

4. Alignment and Troubleshooting

4.1. Alignment and Adjustments

This chapter describes the main functions for service, such as the product maintenance method, the test output related to maintenance and repair, Jam removing method, and so on. It includes the contents of user guide.

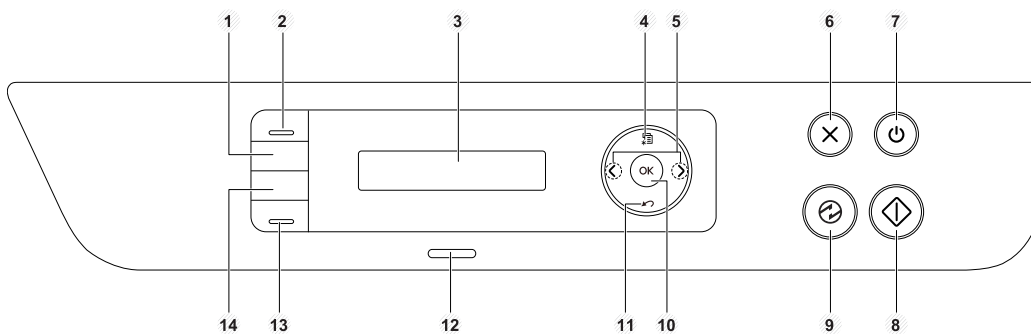
4.1.1. Control Panel




NOTE

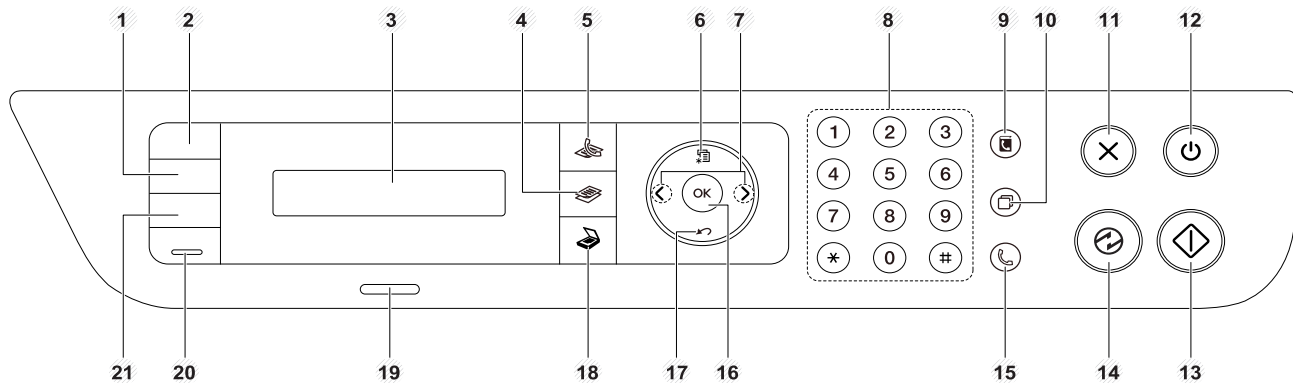
- This control panel may differ from your machine depending on its model. There are various types of control panels.
- Some features and optional goods may not be available depending on model or country.

M2070 / M2070W





1	ID Copy	Allows you to copy both sides of an ID card like a driver's license on a single side of paper.
2	Scan to	Switches between scan and copy mode. The Scan to LED turns on scan mode and turns off on copy mode.
3	Display screen	Shows the current status and displays prompts during an operation.
4	Menu	Opens Menu mode and scrolls through the available menus
5	Left/Right Arrows	Scrolls through the options available in the selected menu and increases or decreases values.
6	Stop/ Clear	Stops an operations at any time.
7	Power/ Wakeup	Turns the power on or off, or wakes up the machine from the power save mode. If you need to turn the machine off, press this button for more than three seconds.
8	Start	Starts a job.
9	Power Saver	Goes into power save mode.
10	OK	Confirms the selection on the screen.
11	Back	Sends you back to the upper menu level.
12	Status LED	Indicates the status of your machine.
13	Eco	Turn on Eco mode to reduce toner consumption and paper usage

14	Darkness	Adjust the brightness level to make a copy for easier reading, when the original contains faint markings and dark images.
	WPS  NOTE M2070W only	Configures the wireless network connection easily without a computer

M2070F / M2070FW

1	Darkness	Adjust the brightness level to make a copy for easier reading, when the original contains faint markings and dark images.
2	ID Copy	Allows you to copy both sides of an ID card like a driver's license on a single side of paper.
3	Display screen	Shows the current status and displays prompts during an operation.
4	Copy	Switches to Copy mode.
5	Fax	Switches to Fax mode.
6	Menu	Opens Menu mode and scrolls through the available menus.
7	Left/Right Arrows	Scrolls through the options available in the selected menu and increases or decreases values.
8	Numeric keypad	Dials a number or enters alphanumeric characters.
9	Address Book	Allows you to store frequently used fax numbers or search for stored fax numbers.
10	Redial/ Pause(-)	Redials the last number in ready mode, or inserts a pause(-) into a fax number in edit mode.
11	Stop/ Clear	Stops an operations at any time.
12	Power/ Wakeup	Turns the power on or off, or wakes up the machine from the power save mode. If you need to turn the machine off, press this button for more than three seconds.
13	Start	Starts a job.
14	Power Saver	Goes into power save mode.
15	On Hook Dial	When you press this button, you can hear a dial tone. Then enter a fax number. It is similar to making a call using speaker phone.
16	OK	Confirms the selection on the screen.
17	Back	Sends you back to the upper menu level.
18	Scan	Switches to Scan mode.
19	Status LED	Indicates the status of your machine.
20	Eco	Turn on Eco mode to reduce toner consumption and paper usage.

21	WPS	Configures the wireless network connection easily without a computer
	<div>  NOTE M207xFW only. </div>	
	Print Screen	<p>Press this button and the display will Print Screen? on the display screen. If you want to print only the active screen, select the Active. If you want to print the whole screen, select Full.</p> <div>  NOTE <ul style="list-style-type: none"> • Print Screen can only be used in the Windows and Mac operating systems. • You can only use this function with USB-connected machine. • When printing the active window/whole monitor screen using the print screen button, the machine may use more toner depending on what is being printed. • You can only use this function if the machine's Samsung Easy Printer Manager program is installed. If you are a Mac OS user, you need to enable Screen Print Settings from the Samsung Easy Printer Manager to use the Print Screen feature. </div>

4.1.2. Understanding the status LED

The color of the LED indicates the machine's current status.



NOTE

- Some LEDs may not be available depending on model or country.
- To resolve the error, look at the error message and its instructions from the troubleshooting part.
- You also can resolve the error with the guideline from the computers's Printing Status or Smart Panel program window.

LED	Status		Description
Status	Off		<ul style="list-style-type: none"> • The machine is off-line. • The machine is in a power save mode.
	Green	Blinking	When the backlight blinks, the machine is receiving or printing data.
		On	<ul style="list-style-type: none"> • The machine is on-line and can be used.
	Orange	On	A paper jam has occurred.
	Red	Blinking	<ul style="list-style-type: none"> • A minor error has occurred and the machine is waiting for the error to be cleared. Check the display message. When the problem is cleared, the machine resumes. For some models that does not support the display screen on the control panel, this feature is not applicable. • Small amount of toner is left in the cartridge. The estimated cartridge life of toner is close. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner.
		On	<ul style="list-style-type: none"> • A toner cartridge has almost reached its estimated cartridge life*. It is recommended to replace the toner cartridge. • There is no paper in the tray. Load paper in the tray. • The machine has stopped due to a major error. Check the display message.
Wireless	Blue	Blinking	The machine is connecting to a wireless network.
		On	The machine is connected to a wireless network.
		Off	The machine is disconnected from a wireless network.
Power/ Wakeup	Blue	On	The machine is in power save mode.
		Off	The machine is in ready mode or machine's power is off.
Eco	Green	On	Eco mode is on.
		Off	Eco mode is off.



NOTE

* Estimated cartridge life means the expected or estimated toner cartridge life, which indicates the average capacity of print-outs and is designed pursuant to ISO/ IEC 19752. The number of pages may be affected by operating environment, percentage of image area, printing interval, graphics, media and media size. Some amount of toner may remain in the cartridge even when red LED is on and the printer stops printing.

4.1.3. JAM removal

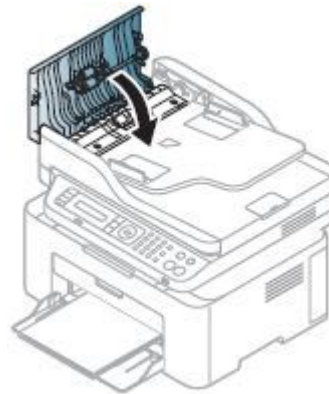
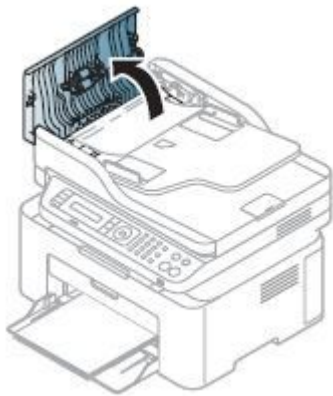
4.1.3.1. Clearing original document jams

**NOTE**

Illustrations on this user's guide may differ from your machine depending on its options or models. Check your machine type.

Original paper jam in front of scanner

- 1) Open the document feeder cover.
- 3) Close the document feeder cover.



- 2) Gently remove the jammed paper from the document feeder.



Original paper jam inside of scanner

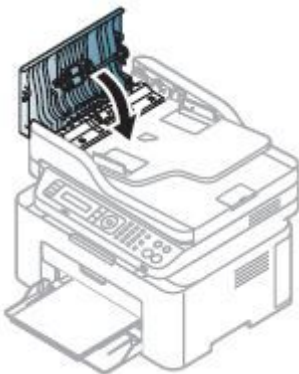
1) Open the document feeder cover.



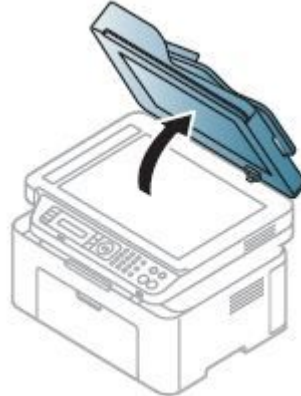
2) Gently remove the jammed paper from the document feeder.



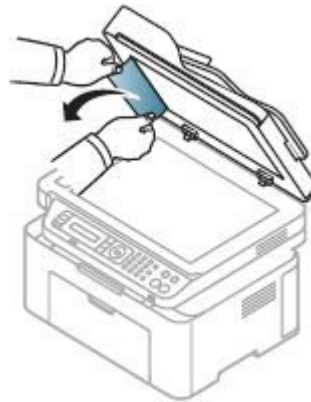
3) Close the document feeder cover.



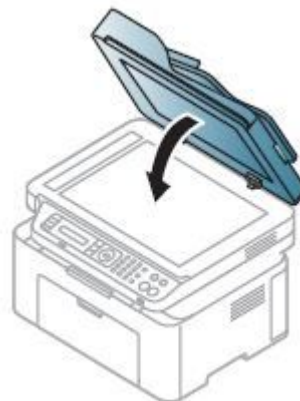
4) Open the document feeder.



5) Grasp the misfeed paper, and remove the paper from the feed area by carefully pulling it.



6) Close the document feeder.



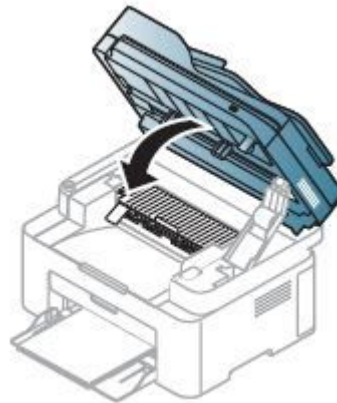
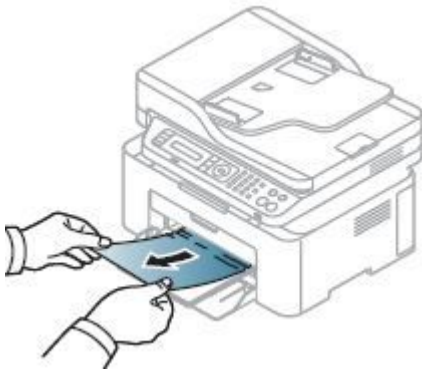
4.1.3.2. Clearing paper jams

**NOTE**

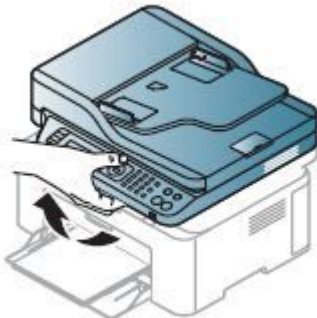
To avoid tearing the paper, pull the jammed paper out slowly and gently.

In tray

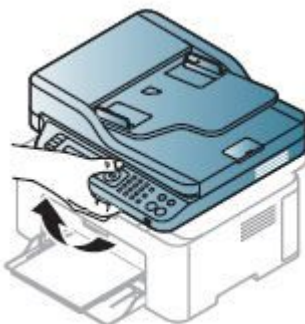
- 1) Remove the jammed paper by gently pulling it straight out.
- 3) Close the scanner unit.



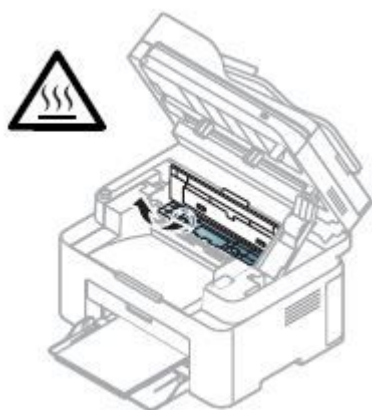
- 2) Open the scanner unit.

**Inside the machine**

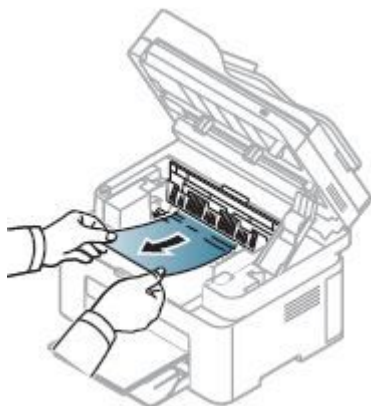
- 1) Open the scanner unit.
- 2) Open the jam cover.



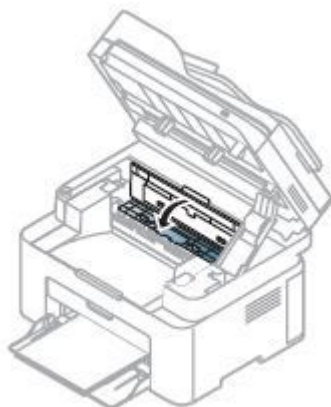
- 3) Open the fuser dummy cover.



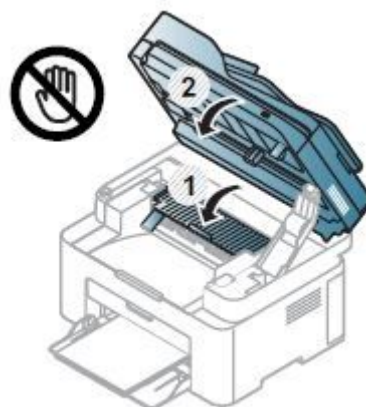
- 4) Remove the jammed paper by gently pulling it straight out.



- 5) Close the fuser dummy cover.

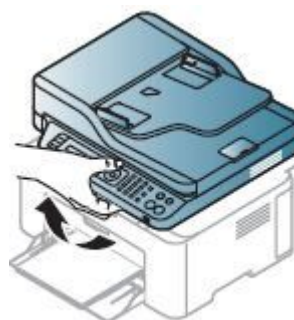


- 6) Close the jam cover. And then close the scanner unit.

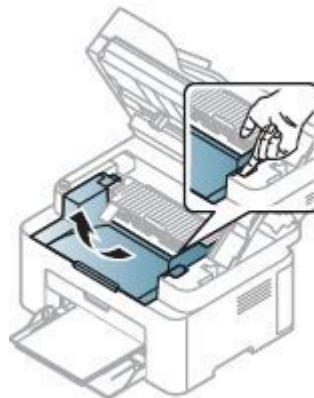


If you do not see the paper in this area, stop and go to next step:

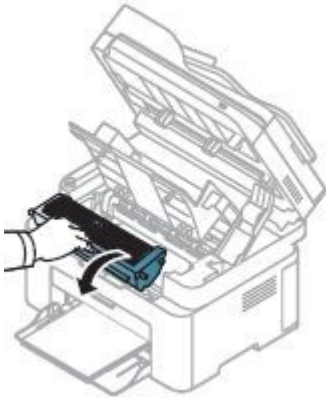
- 7) Open the scanner unit.



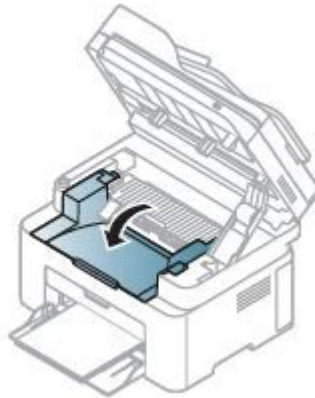
- 8) Open the middle cover.



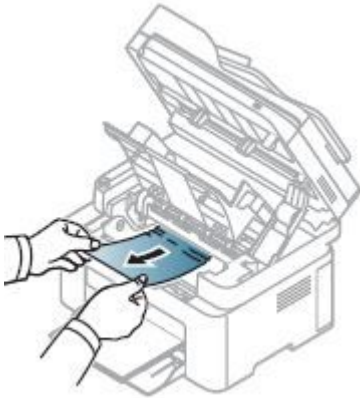
9) Remove the toner cartridge.



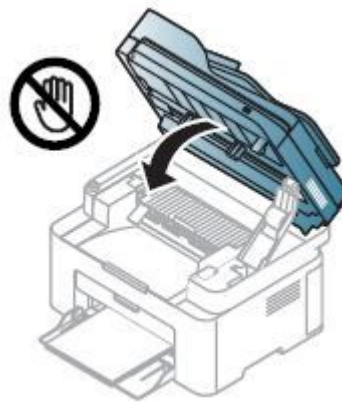
12) Close the middle cover.



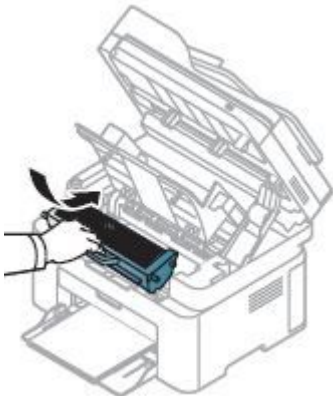
10) Remove the jammed paper by gently pulling it straight out.



13) Close the scanner unit.



11) Reinstall the toner cartridge.



4.1.4. Useful menu item for service

1) Monitoring the supplies life

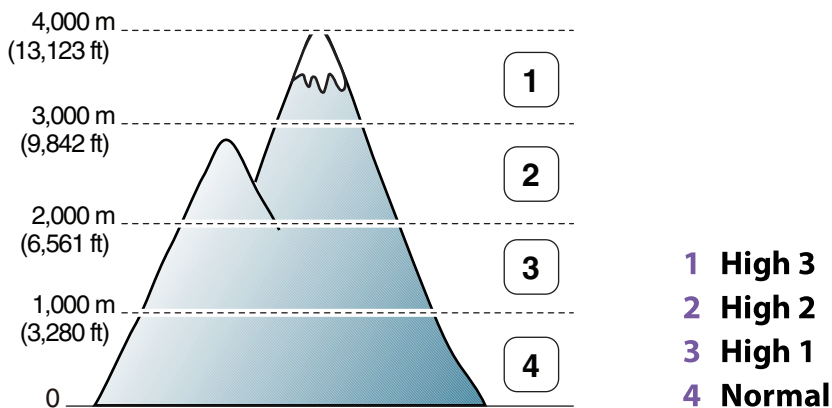
If you experience frequent paper jams or printing problems, check the number of pages the machine has printed or scanned. Replace the corresponding parts, if necessary.

- 1) Select **Menu > System Setup > Maintenance > Supplies Life** on the control panel.
- 2) Select the option you want and press **OK**.
 - **Supplies Info**: Prints the supply information page.
 - **Total**: Displays the total number of pages printed.
 - **ADF Scan**: Displays the number of pages printed by using the document feeder.
 - **Platen Scan**: Displays the number of pages scanned by using scanner glass.
- 3) Press “**Stop/ Clear**” to return to ready mode.

2) Altitude adjustment

Print quality is affected by atmospheric pressure, which is determined by the height of the machine above sea level. The following information will guide you on how to set your machine for the best print quality.

Before you set the altitude value, determine the altitude where you are.



You can set the altitude value from Device Settings or Machine section in Printer Settings Utility program.

- For Windows and Macintosh, open the Samsung Easy Printer Manager program.
Click **Device Settings > Link** to Program button, you can configure various machine settings.
- For Linux, open the Smart Panel program.
Click Printer Setting. Click **Setting > Altitude Adjustment**. Select the appropriate value from the drop-down list, and then click Apply.

You can also set the altitude in System Setup option on the machine's display.

- Select “**Menu > System Setup > Machine Setup > Altitude Adj.**” on the control panel.

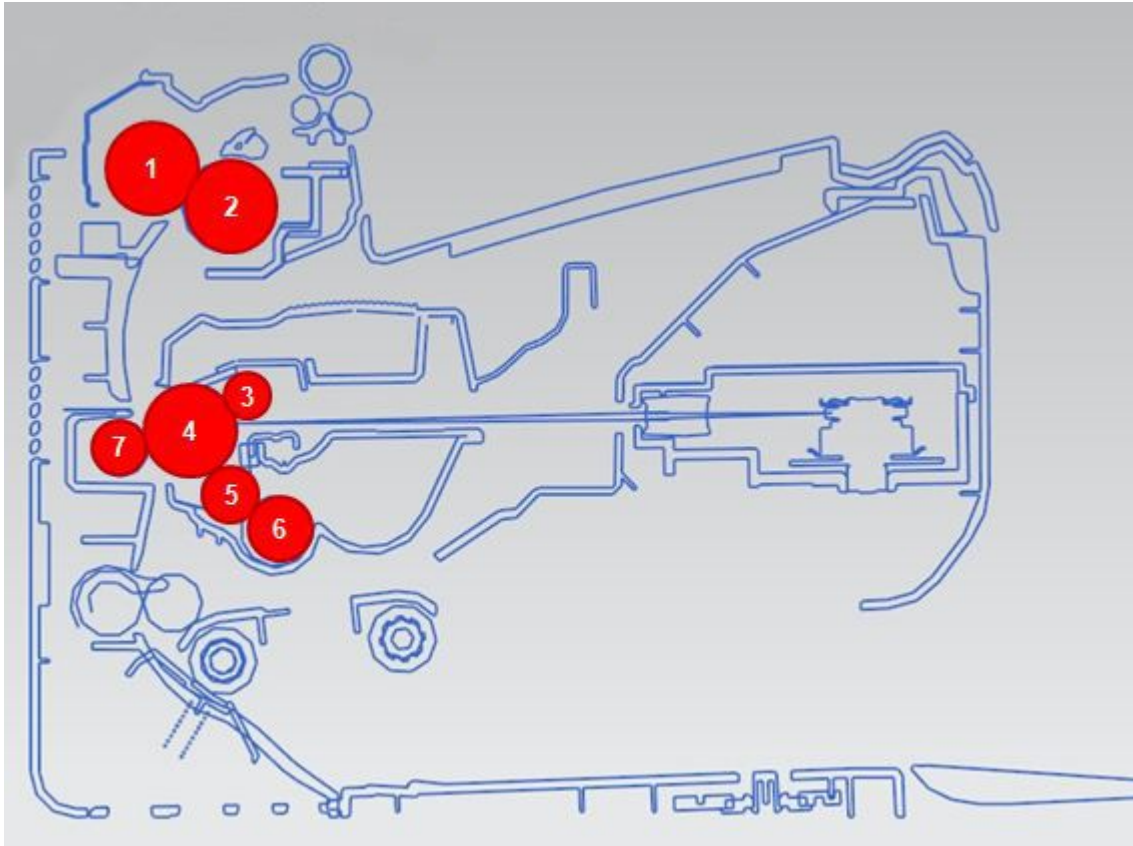


NOTE

If your machine is connected to the network, you can set the altitude via SyncThru™ Web Service.

4.1.5. Periodic Defective Image

If an image defects appears at regular intervals on the printed-paper, it is due to a faulty or damaged roller. Refer to the table below and check the condition of the appropriate roller.



	Roller	Period (mm)	Phenomenon	Defective part
1	Pressure Roller	62.8 mm	Background	Fuser Unit
2	Heat Roller	63.7 mm	Black spot and image ghost	
3	Charging Roller	26.7 mm	Black Spot and line and periodic band	Toner Cartridge
4	OPC Drum	62.9 mm	White and Black Spots	
5	Developing Roller	33.7 mm	White spot, Horizontal black band	
6	Supply Roller	78.2 mm	Periodic Band by little difference of density	
7	Transfer Roller	39.3 mm	Ghost, Damaged image by abnormal transfer	Transfer roller

4.1.6. Useful management tools

4.1.6.1. Using Samsung Easy Printer Manager (Windows and Macintosh only)



NOTE

- This feature may not be available depending on model or optional goods.
- Available for Windows or Macintosh OS users only.
- For Windows, Internet Explorer 6.0 or higher is the minimum requirement for Samsung Easy Printer Manager.

Samsung Easy Printer Manager is an application that combines Samsung machine settings into one location. Samsung Easy Printer Manager combines device settings as well as printing environments, settings/actions and launching. All of these features provide a gateway to conveniently use your Samsung machine. Samsung Easy Printer Manager provides two different user interfaces for the user to choose from: the basic user interface and the advanced user interface. Switching between the two interfaces is easy: just click a button.

Understanding Samsung Easy Printer Manager

To open the program:

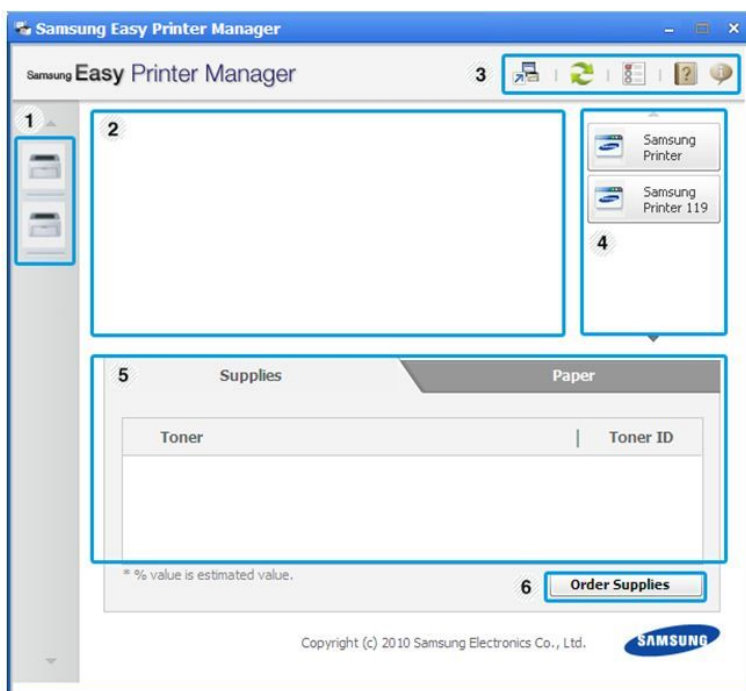
- For Windows, Select Start > Programs or All Programs > Samsung Printers > Samsung Easy Printer Manager > Samsung Easy Printer Manager.
- For Macintosh, Open the Applications folder > Samsung folder > Samsung Easy Printer Manager.


The Samsung Easy Printer Manager interface is comprised of various basic sections as described in the table that follows:



NOTE

The screenshot may differ depending on operating system you are using.



No	Area	Description
1	Printer List	The printer list displays the installed printer icons on your computer.
2	Printer Information	<p>This area gives you general information about your machine. You can check information, such as the machine's model name, IP address (or Port name), and machine status.</p> <div>  NOTE Troubleshooting button: This button opens Troubleshooting Guide when an error occurs. You can directly open the necessary section in the user's guide. </div>
3	Application Information	Includes links for changing to the advanced settings, preference, help, and about.
4	Quick links	Displays Quick links to machine specific functions. This section also includes links to applications in the advanced settings.
5	Contents Area	Displays information about the selected machine, remaining toner level, and paper. The information will vary based on the machine selected. Some machines do not have this feature.
6	Order Supplies	Click on the Order button from the supply ordering window. You can order replacement toner cartridge(s) from online.

Advanced settings user interface overview

The advanced user interface is intended to be used by the person responsible for managing the network and machines.

- **Device Settings**

You can configure various machine settings such as machine setup, paper, layout, emulation, network, and print information.

- **Scan to PC Settings**

This menu includes settings to create or delete scan to PC profiles.

- **Scan Activation** : Determines whether or not scanning is enabled on the device.
- **Profile** : Displays the scanning profiles saved on the selected device.
- **Basic tab** : Contains settings related general scan and device settings.
- **Image tab** : Contains settings related to image altering.

- **Fax to PC settings**

This menu includes settings related to the basic fax functionality of the selected device.

- **Disable** : If Disable is On, incoming faxes will not be received on this device.
- **Enable Fax Receiving from Device** : Enables faxing on the device and allow more options to be set.

- **Alert Settings**

This is menu includes settings related to error alerting.

- **Printer Alert** : Provides settings related to when alerts will be received.
- **Email Alert** : Provides options relating to receiving alerts via email.
- **History Alert** : Provides a history of device and toner related alerts.

- **Job Accounting**

Provides querying of quota information of the specified job accounting user. This quota information can be created and applied to devices by job accounting software such as SyncThru™ or CounThru™ admin software.

4.1.6.2. Using Samsung Printer Status (Windows only)

The Samsung Printer Status is a program that monitors and informs you of the machine status.

NOTE




- The Samsung Printer Status window and its contents shown in this user's guide may differ depending on the machine or operating system in use.
- Check the operating system(s) that are compatible with your machine.

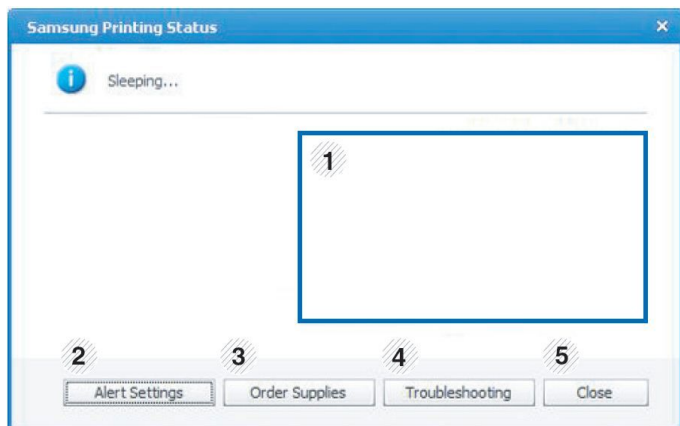
Samsung Printer Status overview

If an error occurs while operating, you can check the error from the Samsung Printer Status. Samsung Printer Status is installed automatically when you install the machine software.

You can also launch Samsung Printer Status manually. Go to the **Printing Preferences**, click the **Basic** tab > **Printer Status** button.

These icons appear on the Windows task bar:

Icon	Mean	Description
	Normal	The machine is in ready mode and experiencing no errors or warnings.
	Warning	The machine is in a state where a soft error has occurred. For example, a toner low status, which may lead to toner empty status.
	Error	The machine has at least one hard error, such as out of paper, fuser error, etc. Machine does not have ability to come to ready without customer intervention.



1	Toner Level	You can view the level of toner remaining in each toner cartridge. The machine and the number of toner cartridge(s) shown in the above window may differ depending on the machine in use. Some machines do not have this feature.
2	Alert Settings	Select the settings you want from the options window.
3	Order Supplies	You can order replacement toner cartridge(s) from online.
4	Troubleshooting	You can directly open the troubleshooting section in the user's guide.
5	Close	Close the window.

4.1.6.3. Using SyncThru Web Service (SWS)

SWS is an embedded web server in the machine. This web server informs you of machine configuration, version, status and allows you to customize the machine's settings. You can contact this server via wired and wireless network using your web browser in the remote place.

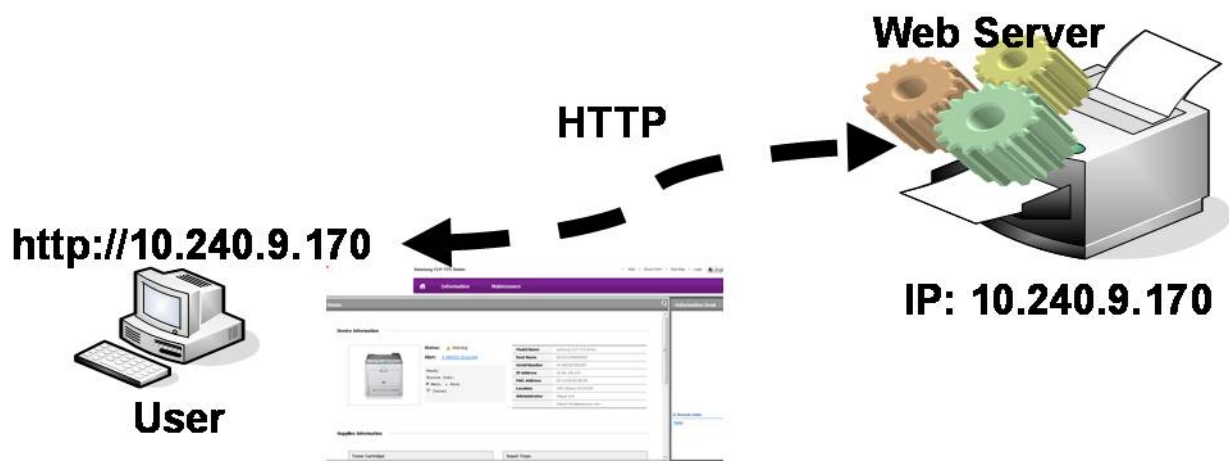
Connecting preparations

- Wired or Wireless Network connection is established.
- Browser (Ex> Internet Explorer) Program on your PC network connected

SWS overview

SyncThru Web Service (SWS)

- accepts HTTP request via port 80 as normal web servers.
- provides interface to users information of networked printers and allow to configure the setting of printers.
- is able to provide more complicated options than Local UI for printer configuration.



Connection Procedure

- 1) Open the Web-browser and input IP address of machine. Click "Login".
- 2) Log-in Admin Mode. (ID: admin, PW: sec000000)
- 3) Select pages to check the configuration and customize the settings.



CAUTION

Please, change SWS Default ID and Password for system security in case of your first connection.

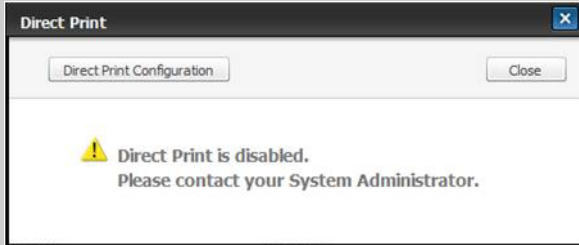


NOTE

If the machine supports 'Direct Print', you can enable this function using the SWS menu. The default configuration is 'Disabled' for your security.

Firstly, you have to login to SWS.

- 1) Click 'Direct Print Configuration' in the pop up windows when clicking 'Direct Print'.
- 2) In the 'Services' Menu, check 'Direct Print'.



Or,

- 1) Click 'System Security' in the 'Security' menu.
- 2) Select 'Feature Management' in the left frame.
- 3) In the 'Services' Menu, check 'Direct Print'.

4.1.7. Updating Firmware

This chapter includes instructions for updating the printer firmware. You can update the printer firmware by using one of the following methods :

- Update the firmware by using the USB port.
- Update the firmware by using the Network.

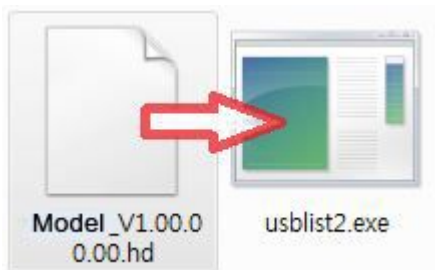
4.1.7.1. Update the firmware by using the USB port

Upgrading preparations

- usblist2.exe : Tool which sends firmware data to printer.
- Firmware file to update.

Upgrade Procedure

- 1) Turn the machine off.
- 2) Connect USB cable to printer.
- 3) Turn the machine on. Check if the printer is the ready status.
- 4) Drag the firmware file and Drop down on the usblist2.exe.



And then firmware update will be started automatically.

- 5) When upgrading is completed, machine is automatically re-booting.

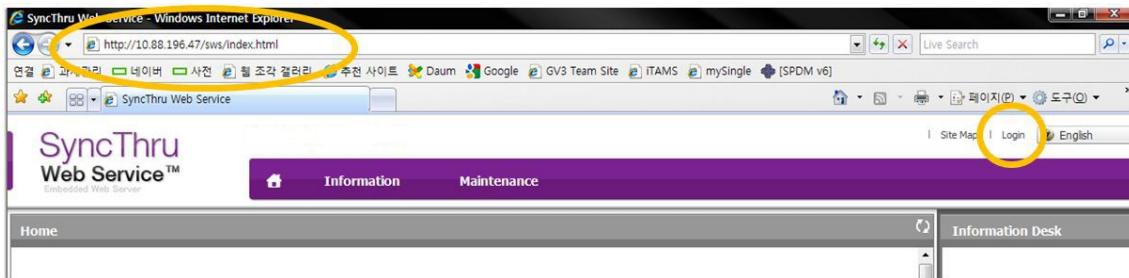
4.1.7.2. Update the firmware by using the network

Upgrading preparations

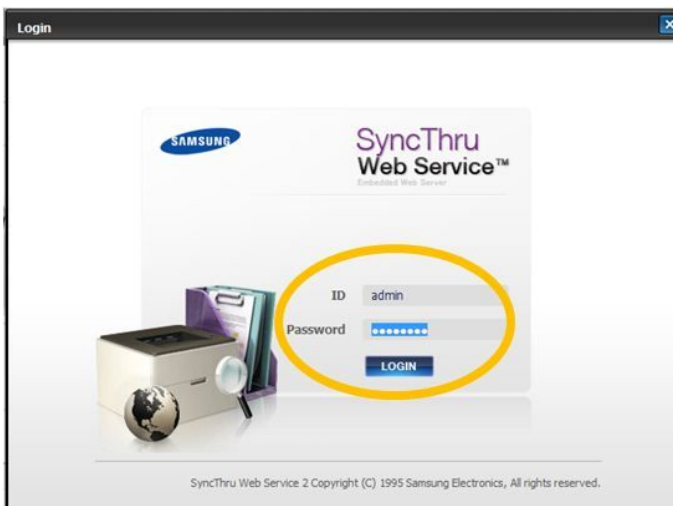
- Wired or Wireless Network connection is established.
- Firmware file to update

Upgrade Procedure

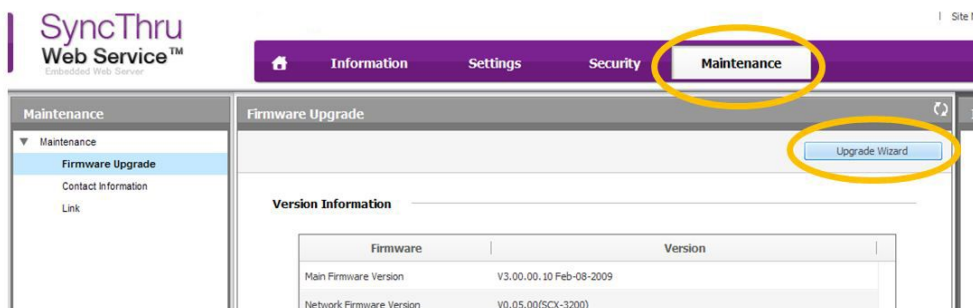
- 1) Open the Web-browser and input IP address of machine. Click “Login”.



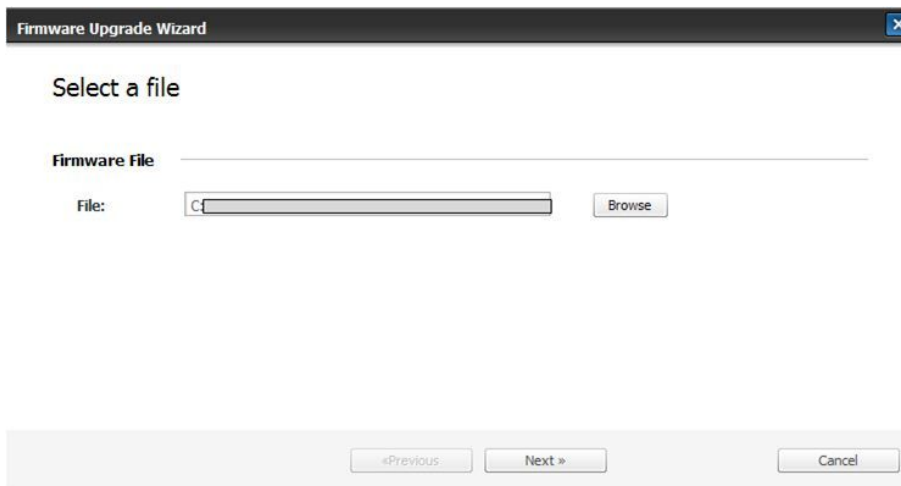
- 2) Log-in Admin Mode. (ID: admin, PW: sec00000)



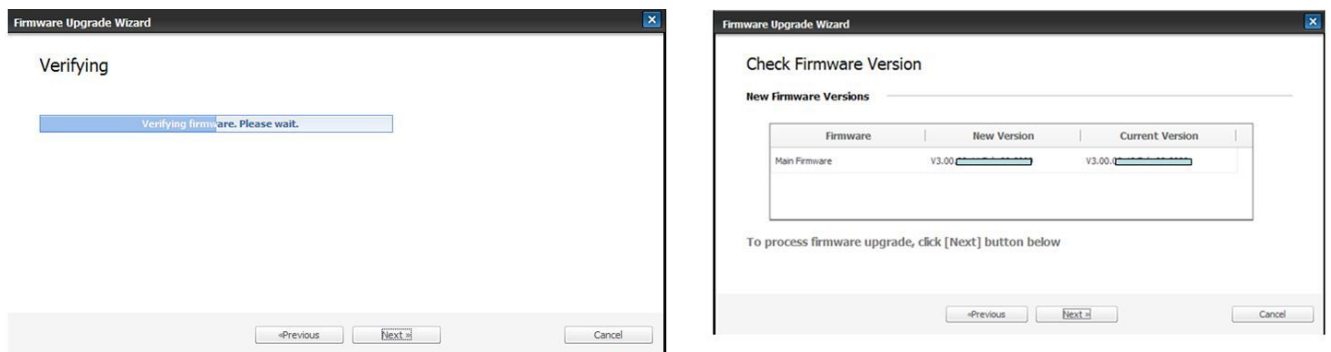
- 3) Select Maintenance menu and click “upgrade wizard”



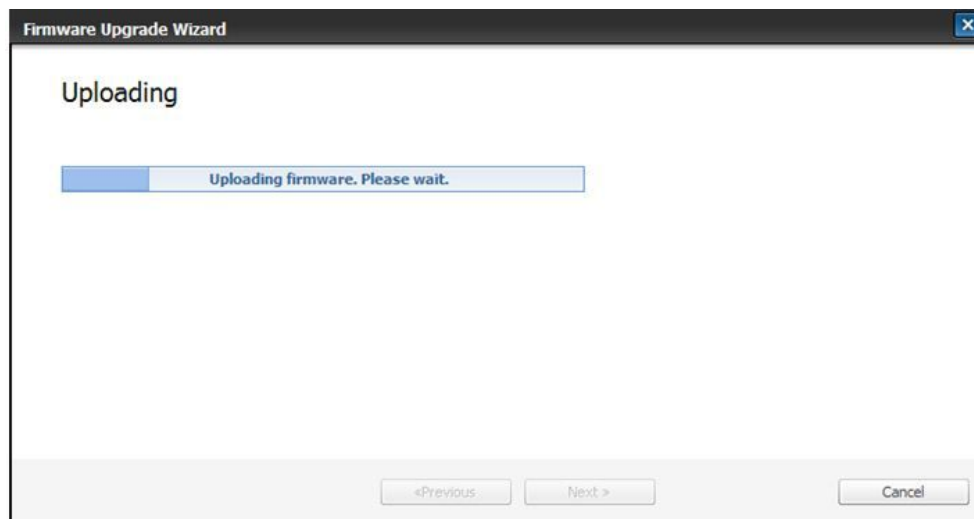
- 4) Select firmware file using “browser” button and press next button.



- 5) SyncThru will check verify firmware file and compare version and press next button.



- 6) Machine starts upgrading. SyncThru will return home page after upgrading is completed.



4.1.8. Tech mode (SVC mode)

In service (tech) mode, the technician can check the machine and perform various test to isolate the cause of a malfunction.

a) Entering Tech mode

- **For M2070F / M2070FW,**
 - 1) Press “**Menu > # > 1 > 9 > 3 > 4**” on the control panel continuously.
 - 2) Press **Menu**.
 - 3) Select “**Tech Mode**”.
- **For M2070W / M2070,**
 - 1) Press “**Menu > Back > Left arrow > Right arrow > OK > Stop**” on the control panel continuously.
 - 2) Press **Menu**.
 - 3) Select “**Tech Mode**”.

b) Tech mode menu



NOTE

Some menu may not be available depending on model.

Depth 1	Depth 2	Depth 3	Depth 4
Data Setup	Send Level	[9-15]	12
	DTMF Level	High [0-15]	Low [0-15]
	Pause Time	[1-9]	
	Dial Mode	Tone	
		Pulse	
	Modem Speed	33.6	
		28.8	
		14.4	
		12.0	
		9.6	
		4.8	
	Error Rate	10%	
		5%	
	Clear All Mem.		
	TonerLow Level	[1-30]%	
	Clear Counts	Enter Passcode [????]	ADF Scan
			Platen Scan
			Fuser
			TransferRoller
			Pickup Roller
			ADF Roller
			ADF Rubber Pad

Depth 1	Depth 2	Depth 3	Depth 4
	Engine Footer	Off	
		On	
	Dial Tone	On	
		Off	
	Caller ID	On	
		Off	
	Busy Tone	On	
		Off	
	Wrap Jam Clear	Yes	
		No	
	F/W Upgrade	Off	
		On	
Machine Test	Switch Test		
	Test Param Set		
	Modem Test		
	DRAM Test		
	ROM Test		
	Shading Test	Shading&Print	
		Print	
	Scan Aging		
Report	Protocol Dump		
	Supplies Info.		
	Configuration		
	Error Info.		
	Usage Counter		
	ComponentCheck		
	Fax Options		
EDC Mode	NVM Initialize		
	Test Routines	100-Motor	Feed Mot
			Feed Mot Slow
		101-Clutch	Tray1 Pickup
		102-Sensor	Feed Sens
			Width Sensor
		105-Charger	K MHV Bias
		106-Development	K Dev Bias
			K Dev AC
		107-Transfer	K THV Bias
			K THV- Bias
		109-Fuser	Temp A
		110-LSU	LSU Mot1 Run
			LD Power4

c) Data Setup

- **Send Level**

You can set the level of the transmission signal. Typically, the Tx level should be under -12 dBm.

**NOTE**

The Send Fax Level is set at the best condition in the shipment from factory.

- **DTMF Level**

This is a setting value of the High level tone and low level tone at DTMF mode. (Not dial mode)

- **Pause Time**

It shows the delay time when receiving the pause input at auto dial.

- **Dial Mode**

This function can choose dial method.

- **Modem Speed**

You can set the maximum modem speed. Communication is done with modem speed automatically set at lower speed when communicating with a slower speed modem since communication is done on the standard of the side where modem speed is low for transmission/reception. It is best set 33.6 Kbps as default setting.

- **Error Rate**

When the error rate is about exceed the set value, the Baud rate automatically adjusts to 2400 bps. This ensures that the error rate remains below the set value. You can select the rate between 5% and 10%.

- **Clear All Memory**

The function resets the system to factory default settings. This function is used to reset the system to the initial value when the product is functioning abnormally. All the values are returned to the default values, and all the information, which was set by the user, will be erased.

**NOTE**

Always perform a memory clear after replacing the main board. Otherwise, the system may not operate properly.

- **Toner Low Level**

The function is to set up the time to inform toner low status. This function can provide user convenience for replacing the toner cartridge.

- **Clear Count**

This function resets the count value you select.

- **Engine Footer**

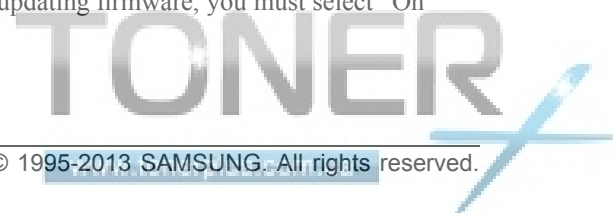
This function is for monitoring of the engine status. If you perform this function, at printing, the setting value for engine is shown on the bottom of the printed page.

- **Wrap Jam Clear**

This function is for canceling wrap jam error.

- **F/W Upgrade**

The function is to upgrade the firmware by using "usblist.exe" file. When updating firmware, you must select "On" for this menu.



d) Machine Test

- **Switch Test**

Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

- **Modem Test**

Use this feature to hear various transmission signals to the telephone line from the modem and to check the modem. If no transmission signal sound is heard, it means the modem part of the main board malfunctioned.

- **Dram Test**

Use this feature to test the machine's DRAM. The result appears in the LCD display.

- **ROM TEST**

Use this feature to test the machine's ROM. The result and the software version appear in the LCD.

- **Shading Test**

The function is to get the optimum scan quality by the specific character of the CIS (Contact Image Sensor). If the copy image quality is poor, perform this function to check the condition CIS unit.

e) Report

- **Protocol Dump**

Protocol list shows the sequence of the CCITT group 3 T.30 protocol during the most recent sending or receiving operation. Use this list to check for send and receive errors.

- **Supplies Info**

Supplies Information Report shows toner cartridge information such as toner remaining, toner capacity, toner product date etc.

- **Configuration**

Configuration report shows the status of the user-selectable options. You may print this list to confirm your changes after changing settings. This page provides useful information for service.

- **Error Info**

Error Information Report shows error records.

- **Usage Counter**

Usage page report shows usage page counts since service date. It shows total counts of the simplex print and duplex print.

- **Component Check**

Component Check Report shows the operation procedure of the machine test in tech mode.

f) EDC mode

- **NVM Initialize**

This menu is to initialize the NVM value.

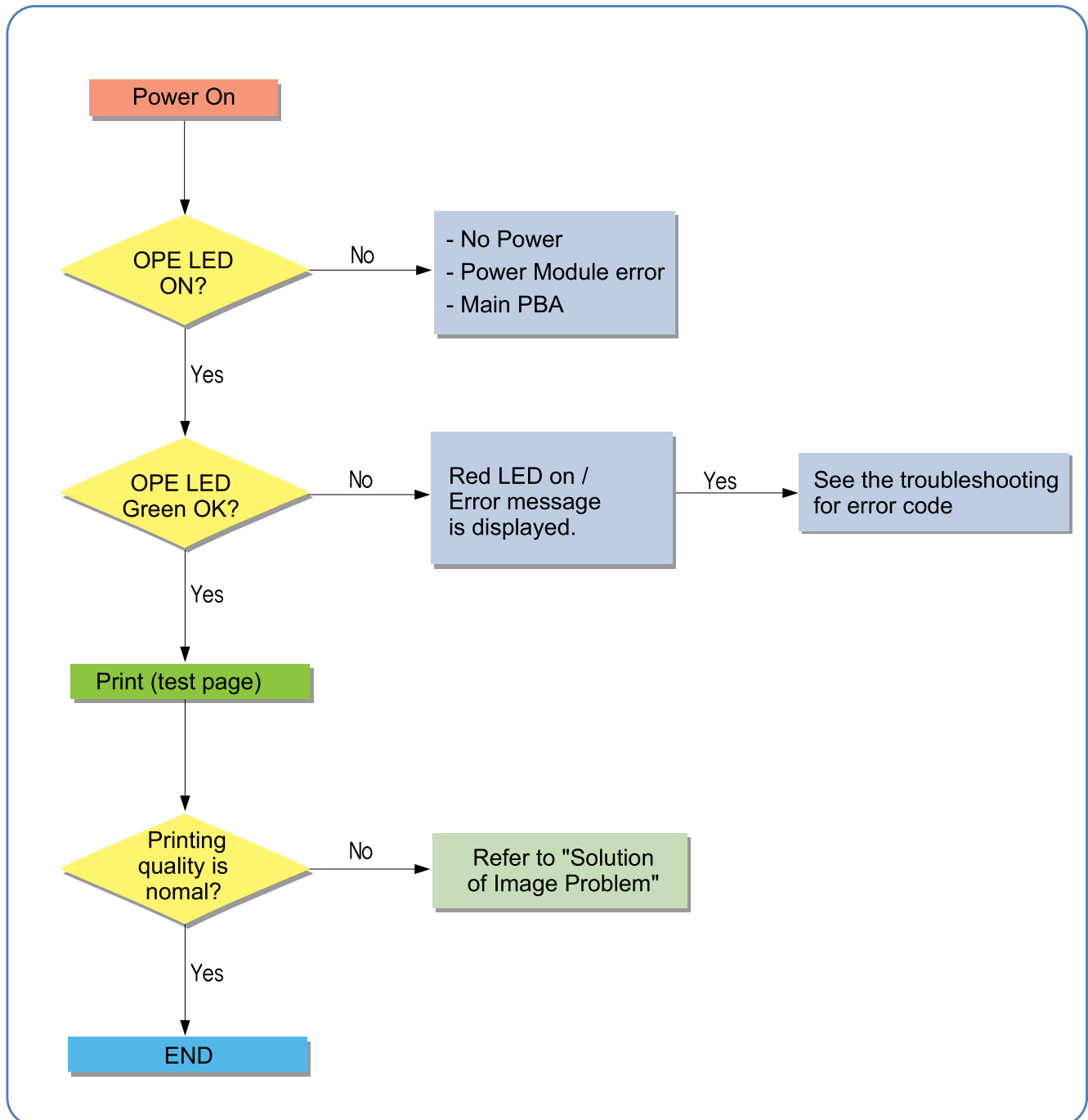
- **Test Routines**

This menu can perform the operation test for the main components.

4.2. Troubleshooting

4.2.1. Procedure of checking the symptoms

Before attempting to repair the printer first obtain a detailed description of the problem from the customer.



4.2.1.1. Basic Check List

1) Check the Power.

- Check that the power switch is turned on.
- Check that the power cable is plugged into the outlet and the printer.
- Check the voltage of the power outlet.

2) Check the LED of Panel.

- Is there OPE LED ON?
 - › If not check power cable, switch SMPS or Main board.
- Is the abnormal Lamp?
 - › Check the Main board and cable harness.

3) Check the Paper Path

- Is there a Paper Jam?
 - › Remove any paper fragments caught in the paper path.
- Paper Jam occurs repeatedly at a specific point in the Paper Path
 - › Open the fuser cover, Jam clear.
 - › Dismantle the machine and carefully inspect the region where the jam occurs.
(Especially, check if paper fragments are caught in the Fuser)

4) Print the Information Page (Configuration).

- Try printing a test page from a computer.
 - › If there is an error check cables and driver installation.

5) Check the Print Quality.

- Is there are a Print Quality Problem?
 - › Refer to image quality problem section.

6) Check consumables (toner etc.).

- Using the keys print the Test Pattern.
 - › Expected life of various consumable parts, compare this with the figures printed and replace as required

4.2.2. Error Code and Troubleshooting

**NOTE**

Some messages may not appear on the display depending on the models.

Error Code	Error Message	Troubleshooting
11-2T11	Tray 1 Paper Mismatch	Page 4-27
C2-1110	Prepare new cartridge	Page 4-27
C2-1120	Replace new cartridge	Page 4-27
C2-1150	Replace new cartridge	Page 4-27
C2-1160	Replace new cartridge	Page 4-27
C2-1410	Install toner cartridge	Page 4-28
C2-1510	Not Compatible Toner cartridge	Page 4-28
C2-1711	Error: #C2-1711 Call for Service	Page 4-28
C2-1712	Error: #C2-1712 Call for Service	Page 4-28
M2-1110	Paper Jam inside machine	Page 4-29
M2-1116	Paper jam or empty	Page 4-29
M2-1317	Paper Jam inside machine	Page 4-30
S2-4110	Door open Close it	Page 4-31
S3-3122	Scanner Locked.	Page 4-32
S6-3123	Network Problem: IP Conflict	Page 4-33
S6-3210	Error: #S6-3210 Turn off then on	Page 4-33
U1-2320	Error #U1-2320 Turn off then on	Page 4-34
U1-2330	Error #U1-2330 Turn off then on	Page 4-34
U1-2340	Error #U1-2340 Turn off then on	Page 4-34
U2-1112	Error #U2-1112 Turn off then on	Page 4-35
U2-1113	Error #U2-1113 Turn off then on	Page 4-35
U3-3313	Document jam. Remove jam	Page 4-36
U3-3314	Document jam. Remove jam	Page 4-36
U3-4110	Door of scanner is open.	Page 4-36

► **Error Code**

11-2T11

► **Error message**

Tray 1 Paper Mismatch

► **Symptom**

Tray1 paper is not proper.

► **Troubleshooting method**

Check if the paper setting is proper. Change the paper setting or replace the paper.

► **Error Code**

C2-1110

C2-1120

C2-1150

C2-1160

► **Error message**

Prepare new toner cartridge.

Replace new cartridge.

Replace new cartridge.

► **Symptom**

The remaining toner cartridge is less than 10% / The toner cartridge is at the end of its life.

► **Troubleshooting method**

Print the supply information report.

Check the life remaining of the toner cartridge.

If its life is at the end, turn the machine off and replace the toner cartridge with new one.

► **Error Code**

C2-1410

C2-1711

C2-1712

► **Error message**

Install cartridge.

Error: #C2-1711 Call for Service

Error: #C2-1712 Call for Service

► **Symptom**

The toner cartridge is not installed. / The machine can't detect the toner cartridge.

► **Troubleshooting method**

- 1) Check if the toner cartridge is installed. If it is OK, turn the machine off then on.
- 2) If the error message is not disappear, remove the toner cartridge. Thoroughly roll the cartridge five or six times to distribute the toner evenly inside the cartridge. And reinstall the toner cartridge.
- 3) If the problem persists, check that the CRUM contact area is contaminated. Clean it.



- 4) If the problem persists, replace the toner cartridge with new one.

► **Error Code**

M2-1110

M2-1116

► **Error message**

Paper jam inside machine.

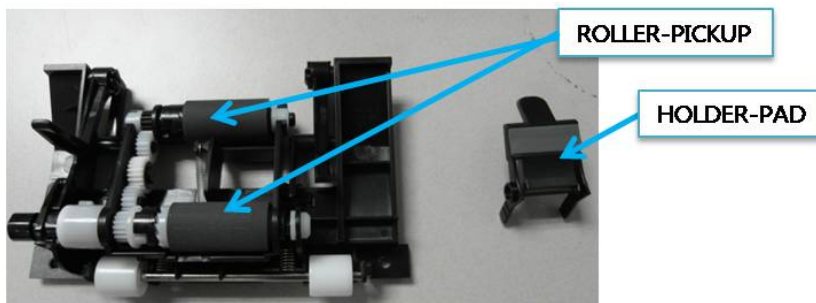
Paper jam or empty

► **Symptom**

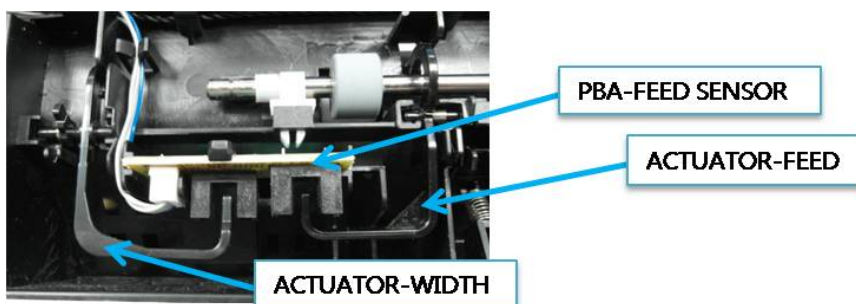
A paper jam was detected at the feed sensor.

► **Troubleshooting method**

- 1) Check if paper is on tray.
- 2) Remove the jammed paper. (Refer to 4.1.3 Jam removal)
- 3) If the jammed paper occurs continually, check the followings.
 - a) Check if the pick up rubber or friction pad is worn out or contaminated. Clean the contaminated part or replace it.



- b) Check if the connector is connected to the feed sensor PBA correctly.
- c) Check if the actuator is assembled correctly.
- d) If the connection and actuator are OK, replace the feed sensor PBA.



► **Error Code**

M2-1317

► **Error message**

Paper Jam inside machine

► **Symptom**

A paper jam was detected in the fuser unit area.

► **Troubleshooting method**

- If the machine **supports** fax.
 - 1) Open the top cover. Remove the jammed paper.
 - 2) Turn the machine off.
 - 3) Turn the machine on while pushing the cancel button. Wait for rebooting the machine.
- If the machine **not supports** fax.
 - 1) Open the top cover. Remove the jammed paper.
 - 2) Entering Tech Mode. (Refer to Tech Mode section.)
 - 3) Select Data Setup.
 - 4) Wrap Jam Clear
Select ◀ Yes ▶ by Ok button, and the machine is rebooted after Error Clear.

► **Error Code**

S2-4110

► **Error message**

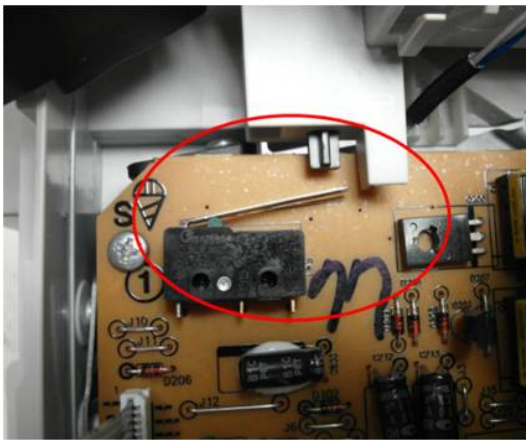
Door open. Close it.

► **Symptom**

Top cover is open or the cover open switch is defective.

► **Troubleshooting method**

- 1) Check if the top cover is closed perfectly. Open and close it.
- 2) Remove the right cover. Check if the connection between the main board and SMPS/HVPS board is correct.
- 3) Check if the cover open switch on SMPS/HVPS board is operated properly. If it is defective, replace the SMPS/HVPS board.



► **Error Code**

S3-3121

► **Error message**

Scanner Locked.

► **Symptom**

CIS unit in the scanner does not move.

► **Troubleshooting method**

- 1) Check if the CIS unit moves when turning the machine off then on.
- 2) Check if the CIS cable is connected correctly. Reconnect it.
- 3) If the CIS unit is defective, replace it.
- 4) Check if there is any defective part in the scanner. Find and replace it.
- 5) If the problem persists, replace the main board.

► **Error Code**

S6-3123

► **Error message**

Network Problem : IP Conflict

► **Symptom**

Network has some problem. (IP address conflicts with that of other system. / Communication error / There is no response when checking the ping test.)

► **Troubleshooting method**

Change the machine's IP address.

- Execute the Samsung Easy Printer Manager program. (Device setting — Network — IP address). Change the IP address.
- In case of DHCP or Bootp, reboot the machine to receive a new IP address.

► **Error Code**

S6-3210

► **Error message**

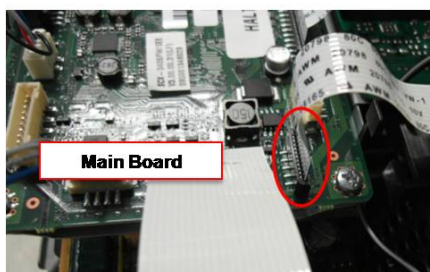
Error: #S6-3210 Turn off then on

► **Symptom**

The communication error between the main board and the wireless board has occurred.

► **Troubleshooting method**

- 1) Check if the connection between the main board and the wireless board is normal.



- 2) If the connection is OK, replace the flat cable.
- 3) If the flat cable is OK, replace the WLAN board.
- 4) If the problem persists after replacing the WLAN board, replace the main board.

► **Error Code**

U1-2320

U1-2330

U1-2340

► **Error message**

Error #U1-2320 Turn off then on

Error #U1-2330 Turn off then on

Error #U1-2340 Turn off then on

► **Symptom**

The temperature control of fuser unit is abnormal. (U1-2320 : Open Heat Error / U1-2330 : Low Heat Error / U1-2340 : Over Heat Error)

► **Troubleshooting method**

- 1) Turn the machine off. Re-install the fuser unit. Then turn the machine on. Is the error message is disappeared?
- 2) If the problem persists, turn the machine off and remove the fuser unit.
 - a) Check if the fuser connector is connected properly.
 - b) Check if the input voltage is normal.
 - c) Check if the thermistor is twisted or contaminated.
- 3) After confirming continuity in the fuser connector and the problem still exists; order an SMPS/HVPS and Fuser Unit and install as is necessary.

► **Error Code**

U2-1112

U2-1113

► **Error message**

Error #U2-1112 Turn off then on

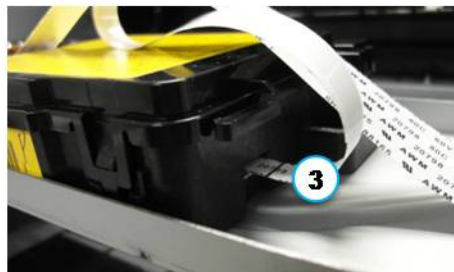
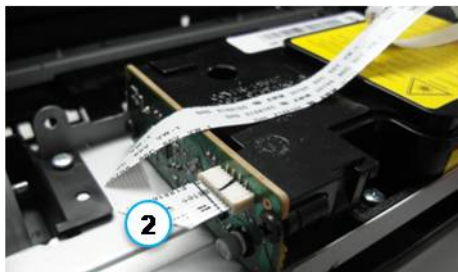
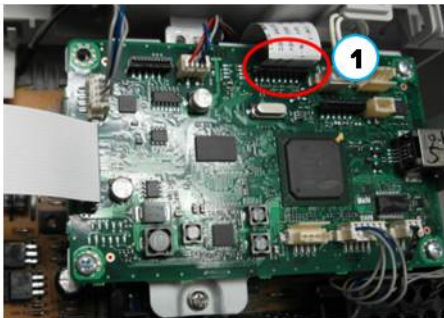
Error #U2-1113 Turn off then on

► **Symptom**

LSU Motor does not work normally.

► **Troubleshooting method**

- 1) Check if the LSU harness on the main board is connected properly. (picture- 1)
- 2) If it is OK, check that the LSU harness on LSU board is connected properly. (picture- 2,3)
- 3) Check if the LSU harness is defective. (picture- 4,5)
- 4) If the problem persists, replace the LSU.
- 5) If the problem persists after replacing LSU, replace the main board.



► Error Code

U3-3313

U3-3314

► Error message

Document jam. Remove jam.

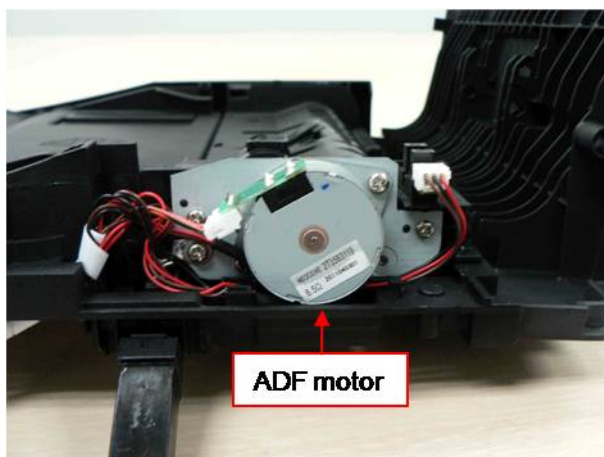
Document jam. Remove jam.

► Symptom

A document jam was detected in the ADF unit.

► Troubleshooting method

- 1) Remove the jammed paper from ADF unit.
- 2) If the error persists, turn the machine off then on.
- 3) If the document jam occurs continually, open the ADF cover-top. Check if the ADF pick up roller is contaminated or worn out. Clean or replace it.
- 4) If the pick up roller is OK, check the followings.
 - a) Check if the ADF motor is working normally.



- b) Check if the connector on the ADF joint board is connected correctly.
- 5) If the problem persists, replace the ADF unit.

► Error Code

U3-4110

► **Error message**

Scanner Door Open

► Symptom

ADF or ADF top cover is opened.

► Troubleshooting method

- 1) Close the ADF unit.
- 2) Close the ADF top cover.

4.2.3. Image quality problem

1) Vertical Black Line and Band

Description : Straight thin black vertical line occurs in the printed image.



Check and cause	Solution
<ul style="list-style-type: none"> Damaged develop roller in the toner cartridge. Deformed Doctor-blade or cleaning-blade. Scratched surface of the charge roller in the toner cartridge. 	Replace the toner cartridge.
Partly depression or deformation on the surface of the transfer roller.	Replace the transfer roller.

2) Vertical White Line

Description : White vertical voids occurs in the printed image.



Check and cause	Solution
Foreign matter sticks onto the window of internal lenses of LSU mirror.	Clean the LSU window with recommended cleaner (IPA). Clean the window with a clean cotton swab.
The life of the toner cartridge has been expired	Replace the toner cartridge.
Some foreign substances are on the window of the toner cartridge frame.	Remove the foreign matter of the exposure window.
If the fuser is defective, voids occur periodically at the top of a black image.	Reinstall the fuser unit.

3) Horizontal Black Band

Description : Dark or blurry horizontal stripes occur in the printing periodically.



Check and cause	Solution
Bad contacts of the voltage terminals to toner cartridge.	Clean each voltage terminal of the Charge, Developing and Transfer roller. (remove the toner particles and paper particles)
The rollers of developer may be stained. — OPC Drum = 62.9 mm — Charge Roller = 26.7 mm — Developing Roller = 33.7 mm	Replace the toner cartridge.

4) Black and White spot

Description : Dark or blurry black spots occur periodically in the printing.



Check and cause	Solution
If dark or blurry black spots occur periodically, the rollers in the toner cartridge may be contaminated with foreign matter or paper particles. (Charge roller : 26.7 mm interval / OPC drum : 62.9 mm interval)	Clean each voltage terminal of the Charge, Developing roller and Transfer roller. (remove the toner particles and paper particles)
If faded areas or voids occur in a black image at intervals of 62.9 mm, the OPC drum surface is damaged.	Replace the toner cartridge.
If a black image is partially broken, the transfer voltage is abnormal or the transfer roller's life has expired.	<ul style="list-style-type: none"> If the transfer roller's life is expired, replace it. Clean the inside of the set against the paper particles and foreign matter in order not to cause the trouble.

5) **Light image**

Description : The printed image is light, with no ghost.



Check and cause	Solution
Toner cartridge life is expired.	Replace the toner cartridge.
HVPS terminal is contaminated.	Clean the contaminated terminal.
The output from the HVPS is abnormal.	Replace the HVPS board.

6) **Dark or Black page**

Description : The printed image is dark or black.



Check and cause	Solution
Check if the high voltage terminal is contaminated.	Clean the high voltage terminal.
The charging roller is defective.	Replace the toner cartridge.
The output from the HVPS is abnormal.	Replace the HVPS board.

7) Uneven Density

Description : Print density is uneven between left and right.



Check and cause	Solution
<ul style="list-style-type: none"> The pressure force on the left and right springs of the transfer roller is not even. The springs are damaged. The transfer roller is improperly installed. 	<ol style="list-style-type: none"> 1) Remove the transfer roller Assy. 2) Check if the transfer roller Assy has any wrong part. 3) Replace the transfer roller Assy.
The toner level is not even on the toner cartridge roller due to the bad doctor blade.	Replace the toner cartridge.

8) Background

Description : Light dark background appears in whole area of the printing.



Check and cause	Solution
Does recycle paper be used?	Use the proper papers.
The life of the toner cartridge has been expired	Replace the toner cartridge.
The output from the HVPS is abnormal.	Replace the HVPS board.

9) **Ghost**

Description : Ghost occurs at 62.9 mm intervals of the OPC drum.



Check and cause	Solution
The high voltage terminal is contaminated.	Clean the high voltage terminals.
The life of the toner cartridge has been expired	Replace the toner cartridge.
The life of the transfer roller has been expired.	Replace the transfer roller.

10) **Stains on back of page**

Description : The back of the page is stained.



Check and cause	Solution
Transfer roller is contaminated.	Replace the transfer roller.

11) Blank page

Description : The back of the page is stained.



Check and cause	Solution
The ground contact of the toner cartridge is bad.	Clean the ground terminal of the toner cartridge. If the problem persists, replace the toner cartridge.
LSU is defective.	Replace the LSU.
The connection between the main board and HVPS board is bad.	Reconnect the harness. If the main board or HVPS board is defective, replace it.

12) Partial image void

Description : The partial void occurs in the printed page.



Check and cause	Solution
The printer is not installed on flat ground.	Install the printer on flat ground. Print 10 sample pages for test.
The developer circulation in the toner cartridge is bad.	1) Shake the toner cartridge 2~3 times from right to left. Reinstall the toner cartridge. Print 10 sample pages for test. 2) If the problem persists, replace the toner cartridge.
The contact between toner cartridge and transfer roller is bad.	Check if the toner cartridge and transfer roller are installed properly.

4.2.4. Other errors

1) Multi-feeding

- Description : Multiple sheet of paper are fed at once.

Check and cause	Solution
Pick clutch does not work properly.	Replace the defective clutch if necessary.
Pick up roller is worn out or contaminated.	Clean or replace the pick up roller.

2) No-Power

- Description : When system power is turned on, LED and LCD on the operator panel do not come on.

Check and cause	Solution
The connection between main board and OPE board is bad.	Reconnect or replace the harness.
HVPS/SMPS output is abnormal.	Replace the HVPS/SMPS board.