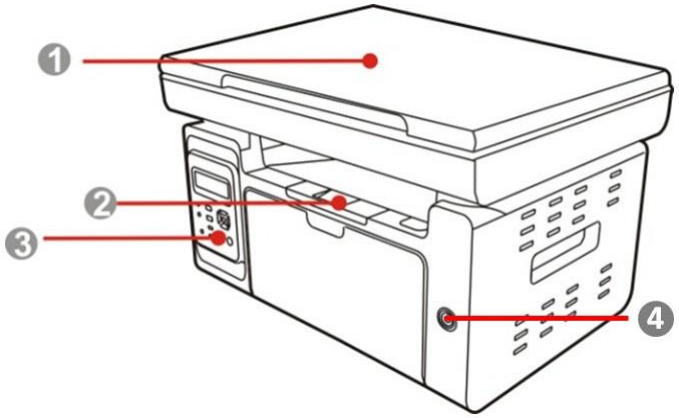
1
CHAPTER

1. An Introduction to the Product 1-2
1.1. Overview 1-2
1.1.1. Front View (1) 1-2
1.1.2. Front View (2) 1-3
1.1.3. Rear View 1-4
1.1.4. Overview of the Control Panel 1-5
1.2. Product Specifications 1-6
1.2.1. General Specifications 1-6
1.2.2. Scanning Specifications 1-7
1.2.3. Printing Specifications 1-8
1.2.4. Copy Specifications 1-9
1.2.5. Consumables Specifications 1-10

1. An Introduction to the Product

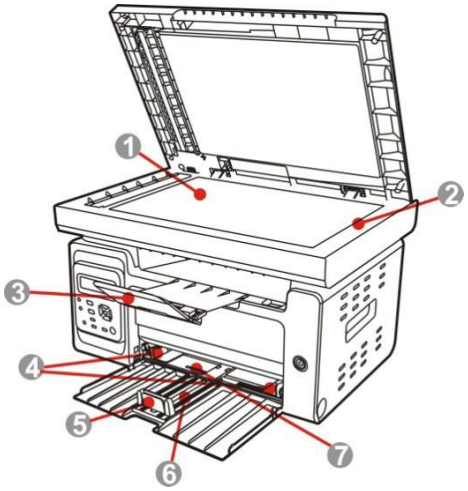
1.1. Overview

1.1.1. Front View (1)



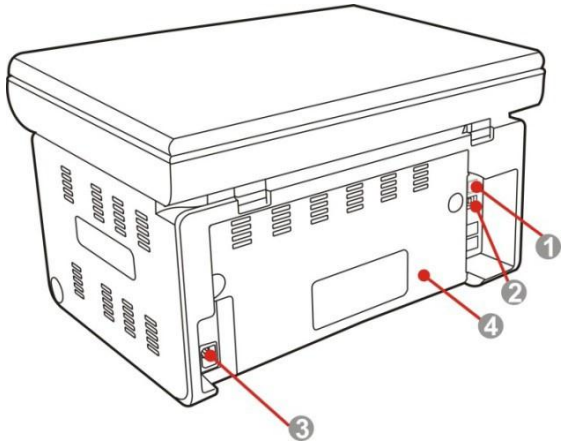
1	Scan Cover
2	Output Bin
3	Control Panel
4	Power Switch

1.1.2. Front View (2)



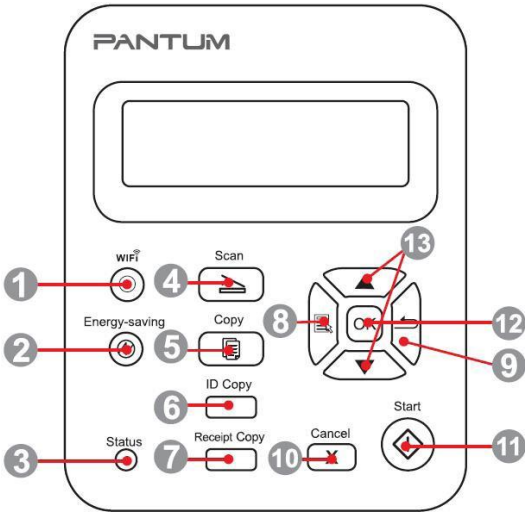
1	Glass Platen
2	Scanning Platform
3	Output Tray
4	Manual Feed Guide
5	Paper Stop
6	Feeder Tray
7	Automatic Feed Guide

1.1.3. Rear View



1	USB Interface
2	Network Interface
3	Power Interface
4	Rear Cover

1.1.4. Overview of the Control Panel



1	Wi-Fi Button	This button indicates the Wi-Fi connection status
2	Energy-saving Button	Press this button to switch to energy saving status or wake the machine from energy saving status
3	Status Light	This light indicates if the machine is ready
4	Scan Button	Press this button to enter into scan mode
5	Copy Button	Press this button to enter into copy mode
6	IDCopy Button	Press this button to enter into ID Card Copy mode
7	Receipt Copy Button	Press this button to enter into Receipt Copy mode
8	Menu Button	Press this button to access the menu options to make the settings
9	Back Button	Press this button to go back to the upper-level page
10	Cancel Button	Press this button to cancel the operation
11	Start Button	Press this button to start the corresponding operation after the operation setting
12	OK Button	Press this button to save the setting
13	“▲” and “▼”	Press these two buttons to browse through each menu and its options

1.2. Product Specifications

1.2.1. General Specifications

		Pantum M6500	Pantum M6500N	Pantum M6500NW
Functions		PC monochrome printing, PC colored/monochrome scanning, monochrome copying		
PC Client Interface Type		Hi-speed USB 2.0	Hi-speed USB 2.0 100Base-Tx Ethernet	Hi-speed USB 2.0 100Base-Tx Ethernet WiFi 802.11b/g/n
Supported Operating Systems		Microsoft Windows: Server 2003, Server 2008, Server 2012, XP, Vista, Win 7, Win 8, Win 8.1 (32/64 Bit) Mac OS: 10.6/10.7/10.8/10.9, Linux (ubuntu 13.10) IOS, Android: Neokylin, Loongson, SW		
Main Processor		600 MHz		
Memory		128 MB		
Power Supply		AC220~240V (-15%,+10%), 50Hz/60Hz; 3A		
Noise	Work	Less than 54 dB		
	Stand-by	Less than 30 dB		
Environment		Operation Temperature: 50-90 °F (10-32 °C). Operation Humidity: 20-80%		
Product Size (W*D*H)		417*305*244 mm		
Product Weight		About 8 kg (No packaging, toner cartridges)		

1.2.2. Scanning Specifications

Scan Source	Surface Plate
Optical System	CIS, Maximum Optical Resolution 1200 dpi
Scan Driver	TWAIN WIA Driver (Simplified Chinese/English/Other Languages)
Scan Preview	Available
Scan Mode	Colored/Grey/Monochrome
Scan Resolution	Max: 1200*1200 dpi
Maximum Scan Size	216 x 297 mm
Scanned File Format	BMP, JPEG, TIFF, PDF
Bit Depth	24 bit/8 bit/1 bit
Output Functions	Scan to E-mail, PC, FTP

1.2.3. Printing Specifications

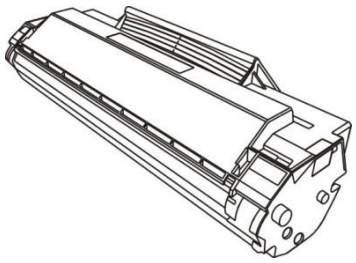
Maximum Print Size	Legal (216mm*356mm)
Printing System	Laser Electrostatic Printing System
First Page Out Time	< 7.8 s
Print Speed	22PPM (A4)/23PPM (Letter)
Feed System	Auto Feed
Maximum Monthly Volume	15,000 Pages
Print Resolution	Max: 1200*1200
Media Type	Plain paper, thick paper, transparent film, cardstock, label paper, envelope, thin paper
Paper Size	A4, A5, A6, JIS B5, ISO B5, B6, Letter, Legal, Executive, Statement, Monarch envelope, DL envelope, C5 envelope, C6 envelope, NO.10 envelope, Japanese Postcard, Folio, Oficio, Big 16k, 32k, 16k, Big 32k, ZL, Yougata4, Postcard, Younaga3, Nagagata3, Yougata2
Paper Weight	60~163 gsm
Languages	GDI

1.2.4. Copy Specifications

Scan Source	Surface Plate		
Maximum Copy Width	216*356mm		
Original Paper Size	A4/A5/A6/B5/Letter/Executive		
Optical System	CIS, Maximum Optical Resolution 1200 dpi		
Zoom	Auto Zoom	1. 100%	
		2. 141% A5→A4	
		3. 122% A5→B5	
		4. 115% B5→A4	
		5. 97% LTR→A4	
		6. 94% A4→LTR	
		7. 86% A4→B5	
		8. 81% B5→A5	
		9. 70% A4→A5	
	Manual Zoom	Custom	Use left and right arrow keys to adjust the scale interval
		25% to 400%	5%
Copies	1-99		
Copy Quality	Text, Images, Text+Images		
N-in-1	2-in-1		
	4-in-1 (Land)		
	4-in-1 (Port)		
Copy Function	Normal Mode: Text, Images, Text+Images Special Mode: Receipt Copy, ID Card Copy, N-in-1 Copy, Clone Copy, Poster Copy		

1.2.5. Consumables Specifications

Service Life of the Laser Toner Cartridge

	
Model	Average Print Volume
P*-210	About 1600 Pages (The above data is based on ISO/IEC 19752 standard)

Note:
- Model specifications are subject to change without notice.
- Consumables capacity may vary depending on different varieties used.
- For optimal print quality, please use only original Pantum products.
- The warranty excludes damage caused by using non-Pantum original consumables.

Installation and Basic Instructions

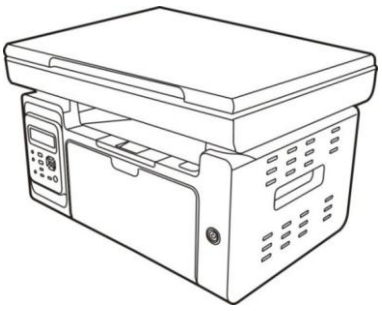
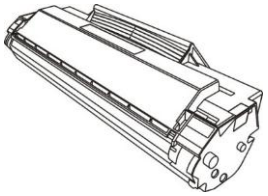
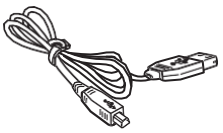
2
CHAPTER

2. Installation and Basic Instructions 2-2
2.1. Packing List 2-2
2.2. Machine Installation 2-3
2.3. Process of Using the Paper and the Manuscript 2-8
2.4. Driver Installation and Uninstallation 2-9
2.4.1. Based on Windows® System 2-9
2.4.2. Uninstallation 2-19
2.4.3. Mac-based Driver 2-21
2.5. Print a Test Page 2-25
2.5.1. Print an Offline Self-test Page 2-25
2.5.2. Print a Windows Test PageOnline 2-26

2. Installation and Basic Instructions

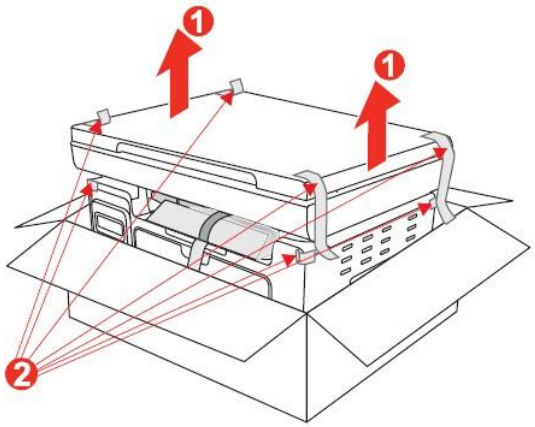
2.1. Packing List

When you open the package, make sure that the following parts are included in the carton:

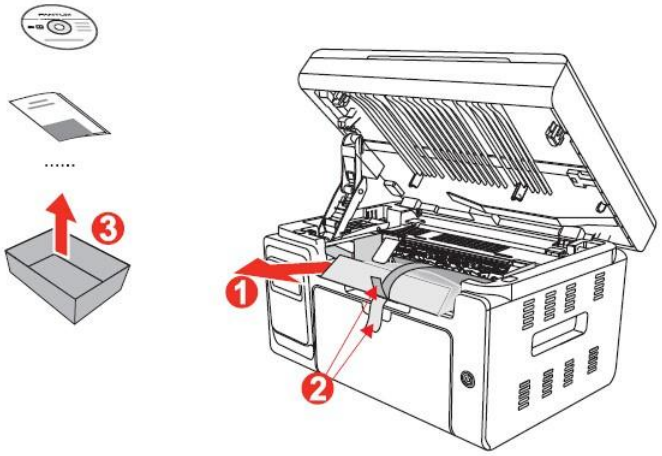
Name	Parts
Printer	
Toner Cartridges	
USB Interface Cable	
Power Cable	
CD-ROM	
Quick Setup Guide	
Warranty Certificate	

2.2. Machine Installation

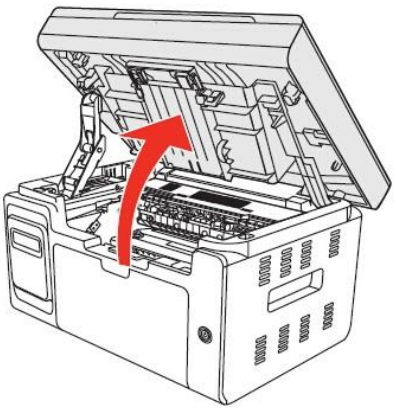
1. Take out the printer and remove the fixing seal from the scanner cover.



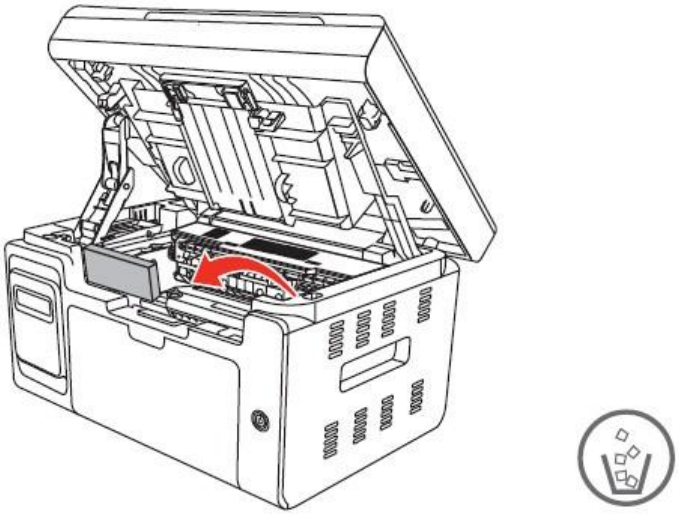
2. Lift the scanning platform and take out the included box, which contains the driver CD, quick installation guide, warranty certificate, and other accessories.



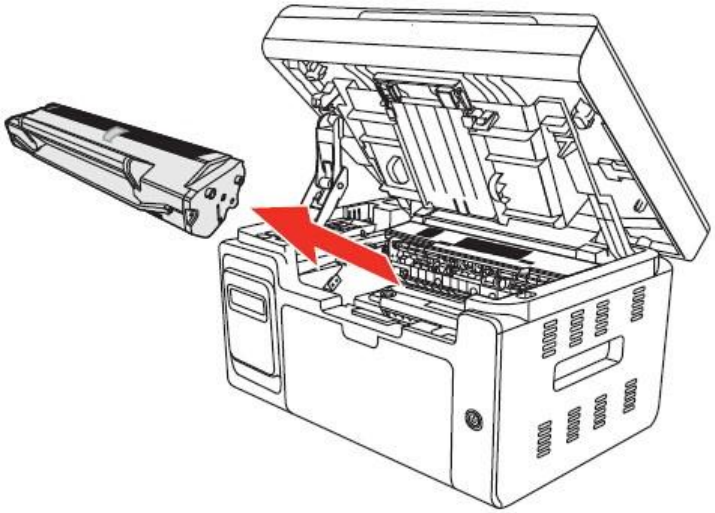
3. Open the output bin.



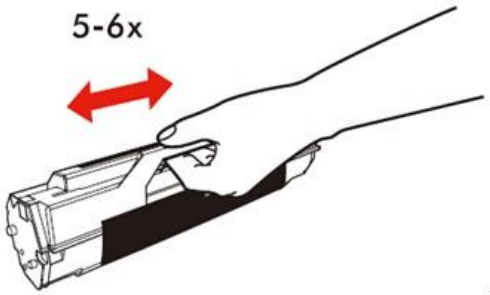
4. Take out the plate for fixing the toner cartridge.



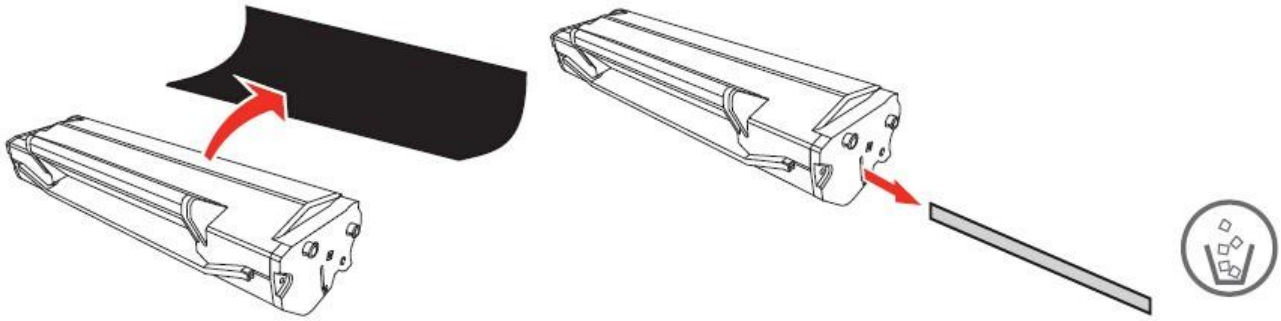
5. Remove the cartridge.



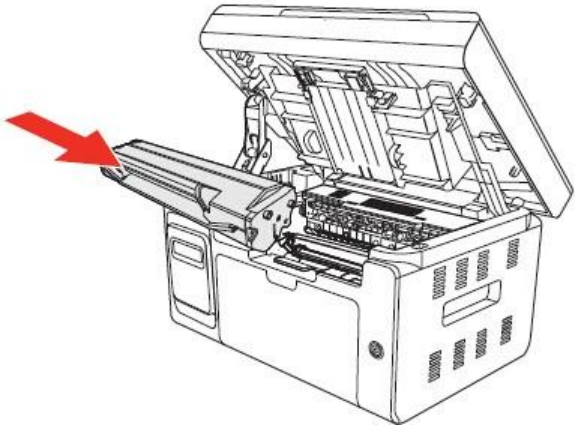
6. Hold the handle of the cartridge and shake it gently (horizontally) 5-6 times, so as to evenly distribute the toner inside the cartridge.



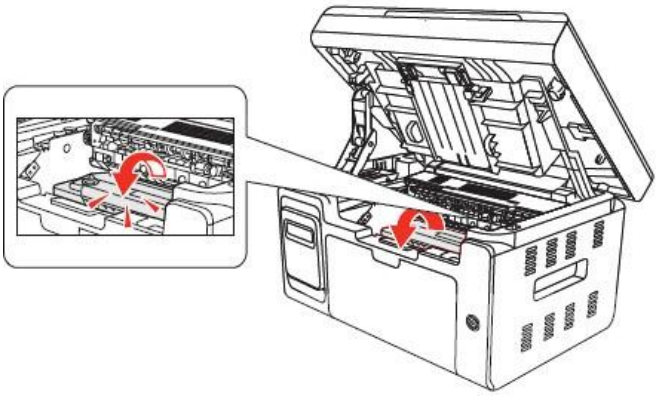
7. Remove the protective paper and seals of the photosensitive drum.



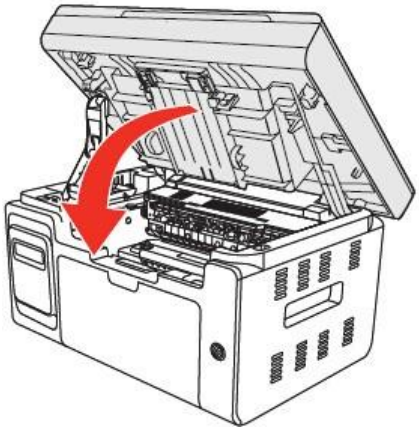
8. Place the cartridge into the printer along the guides.



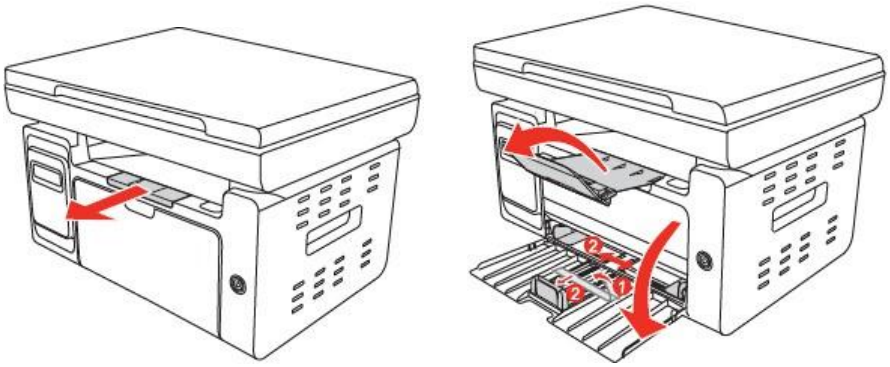
9. Push it firmly in the direction of the arrow until you hear it click. This means that the cartridge is fully inserted.



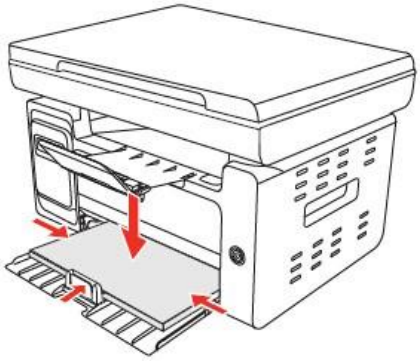
10. Close the output bin and the scanning table.



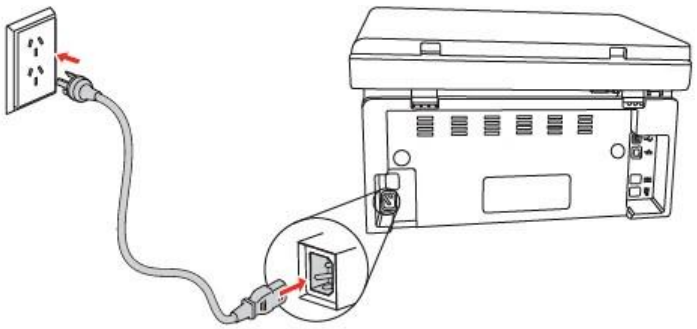
11. Pull out and open the extended tray of the output bin; then open the input tray, remove the seal, and pull out the feed baffle.



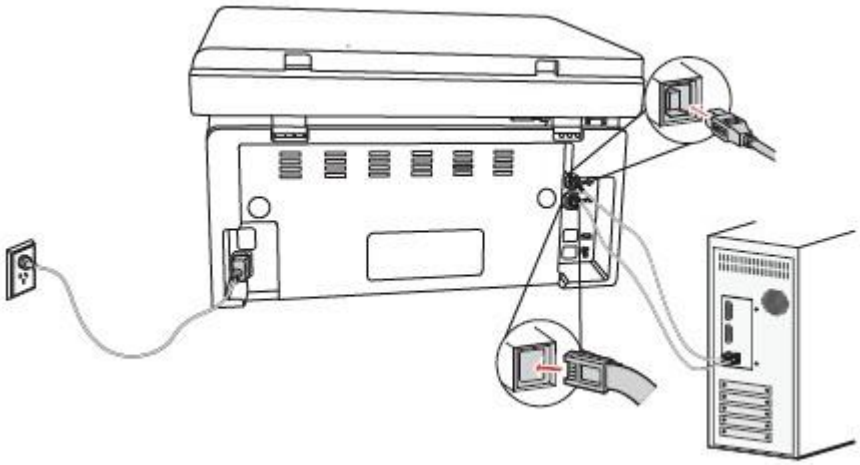
12. Put in the paper, and adjust the feed baffle properly.



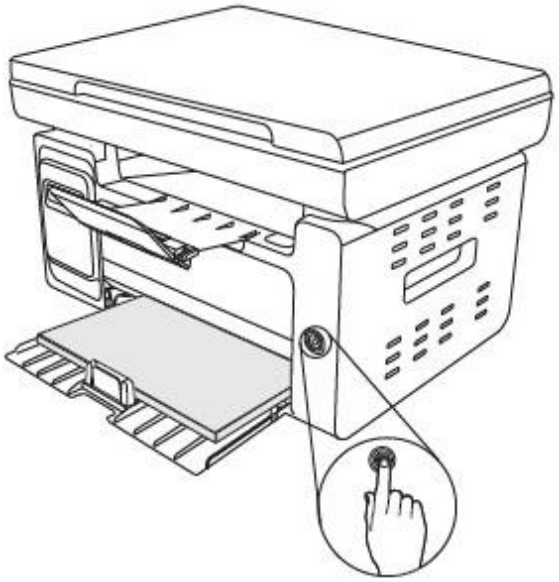
13. Connect the power supply.



14. Connect the USB or network cable.

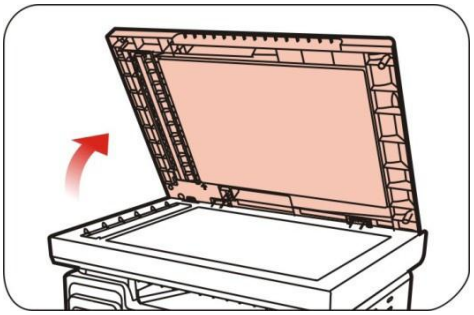


15. Turn on the power, and install the driver (see more details here: 2.3. Driver Installation and Uninstallation).

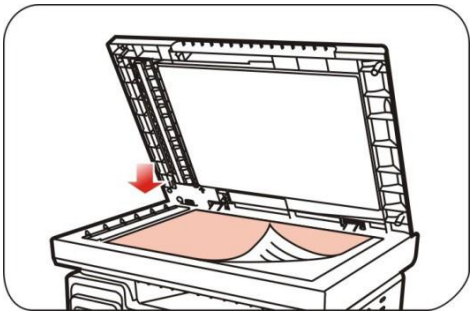


2.3. Process of Using the Paper and the Manuscript

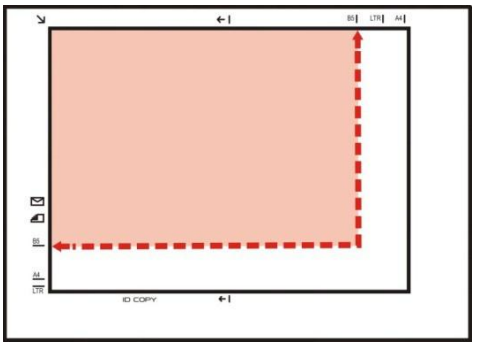
1. Raise the cover.



2. Load the manuscript face down.

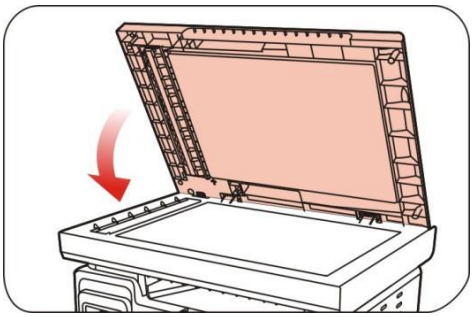


3. Align the manuscript to match the appropriate paper size.



Note: • If the manuscript does not match with any size marker, please align the upper-left corner of the manuscript with the arrow.

4. Gently put down the cover.



• Please put the paper or document on the scanner glass after the glue, ink or correction fluid are completely dried.

• Paper or manuscript with rough texture, concave and convex, oil stain and little smoothness has poor printing performance.

• Please make sure that there is no dust, fluff, etc. on the paper.

• Paper shall be put on a flat surface and stored in a cool and dry environment.

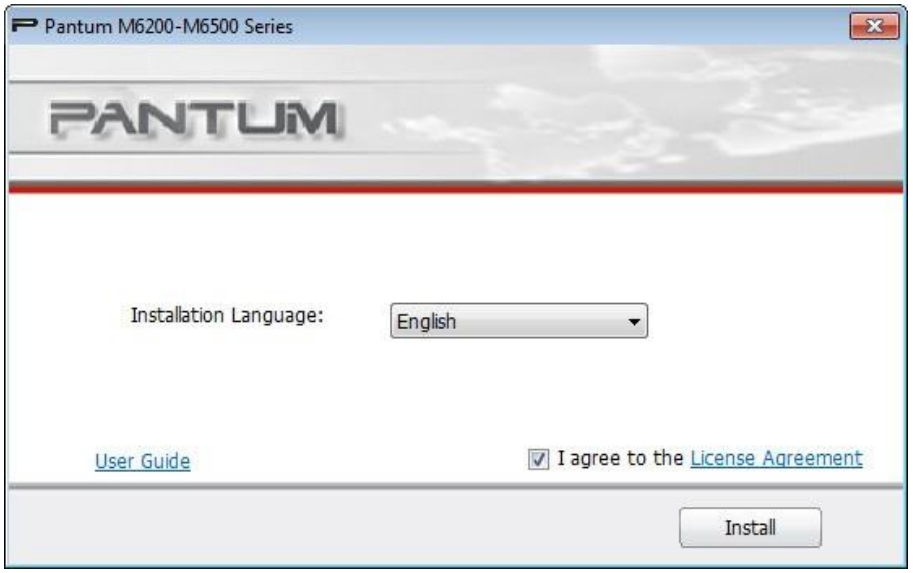
2.4. Driver Installation and Uninstallation

2.4.1. Based on Windows® System

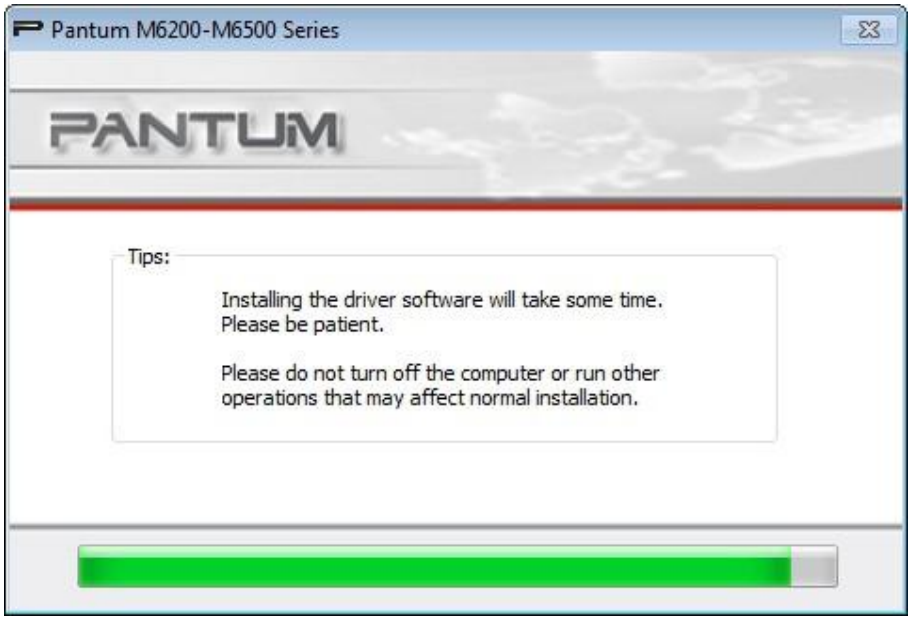
2.4.1.1. USB Model Installation

1) After running the installation CD, the program will run automatically and display the following interface.

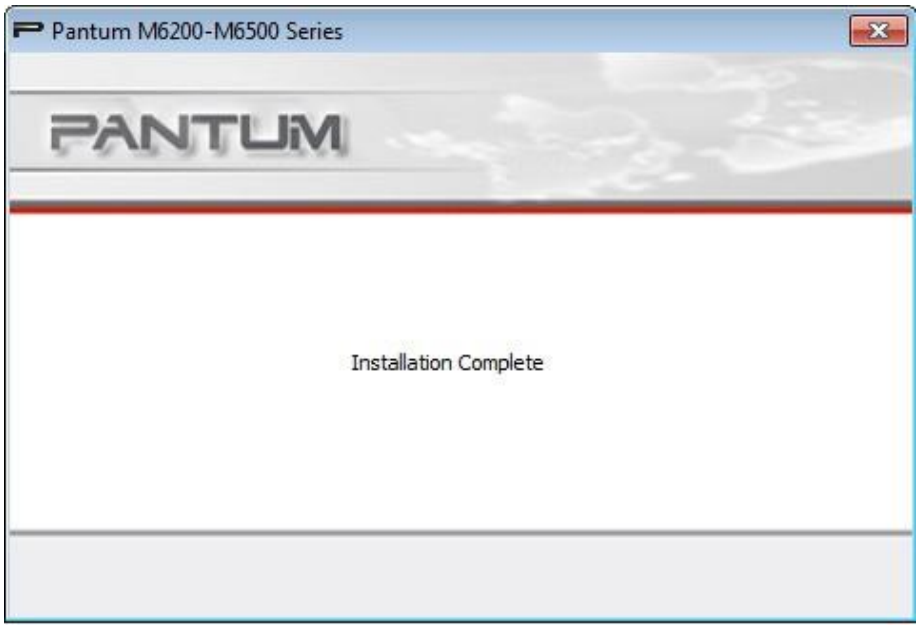
2) After the running interface ends, it will enter into Installation Configuration interface. Users will select the corresponding series, language and model according to the purchased printer model.



3) Choose the Installation language, click the “I agree to the License Agreement”. Click Install to enter into the Installation Process interface.



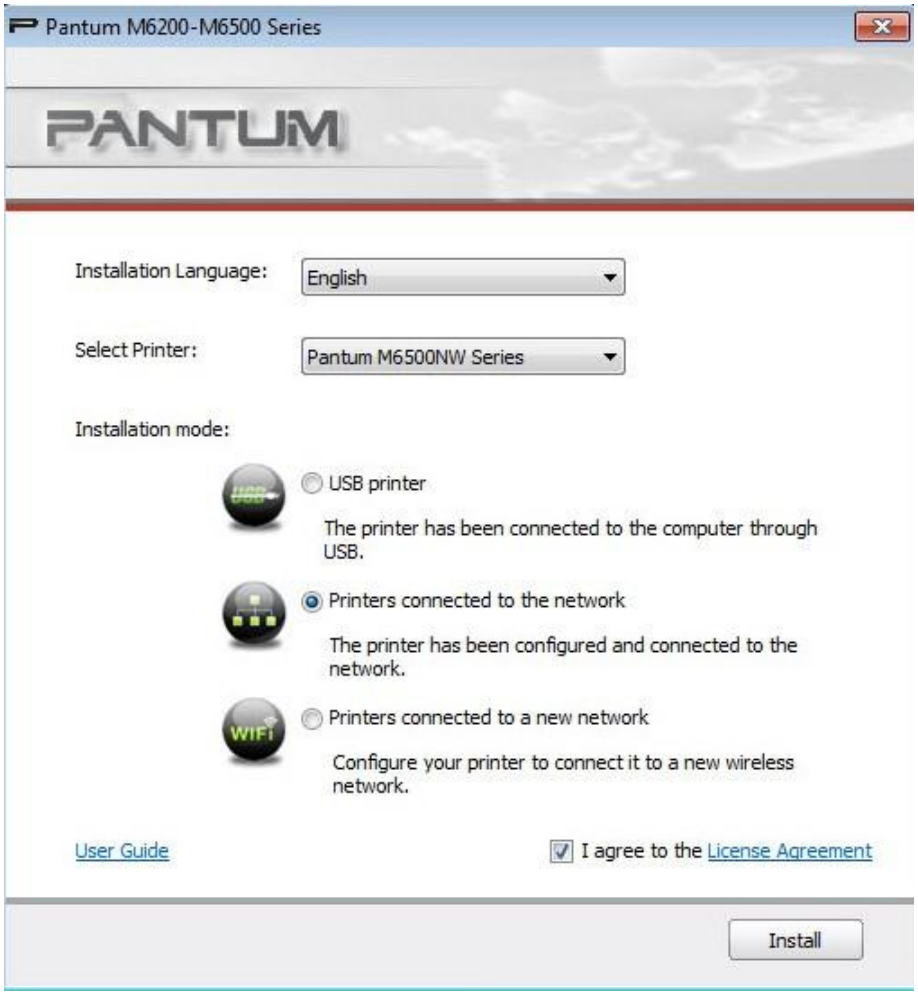
4) The program will automatically enter into this interface after the driver installation is completed. It will automatically exit in 3 seconds and set the printer as default.



2.4.1.2. Net Model (Wired and Wireless Networks)

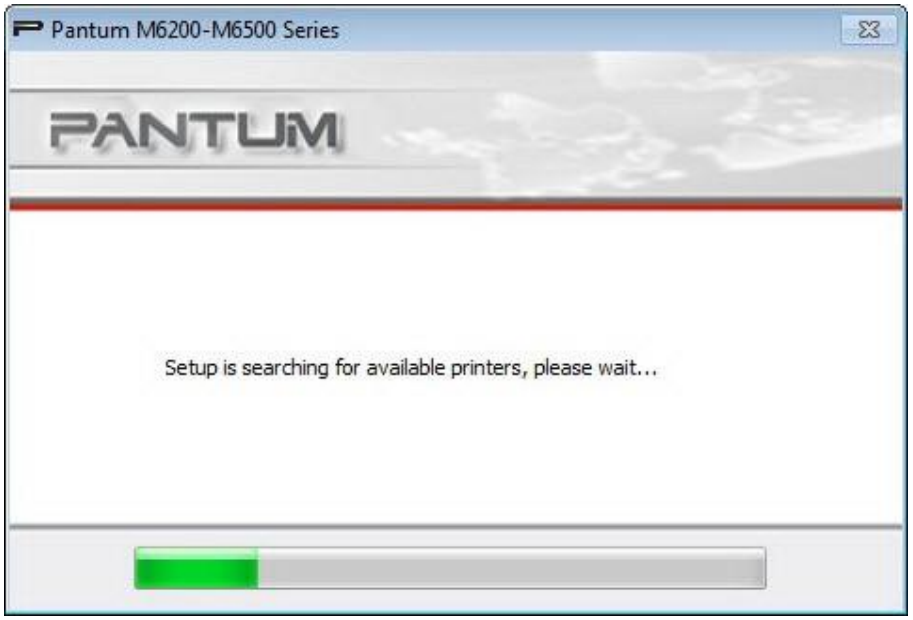
1) After inserting the installation CD, the Pantum interface will pop up and the installation CD will run automatically. See the figure below.

2) After the running interface ends, it will enter into Installation Configuration interface. Users will select the corresponding series, language and model according to the purchased printer model.

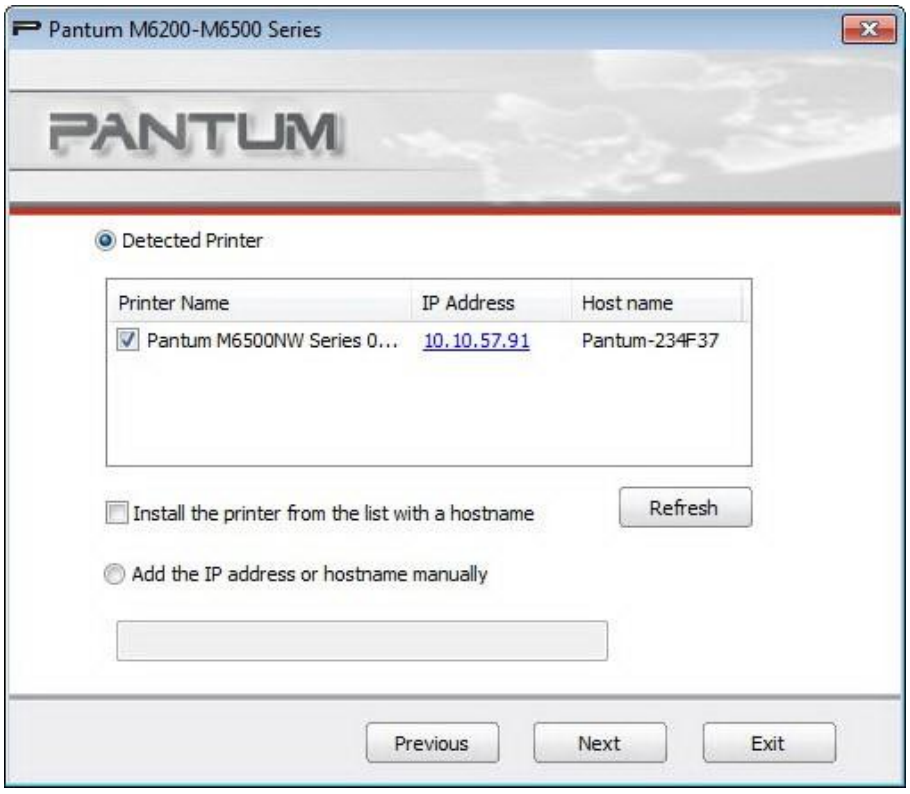


Select your Installation language and the installed printer model; select “Printers connected to the network” for the installation mode, check “I agree to the License Agreement”, and click “Install” to install the driver.

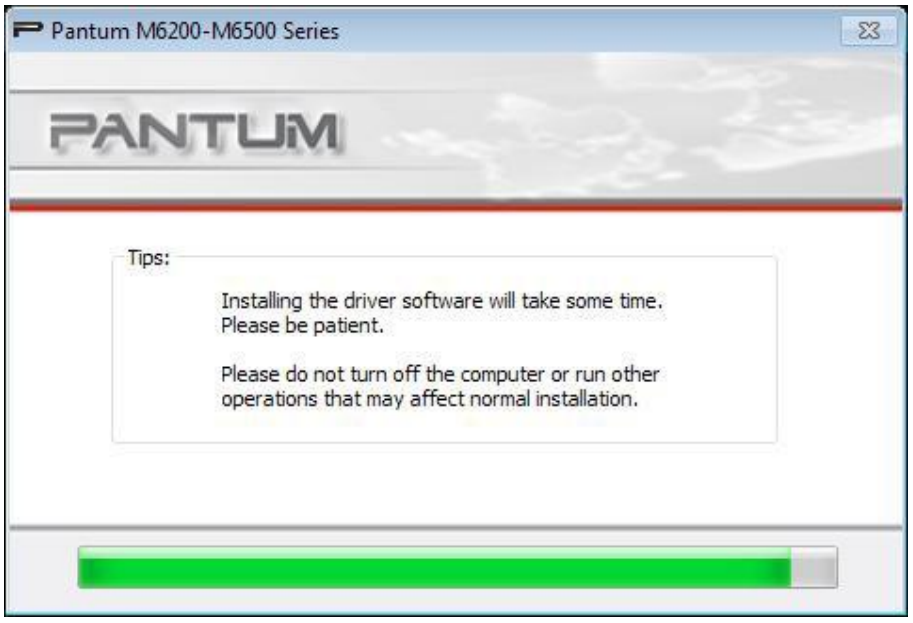
3) Click “Install”, and the interface of searching for printer appears.



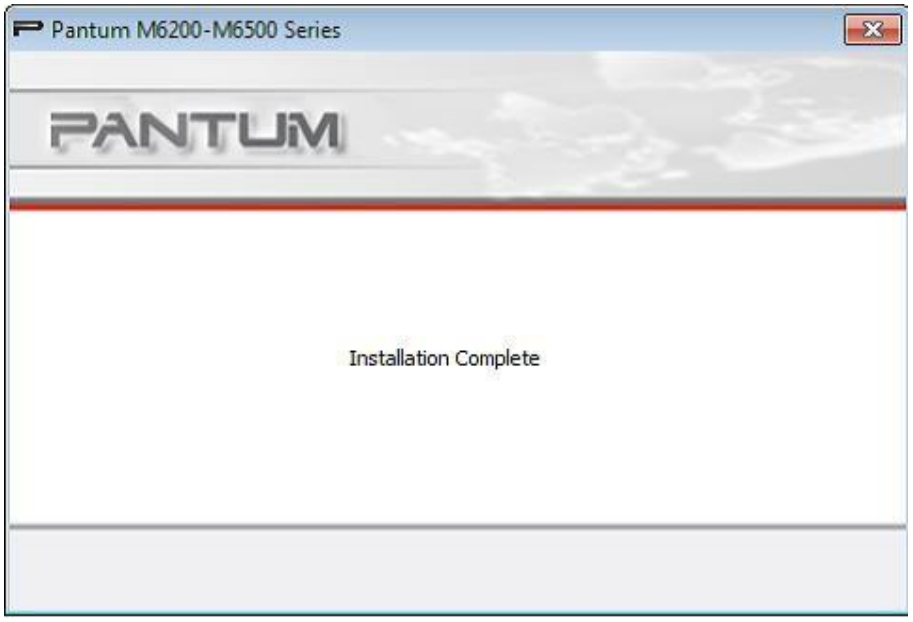
4) After searching for printer, the program will automatically enter into “Detected Printer” interface. Users can select the printer that has been found or add a printerby manually adding its IP or host name.



5) Click Next to enter into the Installation Process interface. This interface is mainly used for the installation of driver software.



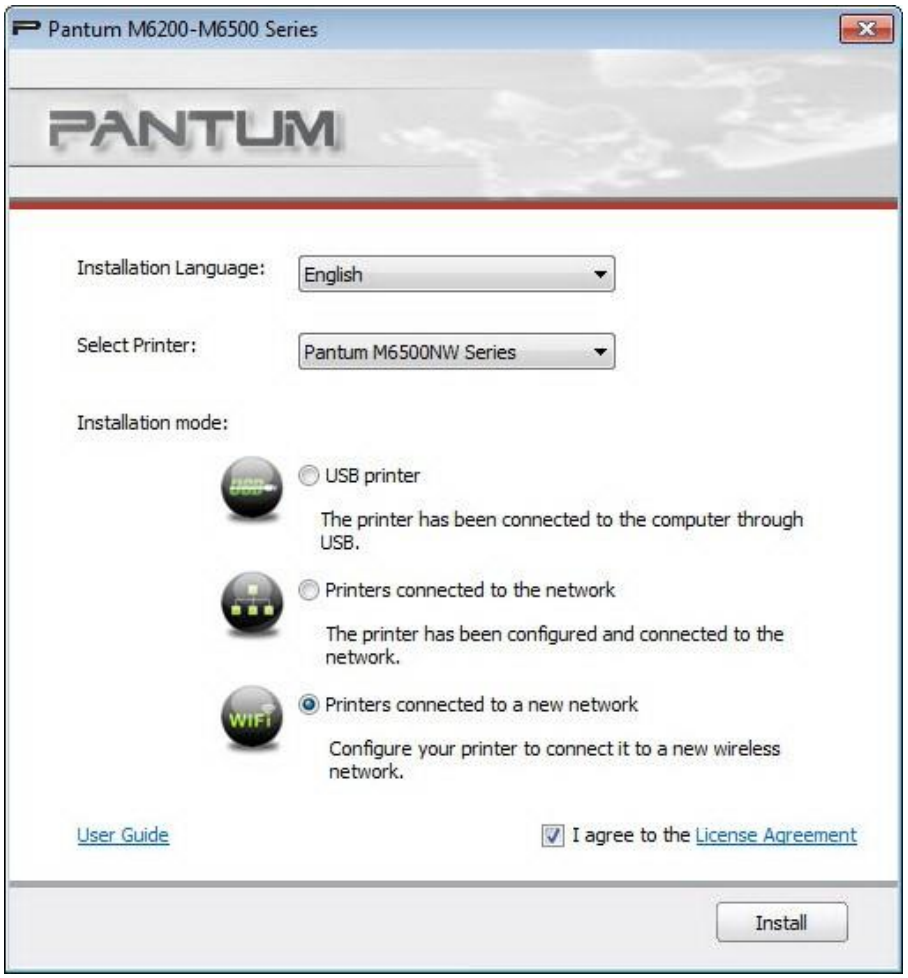
6) The program will automatically enter into this interface after the driver installation is completed. It will automatically exit in 3 seconds and set the printer as default.



2.4.1.3. Wi-Fi Model Installation

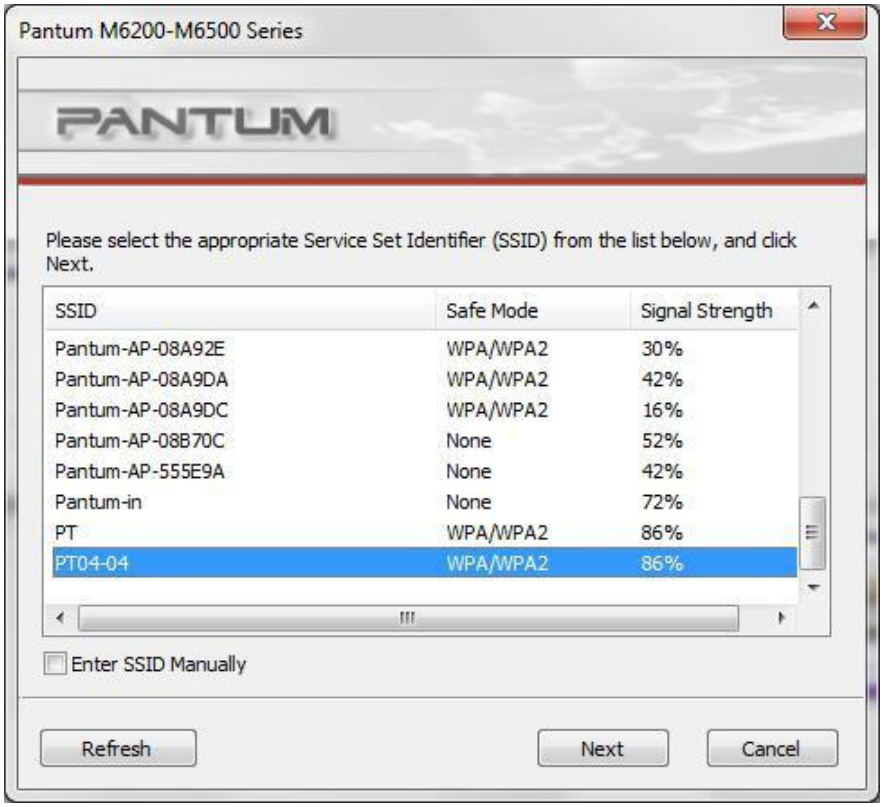
1) After inserting the installation CD, the Pantum interface will pop up and the installation CD will run automatically. See the figure below.

2) After the running interface ends, it will enter into Installation Configuration interface. Users will select the corresponding series, language and model according to the purchased printer model.

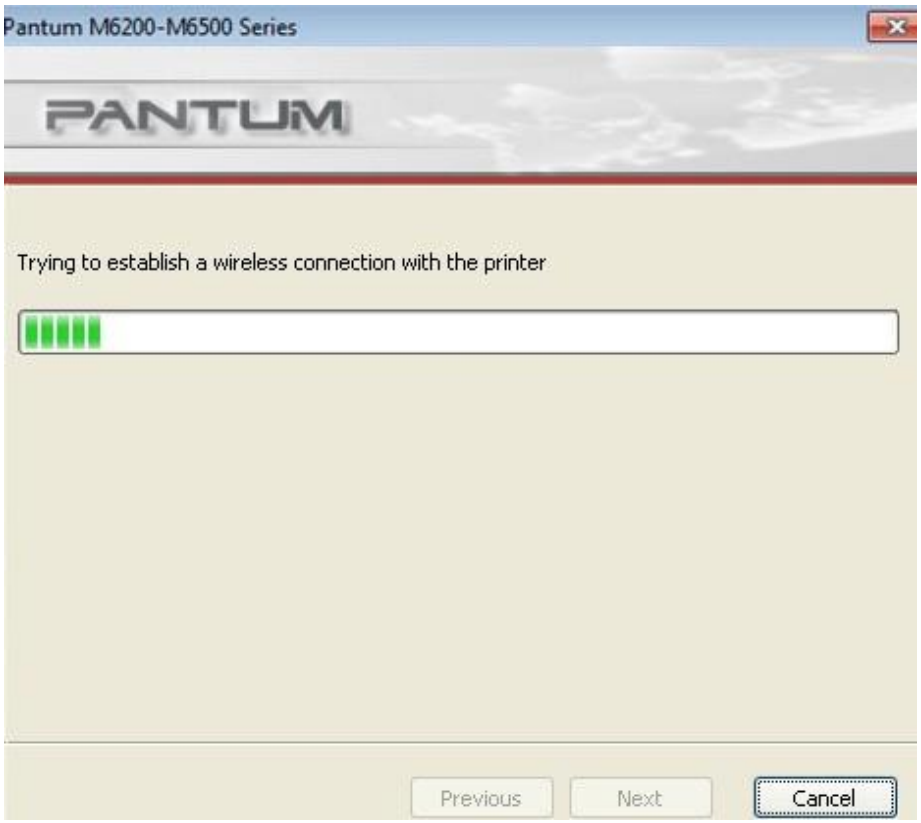


3) Click on “Install”, and configure the wireless connection to connect the printer to a wireless network.

Note:
- To enable wireless connection, the computer must have its own wireless function.
- The USB cable must remain connected and the WIFI light should remain flashing during the wireless configuration process.
- The wireless network configured must be the same one that the computer is connected to.

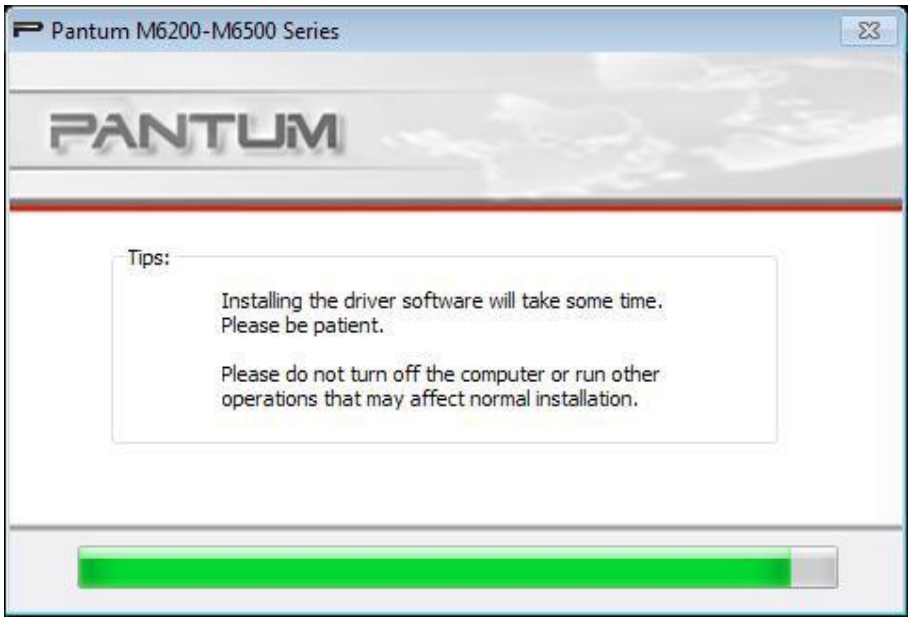


4) Click “Next” for wireless connection.

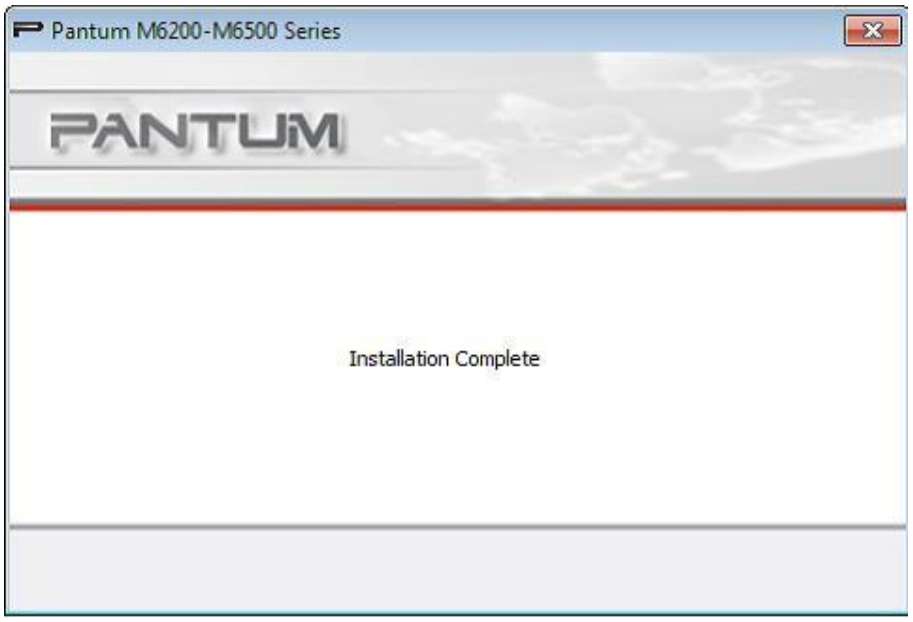


5) Once the connection is successfully established and the wireless configuration is done, the following interface pops up.

6) Click “Done” to install the driver.



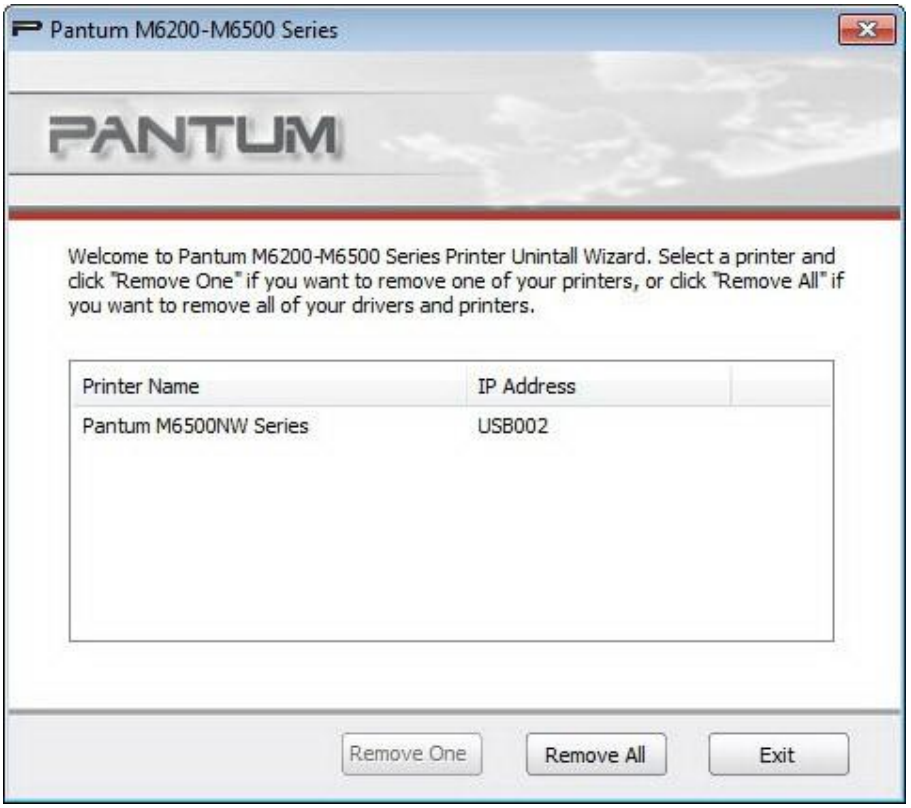
7) The program will automatically enter into this interface after the driver installation is completed. It will automatically exit in 3 seconds and set the printer as default.



2.4.2. Uninstallation

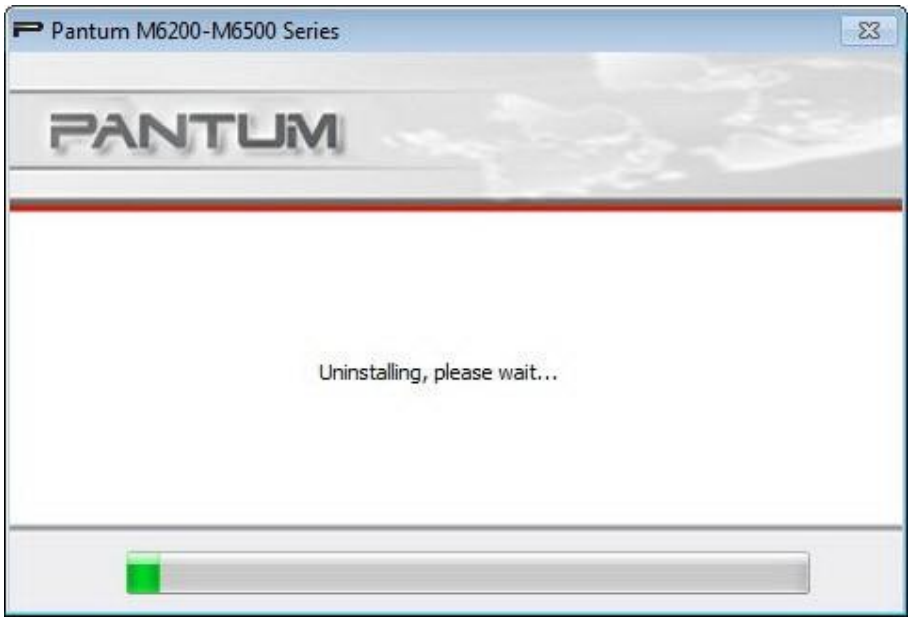
1. Select Uninstallation Mode

In the Start menu, select the path “Pantum -Pantum M6500 Series uninstall Icon” to enter the uninstall interface, or find “Add/Remove” in the PC control panel to find relevant Pantum options. Then click “Change or Remove”, and the Welcome interface will show.



Select the installed model, and click “Remove One” to uninstall the corresponding printer driver and remove the icon, or click “Remove All” to uninstall all the printer drivers and remove the icons (The list will be empty if there is no printer).

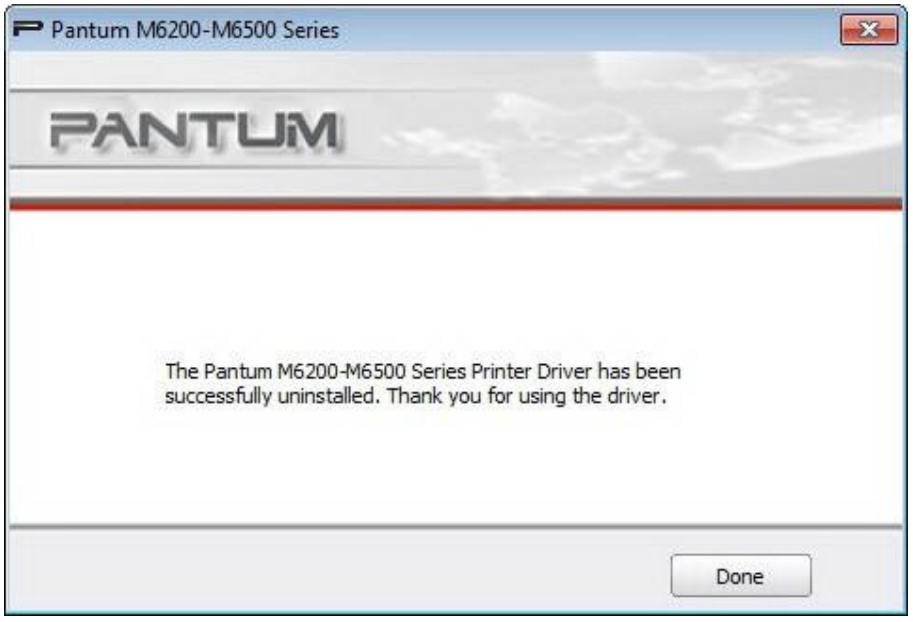
2. Process of Uninstallation



The “Exit” button of the dialog is disabled, and the ALT + F4, Enter, ESC and other keyboard operations are also disabled.

After the uninstallation progress bar completes running, the program will automatically switch to the Uninstall Complete Interface.

3. Uninstallation Complete



The uninstallation is completed. Thank you for using the driver.

Click the “Done” button or the “Close” button (the X button on the title bar at the upper right corner of the window) to exit the Unsetup program.

2.4.3. Mac-based Driver

2.4.3.1. Introduction

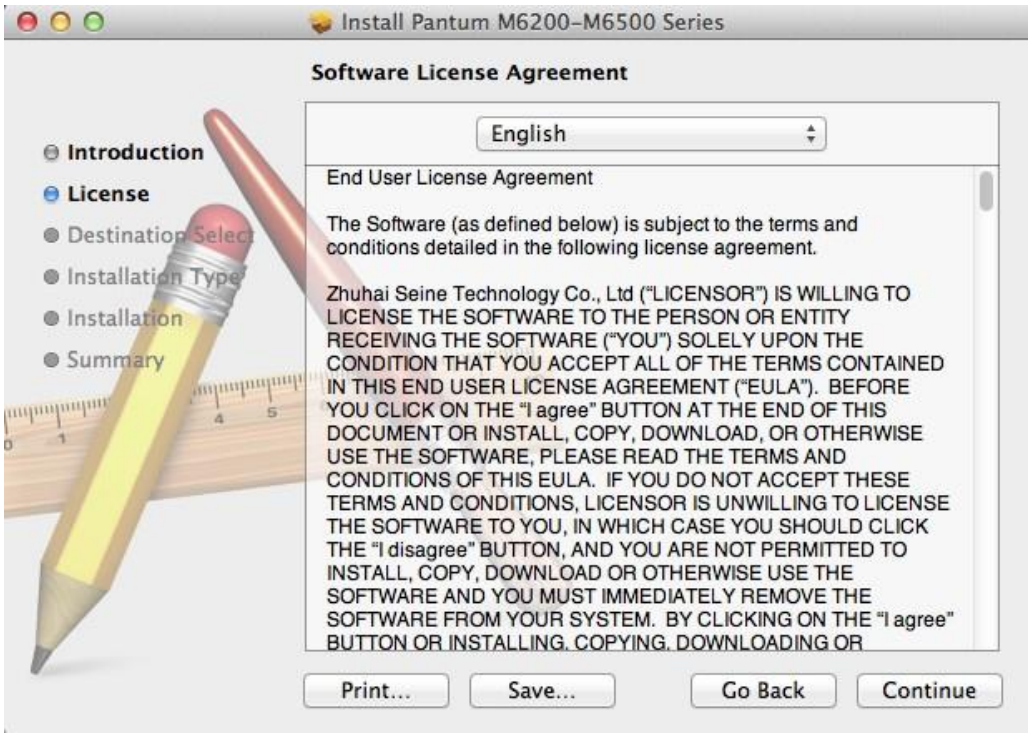
Mac driver installer is made by using the Package Maker software that comes with the Mac System. The installation style is basically consistent with the installation of other softwares under Mac.

The installation consists of the following steps: introduction, license, destination select, installation type, installation, and summary.

2.4.3.2. Installation Steps:

1. Insert the CD-ROM into the CD-ROM driver, run the CD-ROM and click the installation package for Mac, then the following interface will be displayed.

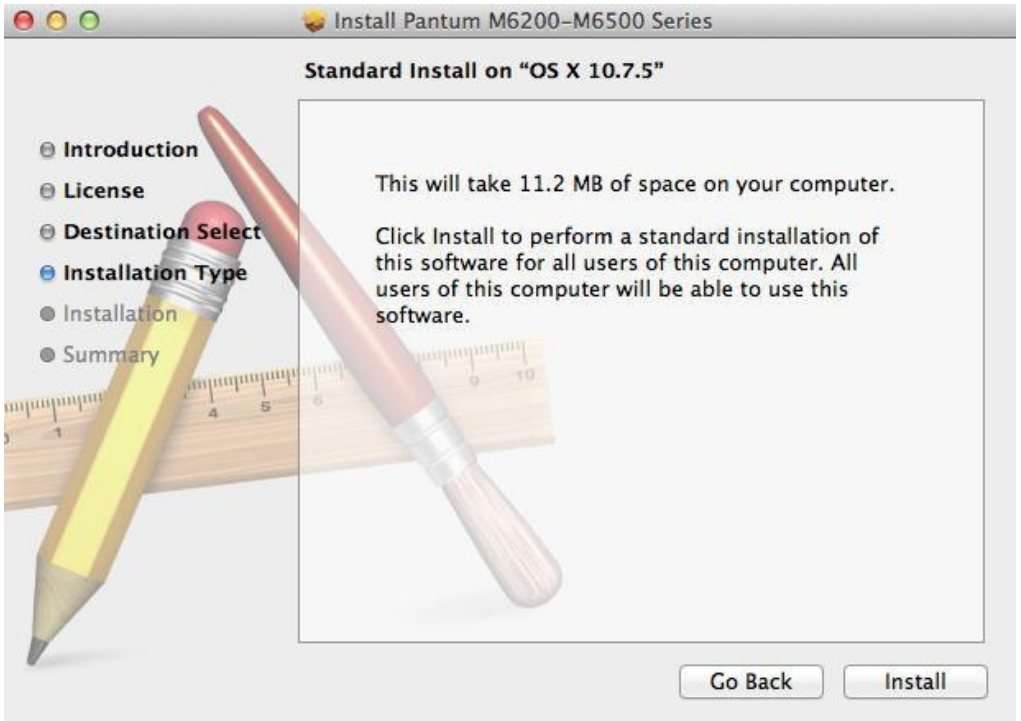
2. Click “Continue” on the above figure to display the contents of the License Agreement, as shown below.



3. Click “Continue”. The dialog box of “To continue installing the software, you must agree to the terms of the Software License Agreement” will pop up.

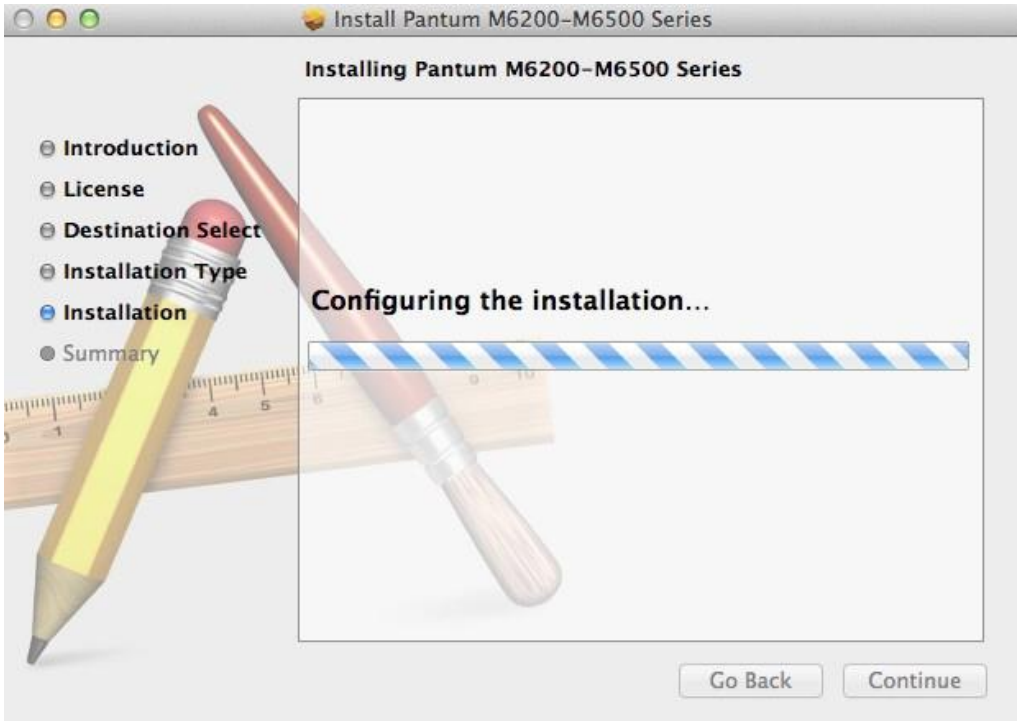
4. Click “Agree” to accept the License Agreement and continue with the installation.

5. Click “Install” on the above figure to display the installation-related information, as shown below.

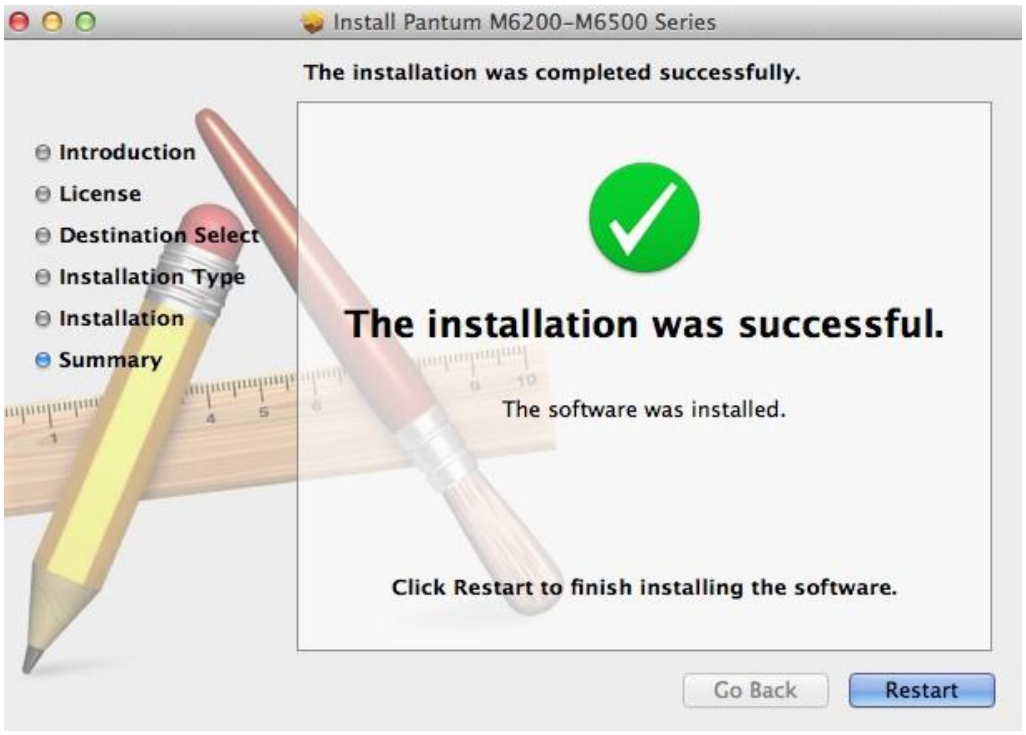


6. Click “Install”, and the following prompt box will pop up. You can continue with the installation only after getting the permission from the administrator.

7. Click “Install Software” after filling in relevant information on the above figure. Then the installation progress will be displayed, as shown below.



8. After successful installation is displayed, click on “Restart” to complete the installation, as shown below.



2.5. Print a Test Page

2.5.1. Print an Offline Self-test Page

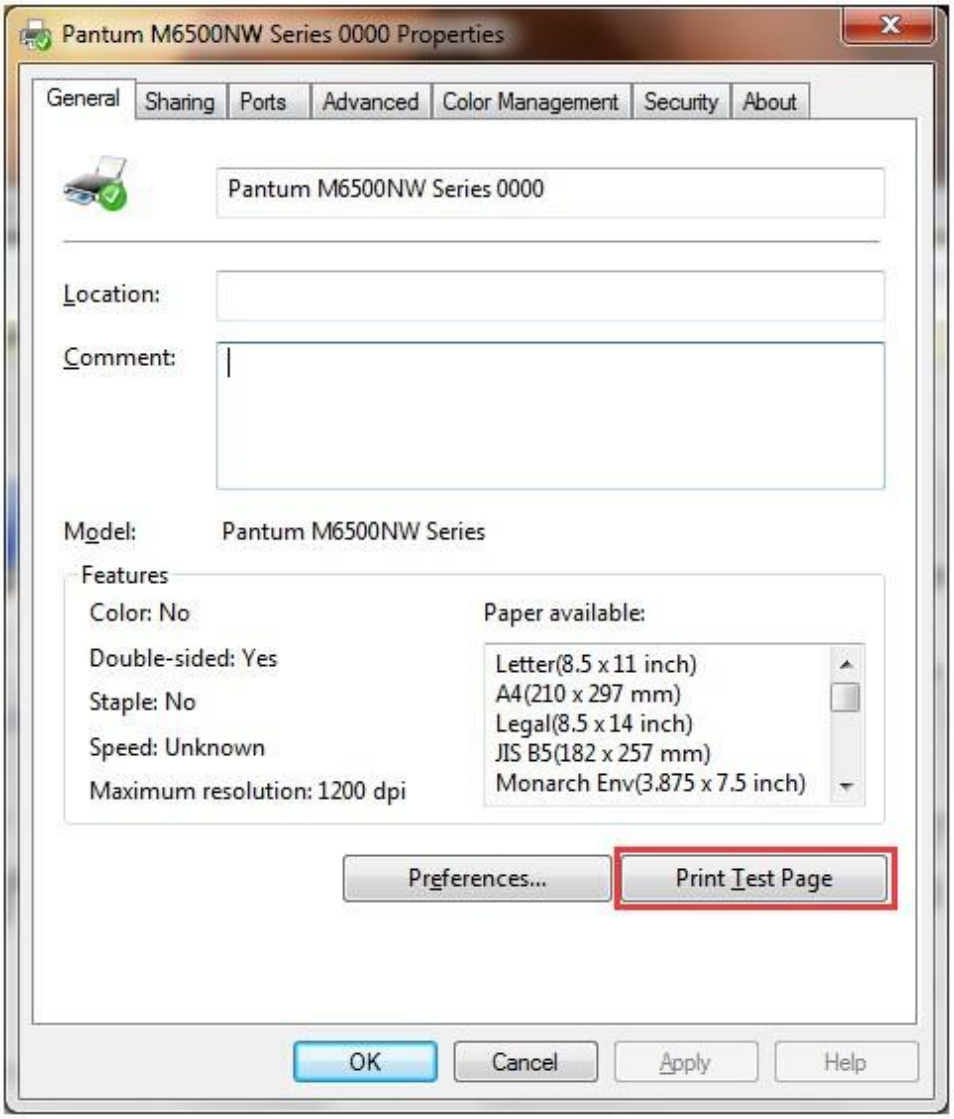
The offline self-test page can be set from the operation panel, using the following steps:

Click the “Menu” Button→Click the “Direction” Button to choose system settings→Choose the information page→Click the “OK” Button, then you can print the DEMO page, Information page, Network configuration page, etc.

2.5.2. Print a Windows Test PageOnline

After installing the driver, click the “Start” menu on the computer and select “Device&Printer”. Find the “Pantum M6500NW Series” printer icon. Right-click “Printer Properties”, and the following interface will appear:

Click on “Print Test Page” to print a test page.



Operating Principles

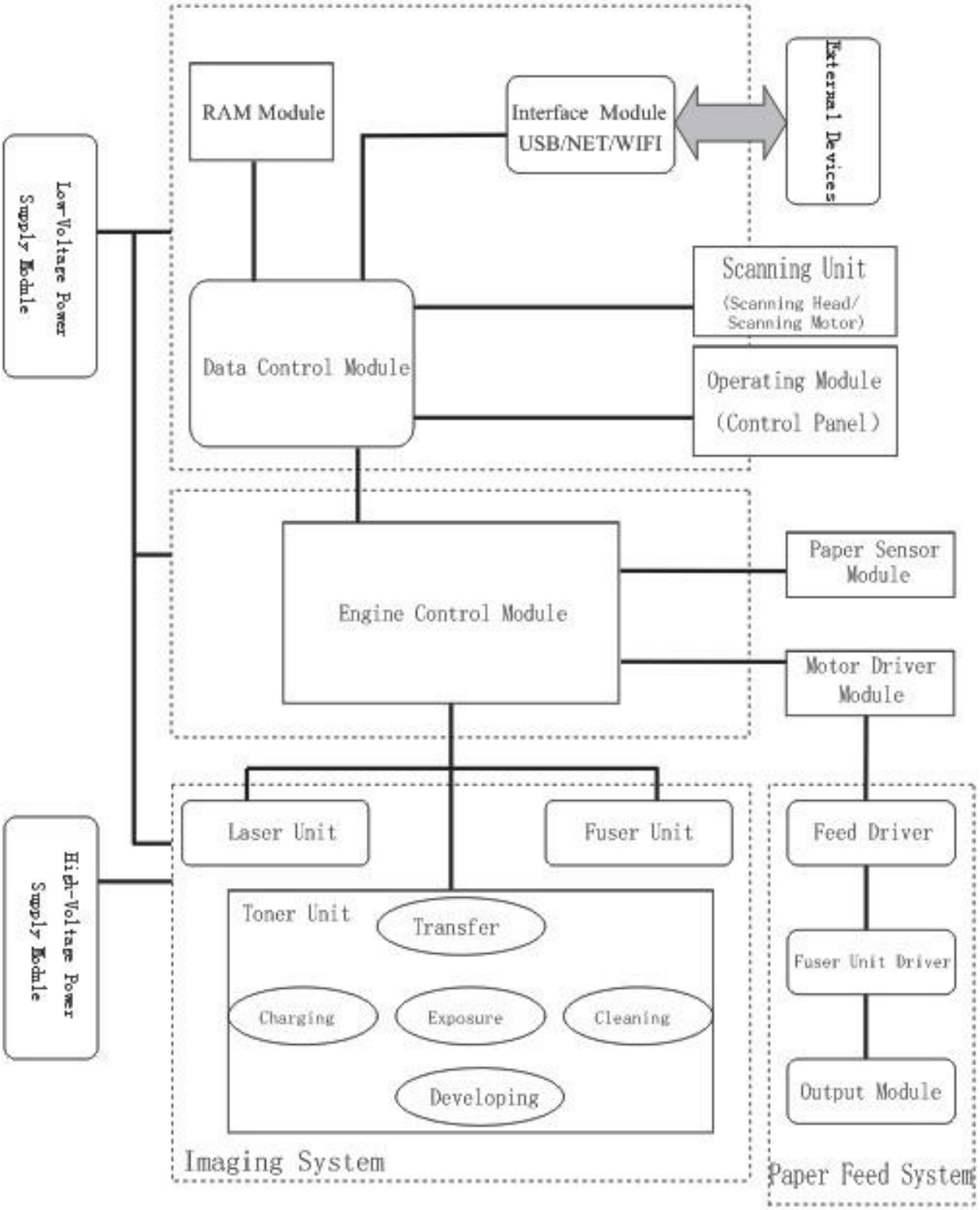
3

CHAPTER

3. Operating Principles 3-2
3.1. Overview of Components 3-2
3.2. Mechanical Device 3-3
3.3. Feeder Circuit Diagram 3-4
3.4. Print Principles 3-5
3.4.1. Charging 3-5
3.4.2. Exposure 3-5
3.4.3. Print Transfer 3-6
3.4.4. Separation 3-7
3.4.5. Fusing 3-7
3.4.6. Cleaning 3-7
3.5. Scanning/Copying Principles 3-8

3. Operating Principles

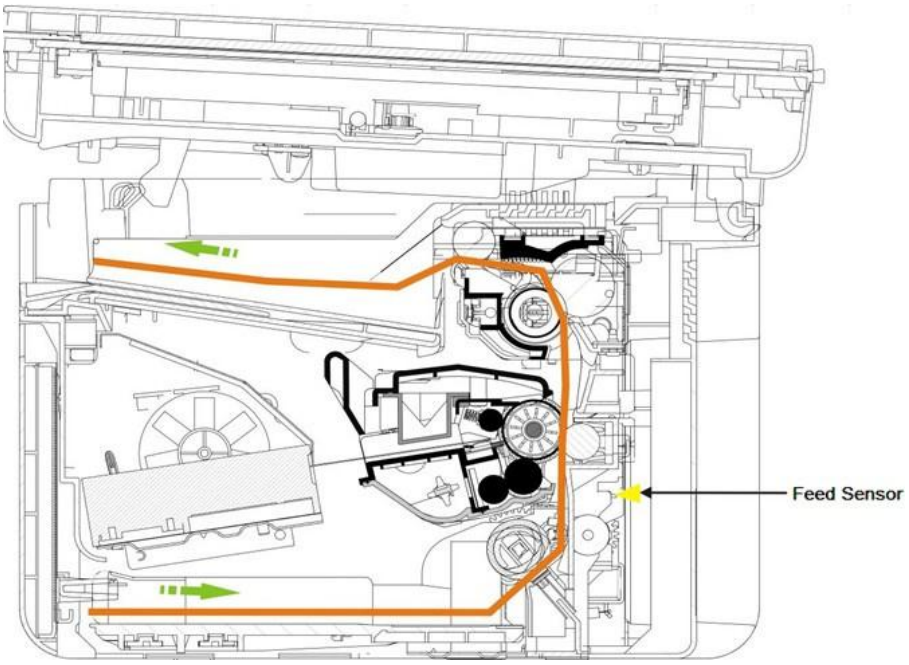
3.1. Overview of Components



3.2. Mechanical Device

NO.	Name
1	Laser
2	Motor
3	Scanner Home Position Sensor
4	Scanning Head
5	Discharge Roller
6	Heating Roller
7	Pressure Roller
8	Primary Charge Roller
9	Photosensitive Drum
10	Transfer Roller
11	Developing Roller
12	Supply Roller
13	Paper Feed Clutch
14	Pickup Roller
15	Separation Pad

3.3. Feeder Circuit Diagram



Feed Sensor

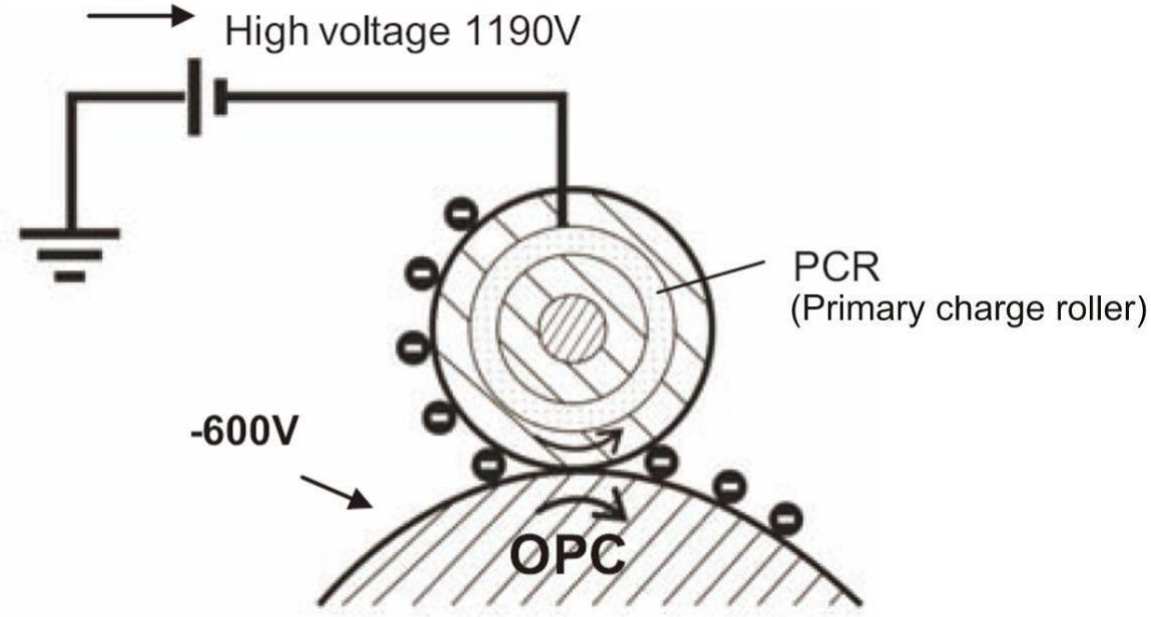
The sensor is used to detect the length of paper. If the detected length exceeds the paper size range, the printer will jam.

Note: • For paper specification ranges, please refer to 1.2.3. Print Specifications.

3.4. Print Principles

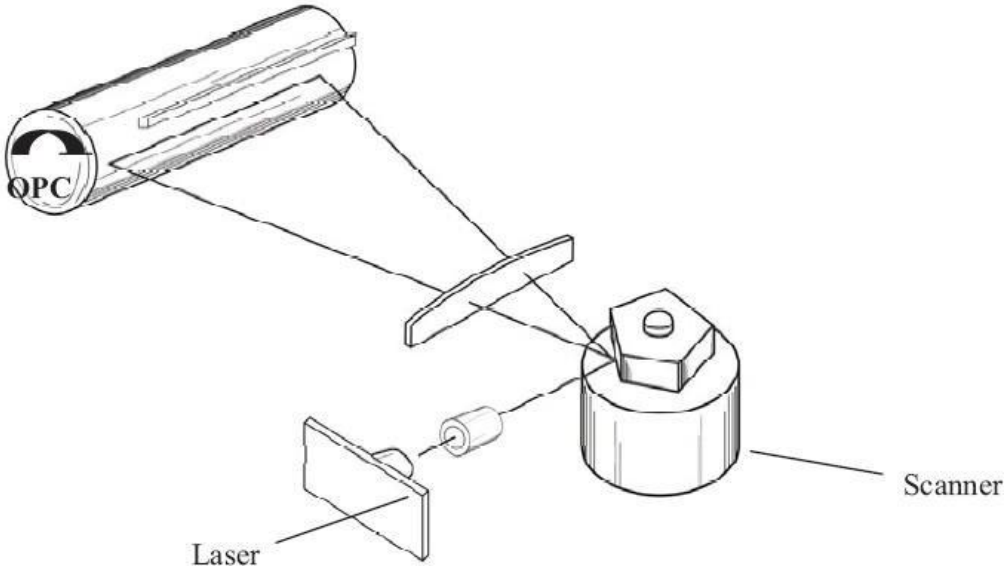
3.4.1. Charging

Using DC high voltage, the steel shaft of the charging roller will evenly charge the surface of the OPC with a negative 600V charge.



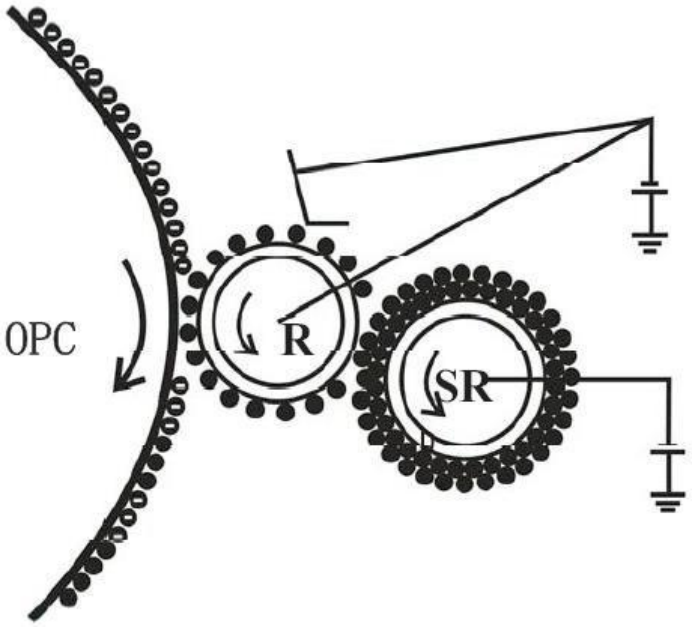
3.4.2. Exposure

When the light conductor is scanned by the laser beam, the irradiated portion meets the conductive layer of the photosensitive drum. This results in the removal of the electric charge. Conversely, the non-irradiated surface retains its electric charge, creating a potential different image. This is often referred to as the “electrostatic latent image.”



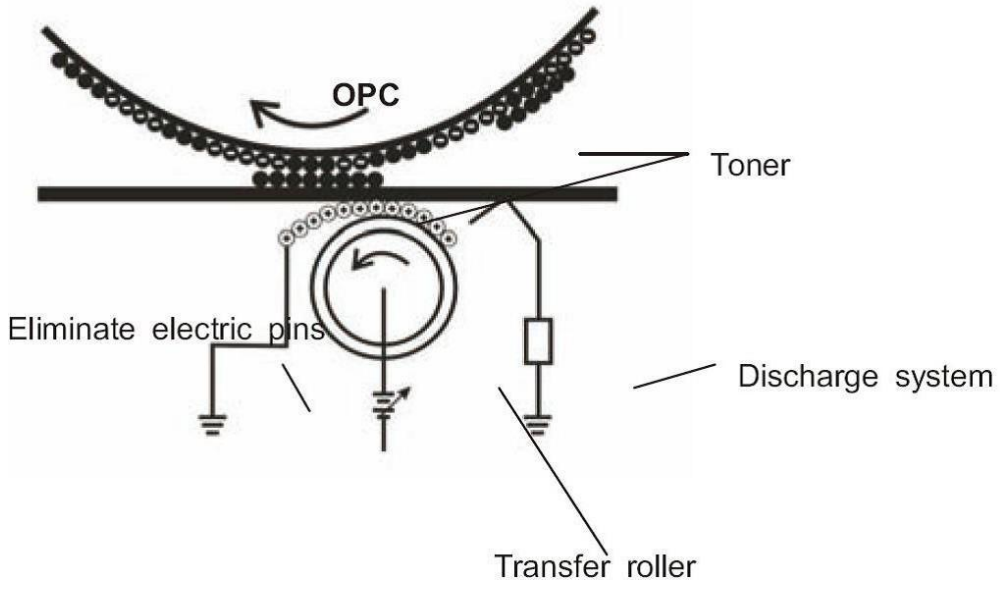
Development

When the toner has been moved through, under friction between the Developing Roller (DR) and Supply Roller (SR), the surface of the Developing Roller will be covered with a layer of charged toner. After exposure, as the OPC goes through the DR, it will transmit the developing voltage to the DR. This voltage is greater than that of the exposed portion of the OPC and less than that of the unexposed portion. Toner will be attracted to the exposed area of the OPC due to the electrostatic field between the OPC and DR, and a visible image will form.



3.4.3. Print Transfer

When the paper moves through the interlayer between the Transfer Roller (TR) and the photosensitive drum (OPC), the TR will gain high pressure opposite to the toner charge polarity. The toner will therefore be affected by the TR's electrical field, transferring toner to the surface of the paper. After moving through the TR, the back of the paper is positively charged. This causes the toner, separated by the OPC, to be attracted to the paper.

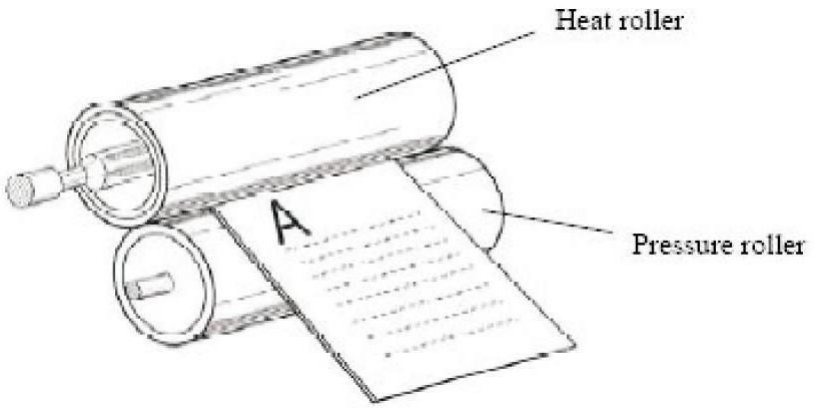


3.4.4. Separation

Paper that has moved through print transfer will be positively charged. When the paper leaves the paper guide next to the Transfer Roller, the zigzag separator which should be negatively charged, ~1-2mm from and parallel with the paper, starts working. Gravity will then cause the paper to separate from the OPC.

3.4.5. Fusing

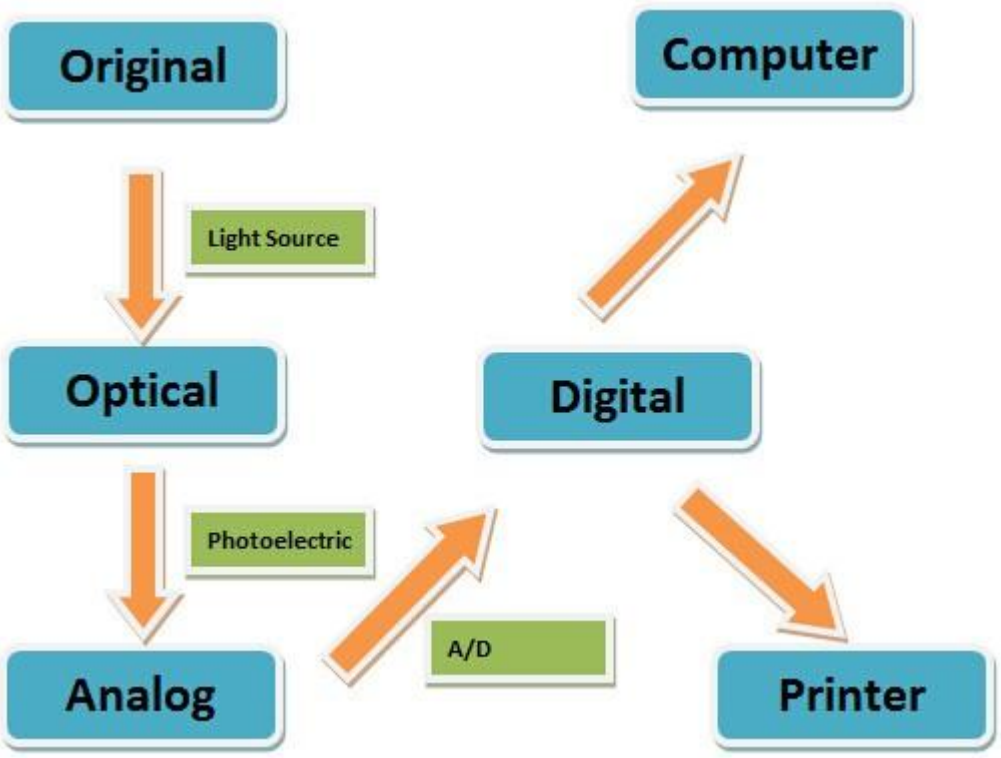
When the paper moves onto the heating roller, the toner is melted at a specific temperature. The Pressure Rollers (PR) then press the toner into the paper fibers, curing it to the paper.
Note: If the fusing temperature is too high or too low, the toner fusing result will be affected.



3.4.6. Cleaning

As the toner on the surface of the OPC is not completely transferred to the paper, it must then be cleaned by a blade before the next round of the imaging process occurs.

3.5. Scanning/Copying Principles



Note: • The above A/D converter, i.e. the analog to digital converter (ADC), is an electronic component that converts an analog signal into a digital signal.

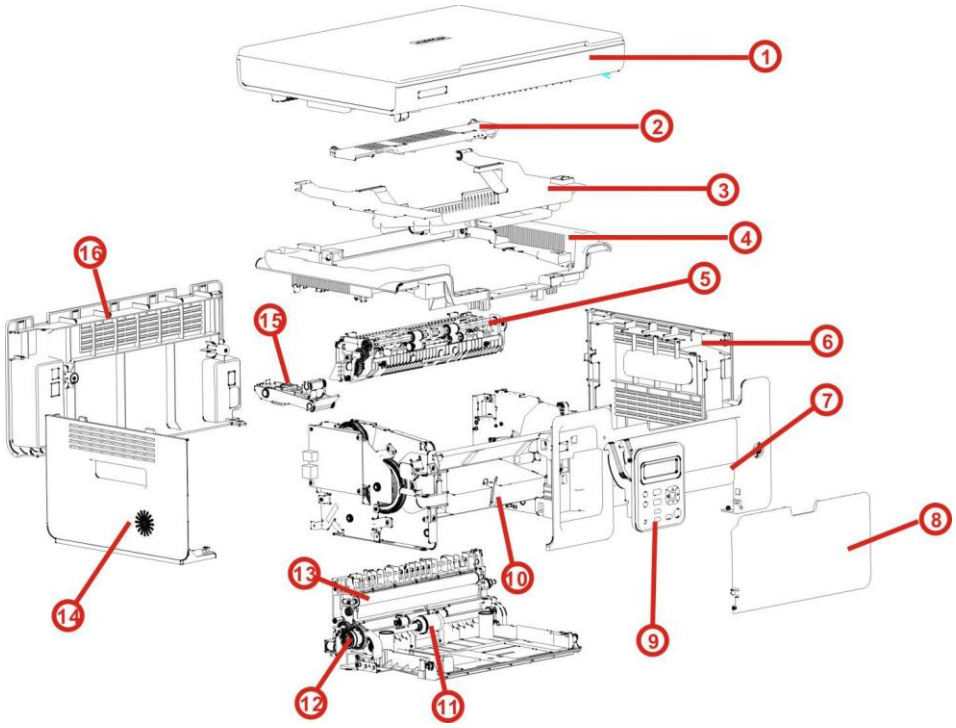
Disassembly and Installation

4
CHAPTER

4. Disassembly and Installation 4-2
4.1. Parts 4-2
4.2. Step-by-Step Disassembly Diagram 4-3
4.3. Disassembly Steps 4-4
4.3.1. Preparation for Disassembly 4-4
4.3.2. Rear Cover 4-6
4.3.3. Left Cover 4-6
4.3.4. Right Cover 4-6
4.3.5. Scanning Platform 4-7
4.3.6. Engine Board 4-7
4.3.7. High-Voltage Power Board 4-8
4.3.8. Data Board 4-9
4.3.9. Fuser Unit 4-9
4.3.10. Electromagnet 4-11
4.3.11. Paper Feed Clutch 4-11
4.3.12. Pickup Roller 4-11
4.3.13. Separator Component 4-12
4.3.14. Transfer Roller 4-12
4.3.15. Upper Cover 4-13
4.3.16. Front Cover 4-13
4.3.17. Base Board of the Control Panel 4-14
4.3.18. Laser 4-15
4.3.19. Main Motor 4-15
4.3.20. Scanning Platform Disassembly 4-16

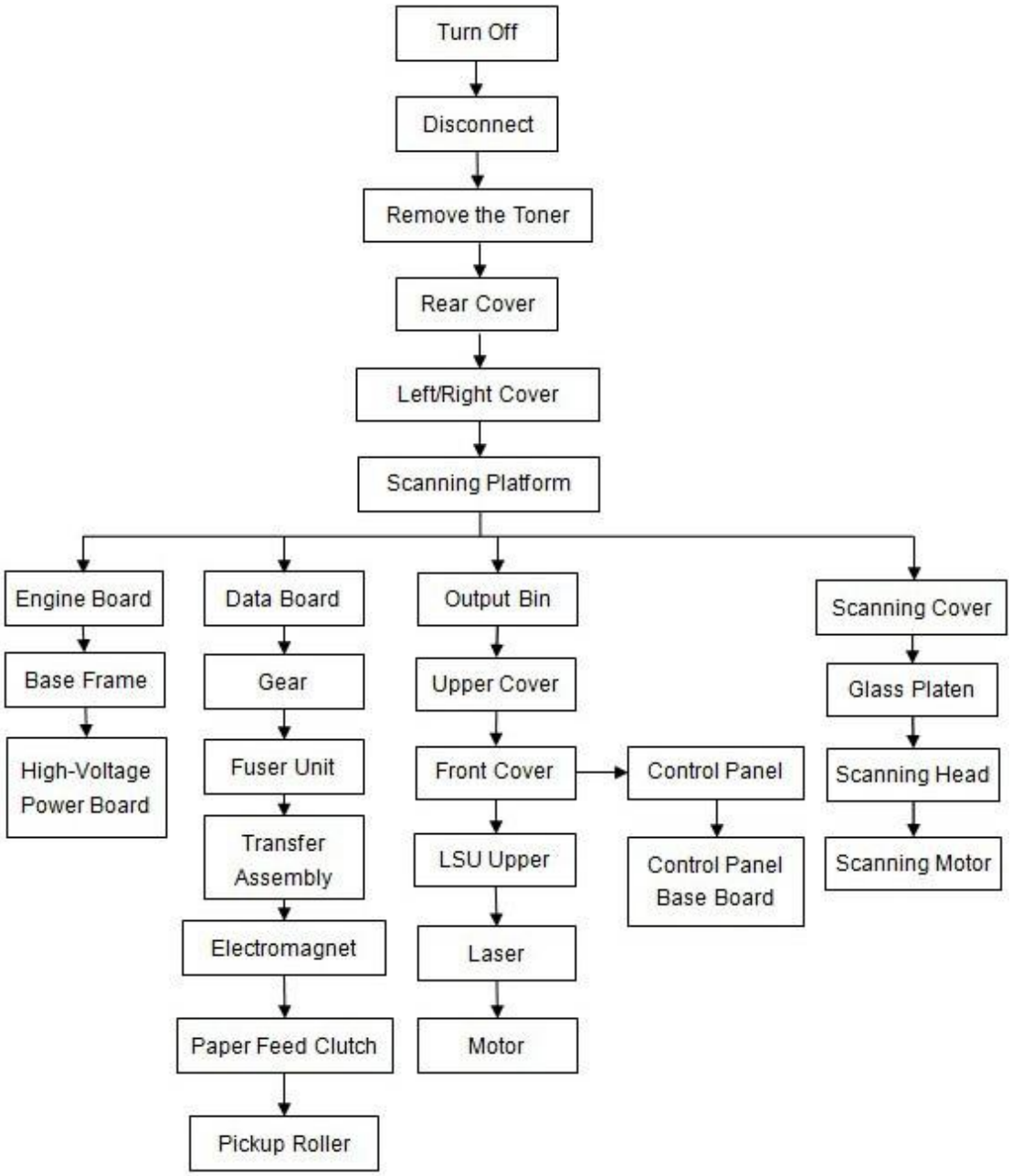
4. Disassembly and Installation

4.1. Parts



NO.	Name
1	Scanning Cover
2	Fuser Protection Cover
3	Output Bin
4	Upper Cover
5	Fuser Unit
6	Right Cover
7	Front Door Component
8	Paper Tray
9	Control Panel
10	LSU
11	Pickup Roller
12	Paper Feed Clutch
13	Transfer Roller
14	Left Cover
15	Scanning Support Bar
16	Rear Cover

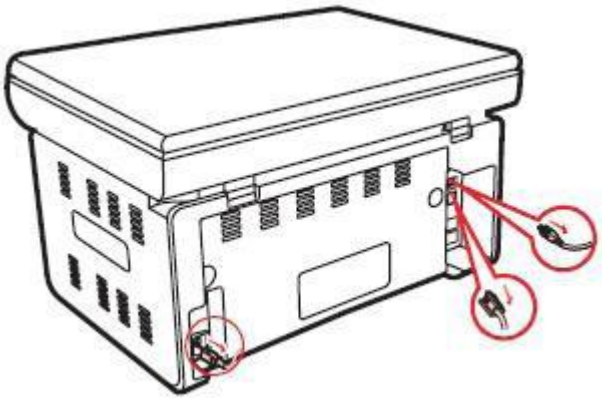
4.2. Step-by-Step Disassembly Diagram



4.3. Disassembly Steps

4.3.1. Preparation for Disassembly

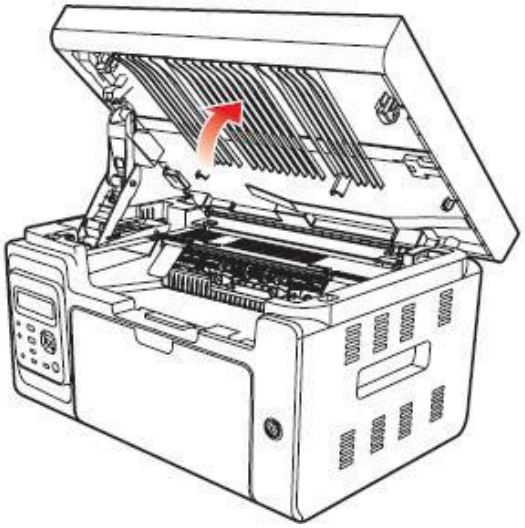
1. Before disassembling, please disconnect the printer and unplug the power cable.



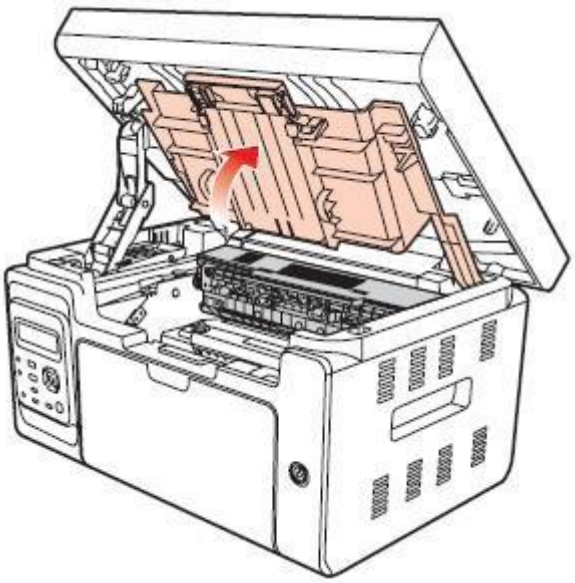
2. Remove the paper and close the paper tray and the output tray.

3. Remove the cartridge.

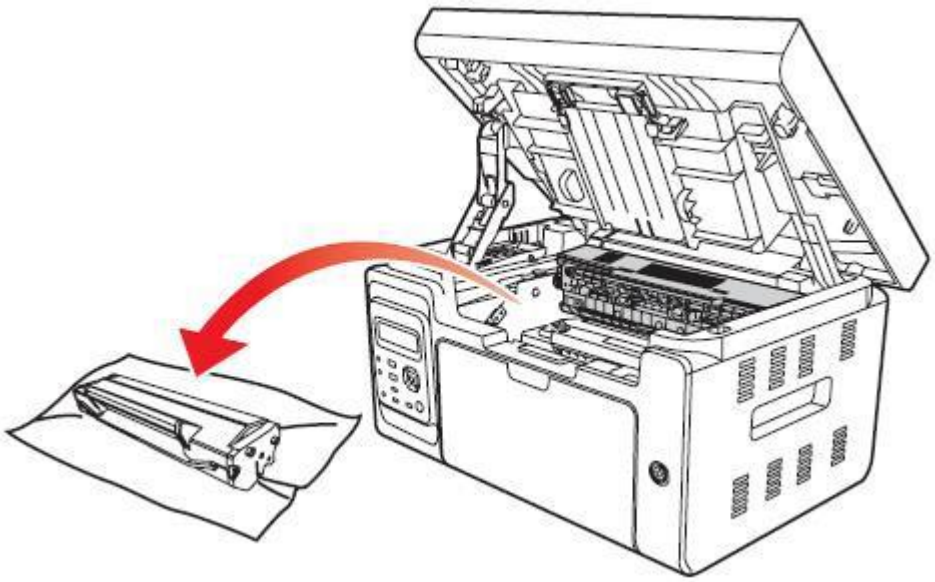
a) Raise the scanning platform until it is locked.



b) Open the output bin.



c) Remove the toner cartridge along the guide.



Note: • Please remove personal objects such as watches or bracelets before removing the cartridge, as they may damage the inside of the machine.

• When removing the cartridge, put the cartridge in a protective bag or wrap it in thick paper to avoid direct light damaging the cartridge.

• After removing the cartridge, do not touch the shaded area with your hands.

4.3.2. Rear Cover

Remove the two screws at location 1, then open the claws on both sides at location 2. Remove the rear cover.

4.3.3. Left Cover

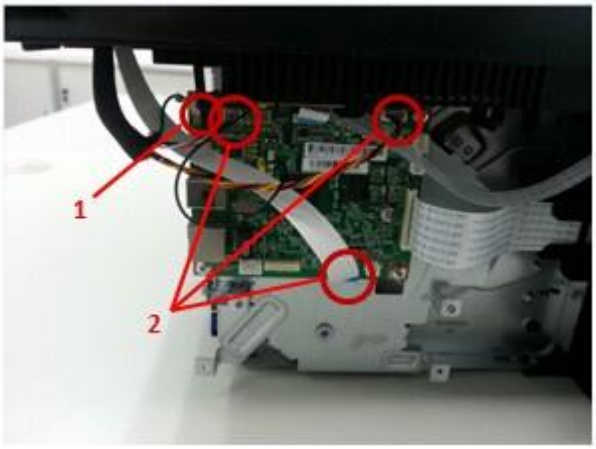
After removing the rear cover,open the claws at location 1, and remove the left cover.

4.3.4. Right Cover

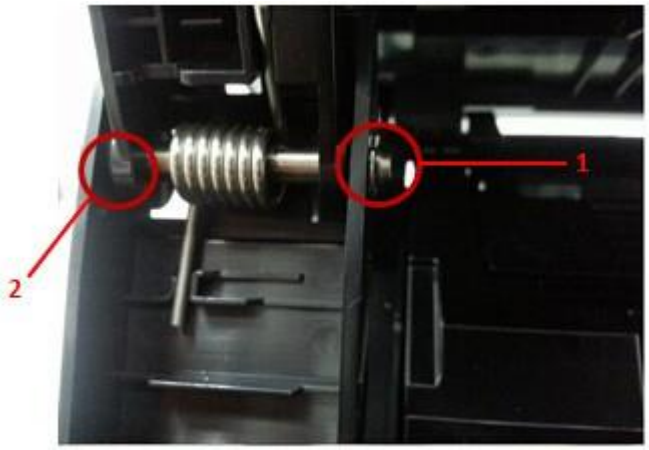
After removing the left cover, open the 6 claws at location 1 and 2, then remove the right cover.

4.3.5. Scanning Platform

1. After removing the left cover, remove the screw at location 1, then unplug the three cables at location 2, as shown below.

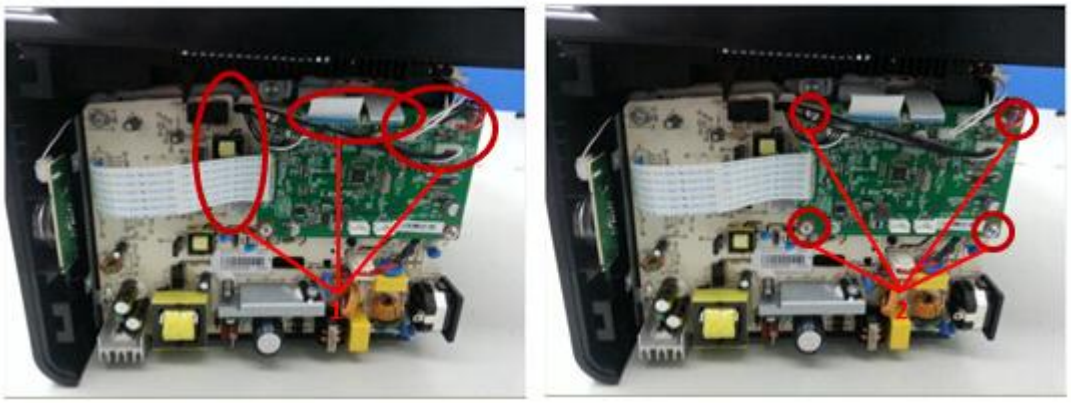


2. Remove the snap ring from location 1, pull out the pin from the support bar, and remove the scanning platform.



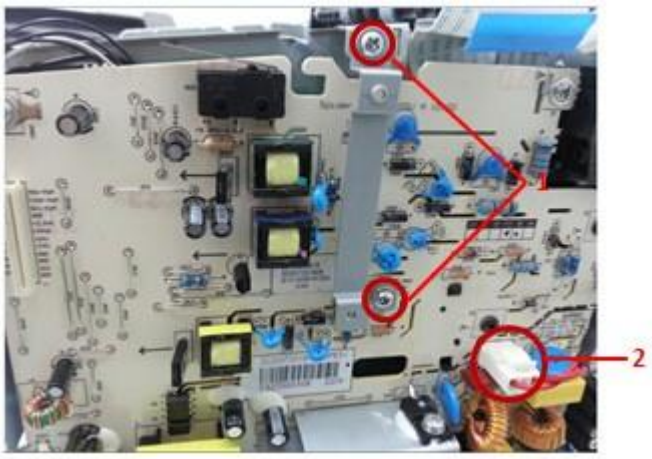
4.3.6. Engine Board

After removing the right cover, unplug the cables at location 1, remove the screws at location 2, and remove the engine board.

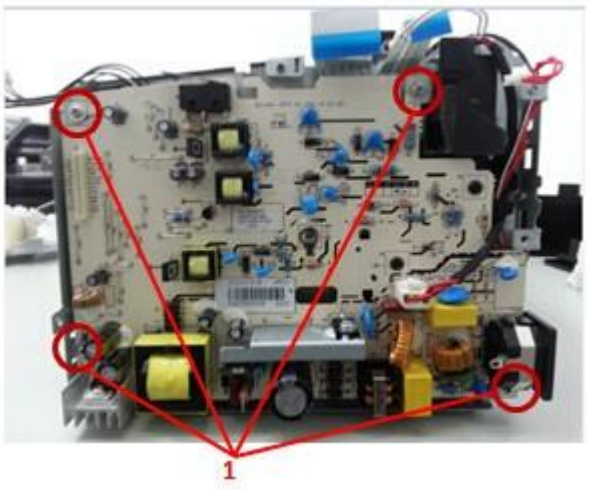


4.3.7. High-Voltage Power Board

1. After removing the engine board, remove the two screws at location 1, then unplug the cable at location 2.



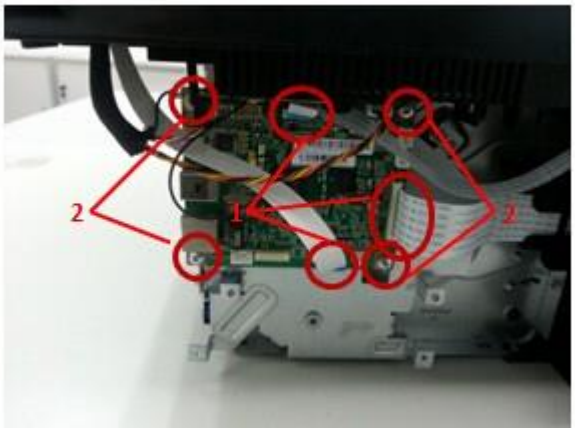
2. Remove the screws at location 1, then remove the high-voltage power board.



Note:
- The large capacitance on the substrate may have accumulated static because the printer has just been used. Please discharge the substrate to avoid electric shock.
- After removing the high-voltage power supply board, put the high-voltage contact in a safe place to avoid loss.

4.3.8. Data Board

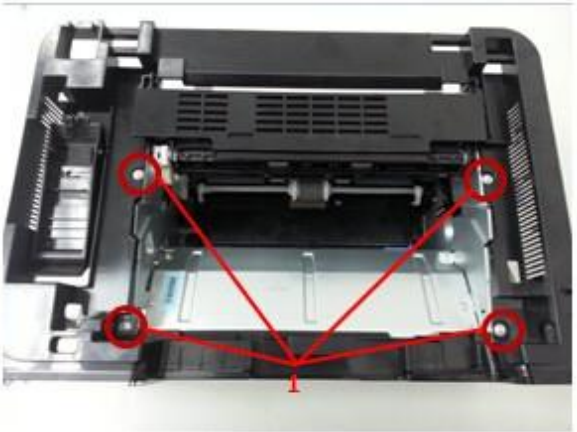
After removing the left cover, unplug the cables at location 1, remove the screws at location 2, then remove the data board.



4.3.9. Fuser Unit

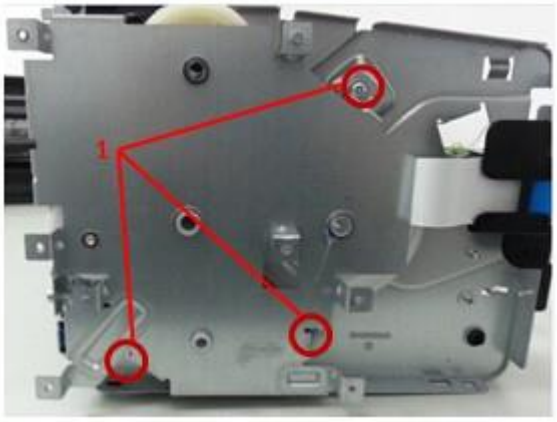
1. Remove the scanning platform. Lift the groove at location 1, then remove the output bin.

2. Remove the screws at location 1, then remove the upper cover.



Note: When you remove the upper cover, please note there is a WIFI antenna on the left. You need to remove it.

3. Follow Section 4.3.8 to remove the data board, then remove the three screws at location 1, and remove the gear drive system.

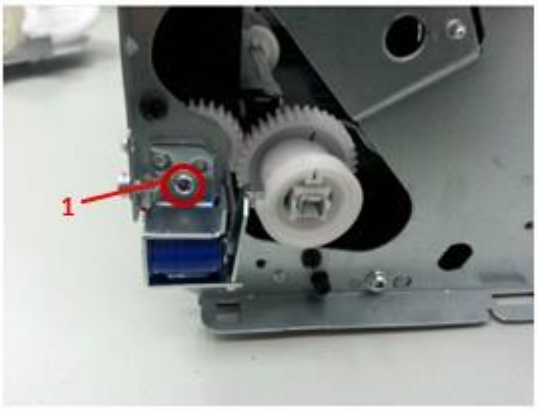


Note: When removing the gear drive system, make sure the gear is well protected from falling, which may damage the engine.

4. Remove the screws at location 1, 2, 3, then remove the fuser unit.

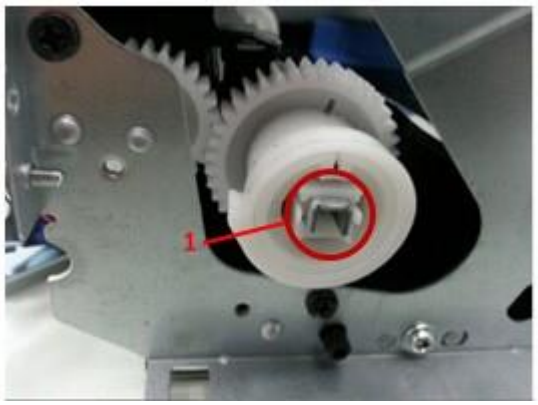
4.3.10. Electromagnet

Remove the gear drive system, remove the screw, then remove the electromagnet.



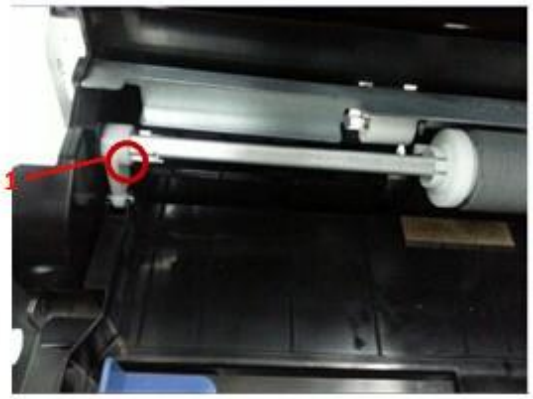
4.3.11. Paper Feed Clutch

Remove the electromagnet, then open the two claws at location 1, and remove the paper feed clutch by pulling it out.

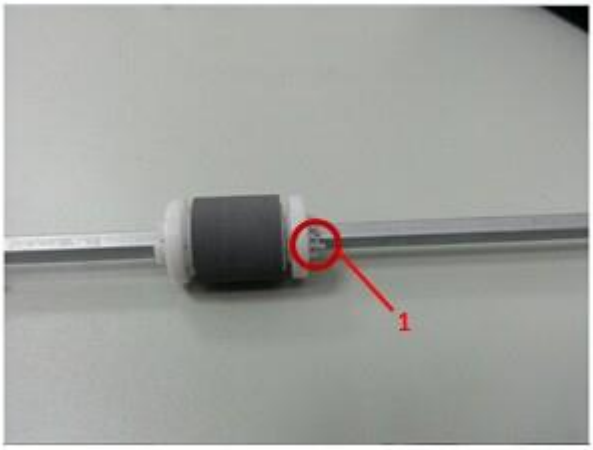


4.3.12. Pickup Roller

1. Open the claw on the cam of the paper feed shaft at location 1, and remove the paper feed shaft assembly by pulling it in the direction of the pickup roller.



2. Open the claw on the pickup roller, and remove it by pulling it in the direction opposite to the cam.

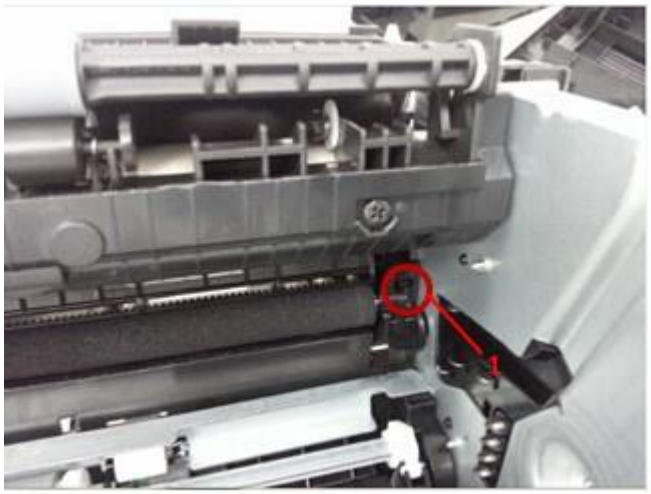


4.3.13. Separator Component

When you have removed the pickup roller, remove the separator component. Be careful that the spring does not fall.

4.3.14. Transfer Roller

Open the claw at location 1, remove the bearing of the transfer roller and remove the transfer roller.

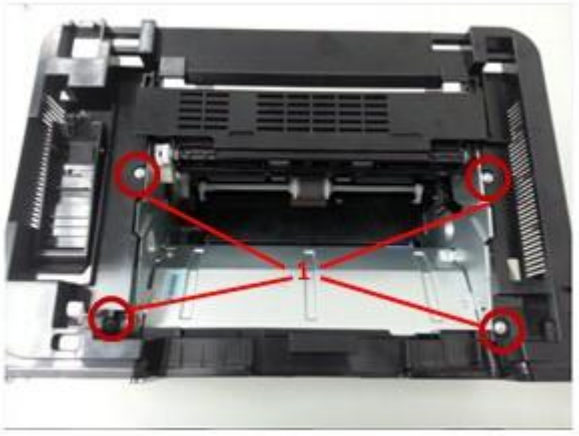


Note: When you remove the transfer roller, do not touch the transfer roller sponge to avoid causing printing abnormalities.

4.3.15. Upper Cover

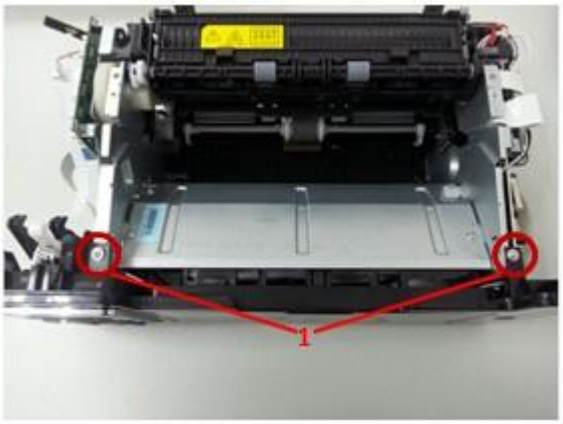
1. Remove the scanning platform, lift the groove at location 1, then remove the output bin.

2. Remove the screws at location 1, then remove the upper cover.



4.3.16. Front Cover

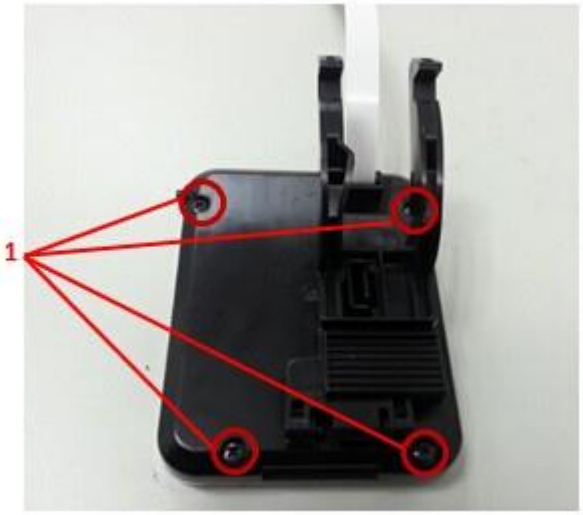
Remove the screws at location 1, then remove the front cover.



4.3.17. Base Board of the Control Panel

1. Remove the upper cover, then open the claws at location 1, and remove the control panel.

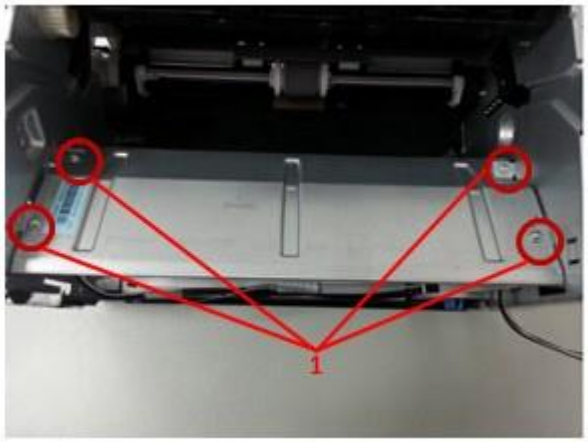
2. After removing the control panel, remove the screws at location 1, then remove the rear cover of the control panel.



3. After removing the rear cover of the control panel, remove the screw at location 1,open the claws at location 2, then remove the base board of the control panel.

4.3.18. Laser

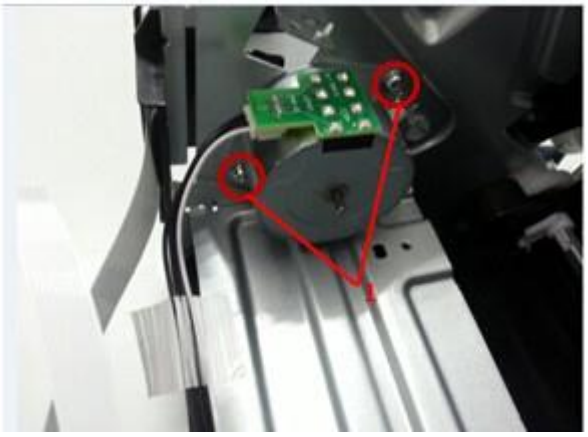
1. Remove the upper cover, remove the screws at location 1, then remove the shield on the laser.



2. Remove the screws at location 1 after removing the shield on the laser, then remove the laser.

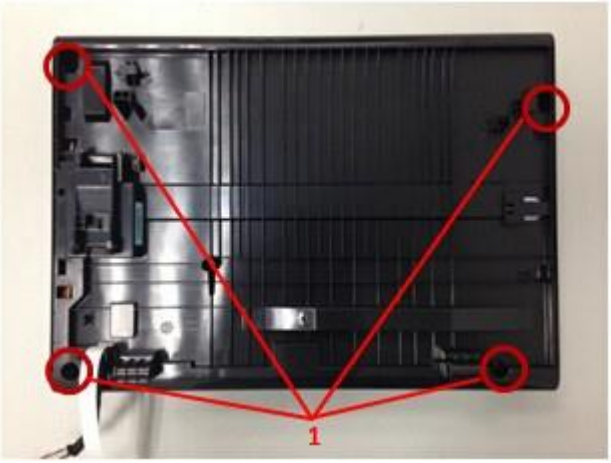
4.3.19. Main Motor

After removing the laser, remove the screws at location 1, then remove the motor.

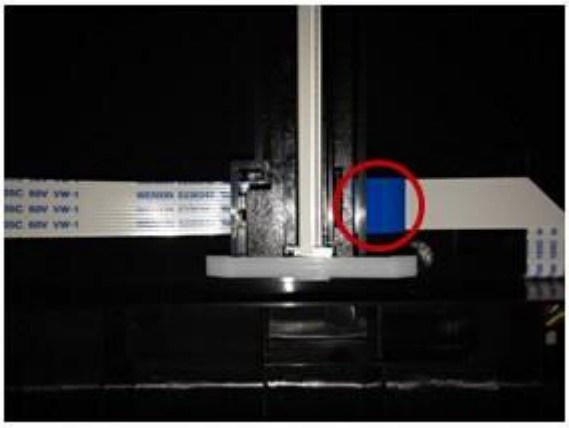


4.3.20. Scanning Platform Disassembly

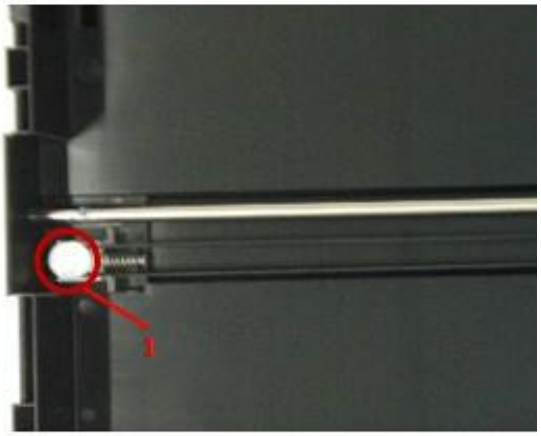
1. Remove the screws at location 1 and remove the scanning platform.



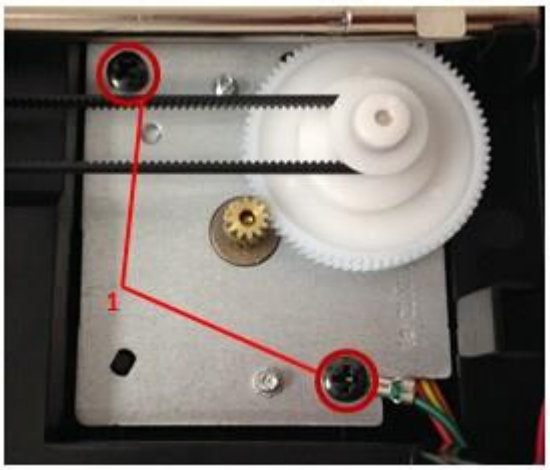
2. Unplug the cable of the scanning head and remove the scanning head.



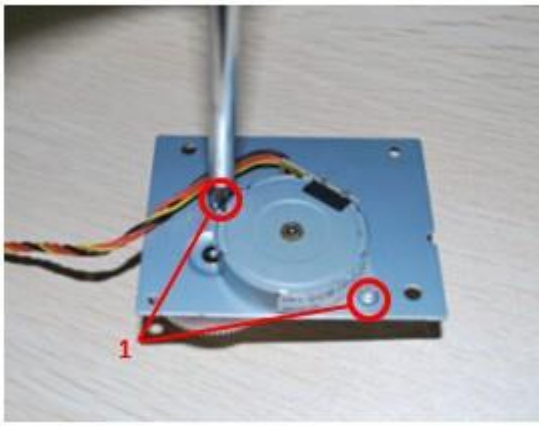
3. After removing the scanning head, remove the steel shaft guide and loosen the belt.



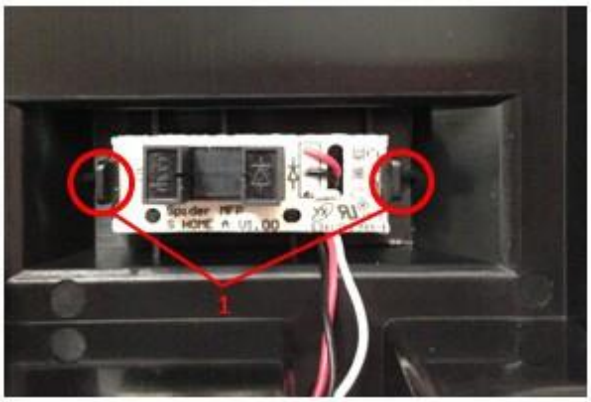
4. Remove the screws at location 1 and remove the fixing plate of the scanning motor.



5. Remove the screws at the back of the scanning motor at location 1, then remove the scanning motor.



6. Open the claws at location 1, and remove the scanning home position sensor.



Maintenance

5
CHAPTER

5. Maintenance 5-2
5.1. Cleaning 5-2
5.2. Consumables 5-5
5.2.1. About Consumables 5-5
5.2.2. Replacement of Consumables 5-5

5. Maintenance

5.1. Cleaning

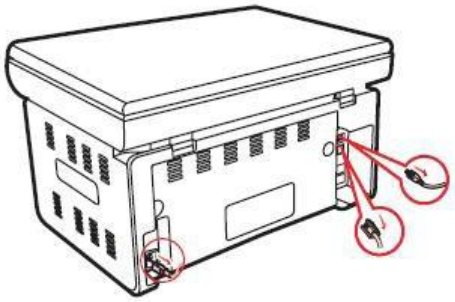
Note: • Please use mild detergents.

• Do not use highly corrosive liquids such as thinners or benzene-based liquids for cleaning, as these will damage the surface of the device.

• Do not use cleaning materials containing ammonia.

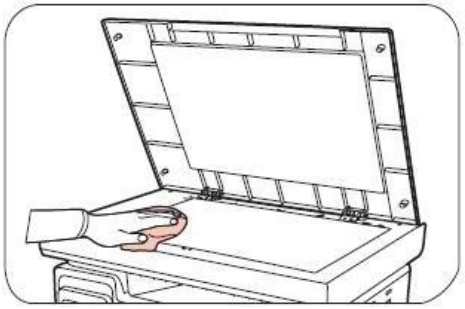
• Do not use isopropanol to remove dust from the control panel, as it may crack the panel.

1. Turn off the main power switch and unplug the power cable.

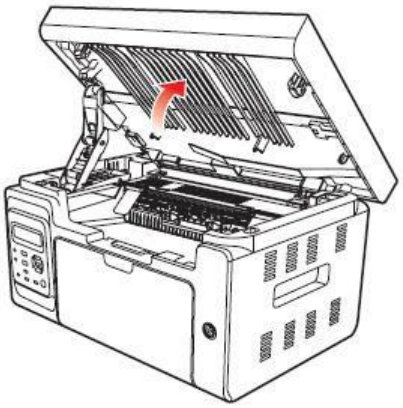


2. Use a soft cloth to wipe the outside of the printer.

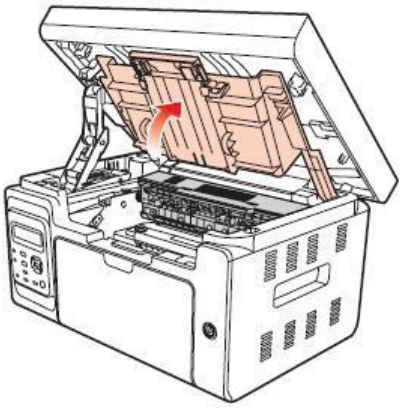
3. Raise the cover and gently wipe the platen glass with a soft cloth.



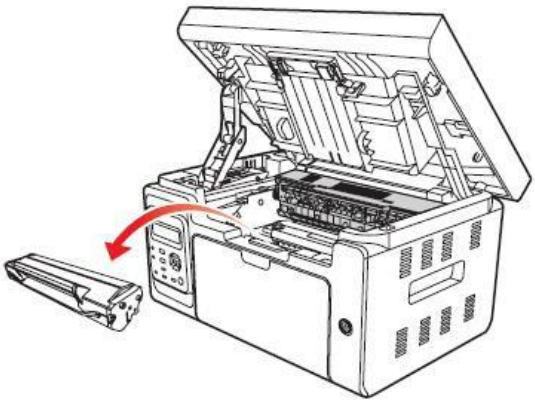
4. Raise the scanning platform until it is locked.



5. Open the output bin.



6. Remove the toner cartridge along the guides.



Note: • Please remove personal objects such as watches or bracelets before removing the cartridge, as they may damage the inside of the machine.

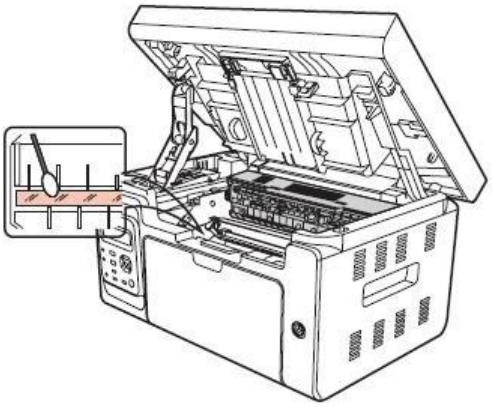
• When removing the cartridge, put the cartridge in a protective bag or wrap it in thick paper to avoid direct light damaging the cartridge.

• After removing the cartridge, do not touch the shaded area with your hands.

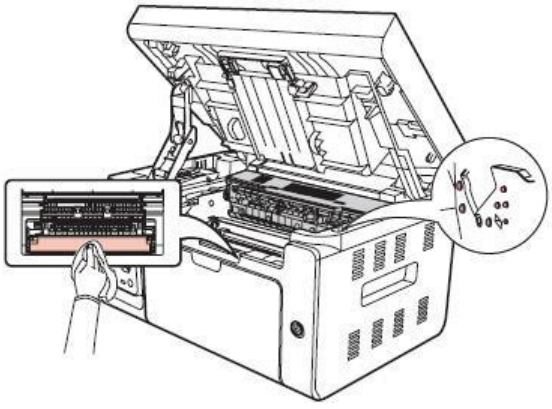
Warning

Some parts of the printer are still hot for a short time after use. When opening the front cover or rear cover to clean the parts inside the printer, please do not touch the parts in the shaded area, as shown below, so as to avoid burns.

7. Wipe the laser scanning unit's dust-proof surface gently with a cotton swab or a damp, lint-free soft cloth.



8. Clean the inside of the printer by using a dry and lint-free cloth to gently wipe the shaded area, as shown in the picture below.



5.2. Consumables

5.2.1. About Consumables

1) Utilization of consumables.

Please only use genuine Pantum consumables.

2) Cartridge Maintenance and Protection.

To maximize toner use, please bear the following guidelines in mind:

• Do not remove the cartridge from its packaging until you need to use it.

• The warranty excludes damage caused by refilling the cartridge.

• Store the cartridge in the same environment as that of the printer.

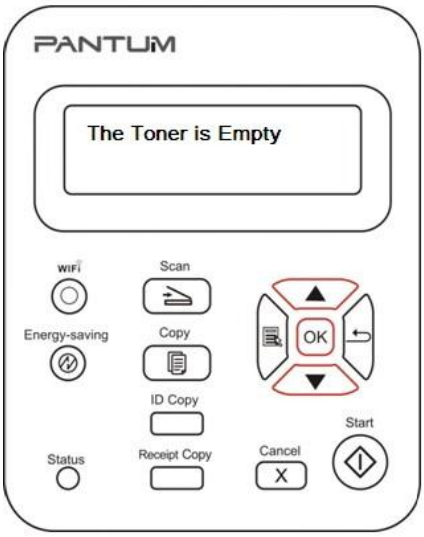
• To avoid damage, do not expose the cartridge to sunlight.

3) Cartridge Service Life.

The service life of the cartridge depends on the amount of toner required for print jobs. A new cartridge can print an average of 1600 pages, with 5% coverage, on A4 paper. The actual number of pages may vary depending on the print density, and is affected by the operating environment and print interval, as well as the type and size of media to be printed. The cartridge may need to be changed frequently if you print numerous graphs.

5.2.2. Replacement of Consumables

When the orange indicator on the printer flashes, or the LCD screen shows that the toner is exhausted (as shown below), this means that the cartridge is almost or completely empty. To ensure print quality, please replace the cartridge as needed.



Follow the steps below to replace the cartridge:

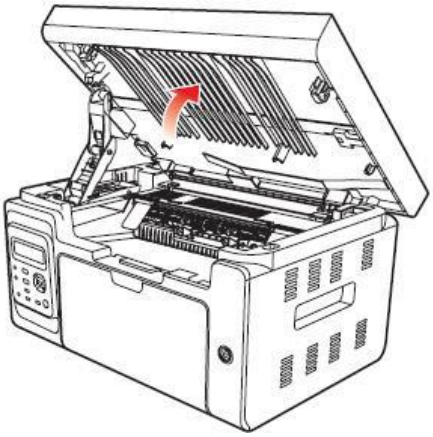
Note: • There may be remaining toner in the cartridge. Please remove it carefully to avoid spillage.

• Put the empty cartridge on a piece of paper to avoid accidental spillage and contamination.

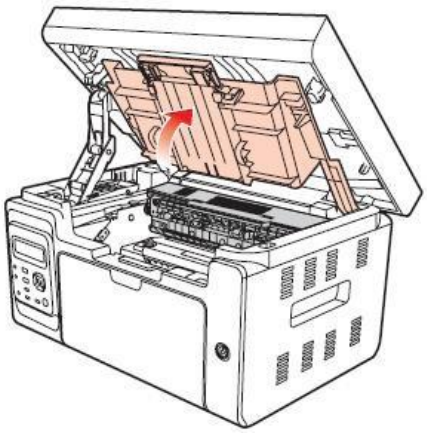
• After removing the protective cover from the new toner cartridge, load it immediately into the printer to avoid light damage.

• When installing, do not touch the surface of the cartridge to avoid scratching it.

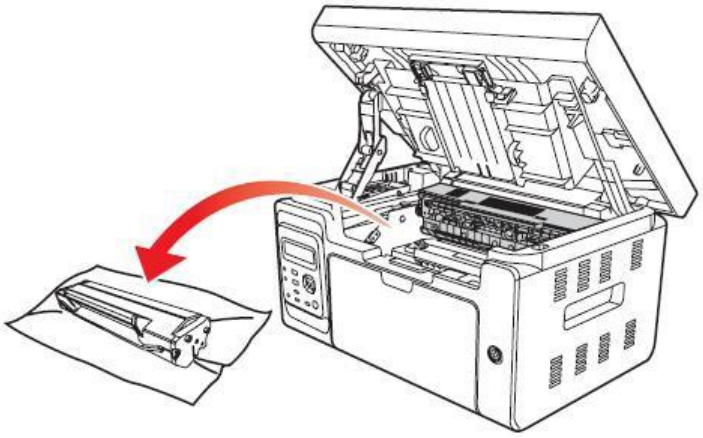
1. Raise the scanning platform until it is locked.



2. Open the output bin.

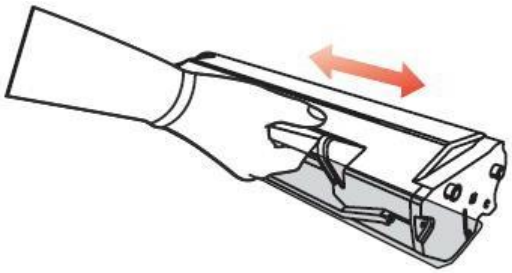


3. Remove the old cartridge along the guides.

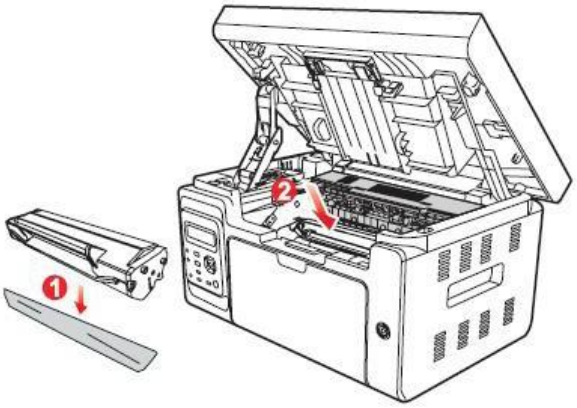


Note:
- Please remove personal objects such as watches or bracelets before removing the cartridge, as they may damage the inside of the machine.
- When removing the cartridge, put the cartridge in a protective bag or wrap it in thick paper to avoid direct light damaging the cartridge.
- After removing the cartridge, do not touch the shaded area with your hands.

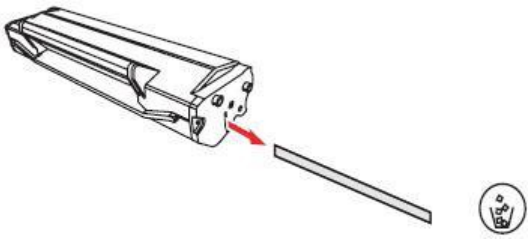
4. Take the new cartridge out of its packaging, hold the cartridge handle and shake it gently (horizontally) 5-6 times so as to evenly distribute the toner inside the cartridge.



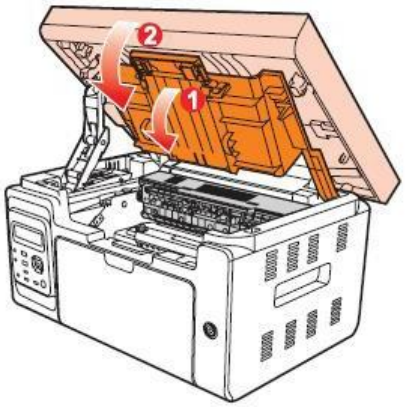
5. Remove the cartridge protector (blister cover), insert the cartridge along the guides, and then push it firmly along the direction of the arrow until you hear a click assuring you that the cartridge is fully inserted.



Note: • Please check whether there is a seal before you put toner cartridge into the printer. If there is one, please tear off the seal before installation.



6. Cover the output bin and close the scanning platform.



7. Turn on the power of the printer again and use the product control panel to print a test page.

Error Display and Troubleshooting

6
CHAPTER

6. Error Display and Troubleshooting 6-2
6.1. Pre-maintenance Check 6-2
6.2. Error Information 6-3
6.3. Error Code 6-4
6.4. Clearing Jammed Paper 6-6
6.5. Troubleshooting 6-9
6.5.1. Feeder Paper Failure 6-9
6.5.2. Common Problems 6-10
6.6. Image Defects 6-15
6.6.1. Printing 6-15
6.6.2. Scanning and Copying 6-18

6. Error Display and Troubleshooting

6.1. Pre-maintenance Check

I. Environment

1. The power voltage must be within the range of 220~240 VAC, depending on the model.

2. Place the equipment on a flat, stable surface.

3. Room temperature is maintained at 50 to 90 °F, (10 to 32.5 °C). Relative humidity should be between 20% and 80%.

4. Do not expose the equipment to dust.

5. Do not expose the equipment to ammonia or other noxious gases.

6. Avoid exposing the equipment to heat or moisture (e.g. near water or a humidifier).

7. Avoid exposing the equipment to direct sunlight.

8. Use the printer in a well-ventilated room.

9. Make sure the printer's air vent is not blocked.

II. About Paper

1. Check whether the paper used is within the specified range. [Printing with paper that is too thick, too thin, or curled may result in paper jams, feed problems or poor print quality]

2. Do not use damp or wet paper. [If paper is damp or wet, please replace with dry paper and check to see if the quality improves]

3. Do not use short-grained paper or acid paper. [If you use short-grained paper or acid paper, it can cause print quality problems]

III. About Consumables

1. Replace the cartridge when the indicator on the printer control panel flashes yellow, or the LCD display shows that the toner level is low.

2. Check that a specified Pantum cartridge is being used. For more information, please refer to 5.2. Consumables.

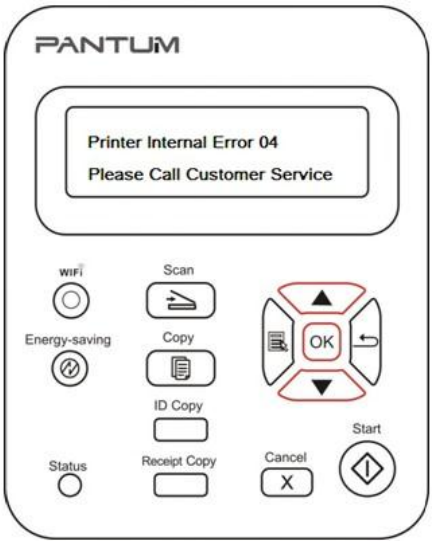
6.2. Error Information

Error Information	Cause	Checks and Measures
The printer is not connected	• The USB cable or power cord is not connected. • Master board failure.	• Connect the USB cable and the power cord correctly. • Replace the master board.
The printer's upper cover is open	• The upper cover has not been fully closed.	• Close the upper cover.
Feed jam	• Check if the printer is out of paper. • The print paper is loaded incorrectly. • The pickup roller is dirty or aging.	• Make sure the feeder tray is loaded with paper. • Correctly load the print paper. • Clean or replace the pickup roller.
Paper jam	• Check if the printer is out of paper. • The print media is damp. • The pickup roller is dirty. • Top of the page sensor failure. • The fuser unit is damaged.	• Make sure the feeder tray is loaded with paper. • Use the recommended dry print media. • Clean the pickup roller. • Check/Replace the top of the page sensor. • Replace the fuser unit.
Cartridge is not installed	• The cartridge is not installed or has been installed incorrectly. • The cartridge chip contact is dirty or damaged. • The cartridge chip is damaged.	• Install the cartridge correctly. • Replace the engine baseplate. • Replace the cartridge with a new one.
Cartridge model mismatch.	• The toner cartridge model does notmatch.	• Replace the cartridge.
The cartridge is empty.	• The cartridge is empty.	• Replace the cartridge.

6.3. Error Code

Warning

This product has a self-diagnostic function. If a fault is detected, the error code warning messages will be displayed on the screen,as shown below:



6.3.1 Error Code(Non 2700 platform machine)

2013MFP have two platform, which have two different error code respectively, Below is the method for distinguish non-2700 machine:

The LCD screen display as follows after pressing the start key. (When press the start key, screen will light immediately):

Error Code	Cause	Checks and Measures
Printer Internal Error 00 Please call Customer Service	The main motor is faulty	• Make sure that the cable between the main motor and engine board is connected correctly. • Replace the main motor if it is faulty. • Replace the engine board if it is faulty.
Printer Internal Error 01 Please call Customer Service	A fault is detected in the LSU motor	• Make sure that the cable between LSU and the engine board is connected correctly. • Replace the LSU if it is faulty. • Replace the engine board if it is faulty.
Printer Internal Error 02 Please call Customer Service	The LSU line synchronizing signal is abnormal	

Printer Internal Error Please call Customer Service	03-12	Irregular heating	• Check the cable between the fuser unit and the substrate to ensure proper connection. • Replace the fuser component if it is faulty. • Replace the engine board if it is faulty.

Error Code		Cause	Checks and Measures
Printer Internal Error Please call Customer Service	11	Scanner self-test failure	• Check whether the scan data cable is properly connected. • Check whether the scanning head is damaged. • Check whether the original scanning sensor is damaged. • Replace the data board if it is faulty.
Printer Internal Error Please call Customer Service	12	Origin check error	• Check the scan data cable. • Check whether the scanning head is damaged. • Check whether the original scanning sensor is damaged. • Replace the data board if it is faulty.
Printer Internal Error Please call Customer Service	13	Black label error	• Check the scan data cable. • Check whether the scanning head is damaged. • Check whether the original scanning sensor is damaged. • Replace the data board if it is faulty.
Communication Error Cancel	22 OK	Invalid Command	• Make sure the USB cable is connected correctly. • Check scan parameter setting to confirm that the scan parameters are correctly set. • Replace the scanning head if it is faulty. • Replace the data board if it is faulty.
Communication Error Cancel	23 OK	Invalid Parameter	
Communication Error Cancel	25 OK	USB Connection Error	
Communication Error Cancel	26 OK	Network Connection Error	• Check the network cable to ensure it is properly connected. • Replace the data board if it is faulty.
Communication Error Cancel	27 OK	Wi-Fi Connection Error	• Check the wireless connection status of the printer to ensure it is ON. • Check the network environment to ensure the wireless network is available. • Check the cable between the inside antenna and the data board to ensure proper connection. • Replace the data board if it is faulty.

6.3.2 Error code (For 2700 platform machine) ★

2013MFP have two platform, which have two different error code respectively, Below is the method for distinguish 2700 platform machine:

A. When pressing the start key, The LCD screen will light after waiting for 3 seconds, the screen displays as follows:

B. 2700 machine can be set apart from machine SN, the product name has words ”2700” .(For example: 301061011301 B1-P2502W-俄罗斯-F-220-黑色-22-**2700**-锁死)

Error Code	Cause	Check and Measures
Internal error 01 of printer Please call the customer service staff.	Abnormality of main motor	1. Check the connecting wire of the motor; 2. Replace the motor; 3. Restart the printer; 4. Replace the data substrate.
Internal error 02 of printer Please call the customer service staff.	Abnormality of synchronization of laser unit	1. Check the connecting wire of the laser unit; 2. Replace the laser unit; 3. Restart the printer; 4. Replace the data substrate.
Internal error 03 of printer Please call the customer service staff.	Abnormality of motor of laser unit	1. Check the connecting wire of the laser unit; 2. Replace the laser unit; 3. Restart the printer; 4. Replace the data substrate.
Internal error 04 of printer Please call the customer service staff.	Too long heating of heating roll under full power	1. Check the connecting wire of the fuser unit; 2. Replace the fuser unit; 3. Replace the power substrate; 4. Replace the data substrate.
Internal error 05 of printer Please call the customer service staff.	Too slow temperature rise of heating roll	
Internal error 06 of	Abnormality of thermistor	

printer Please call the customer service staff.	of heating roll	
Internal error 07 of printer Please call the customer service staff.	Too slow cooling of heating roll	
Internal error 08 of printer Please call the customer service staff.	Abnormal temperature of heating roll	
Internal error 09 of printer Please call the customer service staff.	Failure of heating roll to reach the start temperature of laser unit	
Internal error 10 of printer Please call the customer service staff.	Failure of heating roll to reach the pickup temperature	
Internal error 11 of printer Please call the customer service staff.	Fault of engine system	1. Restart the printer; 2. Replace the data substrate.
Internal error 12 of printer Please call the customer service staff.	Abnormality of image output unit or video module	1. Restart the printer; 2. Replace the data substrate.
Internal error 13 of printer Please call the customer service staff.	Failure of fan connection	1. Check the connecting wire of the fan; 2. Replace the fan; 3. Restart the printer; 4. Replace the data substrate.
Internal error 14 of printer Please call the customer service staff.	Temperature out of control	1. Make sure that the cable between the fuser unit and base board is connected correctly. 2. Replace the fuser unit if it is failure. 3. Replace the power board if it is failure. 4. Replace the data board if it is failure.

Internal error 15 of printer Please call the customer service staff.	The rated heating within 16 seconds does not reached the specified temperature	1. Make sure that the cable between the fuser unit and base board is connected correctly. 2. Replace the fuser unit if it is failure. 3. Replace the data board if it is failure. 4. Replace the power board if it is failure.
Internal error 21 of printer Please call the customer service staff.	Communication failure (WSD communication error [the wired network connection and wifi connection cannot be distinguished])	1. Check whether network connection is normal (the same as the internal error 26); 2. Check whether wifi connection is normal (the same as the internal error 27); 3. Replace the data substrate.
Internal error 22 of printer Please call the customer service staff.	Invalid command (reserved)	1. Restart the printer; 2. Replace the data substrate.
Internal error 23 of printer Please call the customer service staff.	Invalid parameter (reserved)	1. Restart the printer; 2. Replace the data substrate.
Internal error 24 of printer Please call the customer service staff.	(reserved)	1. Restart the printer; 2. Replace the data substrate.
Internal error 25 of printer Please call the customer service staff.	USB connection error	1. Check whether the USB plug is connected securely. If the USB plug is connected properly, restart the printer or the device connected to the printer. 2. Replace the data substrate.
Internal error 26 of printer Please call the customer service staff.	Network connection error	1. Check whether the network cable is connected properly; 2. Restart the printer; 3. Replace the data substrate.
Internal error 27 of printer Please call the	wifi connection error	1. Check whether the wireless connection of the printer is enabled; 2. Check the network environment, and

customer service staff.		make sure that the wireless network is normal; 3. Check whether the connecting wire between the internal antenna and data substrate is connected properly; 4. Restart the printer; 5. Replace the data substrate.
Internal error 31 of fax	Fax module initialization failed.	1. Check the connecting cable of the fax substrate; 2. Restart the printer; 3. Replace the fax substrate.
Internal error 11 of scanner	Origin check error	1. Check whether the data line of the scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.
Internal error 12 of scanner	The black mark is not found.	1. Check whether the data line of the scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.
Internal error 13 of	Light calibration failed.	1. Check whether the data line of the

scanner		scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.
Internal error 14 of scanner	AFE calibration failed (OFFSET).	1. Check whether the data line of the scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.
Internal error 15 of scanner	AFE calibration failed (GAIN)	1. Check whether the data line of the scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.
Internal error 16 of	Shading failed	1. Check whether the data line of the

scanner		scanner is connected properly; 2. Check whether the scanning head is damaged; 3. Check whether the scanner motor is damaged; 4. Check whether the connecting wire of the scanner motor is connected properly; 5. Restart the printer; 6. Check whether the data substrate is damaged.

6.4. Clearing Jammed Paper

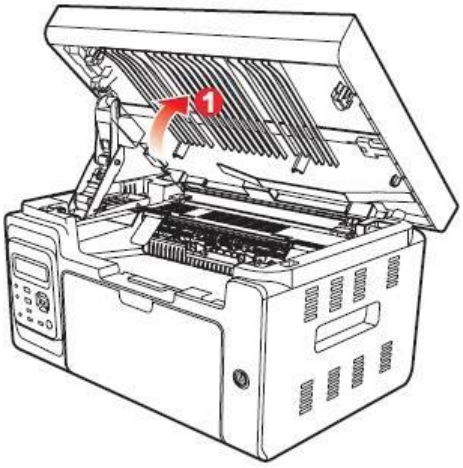
Please clear jammed paper using the following steps.

Remove the jammed paper in accordance with the following steps. Close the output bin and tidy the paper in the feeder tray, then the printer will automatically resume printing. If the printer does not automatically start printing, please press the Cancel button. If the printer still does not start printing, please check whether all the jammed paper inside the printer has been cleared. Then try the print job again.

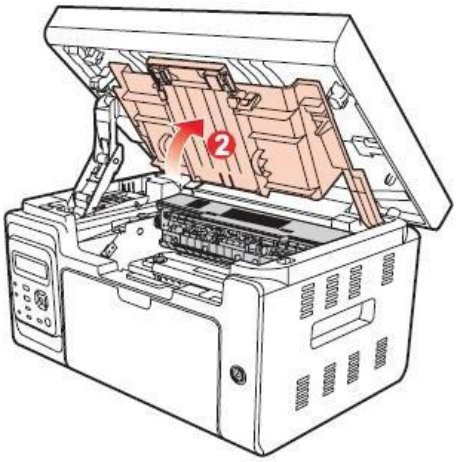
Note: • Please take out all the paper in the paper tray and check paper volume before loading new paper. This helps to prevent a printer jam caused by excessive feeding.

When the LCD screen prompts jam:

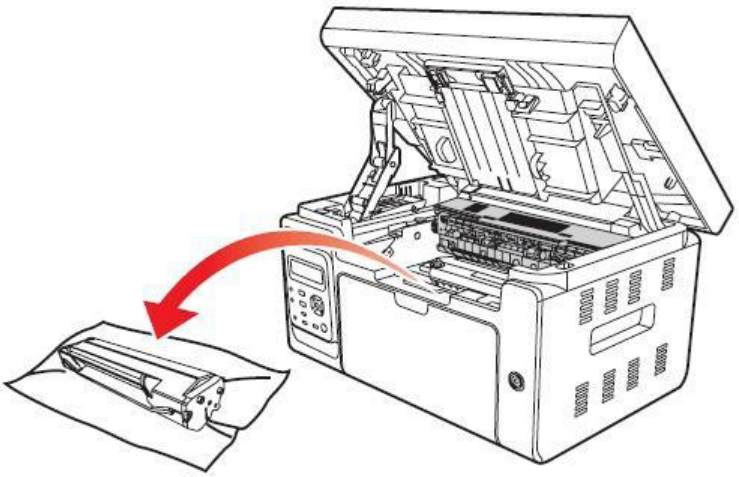
1. Raise the scanning platform until it is locked.



2. Open the output bin by the upper right ridge of the concave section.

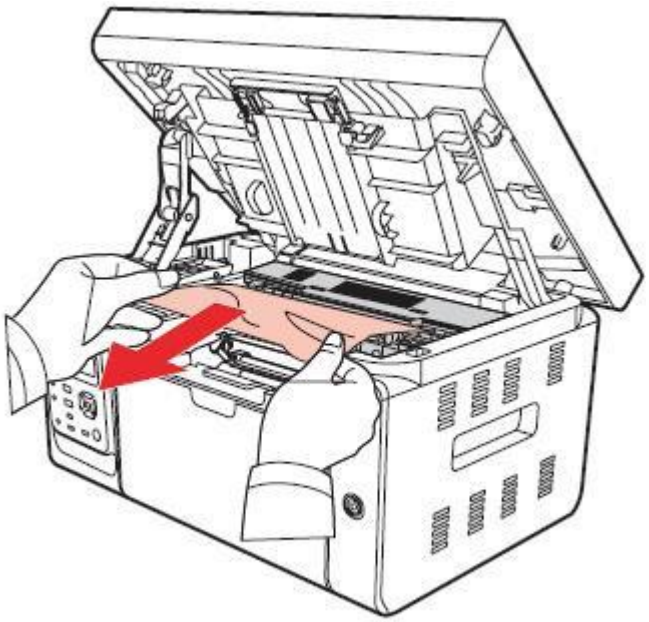


3. Remove the toner cartridge along the guides.

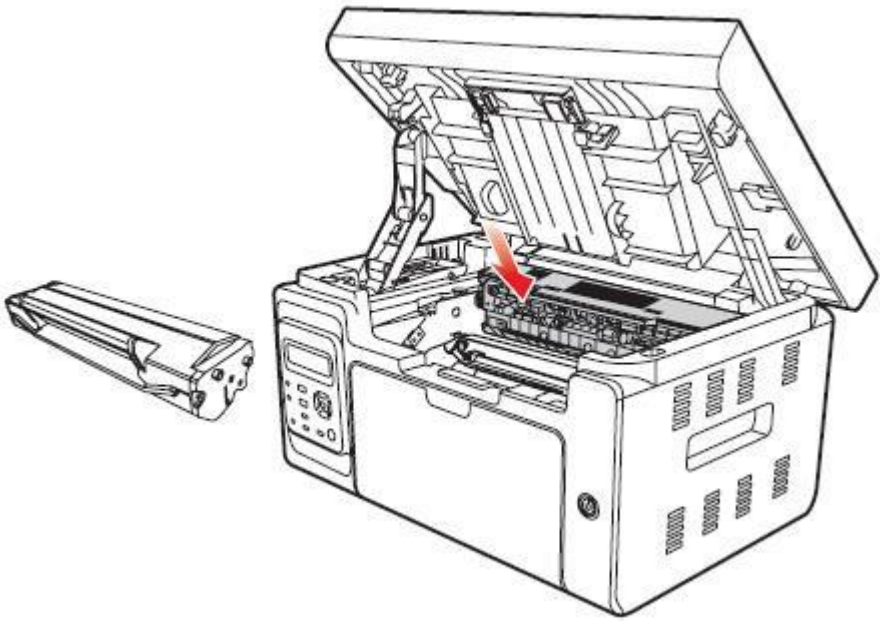


Note: • Please remove personal objects such as watches or bracelets before removing the cartridge, as they may damage the inside of the machine.
• When removing the cartridge, put the cartridge in a protective bag or wrap it in thick paper to avoid direct light damaging the cartridge.
• After removing the cartridge, do not touch the shaded area with your hands.

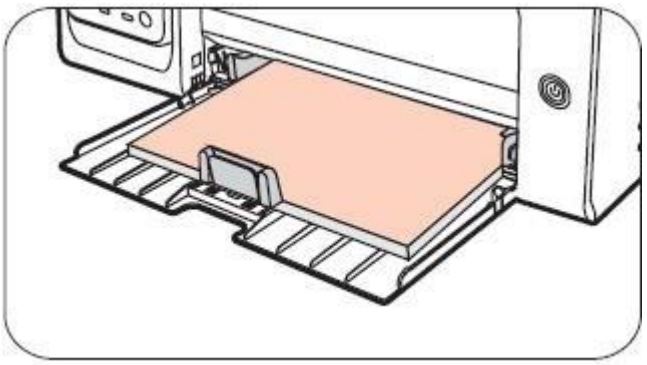
4. Gently draw the jammed paper out along the paper output orientation.



5. After removing the jammed paper, insert the cartridge into the printer along the guides until you hear a click assuring you that the cartridge is fully inserted.



6. Put the paper in the tray neatly and carry out the next print when the indicator resumes print-ready status.



6.5. Troubleshooting

6.5.1. Feeder Paper Failure

Initial Check: Please conduct an initial check when there is a paper feed failure.

Check	Solution
Does the print media meet product specifications?	Replace the print media.
Is the paper curled, wrinkled, or wet?	Replace the paper and tell users how to protect the paper.
Is the paper path deformed, dirty, or blocked up?	Clean the paper path and replace relevant accessories, if needed.
Is the separation claw dirty, deformed, or damaged?	Replace the fuser component.
Are the pickup roller and separation component dirty, deformed or, damaged?	Clean the pickup roller and separation component, and replace them, if needed.
Is the tray detent correctly placed to feed paper?	Slide the tray detent closer to the edge of the paper stack.
Is the clutch gear rotating properly?	Adjust or replace the clutch gear.
Is the electromagnet working properly?	Replace the electromagnet.

M1 Paper Feed Failure

Possible cause	Solution
There is no electromagnet signal.	Check the electromagnet signal input to ensure that the electromagnet signal line is normal.
The pickup roller is dirty.	Clean or replace the pickup roller.
Pickup roller wears down.	Replace the pickup roller.

M2 Continuous Paper Feed

Possible cause	Solution
Electromagnet signal error.	Check the electromagnet signal input to ensure that the electromagnet signal line is normal.
The electromagnet spring hook is not powerful enough.	Replace the electromagnet.
Incorrect assembly of the clutch single set assembly.	Check the clutch single set to ensure that the assembly is correct.

M3 Tilt Feeding

Possible cause	Solution
The feeder channel is dirty.	Check the feeder channel to ensure that the channel is clear.
The pickup roller is dirty.	Clean the pickup roller.

M4 Resend

Possible cause	Solution
Paper is placed incorrectly.	Confirm that the paper is placed correctly.
The separator is contaminated or worn.	Clean or replace the separator.

6.5.2. Common Problems

6.5.2.1. Printing Failure

P1 NO AC power supply

Possible cause	Solution
The voltage is unsuitable.	Ensure suitable voltage from the power supply.
The power cord is not connected to the outlet correctly.	Make sure that the power cord is connected to the outlet correctly.
The fuse has blown.	Replace the high-voltage power board.

P2 No DC power supply

Possible cause	Solution
There is no AC power supply.	Make sure the AC power supply is normal.
The low-voltage power supply is faulty.	Replace the low-voltage power board.

P3 Motor Failure

Possible cause	Solution
The motor cable is faulty.	Make sure that the cable is connected correctly and there are no quality problems.
The main motor is faulty.	Replace any other motors, ensure that the main motor is working normally, and replace it if it is not.
Engine board failure.	Replace the engine board.

P4 Heat lamps doesn’t work

Possible cause	Solution
The high-voltage power supply circuit board is disconnected.	Reconnect the plug wire and ensure that the AC power supply is working normally.
There is jammed paper inside of the printer.	Check the printer and remove the jammed paper inside of it.
The output sensor cannot be closed.	Clean or replace the output sensor.
The top of the page sensor is faulty.	Replace the top of the page sensor.
Thermistor failure.	Replace the fuser component.
The temperature relay is disconnected.	Replace the fuser component.
Engine board failure.	Replace the engine board.
High-voltage power board failure.	Replace the high-voltage power board.

P5 Fuser Unit Failure

Possible cause	Solution
There is a poor connection to the thermistor plug wire.	Reconnect the wire.
The temperature relay has burnt out.	Replace the fuser component.
Halogen heating light failure.	Replace the fuser component.

P6 Laser Scanning Failure

Possible cause	Solution
The cable is not connected correctly or is broken.	Reconnect it correctly or replace it.
The laser is damaged.	Change the laser.
Engine board failure.	Replace the engine board.

P7 Paper supply failure

Possible cause	Solution
Separator/pickup roller failure.	1) Clean the surface of the separator or pickup roller. 2) Replace the separator or pickup roller.
The electromagnet cable is not connected properly.	Make sure that the electromagnet cable is connected properly.
Electromagnet failure.	Replace the electromagnet.
Paper Present sensor failure.	Replace the Paper Present sensor.
Engine board failure.	Replace the engine board.
Engine board failure.	Replace the engine board.

P8 Abnormal high-voltage output

Possible cause	Solution
The power cord is not plugged in or is damaged.	Make sure the power cord is connected correctly.
The high-voltage contact is dirty.	Clean the high-voltage contact.
High-voltage power board failure.	Replace the high-voltage power board.

P9 USB cannot be identified by the PC

Possible cause	Solution
The power cord is not plugged in, is poorly connected, or is damaged.	Make sure the power cord is connected correctly.
USB cable is poorly connected or damaged.	Make sure the USB cable is connected correctly.
Data board failure.	Replace the data board.

P10 Page prints gibberish or whole page is dark

Possible cause	Solution
USB cable is loose or damaged.	Make sure the USB cable is connected correctly.
FFC cable connection to the engine and data boards is bad or unreliable.	Replace the FFC cable.
Data board failure.	Replace the data board.
Engine board failure.	Replace the engine board.

P11 No image printed

Possible cause	Solution
The USB cable and power cord are not connected correctly.	Check the USB cable and power cord to ensure the correct connection.
FFC cable connection to the engine and data boards is bad or unreliable.	Replace the FFC cable.
High-voltage power board failure.	Replace the high-voltage power board.
The data board is faulty.	Replace the data board.
The cartridge is faulty.	Replace the cartridge.
The laser is faulty.	Change the laser.

P12 No response when pressing the button on the control panel

Possible cause	Solution
The cable is damaged.	Replace the cable.
The button is damaged.	Replace the button.
Control panel failure.	Replace the control panel.
Engine board failure.	Replace the engine board.

P13 The cartridge cannot be identified

Possible cause	Solution
The cartridge is installed incorrectly.	Ensure correct installation of the cartridge.
Cartridge chip failure.	Replace the cartridge chip.
Data board failure.	Replace the data board.

6.5.2.2. Scanning failure

S1 The scanning picture is faulty

Possible cause	Solution
Scanner cover is not completely covered, causing the scanning exposure.	Make sure that the scanner cover is completely covered.
Scanning software is set incorrectly.	Please check the scan settings, and ensure that the settings are correct.
Scanning head color handle is faulty.	Replace the scanning head.

S2 Scanner Failure

Possible cause	Solution
Internal wiring is faulty.	Properly connect the scanning head cable.
Scanning head failure.	Replace the scanning head.
Data board failure.	Replace the data board.
Engine board failure.	Replace the engine board.

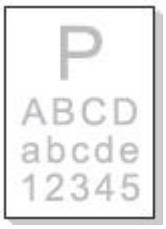
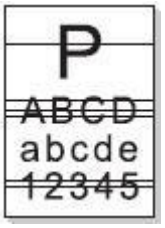
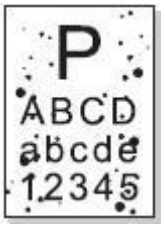
6.5.2.3. Copying failure

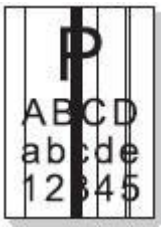
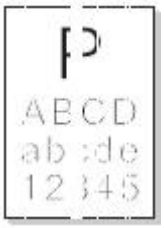
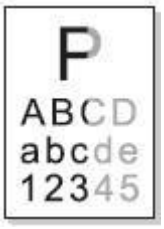
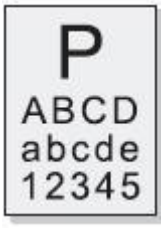
F1 Copy quality is abnormal

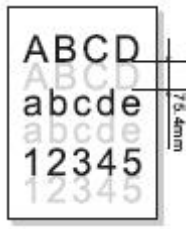
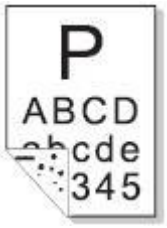
Possible cause	Solution
Scanner cover is not completely covered, causing the scanning exposure.	Make sure that the scanner cover is completely covered.
The glass platen is dirty.	Clean the glass platen.
The cartridge is damaged.	Replace the cartridge.
High-voltage exception.	Clean the high-voltage contact or replace the engine board.
Scanning head faulty.	Replace the scanning head.
High-voltage power failure.	Replace the high-voltage power failure.

6.6. Image Defects

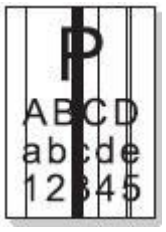
6.6.1. Printing

Status	Cause	Recommended Solutions
Lightly exposed image 	• The carbon powder in the cartridges is running out. • A poor connection at the high-voltage contact of the engine board due to contaminated toner. • The high-voltage output of the engine board is abnormal.	• Replace the cartridge. • Clean the area contaminated with toner. • Clean the high-voltage charge contacts of the engine board or replace the engine board.
Whole page is dark	• The high-voltage charge output of the engine board is abnormal. • The charge roller is faulty.	• Clean the high-voltage charge contacts or replace the engine board. • Replace the cartridge.
Horizontal stripes 	• Poor connection between the high-voltage contact and the cartridge. • The developing roller is contaminated; OPC or charge roller is damaged. • Paper pickup skidding.	• Clean the high-voltage contact or replace the engine board. • Replace the cartridge. • Clean or replace the pickup roller.
Black/White spots 	• Some areas of the cartridge are contaminated or the OPC is damaged. • If there are 45.2mm cyclical spots appearing on the image, the high-voltage transfer is abnormal or the transfer roller is damaged.	• Replace the cartridge. • Clean the transfer high-voltage contact or replace the transfer roller. • Clean up paper scraps and dirt from inside of the printer regularly.

Status	Cause	Recommended Solutions
Vertical stripes 	• The blade is chipped or deformed. • The OPC is damaged. • There is a blockage between the developing roller and the doctor blade.	• Replace the cartridge.
White vertical stripes 	• The window glass of the laser is dirty. • There is a blockage of toner particles between the developing roller and the doctor blade. • The fuser component is faulty.	• Clean the window glass of the laser. • Replace the cartridge. • Clean or replace the fuser component.
There is an area of an exposed image on the page 	• The doctor blade is damaged. • The spring pressures on the left and right side of the transfer roller are uneven; the spring is damaged; the transfer roller is installed improperly or the transfer roller sleeve is damaged. • Laser failure.	• Replace the cartridge. • Replace the transfer roller sleeve. • Replace laser.
Black background 	• Print media used are beyond the specified range. • The cartridge is empty. • The high-voltage output of the engine board is abnormal.	• Please use print media within the specified range. • Replace the cartridge. • Clean the high-voltage contact or replace the engine board.

Status	Cause	Recommended Solutions
Periodic image ghosting 	• If periodic 75.4mm image ghosting appears, it indicates that the OPC is damaged. • If periodic 62.3mm image ghosting appears, it means that the surface of the heating roller is contaminated. • The high-voltage output of the high-voltage power board is abnormal.	• Replace the cartridge. Clean the surface of the heating roller or replace the fuser component if the problem continues. • Replace the high-voltage power board.
The back of the paper is dirty 	• The transfer roller is contaminated. • The fuser pressure roller is contaminated.	• Clean or replace the transfer roller. • Clean the fuser pressure roller or replace the fuser component.
Whole page is white 	• Bad electricity, elimination of the OPC. • The laser is damaged.	• Clean the high-voltage contact or replace the engine board. If the problem continues, replace the cartridge. • Change the laser.

6.6.2. Scanning and Copying

Status	Cause	Recommended Solutions
Whole page is dark	• Scanning exposure. • Scanning head failure. • Scan data cable failure. • Data board failure.	• Please check the scanning cover to ensure that it is properly covered. • Replace the scanning head. • Check the scan data cable to ensure proper connection. If it has been damaged, replace it. • Replace the data board.
Vertical stripes 	• The platen glass is dirty. • The scanning head is dirty. • Scanning head failure. • Scan data cable failure. • Data board failure.	• Clean the platen glass. • Clean the scanning head. • Replace the scanning head. • Check the scan data cable to ensure proper connection. If it has been damaged, replace it. • Replace the data board.
Whole page is white	• Scanning head failure. • Scan data cable failure. • Data board failure.	• Replace the scanning head. • Check the scan data cable to ensure proper connection. If it has been damaged, replace it. • Replace the data board.

Appendix

7
CHAPTER

7. Appendix 7-2
Appendix 1. Circumference of each roller in this deviceI 7-2
Appendix 2. Product Serial Numbers 7-3
Appendix 3. Terminology 7-4

7. Appendix

Appendix 1. Circumference of each roller in this devicel.

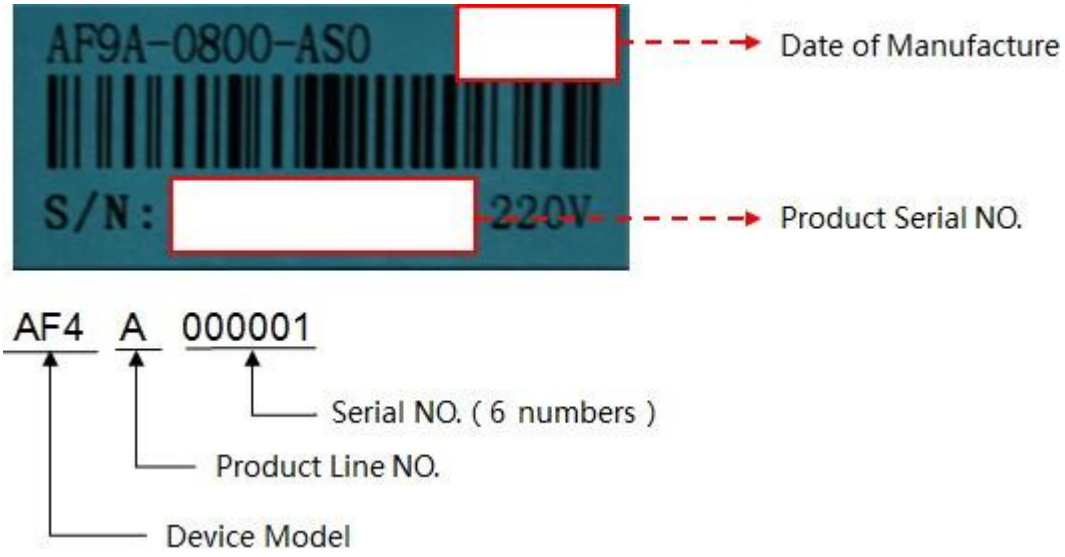
Name	Circumference (mm)
Transfer Roller	45.2
Heating Roller	62.3
Pressure Roller	75.4
OPC (photosensitive drum)	75.4
Developing Roller	35.2
Supply Roller	47.5
Primary Charge Roller	37.7

The reason for relevant periodical image exception can be determined in accordance with the circumference of each roller above.

Appendix 2. Product Serial Numbers

There is a serial number label on each product. Please see below for the meaning of the product serial number and its location.

Meaning of the code:



Label Attached Location: Inside the device

Appendix 3. Terminology

The following table lists the terminology used in this manual.

Terminology	Explanation
CFR	A type of safety standard for laser products
LCD	LCD panels
CIS	Scanner
dpi	The number of dots per inch
PPM	Pages printed per minute
gsm	Paper weight in square meters
auto run	Run automatically
OPC	Photosensitive drum
PCR	Primary Charge Roller
Laser	Laser source
DR	Developing roller
TR	Transfer roller
PR	Pressure roller
LSU	Laser Scan Unit

PANTUM