

## 4. Adjustment and Troubleshooting

This chapter describes some of the main service procedures including:

Using the Tech mode; Clearing paper jam and test patterns.

- Tips for avoiding paper jams, Clearing paper jams.
- Solving other problems.

### 4.1 Alignment and Adjustments

#### 4.1.1 User Mode

The table below shows the map of User settings available in User Mode. These are fully described in the User Guide and are not included here.

1st level		2nd level	3rd level	Default Value	
RETURN	←--	RETURN			
left/right && Enter	--▶	left/right && Enter			
	14 character				
<b>1. Paper Setting</b> ◀ Paper Type ▶	1	Paper Type	Plain Paper, Thick, Thin, Bond, Colored, Card stock, Labels, Transparency, Envelope, Preprinted	Plain Paper	
	2	Paper Size	A4, Legal, Executive, Folio A5, B5, A6, Letter	By Country	
<b>2. Machine Setup</b> ◀ Machine ID ▶	1	Machine ID (Only SCX-4521F)	Fax: ID:		
	2	Date & Time (only SCX-4521F)	00-00-0000 00:00(AM)		
	3	Clock Mode (only SCX-4521F)	12, 24 hours	12hours	
	4	Language	[English/Francais/Espanol/ Portugues/Deutsch/Italiano/ Pycckn/Norsk/Polски/Suomi/ Magyar/Dansk/Slovenčina/ Svenska/Turkse - 16 language	English	
	5	Power Save	On Off	5, 10, 15, 30, 45 min.	5
	6	Ignore Toner	On Off		
	7	Select Country			

1st level			2nd level	3rd level	Default Value	
RETURN	←		RETURN			
left/right && Enter	--▶	14 character	left/right && Enter			
<b>3.Copy Setup</b> ◀ Default-Change ▶	1	Default-Change	Darkness	Light/Normal/Dark	Normal	
			Original Type	Text, Text/Photo, Photo	Text	
			Reduce/Enlarge	[Original(100%)]	100%	
				[LGL→LTR(78%)]		
				[LGL→A4(83%)]		
				[A4→A5](71%)]		
				[A4→LTR(94%)]		
				[EXE→LTR(104%)]		
				[A5→A4](141%)]		
				25%		
50%						
150%						
200%						
400%						
[Custom:25-400]						
No. of Copies	[1-99]	1				
2	Timeout	Off. 15,30,60,120Sec, Off		30sec		
<b>4. Fax Setup</b> (only SCX-4725FN) ◀ Receive Mode ▶	1	Receive Mode	Fax, Tel, Ans/Fax			
			2	Ring to Answer	1~7	2
			3	Darkness	Light/Normal/Dark	Normal
			4	Redial Term	1~15Min	3minutes
			5	Redials	1~13times	2times
			6	MSG Confirm	On, Off, On-Error	On-Error
			7	Image TCR	On, Off	
			8	Auto Report	On, Off	On
			9	Auto Reduction	On, Off	On
			10	Discard Size	0~30mm	20mm
			11	RCV Start Code	0~9	*9*
			12	DRPD Mode	set	
<b>5. Fax Feature</b> ◀ Delay Fax ▶	1	Delay Fax	Enter Number			
			2	Priority Fax	Enter Number	
			3	Add Page	Operation Not Assigned	
			4	Cancel Job	Operation Not Assigned	
<b>6. Advanced fax</b> ◀ Toll Save ▶	1	Toll Save	On,Off	Start Time/ End Time	Off	
			2	Junk Fax Setup	On	Fax:
					Off	Off
			3	Secure Receive	On,Off, Print	Off
			4	Prefix Dial	FAX: xxxxx (5 digits)	
			5	Stamp RCV Name	On, Off	Off
6	ECM Mode	On, Off	On			
<b>7. Reports</b> ◀ Phone Book ▶	1	Phone Book				
			2	Sent Report		
			3	RCV Report		
			4	System Data		
			5	Scheduled Jobs		
			6	MSG Confirm		
			7	Junk Fax List	10 ea	

<continue..>

1st level		2nd level		3rd level	Default Value
RETURN ←--		RETURN			
left/right && Enter --▶		14 character		left/right && Enter	
<b>8. Network Setup</b> (only SCX-4725FN) ◀ Reset Network ▶	1	Reset Network	Yes, No		
	2	Config Network	TCP/IP, Ether Talk	Manual, DHCP, BOOTP	
	3	Set to Default	Yes, No		
	4	Print Net CFG	Yes, No		
<b>9. Sound/Volume</b> ◀ Speaker ▶	1	Speaker	On, Off, Comm.		Comm.
	2	Ringer	Off, Low,Med,High		Med
	3	Key Sound	On, Off		Off
	4	Alarm Sound	On, Off		On
<b>0. Maintenance</b> ◀ Clean Drum ▶	1	Clean Drum	Yes, No		Off
	2	Auto Cleaning	On, Off		Off
	3	Notify Toner	All Settings		Off
	4	Clear Memory	Clear All Mem.		
			Paper setting		
			Copy Setup		
			Fax Setup		
			Fax Feature		
			Advanced Fax		
			Sent Report		
			RCV Report		
		Phone Book			

## 4.1.2 Tech Mode and Setting

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### 4.2.1 How to Enter Tech Mode

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In service (tech) mode the technician can check the machine and perform various tests to help with failure diagnosis.

When in Tech mode the machine still performs all normal operations.

#### To enter the Tech mode (SCX-4725FN)

To enter the Tech mode press  →  →  →  →  →  in sequence and the LCD briefly displays 'TECH', the machine has entered service (tech) mode.

#### To enter the Tech mode (SCX-4725F)

To enter the Tech mode press  →  →  →  →  →  in sequence and the LCD briefly displays 'TECH', the machine has entered service (tech) mode.

### 4.1.2.2 Setting-up System in Tech Mode

1st level			2nd level	3rd level	Default Value
RETURN ←			RETURN		
left/right && Enter →		14 character	left/right && Enter		
Tech Mode ◀Data Setup ▶	1	Data Setup	Send Level	09-15	-12
			Modem Speed	33.6, 28.8, 14.4, 12.0, 9.6, 4.8	33.6
			Error Rate	5%, 10%	10%
			Notify Toner	Customer No.	
				Customer Name	
				Service No.	
				Serial No.	
			Clear All Mem.	Select Country	
			Clear Count	Enter Password [ * * * * ]	
			Flash Upgrade	Local	
			Silence Time	Off/ 12 Sec/Unlimited	Off
	Ignore Toner	On, Off	Off		
	Test Param Set	00-50	55		
	2	Machine Test	Switch Test		
			Modem Test		
			Dram Test		
			Rom Test		
			Pattern Test		
			Shading Test		
	3	Report	Protocol		
			System Data		
Error Info					

### 4.1.2.3 Setting

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#### 4.1.2.3(a) Changing the Display Language

To change the language that displays on the control panel, follow these steps:

1. Press Menu until "Machine Setup" appears on the top line of the display.
2. Press the scroll button ( ◀ or ▶ ) until "Language" appears on the bottom line of the display.
3. Press Enter. The current setting appears on the bottom line of the display.
4. Press the scroll button ( ◀ or ▶ ) until the language you want appears on the display.
5. Press Enter to save the selection.
6. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(b) Setting the Machine ID

In some countries, you are required by law to indicate your fax number on any fax you send. The Machine ID, containing your telephone number and name (or company name), will be printed at the top of each page sent from your machine.

1. Press Menu until "Machine Setup" appears on the top line of the display. The first available menu item, "Machine ID," displays on the bottom line.
2. Press Enter. The display asks you to enter the fax number.  
If there is a number already set, the number appears.
3. Enter your fax number using the number keypad.

**NOTE:** If you make a mistake while entering numbers, press the ◀ button to delete the last digit.

4. Press Enter when the number on the display is correct. The display asks you to enter an ID.
5. Enter your name or the company name using the number keypad.  
You can enter alphanumeric characters using the number keypad, and include special symbols by pressing the 0 button.  
For details on how to use the number keypad to enter alphanumeric characters.  
If you want to enter the same letter or number in succession, enter one digit, move the cursor by pressing the ▶ button and enter the next digit.  
If you want to insert a space in the name, you can also use the ▶ button to move the cursor to skip the position.
6. Press Enter when the name on the display is correct.
7. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(c) Setting the Date and Time

When you turn your machine on for the first time, the display prompts you to enter the current date and time. After entering, it will not appear anymore. For the SCX-4725FN, all of your faxes will have the date and time printed on them.

**NOTE:** If power to the machine is cut off, you need to reset the correct time and date once the power has been restored.

1. Press Menu until "Machine Setup" appears on the top line of the display.
2. Press the scroll button ( ◀ or ▶ ) to display "Date & Time" on the bottom line and press Enter.
3. Enter the correct time and date using the number keypad.

For the SCX-4725, press the scroll button ( ◀ or ▶ ) to enter the time and date.

Month = 01 ~ 12

Day = 01 ~ 31

Year = requires four digits

Hour = 01 ~ 12 (12-hour mode)

00 ~ 23 (24-hour mode)

Minute = 00 ~ 59

**NOTE:** The date format may differ from country to country.

You can also use the scroll button ( ◀ or ▶ ) to move the cursor under the digit you want to correct and enter a new number. For the SCX-4725, you can use Enter or Upper Level to move the cursor.

4. To select "AM" or "PM" for 12-hour format, press the \* or # button or any number button.  
For the SCX-4725, press Enter and then the scroll button ( ◀ or ▶ ).  
When the cursor is not under the AM or PM indicator, pressing the ※ or # button immediately moves the cursor to the indicator. For the SCX-4725, press the scroll button ( ◀ or ▶ ) to move the cursor to the indicator.  
You can change the clock mode to 24-hour format (e.g. 01:00 PM as 13:00).
5. Press Enter when the time and date on the display is correct.  
When you enter a wrong number, the machine beeps and does not proceed to the next step. If this happens, just reenter the correct number.
6. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(d) Changing the Clock Mode

You can set your machine to display the current time using either a 12-hour or 24-hour format.

1. Press Menu until "Machine Setup" appears on the top line of the display.
2. Press the scroll button ( ◀ or ▶ ) until you see "Clock Mode" on the bottom line and press Enter.  
The clock mode currently set for the machine displays.
3. Press the scroll button ( ◀ or ▶ ) to select the other mode and then press Enter to save the selection.
4. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(e) Setting the Paper Size and Type

After loading paper in the tray, you need to set the paper size and type using the control panel buttons. These settings will apply to copy and fax modes. For PC-printing, you need to select the paper size and type in the application program you use on your PC.

1. Press Menu.  
The display shows "Paper Setting" on the top line of the display.
2. Press the scroll button ( ◀ or ▶ ) to display "Paper Size" on the bottom line and press Enter to access the menu item.
3. Use the scroll button ( ◀ or ▶ ) to find the paper size you are using and press Enter to save it.
4. Press the button to scroll to "Paper Type" and press Enter to access the menu item.
5. Use the scroll button ( ◀ or ▶ ) to find the paper type you are using and press Enter to save it.
6. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(f) Setting Sounds

You can control the following sounds:

- Speaker: You can turn on or off the sounds from the telephone line through the speaker, such as the dial tone or a fax tone. With this option set to "Comm." the speaker is on until the remote machine answers.
- Ringer: You can adjust the ringer volume.
- Key Sound: With this option set to "On" a key tone sounds each time a key is pressed.
- Alarm Sound: You can turn the alarm sound on or off. With this option set to "On" an alarm tone sounds when an error occurs or fax communication ends.
- You can adjust the volume level using the On Hook Dial button.

#### 4.1.2.3(g) Speaker, Ringer, Key Sound, and Alarm Sound

1. Press Menu until "Sound/Volume" appears on the top line of the display.
2. Press the scroll button ( ◀ or ▶ ) to scroll through the options. Press Enter when you see the desired sound option.
3. Press the scroll button ( ◀ or ▶ ) to display the desired status or volume for the option you have selected. You will see the selection on the bottom line of the display. For the ringer volume, you can select "Off," "Low," "Med," and "High". Setting "Off" means that the ringer does not sound. The machine works normally even if the ringer is turned off.
4. Press Enter to save the selection. The next sound option appears.
5. If necessary, repeat steps 2 through 4.
6. To return to Standby mode, press Stop/Clear.

#### 4.1.2.3(h) Speaker Volume

1. Press On Hook Dial. A dial tone sounds from the speaker.
2. Press the scroll button ( ◀ or ▶ ) until you hear the volume you want. The display shows the current volume level.
3. Press On Hook Dial to save the change and return to Standby mode.

**NOTE:** You can adjust the speaker volume only when the telephone line is connected.

#### 4.1.2.3(i) Toner Save Mode

Toner Save mode allows your machine to use less toner on each page. Activating this mode extends the life of the toner cartridge beyond what one would experience in the normal mode, but it reduces print quality.

To turn the toner save mode on or off, press Toner Save.

- If the button backlight is on, the mode is active and the machine uses less toner when printing a document.
- If the button backlight is off, the mode is deactivated and the machine prints with the normal quantity of toner.

#### 4.1.2.3(j) Power Save Mode

Power Save mode allows your machine to reduce power consumption when it is not in actual use. You can turn this mode on and select a length of time for which the machine waits after a job is printed before it switches to a reduced power state.

1. Press Menu until "Machine Setup" appears on top line of the display.
2. Press the scroll button ( ◀ or ▶ ) until "Power Save" appears on the bottom line. Press Enter.
3. Press the scroll button ( ◀ or ▶ ) to display "On" on the bottom line and press Enter. Selecting "Off" means that the power save mode is deactivated.
4. Press the scroll button ( ◀ or ▶ ) until the time setting you want appears. The available options are 5, 10, 15, 30, 60 and 120 (minutes).
5. Press Enter to save the selection.
6. To return to Standby mode, press Stop/Clear.

#### 4.1.2.4 FLASH UPGRADE

There are 2 methods to update the Flash Rom, Local and Remote.

##### (1) Local Machine

###### • RCP (Remote Control Panel) mode

This method is for Parallel Port or USB Port. Connect the PC and activate the RCP (Remote Control Panel) to upgrade the Firmware.

###### < Method >

How to Update Firmware using RCP

1. Connect PC and Printer with a Parallel Cable or a USB Cable.
2. Run the RCP utility and select Firmware Update.
3. Search for the Firmware file to be used to update the set using the Browse Icon.
4. Click the Update icon. The firmware file is transmitted to the Printer automatically and the printer is initialized when the download completes.
5. Click the Refresh icon and check that the updated version numbers are displayed.

###### • DOS Command mode

This method is ONLY for Parallel Port. Connect the PC to the set using a Parallel Cable and enter the DOS Command to upgrade the firmware.

###### < Method >

1. First of all you need the following files : down.bat, down\_com.bin, fprt.exe, and Rom File: (file name for upgrade). Ensure you save ALL of these files in the same folder.
2. At the DOS prompt enter the correct command (as shown below) and push the enter key.  
Then the upgrade will automatically take place..
3. There are two commands use the correct one depending on the condition of the set..
  - \* When the product is in the idle condition  
**down "rom file"**
  - \* When the product is in Ready condition  
(TECH MODE --> DATA SETUP --> FLASH UPGRADE --> LOCAL)  
**copy/b "rom file" lpt1**
4. Do not turn off the power during the upgrade process.

##### (2) Remote FAX

It is possible to use a set that already has the latest firmware to upgrade a remote set remotely using the telephone system.

###### < Method >

1. On the set that has the latest firmware set it to transmit the upgrade:-  
(TECH MODE •DATA SETUP••• FLASH UPGRADE••• REMOTE)
2. Enter the telephone number of the set that needs to be upgraded.  
(Several faxes can be upgrade at the same time. In this case, enter each fax number.)
3. When the enter button is pressed the set sends the firmware file by calling designated fax number.  
(Around 10~15 minutes are needed to send the file.)

###### < Caution >

1. The Sending and Receiving fax machines MUST be the same model.
2. The sending fax must be set up in ECM mode and the Receiving fax memory must be 100%.  
If not the function will not work.

### 4.1.2.5 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, amplifier and speaker. If no transmission signal sound is heard, it means the modem part of the main board, amplifier, speaker or speaker harness is faulty.

#### DRAM TEST

Use this feature to test the machine's DRAM. The result appears in the LCD display. If all memory is working normally, the LCD shows << O K >>

#### ROM TEST

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

- FLASH VER : 1.00 V
- ENGINE VER :1.00V

#### PATTERN TEST

Using this pattern printout you can check that the printer mechanism is functioning properly. This function is for factory manufacturing use only.

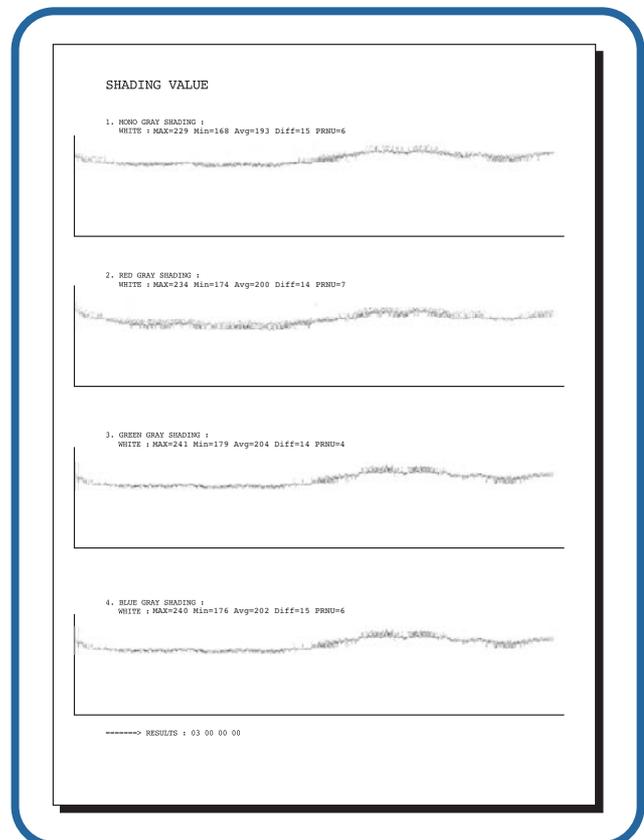
#### SHADING TEST

The function is used to set the optimum scan quality determined by the specific characteristics of the CIS(Contact Image Sensor). If copy image quality is poor perform this function to check the condition of the CIS unit.

##### < Method >

1. Select the [Shading Test] in TECH MODE (Menu, #, 1934).
2. Push the ENTER button and an image will be scanned.
3. After scanning the CIS SHADING PROFILE will be print out.
4. If the printed image is different to the sample image shown the CIS is defective.

**NOTICE :** When you test the CIS, make sure that the cover is closed.



### 4.1.2.6 Report

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#### **PROTOCOL LIST**

This 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. If

#### **SYSTEM DATA**

This list provides a list of the user system data settings and tech mode settings.

#### **KEY HISTORY**

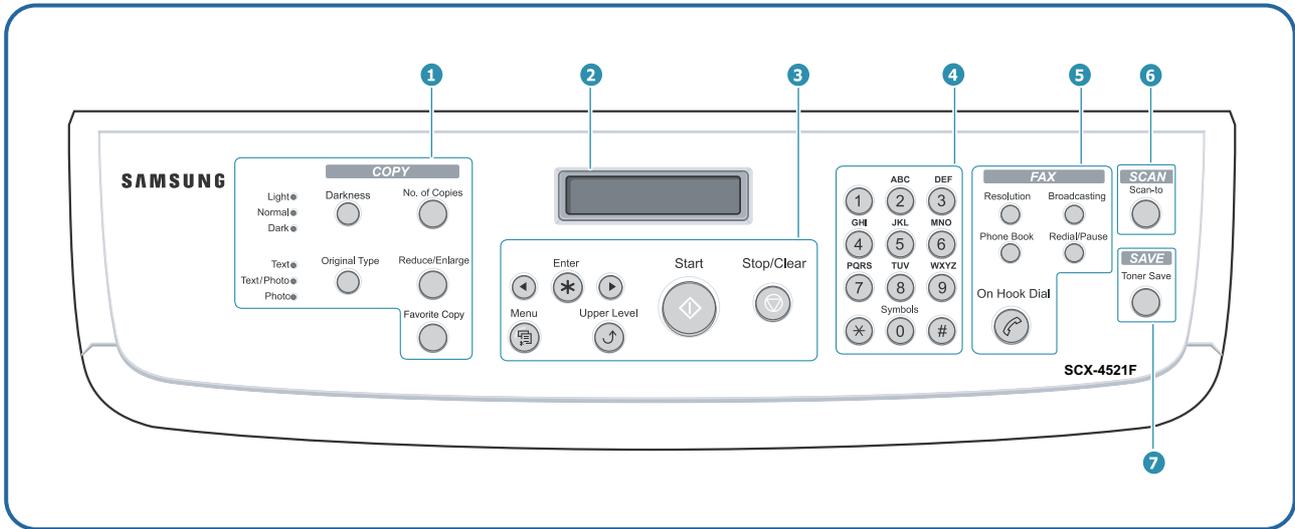
This list shows th input key history.

#### **ERROR INFO**

This list display the detail machine error list.

## 4.1.3 Control Panel

### 4.1.3.1 Control Panel Functions



<b>1</b> <b>COPY</b>	<b>Darkness</b>	Adjusts the brightness of the documents for the current copy job.
	<b>Original Type</b>	Selects the document type for the current copy job.
	<b>No. of Copies</b>	Selects the number of copies.
	<b>Reduce/Enlarge</b>	Makes a copy smaller or larger than the original.
	<b>Favorite Copy</b>	Allows you to use one of the special copy features, such as Clone, Copy Collate, Autofit, ID Card Copy, 2/4 Up and Poster.
<b>2</b>		Displays the current status and prompts during an operation.
<b>3</b>		Uses to scroll through the available options for the selected menu item.
	<b>Enter</b>	Confirms the selection on the display.
	<b>Menu</b>	Enters Menu mode and scrolls through the menus available.
	<b>Upper Level</b>	Sends you back to the upper menu level.
	<b>Start</b>	Starts a job.
<b>4</b>	<b>Stop/Clear</b>	Stops an operation at any time. In Standby mode, clears/cancels the copy options, such as the darkness, the document type setting, the copy size, and the number of copies.
	<b>Number Keypad</b>	Dials a number or enters alphanumeric characters.

[Reference] This Model is Test page not Support.

⑤ F A X	<b>Resolution</b>	Adjusts the resolution of the documents for the current fax job.
	<b>Broadcasting</b>	Allows you to send a fax to multiple destinations.
	<b>Phone Book</b>	Allows you to store frequently-dialed fax numbers as one or two-digit speed dial or group dial numbers for automatic dialing and edit the stored numbers. Also allows you to print a Phonebook list.
	<b>Redial/Pause</b>	In Standby mode, redials the last number or in Edit mode, inserts a pause into a fax number.
	<b>On Hook Dial</b>	Engages the telephone line.
⑥ S C A N	<b>Scan-to</b>	Allows you to access a list of your PC software programs that an image can be scanned to. You must create the scan list using the Samsung software (Printer Settings Utility) provided with this machine. For details, see <b>Software User's Guide</b> .
⑦ S A V E	<b>Toner Save</b>	Allows you to save on toner by using less toner to print a document.

## 4.1.4 LCD Status Error Message

STATUS	LCD Display	Descriptions
Document Jam	Document Jam	When Document Jam occurred at ADF module. This is displayed on LCD, Print in the Transmission Journal.
Door Open or Jam Cover Open	[Front or Rear] [Cover Open]	When machine' front side cover or Jam Cover was opened, it displayed On the LCD.
NO paper	[ No Paper ] Add Paper	When there is no paper in CASSETTE Tray, machine Displays this message on LCD.
PAPER JAM 0	[Paper Jam 0] Open/Close Door	When the machine encountered paper jam in pick up area, Machine displays on the LCD until DOOR OPEN & CLOSE.
PAPER JAM 1	[Paper Jam 1] Open/Close Door	When the machine encountered paper jam in paper exit of Machine, machine displays on the LCD until DOOR OPEN & CLOSE.
PAPER JAM 2	[Paper Jam 2] Check Inside	When the machine encountered paper jam in paper exit of Machine, machine displays on the LCD until DOOR OPEN & CLOSE.
Communication Error	[COMM. Error]	When the machine has problem in communication, It displayed on the LCD.  Machine displays this in case of Transmission.  Machine displays this in case of fax handshaking step of Reception.
Line Error	[Line Error]	When the machine has problem in case of Fax Data reception step.
NO ANSWER	[No Answer]	When the machine could not connect to remote fax after Completion of redial up to redial counter in system data.
INCOMPATIBLE	[Incompatible]	Remote party did not have the requested feature, such as polling.
LINE BUSY	Line Busy	The remote fax didn't answer.
POWER FAILURE	Power Failure	When the machine's user memory has not been backup and There was power off / on.
STOP PRESSED	[Stop Pressed]	When the operator pressed the STOP button during transmission.
MEMORY FULL	Memory Full	When the machine has encountered the user memory was full.
FUSER ERROR	CRU Fuse Error	When the machine failed in installing the new toner cartridge.
LSU ERROR	[Hsync Error]	tech mode
LSU ERROR	[LSU Error]	user mode  When the machine has encountered the Laser Beam Scanning unit could not reach the READY state.
TONER LOW	[Toner Low]	When the machine has encountered the Toner Low.
TONER EMPTY	[Toner Empty] [Replace Toner]	When the machine has encountered the Toner Empty.

<continue..>

STATUS	LCD Display	Descriptions
BY PASS JAM	[Bypass Jam]	When the machine detected the non feeding from BYPASS Tray.
GROUP is not available	Group Not Available	You have tried to select a group location where only a single Location number can be used.
RETRY REDIAL?	Retry Redial ?	the machine is waiting for the programmed interval to automatically redial a previously busy station.
NO. NOT ASSIGNED	NO. Not Assigned	The speed dial location you tried to use has no number assigned to it.
Load document	Load Document	You have attempted to set up a sending operation with no Document loaded.
Memory full and cancel the job	Cancel ? 1:Yes 2:No	When the machine has encountered the memory full during storing the document into memory, the machine display the "CANCEL ?" to operator whether he/she make a decision the canceling the job or accept the scanned page so far to transmit the remained documents.
Job has not been created	Operation Not Assigned	When operator is doing in ADD/CANCEL operation and There is no job to handle if operator entered the job no.
Low Heat Error	[Low Heat Error]	Temperature could not reach certain level.
Open Fuser Error	Open Fuser Error	The thermister has been disconnected.
Over Heat Error	[Over Heat]	Temperature has gone up very high degree.
	[Jam 1] [No Cartridge]	When the machine detected the toner cartridge has not been installed, or detected jam1 in warmup state.
Memory Dial Full	Memory Dial Full	During Auto dial transmission when all 15 jobs are configured and try to add 16th job

## 4.1.5 Engine Test Mode

The Engine Test Mode supplies useful functions to check the condition of the print engine. It tests the condition of each device and displays the result of the test on the LCD. It is divided into 5 functions (0~4), and these are shown below.

### 4.1.5.1 To enter the Engine Test Mode

#### To enter the Engine Test mode (SCX-4725FN)

Press  →  →  →  →  →  in sequence, and the LCD briefly displays

'Engine Test', the machine has entered Engine Test Mode.

Press "0", "1", "2", "3" or "4" to select the Test No. (see list below – left hand column)

### 4.1.5.2 Diagnostic

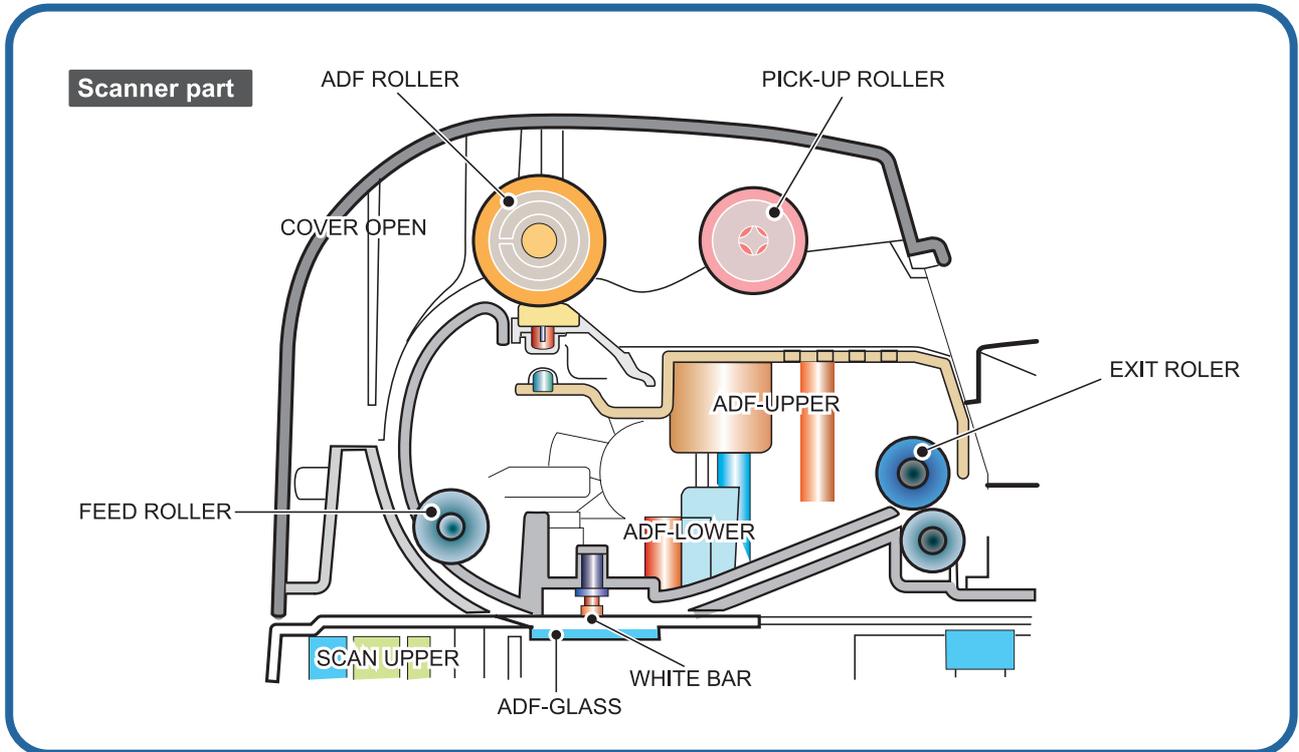
NO.	Sub No.	Engine test	Remark
0	1	Motor Test	1 : On, 2 : Off – next test selected
	2	Pick Up Test	1 : On, 2 : Off – next test selected
	3	Main Fan Test	1 : On, 2 : Off – next test selected
	4	SMPS FAN	1 : On, 2 : Off – next test selected
1	1	LSU Error Test	1 : On, 2 : Off – next test selected
	2	LD Test	1 : On, 2 : Off – next test selected
2	1	Feed Sensor Test	1. Check : read the sensor
			2. Next : Next Sensor test
	2	Exit Sensor Test	1. Check : read the sensor
			2. Next : Next Sensor test
3	Cover Sensor Test	1. Check : read the sensor	
		2. Next : Next Sensor test	
4	Empty Sensor Test	1. Check : read the sensor	
		2. Next : Next Sensor test	
3	1	Therm ADC 170	1 : On, 2 : Off (maintain the fusing temp.)
	2	Therm ADC 160	1 : On, 2 : Off (maintain the fusing temp.)
	3	Therm ADC 150	1 : On, 2 : Off (maintain the fusing temp.)
	4	Therm ADC 140	1 : On, 2 : Off (maintain the fusing temp.)
	5	Therm ADC 130	1 : On, 2 : Off (maintain the fusing temp.)
	6	Therm ADC 125	1 : On, 2 : Off (maintain the fusing temp.)
	7	Therm ADC 120	1 : On, 2 : Off (maintain the fusing temp.)
	8	Therm ADC 115	1 : On, 2 : Off (maintain the fusing temp.)
	9	Therm ADC 110	1 : On, 2 : Off (maintain the fusing temp.)
4	1	MHV Test (1300V)	1 : On, 2 : Off
	2	Dev Bias Test (350V)	1 : On, 2 : Off
	3	THV Test (1300V)	1 : On, 2 : Off
	4	THV Test (-)	1 : On, 2 : Off

### 4.1.5.3 Detail Description (Engine Test Mode)

Function Name	Description	Display
01.Motor Test	The main motor starts when the execution key is pressed and stops when the stop key is pressed.	Main Motor On/Off
02.Pick Up Test	Automatically stops, when the execution is chosen. stops, when the execution is chosen.	Tray 1,2 Solenoid On/Off
03.Fan Test	The fan starts when the execution key is pressed and stops when the stop key is pressed.	Fan On/Off
11.LSU Motor	The laser motor starts when the execution key is pressed and stops when the stop key is pressed.	Laser Motor On/Off
12.LSU Error Test	The LSU motor starts and "Laser Ready" is displayed if the motor spins at the correct speed, otherwise "Laser Error" is displayed.	Laser Leady On/Off
13.LD Test	"Diode On" is displayed, when the laser diode is on. Otherwise "Diode Off" is displayed.	Diode On/Off
21.Feed Sen Test	These functions allow the current state of the sensor to be displayed.	"Sensor Off" or "Sensor On "
22.Exit Sen Test		
23.Cover Sen Test	This function allows the current state of the Cover sensor to be displayed. Touch the sensor and confirm that the message changes: "Cover Open" to "Cover Close"	"Cover Open" or "Cover Close"
24.Empty Sen Test	These functions allow the current state of the sensor to be displayed.	"Sensor Off" or "Sensor On "
31.Them ADC 170	"Current value" is displayed on the upper line of the LCD, and "Target value" on the bottom line. Target value is limited from "191°C" to "80°C"	Target temperature and output temperature from thermistor and ADC.
32.Them ADC 160		
33.Them ADC 150		
35.Them ADC 140		
36.Them ADC 130		
37.Them ADC 125		
38.Them ADC 120		
39.Them ADC 115		
40.Them ADC 110		
41.MHV Test (1300V)		
42.Bias Test (350V)	Dev Bias On/Off	
43.THV Test (1300V)	THV EN/NEG On/Off	
44.THV Test (-)	THV On/Off	

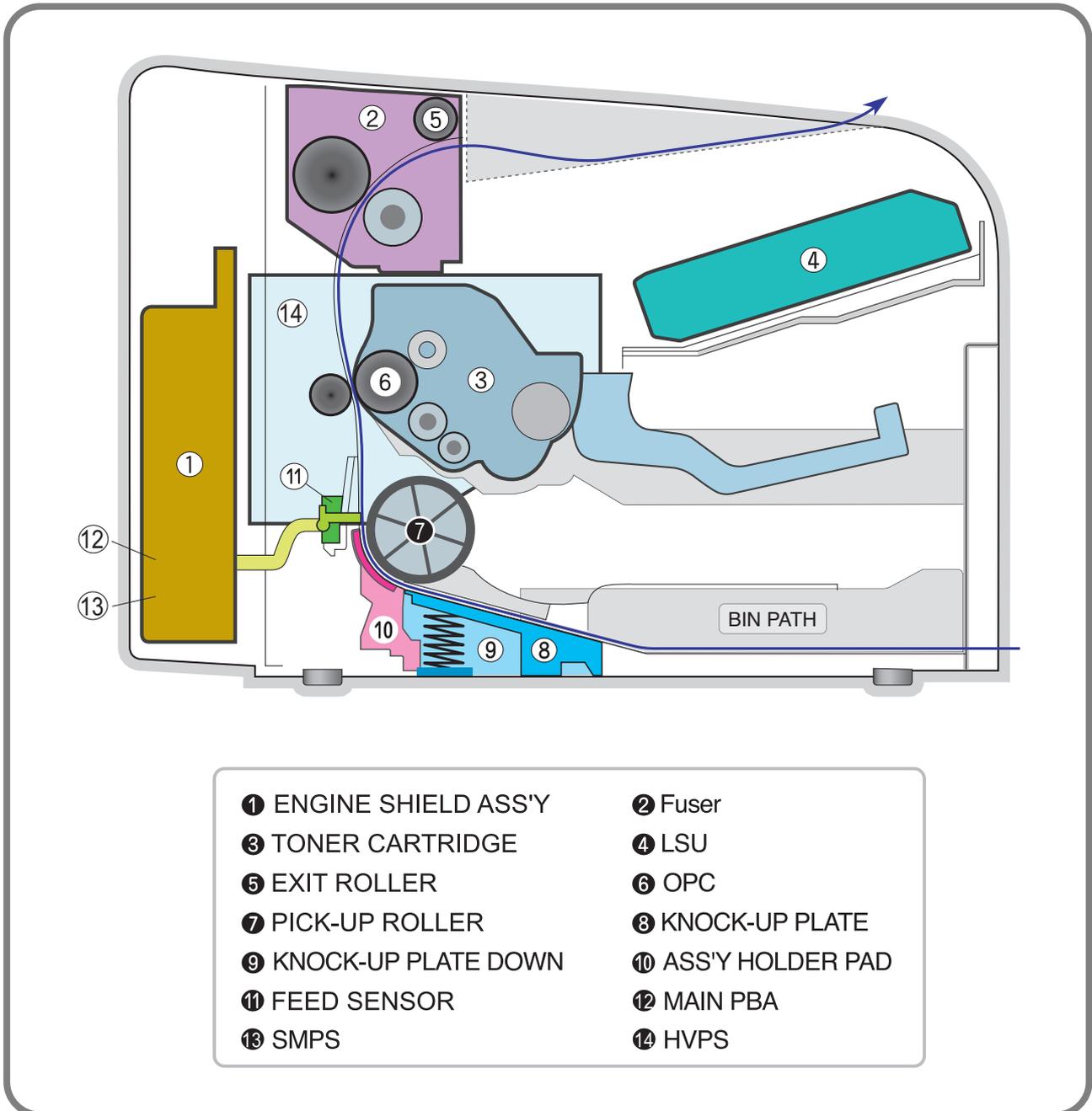
## 4.1.6 Paper Path and Clearing Paper Jams

### 4.1.6.1 Copy & Scan Document Path



### 4.1.6.2 Printer Paper Path

- 1) After receiving a print command, the printer feeds paper from the main cassette or manual feeder as required.
- 2) The paper being fed passes the paper feed sensor. (Jam 0 occurs if the sensor is not operated within a certain time)
- 3) Having passed the paper feed sensor the paper moves to the paper exit sensor via printing process. (Jam 1 occurs if the sensor is not operated within a certain time)
- 4) The paper then passes through the paper exit sensor and out of the set. (Jam 2 occurs if the trailing edge of the paper does not pass the exit sensor within a certain time of the paper leading edge activating the exit sensor)



### 4.1.6.3 Clearing Paper Jams

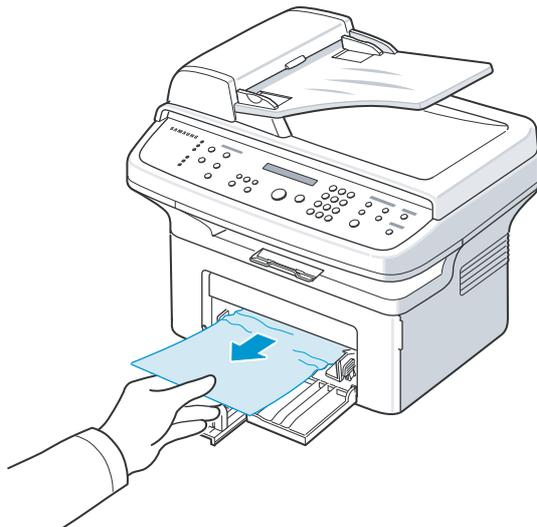
When a paper jam occurs, "Paper Jam" appears on the display. Refer to the table below to locate and clear the paper jam.

Message	Location of Jam
[Paper Jam 0] Open/Close Door	In the tray
[Paper Jam 1] Open/Close	In the fuser area or around the toner Door cartridge.
[Paper Jam 2] Check Inside	In the paper exit area

To avoid tearing the paper, pull out the jammed paper gently and slowly. Follow the instructions in the following sections to clear the jam.

#### 4.1.6.3(a) In the Tray

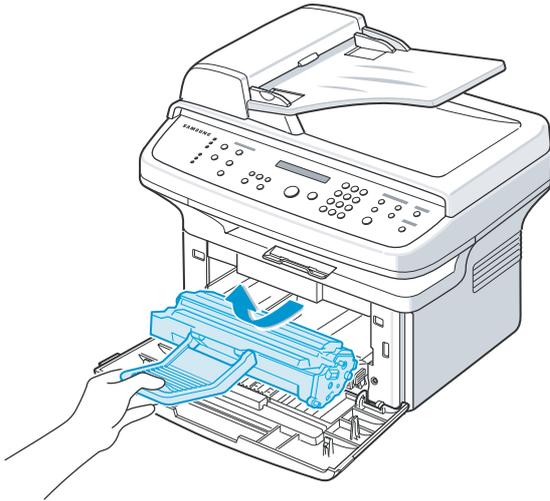
1. Remove the jammed paper in the tray by gently pulling it straight out.
2. Open and close the front door to resume printing.



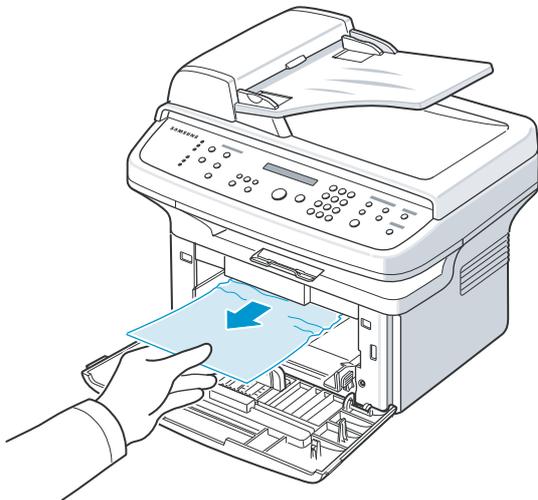
### 4.1.6.3(b) In the Fuser Area or Around the Toner Cartridge

**NOTE:** The fuser area is hot. Take care when removing paper from the machine.

1. Open the front door and pull the toner cartridge out, lightly pushing it down.
3. Replace the toner cartridge and close the front door. Printing automatically resumes.

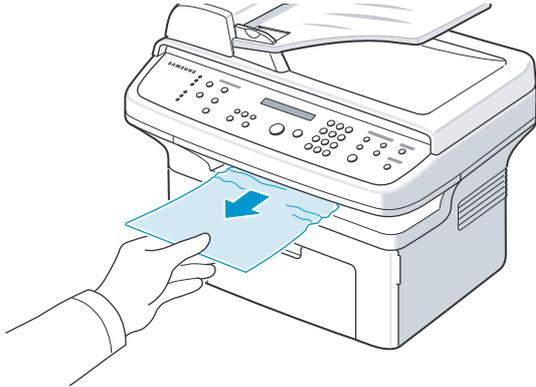


2. Remove the jammed paper by gently pulling it straight out.

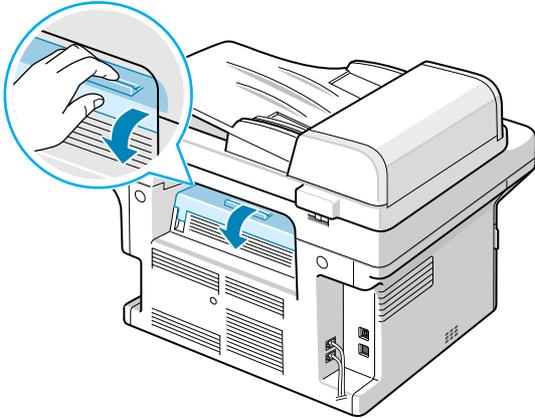


### 4.1.6.3(c) In the Paper Exit Area

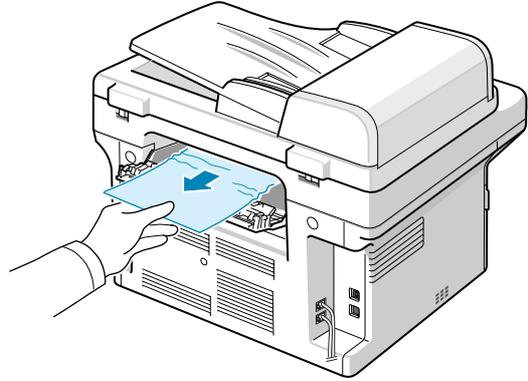
1. Open and close the front door. The jammed paper automatically exits the machine.  
If the paper does not exit, continue to step 2.
2. Gently pull the paper out of the output tray.



3. If there is any resistance and the paper does not move when you pull, or if you cannot see the paper in the output tray, open the rear door by pulling the tab on it.

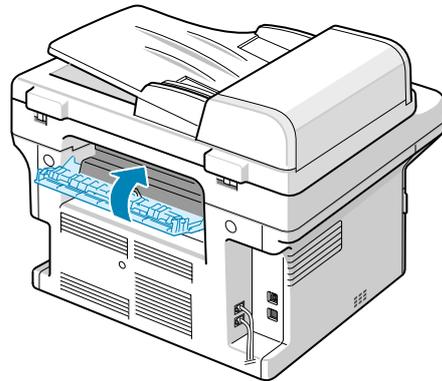


4. Remove the jammed paper by gently pulling it straight out.



**NOTE:** Inside of the machine is hot. Take care when removing paper from the machine.

5. Close the rear door.

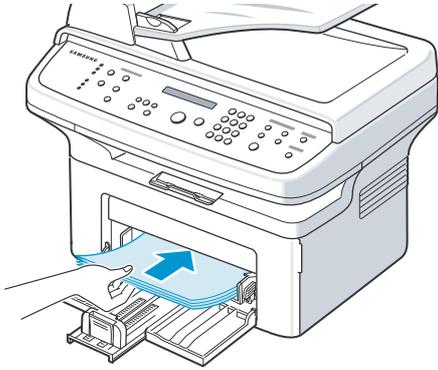


6. Open and close the front door to resume printing.

#### 4.1.6.3(d) Tips for Avoiding Paper Jams When Printing on the A5-sized Paper

If paper jams occur frequently when you print on A5-sized paper:

1. Load the paper into the tray, as shown below.



3. From the Orientation option of the Layout tab, set the Rotate option to 90° .

4. Click OK to start printing.  
For details, see Software User's Guide.

2. Open the printer's properties window, set the paper size to A5 from the Paper tab.

#### 4.6.3(e) Tips for Avoiding Paper Jams

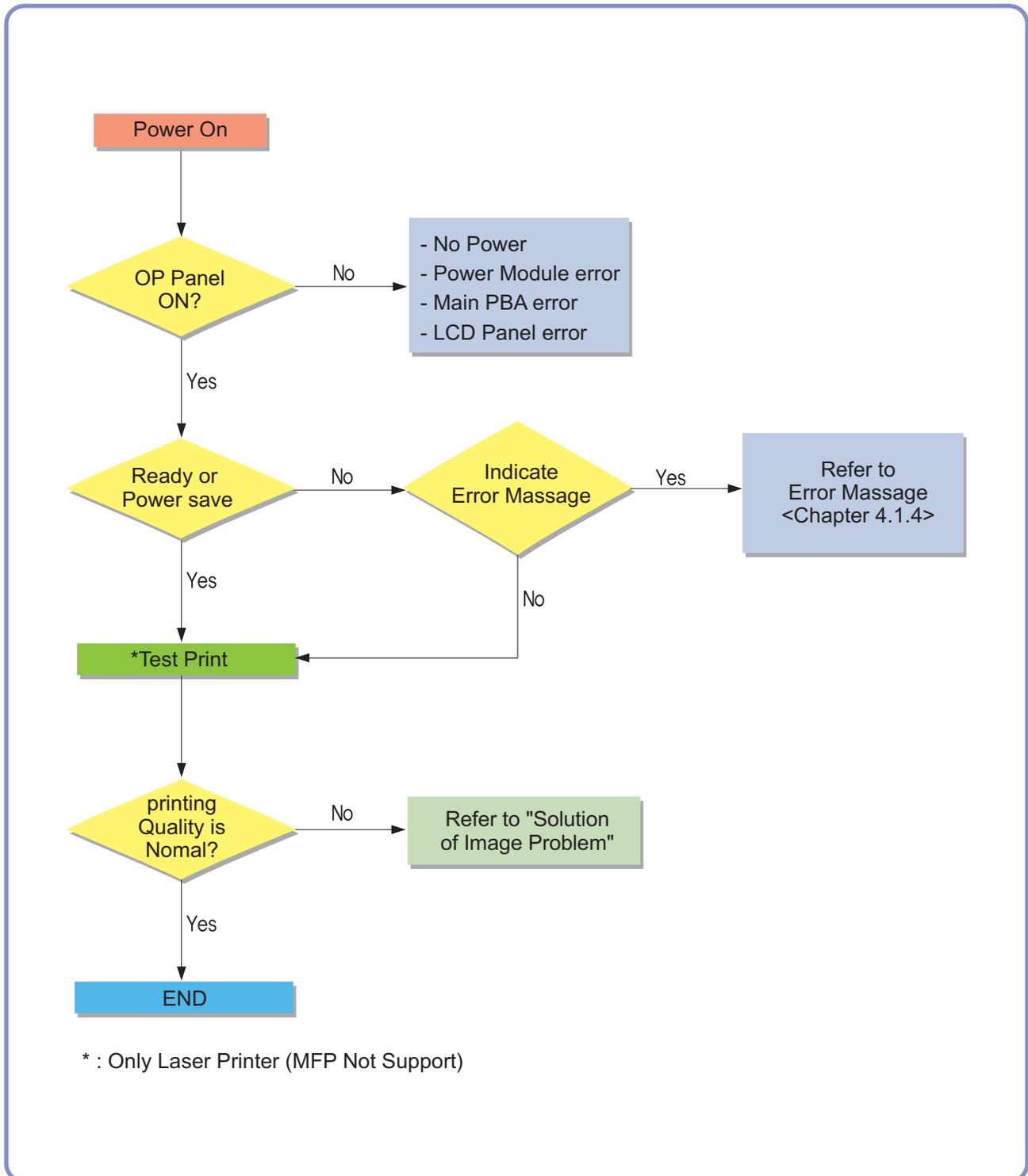
By selecting the correct paper types, most paper jams can be avoided. When a paper jam occurs.

- Follow the procedures in "Loading Paper". Ensure that the adjustable guides are positioned correctly.
- Do not overload the tray.
- Do not remove paper from the tray while your machine is printing.
- Flex, fan, and straighten the paper before loading.
- Do not use creased, damp, or highly curled paper.
- Do not mix paper types in the tray.
- Use only recommended print materials. See "Paper Specifications".
- Ensure that the recommended print side of print materials is facing up in the tray.

## 4.2 Troubleshooting

### 4.2.1 Checking 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.

- Does "Warming Up" appear on the display?
  - > If not check power cable, switch or SMPS.
  - > Does the wall socket work?
- Do the Motors or other components initialize (listen for main motor, fan and LSU sounds)?
  - > If not or there are none of the normal startup sounds check cable, switch or SMPS.
  - > Does the wall socket work?

#### 2. Check the LCD Panel.

- Is there any display at all?
  - > If not check power cable, switch or SMPS.
  - > Does the wall socket work?
- Is the display a meaningful message care there any broken or badly formed characters?
  - > Check the main PBA and cable harness.
- Is the message on the LCD Panel a standard error message?
  - > Refer to section 4.3

#### 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 section 4.2.5

#### 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

## 4.2.1.2 Initial Inspection

### 1. Check Power part

1. The printer does not work no matter how long you wait.
  - A. Is the Power Switch (printer and wall socket) turned on ?
  - B. Is the Power Cord connected to the printer correctly ?
  - C. Is the Power cord connected to the wall socket correctly ?
  - D. Is wall socket working ?
  - E. Is the unit rated at the same voltage as the supply ?
2. Does the Fan work when power is turned on?
  - A. Check the connectors on the SMPS.
  - B. Check the fuses in the SMPS.(F1)

### 2. Check the Installation Environment.

1. Ensure the installation surface is flat, level and free from vibration.  
If necessary move the printer.
2. Ensure that the temperature and humidity of the surroundings are within specification  
If necessary move the printer.
3. Ensure that the printer is position away from any air conditioning or other heating or cooling equipment. Also ensure that is not positioned in a direct draft from any air conditioning, fan or open window.  
If necessary move the printer.
4. Ensure the printer is not positioned in direct sunlight.  
If it is unavoidable use a curtain to shade the printer.
5. Ensure the printer is installed in a clean dust free environment.  
Move the printer to clean area if necessary.
6. Some industrial or cleaning processes give of fumes which can affect the printer.  
Move the printer away from this type of air pollution

### 3. Check paper type.

1. Use only paper which is of a suitable quality, weight and size?  
See the user guide.

### 4. Check the overall condition of the printer

1. Is the printer properly maintained ?  
Clean the Paper Transport Passages.  
Any rollers with dirt surfaces should be cleaned or replaced.

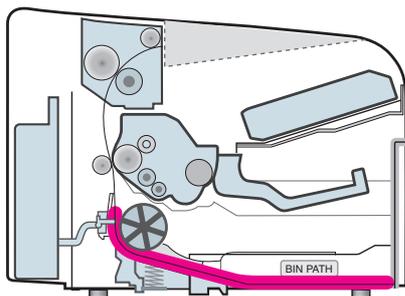
## 4.2.2 Bad discharge

### 4.2.2.1 Wrong Print Position

- **Description** Printing begins at wrong position on the paper.

Check and Cause	Solution
Wrong sense time caused by defective feed sensor actuator.	Replace the defective actuator

### 4.2.2.2 JAM 0

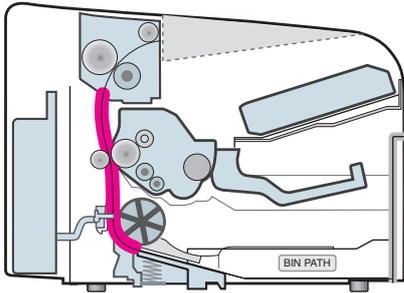


- **Description**

1. Paper is not exited from the cassette.
2. Jam-0 occurs if the paper feeds into the printer.

Check and Cause	Solution
1. Check the Solenoid by using Engine Test Mode-Pick up Test.	1. Replace the solenoid.
2. Check if the pad is loose due to bad sealing of the side-pad.	2. Replace the side-pad Assembly L or R, if necessary.
3. Check the surface of the roller-pickup for foreign matter.	3. Clean with soft cloth dampened with IPA(Isopropyl Alcohol) or water.
4. If the paper feeds into the printer and Jam 0 occurs, perform Engine Test Mode-Feed Sensor Test.	4. Replace the SMPS, HVPS or Sensor.

### 4.2.2.3 JAM 1

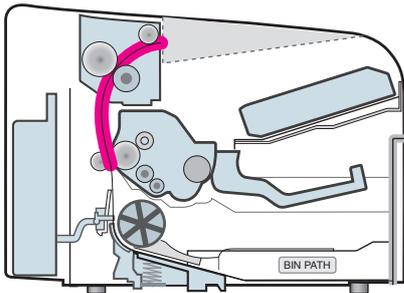


**• Description**

1. Recording paper is jammed in front of or inside the fuser.
2. Recording paper is stuck in the discharge roller and in the fuser just after passing through the Actuator-Feed.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. If the recording paper is jammed in front of or inside the fuser.</li> <li>2. If the recording paper is stuck in the discharge roller and the fuser just after passing through the Actuator-Feed, Feed Actuator may be defective.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the SMPS.</li> <li>2. Reassemble the Actuator-Feed and Spring-Actuator if the returning is bad.</li> </ol>

### 4.2.2.4 JAM 2



**• Description**

1. Recording paper is jammed in front of or inside the fuser.
2. Recording paper is stuck in the discharge roller and in the fuser just after passing through the Actuator-Feed.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. If the paper is completely fed out of the printer, but Jam 2 occurs : Exit sensor is defective.                             <ul style="list-style-type: none"> <li>• After the paper is completely discharged, actuator Exit should return to the original position to shut the photo-sensor. Sometimes it takes longer hour than it should and does not return.</li> </ul> </li> <li>2. If the paper is rolled in the Fuser Roller:                             <ul style="list-style-type: none"> <li>• This occurs when a Guide claw is broken away or transformed.</li> <li>• It occurs when the Spring of a Guide claw is broken away or transformed.</li> <li>• It occurs when the Heat-Roller or Pressure-Roller is seriously contaminated with the toner.</li> </ul> </li> <li>3. Paper is accordion in the fuser.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the exit sensor actuator is defective.                             <ul style="list-style-type: none"> <li>• Check if the actuator exit is unformed (Check if the lever part is unformed in shape).</li> <li>• Check whether burrs occur in the assembly part of the actuator exit or not and if the actuator is smoothly operated.</li> <li>• Check if foreign matters and wire get caught in the actuator exit's operation.</li> </ul> </li> <li>2. If the paper is stuck in the fuser : disassemble the fuser and remove the jammed paper, and clean the surface of the pressure roller with dry gauze.</li> <li>3. Remove the jammed paper after disassembling the fuser : Clean the surface of the pressure roller with dry gauze.                             <ul style="list-style-type: none"> <li>• Remove the toner particles stained on the rib.</li> <li>• Check the assemblage and performance of the exit.</li> </ul> </li> </ol>

### 4.2.2.5 Multi-Feeding

• **Description** Multiple sheets of paper are fed at once.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Solenoid malfunction(the solenoid does not work properly): Perform Engine Test Mode-Pick up Test.</li> <li>2. Pad-Friction is contaminated with foreign matter.(oil...)</li> <li>3. The face of paper is blended.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the solenoid if necessary.</li> <li>2. Clean the pad friction with soft clothe dampened with IPA(Isopropyl Alcohol).</li> <li>3. Use the smooth paper.</li> </ol>

### 4.2.2.6 Paper rolled in the Fuser

• **Description** If contaminated at intervals of 57mm on the back of a paper.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Contamination of the pressure roller or heat roller (Background, Hot off set).</li> <li>2. Check the claw of the fuser whether it is unfitted.</li> </ol>	<ol style="list-style-type: none"> <li>1. After disassembling the fuser, clean contamination between the heat roller and the thermostat and remove the contamination of the pressure roller.</li> <li>2. If there is heavy background, repair it by the background troubleshooting method.</li> <li>3. The surface of the heat roller with IPA or water</li> <li>4. Check the warp or separation of the sprint claw and the holder plate claw, and then manage it.</li> </ol>

#### 4.2.2.7 Paper rolled in the Toner Cartridge (OPC Drum)

- **Description** Paper is rolled up in the OPC.

Check and Cause	Solution
<ol style="list-style-type: none"><li>1. Paper is too much thin.</li><li>2. The face of paper is curled.</li></ol>	<ol style="list-style-type: none"><li>1. Recommend to use normal paper.</li><li>2. How to remove the rolled in the OPC Drum.<ul style="list-style-type: none"><li>• Remove the paper while turning the OPC Drum against the ongoing direction.</li></ul></li></ol>

## 4.2.3 Set Malfunction – Causes and Solutions

### 4.2.3.1 LCD Display Defect ( ■ ■ ■ ■ in LCD Display)

• **Description** Strange characters are displayed in the LCD Window and OPE Panel buttons do not work.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Clear the memory.</li> <li>2. Check that the OPE HARNESS is connected to the Connection Board correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Try again after clearing the memory.</li> <li>2. If re-connecting the harness does not correct the fault replace the OPE Ass'y and the main Board in sequence.</li> </ol>

### 4.2.3.2 Defective OPE Keypad

• **Description** Pressing keys does not cause the set to respond correctly

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Clear the memory.</li> <li>2. Check that there is an audible key click when a key is pressed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check that the keypad is assembled correctly and the membrane is not damaged, replace the membrane or whole keypad assembly if necessary.</li> <li>2. If the fault remains replace the OPE Ass'y and the Main board in sequence.</li> </ol>

#### 4.2.3.3 Fuser gear melts due to overheating causing Paper Jam.

- **Description** Constant Jam where paper is entering Fuser unit.  
Fuser rollers do not turn

Check and Cause	Solution
1. Check the Heat Lamp, thermostat and thermistor	1. Use Engine Test Mode to test the Fuser -THERM ADC 120.  Replace Fuser unit Replace SMPS or Main PBA as appropriate.

#### 4.2.3.4 Paper Empty

- **Description** Paper Empty is displayed in the LCD panel even when paper is loaded in the cassette.

Check and Cause	Solution
1. Deformed paper sensor actuator or faulty sensor.	1. Replace the defective actuator or sensor.
2. SMPS PBA or Main PBA is defective	2. Replace the SMPS PBA or MAIN PBA as appropriate.
3. Faulty cables or connectors.	

#### 4.2.3.5 Paper Empty without indication

- **Description** The paper empty message does not appear in the LCD when the paper cassette is empty.

Check and Cause	Solution
1. Deformed paper sensor actuator or faulty sensor.	1. Replace the defective actuator.
2. SMPS PBA or Main PBA is defective	2. Replace the SMPS PBA or MAIN PBA as appropriate

#### 4.2.3.6 Cover Open

- **Description** The Cover Open message appears on the LCD even when the print cover is closed.

Check and Cause	Solution
1. The 'Open Cover' microswitch may be stuck or faulty  2. The tab on the front cover may be damaged or broken  3. Check the connector and cables between HVPS and main PBA.	1. Use TECH mode("cover sensor test") to check cover switch operation. Check and replace switch if necessary.  2. Replace the front cover.  3. Replace the Main Control board or HVPS as necessary.

#### 4.2.3.7 No error message when the cover is open

- **Description** The Cover Open message does not appears on the LCD even when the print cover is open.

Check and Cause	Solution
1. The 'Open Cover' microswitch may be stuck or faulty  2. Check the connector and cables between HVPS and main PBA.	1. Use TECH mode("cover sensor test") to check cover switch operation. Check and replace switch if necessary.  2. Replace the Main Control board or HVPS S/W as necessary.

#### 4.2.3.8 Defective motor operation

• **Description** Main motor is faulty and paper does not feed into the printer, resulting in Jam 0'

Check and Cause	Solution
1. The main motor harness or Motor PCB may be faulty.	1. Check the motor harnesses and connectors, replace if defective.. If the problem persists replace the main PBA.  <b>Note</b> Check motor operation using Engine Test Mode.

#### 4.2.3.9 No Power

• **Description** When system power is turned on the LCD panel does not come on.

Check and Cause	Solution
1. Check if the power input and SMPS output are normal.	1. Replace the power supply cord or SMPS. Check power fuse and SMPS fuses replace if necessary.
2. LCD panel does not come on but normal start up sounds are heard.	2. Replace the OP panel.
3. After replacing SMPS display does not come on and no start up sounds are heard.	3. Replace the main PBA.

#### 4.2.3.10 Printed Vertical Lines become curved

• **Description** When printing, vertical lines are not straight.

Check and Cause	Solution
1. Check stability of 24V supply to LSU.	1. 24V stable - Replace LSU. 24V unstable replace SMPS, if the problem persists replace the main PBA.

## 4.2.4 Bad Software Environment

### 4.2.4.1 The printer is not working (1)

• **Description** While Power turned on, the printer is not working in the printing mode.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Run Self-Test Mode : Turn the power on and pressing "System Data List" by pressing Menu-Reports-System Data.</li> <li>2. Check if the PC and the printer is properly connected and the toner cartridge installed.</li> <li>3. Printing is not working in the Windows.</li> <li>4. Check if the printer cable is directly connected to peripheral devices</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the power of the printer and perform the Self-Test. If the test printing works, that means no problems in the printer itself. If the test printing does not work, that means bad functioning of the printer(not because of software).</li> <li>2. Replace the printer cable. If the problems not solved even after the cable replaced, check the amount of the remaining toner.</li> <li>3. Check if the connection between PC and printer port is proper. If you use windows, check if the printer driver in the controller is set up. If the printer driver is properly set up, check in which program the printing is not working. The best way to find out is to open the memo pad to check the function of printing. If it is not working in a certain program, adjust the setup the program requires. Sometimes, the printout is normal within the Windows basic programs, but it's not working in a particular program. In such case, install the new driver again. If not working in the Windows basic program, Check the setup of the port of CMOS is on ECP. And check the address of IRQ 7 and 378</li> <li>4. If the scanner needs to be connected to the printer, first the remove the scanner from the PC to see if the printer is properly working alone.</li> </ol>

#### 4.2.4.2 The printer is not working (2)

**• Description**

After receiving the printing order, no response at all or the low speed of printing occurs due to wrong setup of the environment rather than malfunction of the printer itself.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Secure more space of the hard disk.</li> <li>2. Printing error occurs even if there is enough space in the hard disk.</li> <li>3. Check the parallel-port-related items in the CMOS Setup.</li> <li>4. Reboot the system to print.</li> </ol>	<ol style="list-style-type: none"> <li>1. Not working with the message 'insufficient printer memory' means hard disk space problem rather than the RAM problem. In this case, provide more space for the hard disk. Secure more space using the disk utilities program.</li> <li>2. The connection of the cable and printer port is not proper. Check if the connection is properly done and if the parallel port in CMOS is rightly set up.</li> <li>3. As a printer port, Select ECP or SPP among SPP(Normal), ECP, and EPP modes(increase printing speed) SPP normal mode support 8-bit data transfer, while ECP Mode transfer the 12-bit data.</li> <li>4. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and printer off, and reboot the system to print again. If not solved, double-click the printer in my computer. If the regular fonts are not printed this time again, the cable must be defective so replace the cable with new one.</li> </ol>

### 4.2.4.3 Abnormal Printing

**• Description**

The printing is not working properly even when the cable has no problem.  
(even after the cable is replaced)  
If the printer won't work at all or the strange fonts are repeated, the printer driver may be defective or wrong setup in the CMOS Setup.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Set up the parallel port in the CMOS SETUP.</li>   <li>2. Printer Driver Error.</li>   <li>3. Error message from insufficient memory. (The printing job sometimes stops or due to insufficient virtual memory, but it actually comes from the insufficient space of the hard disk.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Select SPP(Normal) or ECP LPT Port the among ECP, EPP or SPP in the CMOS Setup.</li>   <li>2. Check the printer in My Computer.(to see if the printer driver is compatible to the present driver or delete the old driver, if defective and reinstall the new driver)</li>   <li>3. Delete the unnecessary files to secure enough space of the hard disk and start printing job again.</li> </ol>

#### 4.2.4.4 SPOOL Error

##### • Description

To spool which stands for "simultaneous peripheral operations online" a computer document or task list (or "job") is to read it in and store it, usually on a hard disk or larger storage medium so that it can be printed or otherwise processed at a more convenient time (for example, when a printer is finished printing its current document).

Check and Cause	Solution
1. Insufficient space of the hard disk in the directory assigned for the basic spool.	1. Delete the unnecessary files to provide more space to start printing job.
2. If the previous printing error not solved.	2. If there are some files with the extension name of ****.jnl, Delete them and Reboot the Windows to restart printing job.
3. When expected to collide with other program.	3. Shut down all other programs except the current one, if possible.
4. When an application program or the printer driver is damaged.	4. Delete the printer driver completely and reinstall it.
5. When some files related to OS are damaged or virus infected.	5. After rebooting the computer, check for viruses, restore the damaged files and reinstall the program to do the printing job.
6. Memory is less than suggested one.	6. Add up enough memory to the PC.

##### How to delete the data in the spool manager.

In the spool manager, the installed drivers and the list of the documents waiting to be printed are shown. Select the document to be deleted and check the delete menu.

If you intend to delete the current document being printed, the data being transferred to the printer will be put out and then the document is removed. Before choosing the document, the menu is still inactive.

Or put the document out of the list and repeat the routine as in the above or finish the spool manager.

## 4.2.5 Bad image

### 4.2.5.1 Vertical Black Line and Band

- **Description**
1. Straight thin black vertical line occurs in the printing.
  2. Dark black vertical band occur in the printing.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Damaged develop roller in the Developer. Deformed Doctor-blade or cleaning-blade.</li> <li>2. Scratched surface of the discharge roller in the developer.</li> <li>3. Partly depression or deformation on the surface of the transfer roller.</li> </ol>	<ol style="list-style-type: none"> <li>1. If causes 1 and 2 occur in the developer cartridge, replace the developer and try to print out.</li> <li>2. Replace the transfer roller if occurred as No. 3.</li> </ol>

### 4.2.5.2 Vertical White Line

- **Description** White vertical voids in the image.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Foreign matter stuck onto the window of internal lenses of LSU mirror.</li> <li>2. Foreign matter or toner particles between the developer roller and blade. (In case the life of the developer has been expired, white lines or light image occur in front of the image.)</li> <li>3. It may occur when Burr and foreign substances are on the window of the developer frame.</li> <li>4. If the fuser is defective, voids occur periodically at the top of a black image.</li> </ol>	<ol style="list-style-type: none"> <li>1. Foreign matter stuck onto the window : Clean the LSU window with recommended cleaner(IPA) Clean the window with a clean cotton swab.</li> <li>2. Foreign matter in the LSU : Open the cover of LSU and clean with a cotton swab on the surface of the reflex mirror.</li> <li>3. No 3. : Remove the foreign matter and burr of the exposure window. (Developer cartridge)</li> <li>4. No. 4. : Open the front cover and check ribs that corresponds to the position of the voids. Remove if found.</li> <li>5. If the problems are not solved, replace the developer cartridge.</li> </ol>

### 4.2.5.3 Horizontal Black Band

- **Description** 1. Dark or blurry horizontal stripes occur in the printing periodically.  
(They may not occur periodically.)

<del>Digital Printer</del> Digital Printer Digital Printer Digital Printer Digital Printer	Check and Cause	Solution
	1. Bad contacts of the voltage terminals to developer.  2. The rollers of developer may be stained. OPC Drum = 75.5mm Charge Roller = 37.7mm Supply Roller = 47.5mm Develop Roller = 35.2mm Transfer Roller = 46.2mm Heat Roller = 63.9mm Pressure Roller = 75.4mm	1. Clean each voltage terminal of the Charge, Supply, Develop and Transfer roller. (remove the toner particles and paper particles)  2. Clean the right Gear that has relatively small gap of the teeth in the OPC.  3. If the malfunction persists, replace the developer.

### 4.2.5.4 Black/White Spot

- **Description** 1. Dark or blurry black spots occur periodically in the printing.  
2. White spots occur periodically in the printing.

<del>Digital Printer</del> Digital Printer Digital Printer Digital Printer Digital Printer	Check and Cause	Solution
	1. If dark or blurry black spots occur periodically, the rollers in the Developer may be contaminated with foreign matte or paper particles. ( Charge roller : 37.7 mm interval OPC drum : 75.5 mm interval)  2. If faded areas or voids occur in a black image at intervals of 75.5 mm, or black spots occur elsewhere, the OPC drum surface is damaged.  3. If a black image is partially broken, the transfer voltage is abnormal or the transfer roller's life has expired.	1. Run OPC cleaning Mode Print and run the Self-test 2 or 3 times.  2. In case of 75.5 mm interval unremovable in 1, cleanly remove foreign substances stuck on the OPC location equivalent to black spots and white spots with a dry duster.  3. The transfer roller guarantees 50,000 sheets printing. If the roller's life is expired, replace it.  4. In case of 37.7 mm interval unremovable in 1, take measures as to replace the developer cartridge and try to print out.  5. Clean the inside of the set against the paper particles and foreign matter in order not to cause the trouble.

### 4.2.5.5 Light Image

• **Description** The printed image is light, with no ghost.

Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer

Check and Cause	Solution
1. Develop roller is stained when the toner of developer cartridge is almost consumed.	1. Check if the Toner Save mode is off.
2. Ambient temperature is below than 10°C.	2. Replace the developer cartridge and try to print out.
3. Bad contact caused by the toner stains between the high voltage terminal in the HVPS and the one in the set.	3. Wait 30 minutes after printer is powered on before you start printing.
4. Abnormal output from the HVPS.	4. Clean up the contaminated area by the toner.
	5. Replace the HVPS if the problems are not solved by the above four directions.

### 4.2.5.6 Dark Image or a Black

• **Description** The printed image is dark.



Check and Cause	Solution
1. No charge voltage in the engine board.	1. Clean the high voltage charge terminal.
2. Charge voltage is not turned on due to the bad contacts between power supply in the side of the Developer and charge terminal of HVPS.	2. Check the state of the connector which connects the engine board and HVPS.
	3. Replace the HVPS if not solved by the above direction 1 and 2.

#### 4.2.5.7 Uneven Density

- **Description** Print density is uneven between left and right.

Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. 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, or the transfer roller bushing or holder is damaged.</li> <li>2. The toner level is not even on the developer roller due to the bad blade.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace both the left and right Spring Holder.</li> <li>2. Occur in the developer cartridge, replace the developer and try to print out.</li> </ol>

#### 4.2.5.8 Background

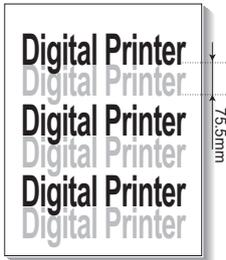
- **Description** Light dark background appears in whole area of the printing.

Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer  
Digital Printer

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Does character exist less than 2% per a page, and hasn't it been used long time?</li> <li>2. Does recycle paper be used?</li> <li>3. Has the life span of the developer ended?</li> <li>4. Is the movement(Up and Down) of the transfer roller smooth?</li> <li>5. Is the HVPS normal?</li> </ol>	<ol style="list-style-type: none"> <li>1. The toner cartridge is basically designed to print 3,000 sheets with 5% image.</li> <li>2. The B/S is not guaranteed if using recycle paper.</li> <li>3. Replace the developer when the life span of it has been ended.</li> <li>4. Clean the bushing part of the transfer roller.</li> <li>5. If the problem is still not solved, replace the developer.</li> </ol>

### 4.2.5.9 Ghost (1)

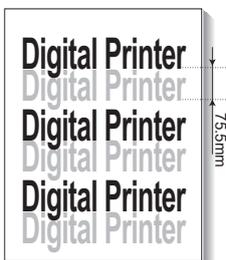
• **Description** Ghost occurs at 75.5 mm intervals of the OPC drum in the whole printing.



Check and Cause	Solution
1. Bad contacts caused by contamination from toner particles between high voltage terminal in the main body and the electrode of the Developer.	1. Clean the terminals when contaminated by toner particles.
2. Bad contacts caused by contamination from toner particles between high voltage terminal in the main body and the one in the HVPS board.	2. Occur in the developer cartridge, replace the developer and try to print out.
3. The life of developer is expired.	3. Replace the Main board and HVPS Board if not solved by the above directions 1-2.
4. Transfer roller lifetime(50.000 sheets) has expired.	4. If not solved by the direction 3, check the transfer roller lifetime and replace it.
5. Abnormal low temperature(below 10°C).	5. Wait about 1 hour after power on before using printer.

### 4.2.5.10 Ghost (2)

• **Description** Ghost occurs at 75.5 mm intervals of the OPC drum in the whole printing. (When printing on card stock or transparencies using manual feeder)



Check and Cause	Solution
When printing on card stock thicker than normal paper or transparencies such as OHP, higher transfer voltage is required.	Select 'Thick Mode' on paper type menu from the software application and after using returning to the original mode is recommended.

#### 4.2.5.11 Ghost (3)

- **Description** White ghost occurs in the black image printing at 47.5mm intervals.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. The life of the developer may be expired.</li> <li>2. The abnormal voltage and bad contact of the terminal of the supply roller</li> </ol>	<ol style="list-style-type: none"> <li>1. Occur in the developer cartridge, replace the developer and try to print out.</li> <li>2. Check the approved voltage of the supply roller and contact of the terminal and adjust if necessary.</li> </ol>

#### 4.2.5.12 Ghost (4)

- **Description** Ghost occurs at 47.5mm(or 63.9mm) intervals.



Check and Cause	Solution
The temperature of the fuser is maintained high.	<ol style="list-style-type: none"> <li>1. Disassemble the fuser and remove the contaminated toner particles on the roller and clean the foreign matter between Thermistor and Heat roller. ( ▲ Caution : can be deformed)</li> </ol>

#### 4.2.5.13 Stains on the Face of Page

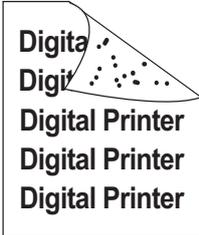
- **Description** The background on the face of the printed page is stained.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Toner leakage due to improperly sealed developer.</li> <li>2. If the transfer roller is contaminated, stains on the face of page will occur.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the developer cartridge.</li> <li>2. If the transfer roller is contaminated, run DRUM Cleaning Mode Print 2 or 3 times. And perform Self-Test 2 or 3 times to remove contamination.</li> </ol>

#### 4.2.5.14 Stains on Back of Page

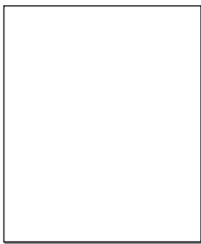
• **Description** The back of the page is stained at 47 mm intervals.



Check and Cause	Solution
1. Transfer roller is contaminated.	1. Perform the DRUM Cleaning Mode Print 2 or 3 times. Run Self-Test to remove the contamination of the transfer roller.
2. Pressure roller is contaminated.	2. Replace the transfer roller if contaminated severely.
	3. Disassemble the fuser and clean the H/R(Heat Roller) and P/R(Pressure roller). And check the area between H/R and Thermistor. If contaminated, clean the area not to be deformed.

#### 4.2.5.15 Blank Page Print out (1)

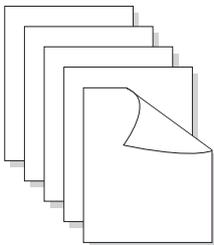
• **Description** Blank page is printed.



Check and Cause	Solution
Bad ground contacts in OPC and/or developer.	Remove contamination of the terminals of the developer and the unit.

#### 4.2.5.16 Blank Page Print out (2)

• **Description**  
 1. Blank page is printed.  
 2. One or several blank pages are printed.  
 3. When the printer turns on, several blank pages print.



Check and Cause	Solution
1. Bad ground contacts in OPC and/or developer.	1. Remove contamination of the terminals of the developer.
2. Abnormal solenoid.	2. Perform the engine self test using Engine Test Mode to check if the Solenoid is normal.(refer to code 06)
	3. If not solved by the above directions 1-2, Replace the engine board.
	4. Turn the power off, delete the data of PC and try printing again.

## 4.2.6 Fax & Phone Problems

### 4.2.6.1 No Dial Tone

- **Description** There is no dial tone when the On-Hook dial button is pressed.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check that the telephone line cord supplied with the set is connected to TEL LINE correctly.</li> <li>2. Listen for a CLICK sound when the OHD key is pressed.</li> <li>3. Check the connection of the HARNESS between the LIU and the Main B'd.</li> <li>4. Check that the SPEAKER is connected correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the telephone cord is OK but there is no dial tone, try plugging a normal telephone into the wall socket. If this is OK then replace the LIU B'd.</li> <li>2. If you cannot hear the OHD CLICK sound, the OPE Ass'y may be defective. Replace the OPE Ass'y. (If the key click sound is off, you cannot hear click sound even if OPE Ass'y has no problem on it)</li> <li>3. Check the Speaker connection and the harness between the LIU and the Main PBA, replace as necessary.</li> <li>4. Use Tech mode / Modem Test to check that the speaker and amplifier are working. Replace the Main B'd.</li> </ol>

### 4.2.6.2 Defective MF DIAL

- **Description** The MF DIAL is not functioning.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check that the telephone line cord supplied with the set is connected to TEL LINE correctly.</li> <li>2. Listen for a CLICK sound when the KEY is pressed.</li> <li>3. Check the connection of the HARNESS between the LIU and the Main B'd.</li> <li>4. Check that the SPEAKER is connected correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the telephone cord is OK but there is no dial tone, try plugging a normal telephone into the wall socket. If this is OK then replace the LIU B'd.</li> <li>2. If you cannot hear the OHD CLICK sound, the OPE Ass'y may be defective. Replace the OPE Ass'y. (After key click sound sets to "ON", and you can hear click sound)</li> <li>3. Check the Speaker connection and the harness between the LIU and the Main PBA, replace as necessary.</li> <li>4. Use Tech mode / Modem Test to check that the speaker and amplifier are working. Replace the LIU and Main B'd in sequence</li> </ol> <p><b>Notes:</b> Product supports MF DIAL type only.</p>

#### 4.2.6.3 Defective FAX FORWARD/RECEIVE

- **Description** FAX FORWARD/RECEIVE is not functioning.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check that you can hear a dial tone by pressing OHD.</li> <li>2. Check that you can hear a RECEIVE tone when MODEM testing in TECH Mode.</li> </ol>	<ol style="list-style-type: none"> <li>1. If MODEM testing is normal and there is no dial tone, then try replacing the LIU B'd.</li> <li>2. If testing the MODEM shows a fault replace the Main B'd.</li> </ol>

#### 4.2.6.4 Defective FAX FORWARD

- **Description** RECEIVE is functioning, but FORWARD is not functioning or received data is corrupt.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check if there is a NOISE line by pressing on-hook dial and listening.</li> <li>2. Check that the destination fax machine can receive forwarded faxes by using a different sending fax machine (preferably from the same wall socket).</li> <li>3. Check the cable between the set and the wall socket for damage.</li> </ol>	<ol style="list-style-type: none"> <li>1. If you can hear a noisy line when using on-hook dial, replace or repair the telephone line</li> <li>2. Replace LIU.</li> <li>3. Replace the line cord.</li> </ol>

#### 4.2.6.5 Defective FAX RECEIVE (1)

• **Description** FORWARD is functioning, but RECEIVE is not functioning or the received data is corrupt.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check if there is a NOISE line by pressing on-hook dial and listening</li> <li>2. Use a different fax machine to receive from the same sender (if possible on the same wall socket).</li> </ol>	<ol style="list-style-type: none"> <li>1. If you can hear a noisy line when using on-hook dial, replace or repair the telephone line.</li> <li>2. Replace the LIU.</li> </ol>

#### 4.2.6.6 Defective FAX RECEIVE (2)

• **Description** Received data are lengthened or cut in the printing.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check if there is a NOISE line by pressing on-hook dial and listening</li> <li>2. Ask sender to send to another fax machine (if possible connected to the same wall socket)</li> </ol>	<ol style="list-style-type: none"> <li>1. If you can hear a noisy line when using on-hook dial, replace or repair the telephone line</li> <li>2. Replace LIU or main PBA in sequence.</li> </ol>

#### 4.2.6.7 Defective FAX RECEIVE (3)

• **Description** The phone is ringing continuously, but it set does not answer the call.

Check and Cause	Solution
Check that the RECEIVE Mode is set to FAX MODE.	If the fault persists even when the RECEIVE Mode is changed to FAX MODE then replace the LIU and the Main B'd in sequence.

#### 4.2.6.8 Defective FAX RECEIVE (4)

• **Description** Received data is reduced by more than 50% in the printing.

Check and Cause	Solution
Check the FAX status of the forwarding side.	This is a problem with the sending fax machine. Correct the setting on the remote machine..

#### 4.2.6.9 Defective Automatic Receiving

• **Description** The automatic receiving function is not working.

Check and Cause	Solution
1. Check that the RECEIVE Mode is set to FAX MODE.	1. If the RECEIVE Mode is set to the TEL MODE, reset it to the FAX MODE.  2. Even after the RECEIVE Mode is changed to the FAX Mode, the problem persists then try to replace the LIU and the Main B'd in sequence.

## 4.2.7 Copy Problems

### 4.2.7.1 White Copy

• **Description** Blank page is printed out when copying.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check the Scanner Cover is properly closed.</li> <li>2. Check shading profile.</li> <li>3. Check white/black reference voltage on Main PBA.</li> </ol>	<ol style="list-style-type: none"> <li>1. Room light can pass through a thin original.</li> <li>2. Redo shading profile in the tech mode.</li> <li>3. Replace the Main PBA.</li> </ol>

### 4.2.7.2 Black Copy

• **Description** Black page is printed out when Copying.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check for CIS problem on the Main PBA.</li> <li>2. Check shading profile.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the CIS FFC Cable is properly connected.</li> <li>2. Redo shading profile in the tech mode.</li> </ol>

### 4.2.7.3 Abnormal noise

- **Description** There is noise from the ADF when copying.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check the Scanner Motor, gearbox and rollers.</li> <li>2. Check the Motor Driver on Driver PBA.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for correct assembly of gears and motor. Ensure no parts are fouling and there are no foreign objects in the mechanism or scanner path. Replace any worn parts</li> <li>2. Replace the main PBA and ADF PBA in sequence.</li> </ol>

### 4.2.7.4 Defective Image Quality

- **Description** The copied image is excessively light or dark

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check shading profile.</li> <li>2. Check the gap between original and scanner glass.</li> <li>3. Check printing quality.</li> </ol>	<ol style="list-style-type: none"> <li>1. Redo shading profile in the tech mode.</li> <li>2. A gap of more than 0.5 mm can cause a blurred image. Ensure rollers and cover close correctly. Replace as necessary.</li> <li>3. See "Print" troubleshooting.</li> </ol>

## 4.2.8 Scanning Problems – Causes and Solutions

### 4.2.8.1 PC Scanning problems

• **Description** Unable to scan using a PC.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check the Cable (USB or Parallel) is properly connected and that the printer can print correctly.</li> <li>2. Check that the driver is installed properly.</li> <li>3. Check that the copy function operates normally.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reconnect the PC and printer, replace any faulty cables. If using a parallel cable, check that the parallel port is properly configured in the BIOS.</li> <li>2. If printing is OK check that the Scan driver is also installed (Refer to User's Manual.)</li> <li>3. If the copy function works, replace the Main PBA. If the copy function doesn't work, replace the CIS Ass'y and try again.</li> </ol>

### 4.2.8.2 Poor Quality of PC Scanned images

• **Description** The image PC scanned is not clear or bad.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Use TECH mode to carry out a shading test and examine the waveform printout.</li> <li>2. Check if the resolution is set too low in PC Scan options. (Refer to User's Manual.)</li> </ol>	<ol style="list-style-type: none"> <li>1. If the CIS waveform form is abnormal replace the CIS Ass'y.</li> <li>2. Teach the user about scanner resolution – refer to the User Guide.</li> </ol>

## 4.2.9 Toner Cartridge Service

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Only toner cartridges supplied by Samsung should be used. Printing defects or set damage caused by the use of non-approved toner cartridges or un-licensed toner refills are not covered by the guarantee.

### 4.2.9.1 Precautions on Safe-keeping of Toner Cartridge

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Excessive exposure to direct light for more than a few minutes may cause damage to the cartridge.

### 4.2.9.2 Service for the Life of Toner Cartridge

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If the printed image is light due to the toner supply becoming low you can temporarily improve the print quality by redistributing the toner (Shake the toner cartridge), however you should replace the toner cartridge to solve the problem permanently.

#### 4.2.9.2(a) Redistributing Toner

When the toner cartridge is near the end of its life, white streaks or light print occurs. The LCD displays the warning message, "Toner Low." You can temporarily reestablish the print quality by redistributing the remaining toner in the cartridge.

### 4.2.9.3 Standard of guarantee for consumable parts.

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Please refer to User's Manual or Instructions on Fax/Printer Consumables SVC manual for the criteria for judging the quality of consumable parts the standard of guarantee on those parts.

- **Spotting a refilled cartridge by eye.**

One way security screws are used in the manufacture of the cartridge – check if these are damaged.

#### 4.2.9.4 Error messages in the LCD window related to toner.

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This section explains messages on the LCD that are related to the data stored in the EEPROM in the toner cartridge.

##### 4.2.9.4(a) Toner Low

- Explanation: The amount of toner remaining is less than 10%
- Solution: The cartridge is almost empty or life-expired – replace the cartridge.

##### 4.2.9.4(b) Toner Empty

- Explanation: The toner cartridge is empty
- Solution: Replace the cartridge.

##### 4.2.9.4(c) Drum Warning

- Explanation: This message appears when the OPC drum is nearing the end of its life (14,000pages). This means that the life of the mechanical parts in the cartridge has expired (this is not an indication of toner remaining).
- Solution: After printing about 15,000 pages, in a worst case scenario, the waste toner collector might overflow and it may cause the system to fail. Also after 15,000 pages the OPC drum surface will be becoming worn and print quality will degrade, print images will become misty. It is therefore necessary to replace the cartridge even though there may be toner left in it.

When this message occurs there are approximately 1,000 pages left.

##### 4.2.9.4(d) Replace Drum

- Explanation: The toner cartridge mechanical life is expired.
- Solution: Replace the cartridge.



### 4.2.10.2 The printer is not working (2)

**• Description**

After receiving the print command there is no response at all or print speed is low due to wrong setup of the environment rather than malfunction of the printer itself.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Ensure you have sufficient free hard disk space for the temporary work files created during printing.</li> <li>2. Printing error occurs even if there is enough space in the hard disk.</li> <li>3. Check the parallel-port-related items in the CMOS Setup.</li> <li>4. Reboot the system to print.</li> </ol>	<ol style="list-style-type: none"> <li>1. Not working with the message 'insufficient printer memory' means there is a hard disk space problem rather than a printer RAM problem. In this case provide more space on the hard disk. Secure more space using the disk utilities program.</li> <li>2. The connection of the cable and printer port is not correct. Check that the cable is properly connected and if you are using the parallel port check that the port settings in CMOS is correct.</li> <li>3. For the printer port, Select ECP. SPP and normal normal modes support 8-bit data transfer, while ECP Mode supports 12-bit data transfer.</li> <li>4. If the regular font is not printing, the cable or the printer driver may be defective. Turn the PC and printer off, and reboot the system to print again. If not solved, double-click the printer in my computer. If the regular fonts are not printed this time again, the cable must be defective so replace the cable with new one.</li> </ol>

### 4.2.10.3 Abnormal Printing

**Description** Printing does not work – even after replacing the cable  
Printer does not work at all or strange fonts are printed,

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Set up the parallel port using CMOS SETUP.</li> <li>2. Printer Driver Error.</li> <li>3. Error message "insufficient memory". (The printing job sometimes stops due to insufficient virtual memory, this is caused by insufficient space on the hard disk.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Ensure that ECP (best) or SPP is selected in the CMOS (BIOS) setup.</li> <li>2. Ensure that the correct driver is loaded. Use the driver supplied on the CD or downloaded from the Samsung web site. DO NOT use the Microsoft driver supplied with the Windows operating system. If the printer is a GDI or SPL type printer ensure that ALL OTHER GDI or SPL drivers are uninstalled as Windows allows only 1 of this type of driver to be loaded.</li> <li>3. Delete any unnecessary files to secure enough space on the hard disk and start the print job again.</li> </ol>

#### 4.2.10.4 SPOOL Error

- **Description** SPOOL (simultaneous peripheral operations online) is the process Windows uses to manage print jobs. Jobs are processed and then stored on the hard disk until the printer is ready to accept them

Check and Cause	Solution
1. Insufficient space on the hard disk in the directory assigned for the basic spool.	1. Delete any unnecessary files to provide more space for spool storage.
2. If previous printing errors were not solved.	2. There may be files from previous failed print jobs on the hard disk with the name in the form '*.jnl'. Delete these files and Reboot Windows to restart the printer.
3. There may be conflict with other drivers or programs.	3. Shut down all other programs except the current one, if possible.
4. When an application program or the printer driver is damaged.	4. Delete the printer driver completely and reinstall it.
5. When some files related to the OS are damaged or virus infected.	5. After rebooting the computer, check for viruses, restore the damaged files and reinstall the application program which is not working properly.
6. Memory is less than suggested.	6. Add up more memory to the PC.

#### How to delete the data in the spool manager.

In the spool manager, the installed drivers and the list of the documents waiting to be printed are shown. Select the document to be deleted and check delete in the menu.

If the job you are deleting is the current job when you delete the job data that has already been transferred to the printer's memory will still be printed. If there is a problem with the printer (out of toner, offline, out of paper etc.) the job may take a long time to delete as it must wait for a time out.

## 4.2.11 Windows Problems

Problem	Solution
<p>After installing PortThru the print server name is not displayed under New Print Server in SyncThru.</p>	<ol style="list-style-type: none"> <li>1. Verify that the printer power switch is turned on and the 'READY' message is displayed on the printer front panel.</li> <li>2. Verify that the LAN cable is plugged into the PortThru card.</li> <li>3. There are 2LEDs on the PortThru card. One should flash irregularly and the other should be on. If this is not the case ensure that the network card is properly installed and the PCB and cable connectors make a good connection. If the problem continues check the network cable / socket by using a different cable or socket. If the problem continues replace the network card.</li> <li>4. Confirm that the print server and the PC which searches for the New Print Server is on the same LAN (correct IP and subnet mask settings). If you want to search for a New Print Server your PC and the print server should be on the same LAN.</li> </ol>
<p>The print server name is displayed, but the test page is not printed.</p>	<p>Using the front panel menus print the Network configuration. If the Network menu is not displayed or the configuration page is not printed turn off the printer, ensure the network card is properly fitted then turn it back on and try again. If the problem continues replace the network card.</p>
<p>SyncThru indicates that firmware upgrade is complete but when the network configuration is printed the software version has not changed.</p>	<p>Before attempting to upgrade firmware ensure that computer and printer can communicate using a Ping command.</p>
<p>SyncThru is unable to automatically detect the printer.</p>	<ol style="list-style-type: none"> <li>1. Check that the LAN cable is connected to the printers. If an IP address is assigned to the computer and printer ensure that the Ping command can see the printer. If an IP address is not allocated to the printer or it is in a different LAN segment then ensure that either IPX/SPX or DLC/LLC protocols are enabled on the computer.</li> <li>2. Print the network configuration. If the TCP/IP or Network protocols are disabled in the printer either use the front panel to re-enable them or ensure that DLC/LLC protocol is installed in the computer.</li> <li>3. In SyncThru use the Settings / Protocol Selection menu option to select either TCP/IP or IPX protocols and then use the View/Refresh option to scan the network again.</li> <li>4. Ensure that the network cable and wall socket are functioning correctly.</li> <li>5. Ensure that the version of SyncThru is the same as or newer than the version supplied with the printer.</li> <li>6. Ensure that there is no router between the printer and the computer as SyncThru will not work through a router.</li> <li>7. Ensure there are no Switch or Router VLAN or Access Control Lists which are blocking communication between the printer and the computer.</li> </ol> <p><b>Note</b> Windows XP does not support DLC/LLC protocols.</p>
<p>The printer does not print via a network connection.</p>	<ol style="list-style-type: none"> <li>1. Connect the printer using a Parallel or USB cable and ensure that the computer can print. If not check that the printer drivers are installed correctly</li> <li>2. If the printer can print via a local connection check Printer Properties / Ports and ensure that a TCP/Ip port has been allocated to the printer.</li> </ol>

## 4.2.12 SyncThru Installation Problems

Problem	Solution
"File Transfer Error" message appears during the Installation process.	<ol style="list-style-type: none"><li>1. Make sure that any previously installed version of SyncThru is uninstalled. Restart your PC after uninstalling previous versions.</li><li>2. If the problem continues, In Windows 95/98 boot into MS/DOS mode and delete the "sammon.dll" file in the windows\system directory the restart Windows and reinstall SyncThru. In Windows NT stop the spooler service using ' Services 'in Control Panel, delete the "sammon.dll" file in the windows\system32 directory then restart the spooler service and reinstall SyncThru.</li></ol>
'Unable to add the Port list of Samsung ports' message appears when you add a port.	Verify that your PC restarts after installing SyncThru.