

Model: GE-SC1a
(Machine Code: G426)
SERVICE MANUAL

November 2007
Subject to Change

Safety Notice and Symbols

Please take the time to read this manual thoroughly in order to obtain comprehensive knowledge about this machine before serving it.

General Notice for Serving

1. Before trying to disassemble this machine, make sure the power supply cord of the machine is disconnected from the power outlet. Under NO circumstance should you remove or install PCBs or connectors in or on the machine with the power switch turned ON.
2. Use caution not to drop small parts or screws inside the machine when disassembling and reassembling. If left inside, they might cause a malfunction of the machine.
3. Do not pull the connector cable when disconnecting it. Grasp and pull on the connector only.
4. When carrying PCBs or the scanning head unit, put them in an anti-static bag.
5. Always keep the document glass surface clean. (If contaminated, use a clean wet cloth for cleaning.)
6. Use caution not to injure your fingers or hands when disassembling or reassembling the machine.

Symbols

Symbols Used in this Manual

This manual uses the following symbols:

Symbol	What it means
	Refer to section number
	Screw
	E-ring

Features

Digital Copying

Since the product includes a laser printer, it is able to produce digital copies with outstanding copy quality. The intuitive control panel and quality LCD-display make digital copying fast and easy.

E-mailing

Connected to an Ethernet network and an SMTP server, this machine allows you to transmit document(s) to your e-mail as attachment. With a touch of the e-mail key and the selection of your recipients' e-mail addresses, the document(s) is/are first scanned and converted into an image file, and then transmitted to remote recipients within minutes.

Filing (Scan to Folder)

This feature allows you to send scanned documents to a server or file folder in a personal computer over the Intranet via FTP (File Transfer Protocol), HTTP (Hypertext Transfer Protocol), HTTPS (Hypertext Transfer Protocol Secure), and CIFS (Common Internet File System). The scan-to-folder feature saves the mail server from handling large attachments.

Faxing

With the built-in fax modem and an additional telephone line, this machine is able to transmit your scanned document to a remote fax machine just like regular fax machine.

Sending Multi-Page Document

With the Auto Document Feeder, the product enables sending of a stack of 50 pages of documents, which are consecutively scanned at one time with reliable quality - increasing your work efficiency.

Managing the Machine Remotely

This machine provides a convenient way to manage your e-mail address book, filing destinations (folders), and telephone book remotely. By simply typing the machine's IP address in the URL field of your browser,

the machine web page will be prompted. This webpage allows the administrator to create up to 2,000 e-mail addresses, 40 filing destinations, and 200 fax numbers to conveniently deliver the scanned documents to multiple recipients.

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1. Installation

Installation Requirements

For details, refer to the Quick Installation Guide for this machine.

2. Preventive Maintenance

Preventive Maintenance Schedule

User Maintenance

2

Clean these parts at every EM.

Abbreviations: C: Clean, R: Replace, EM: Emergency Maintenance

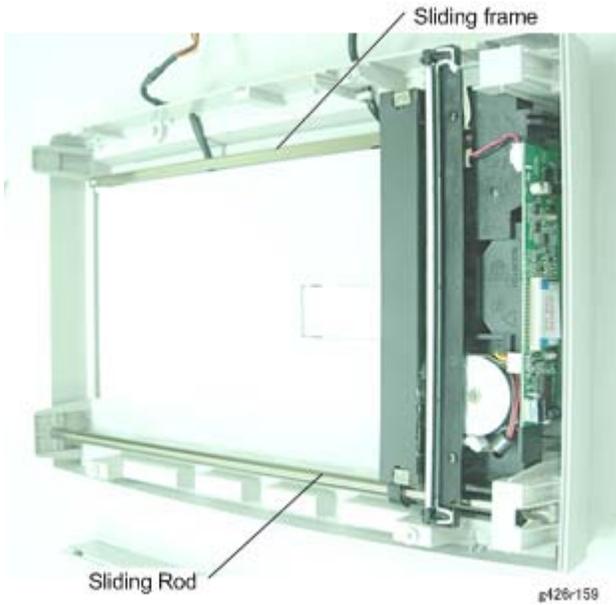
Item	30 K	EM	Remarks
Exposure Glass	-	C	Wipe with a damp cloth (alcohol or water).
LCD Display	-	C	Wipe with a damp cloth (alcohol or water).
ADF Rollers	-	C	Wipe with a damp cloth (alcohol or water).
Separation pad	R	C	Wipe with a damp cloth (alcohol or water).

The separation pad is supplied as "Scanner Maintenance Kit for Image Scanner IS800C" (G426-18).

For details, refer to the IS800C User's Manual.

Service Maintenance

Lubricate these parts at every EM.



Abbreviations: L: Lubricant

Item	EM	Remarks
Sliding rod (* 1)	L	Launa oil 40 Coat thinly uniformly
Sliding frame (* 1)	L	Grease-Barrierta S552R Coat thinly & uniformly

* 1: Refer to the illustration above.

3. Replacement and Adjustment

Service Tool

The table below describes the maintenance tools necessary for the maintenance of this equipment.

Part number	Name	Qty
54429103	Launa oil	1
A2579300	Grease-Barrierta S552R	1
VSSM9000	Digital Multimeter - Fluke 187	1
G4049005	RS-13 Chart (A4)	1

Procedure for Disassembly and Reassembly

⚠ CAUTION

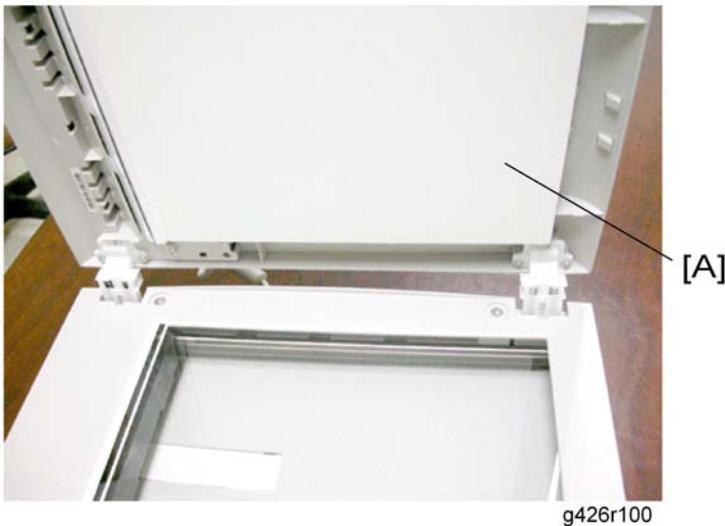
- Disconnect the power cable and remove the AC plug from the outlet before disassembly and assembly.

↓ Note

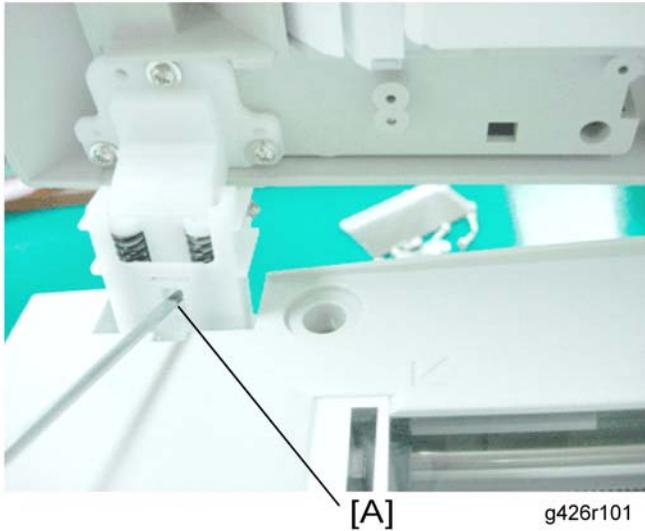
- Perform disassembly and assembly in a clean location.
- Follow the disassembly and assembly procedures carefully. Never loosen the screws of parts other than those being disassembled.
- Store the disassembled parts in a clean, uncluttered place to avoid loss.
- After replacement, verify that contacts and parts are correctly aligned.
- Assemble the parts in the reverse order of the disassembly procedure.

3

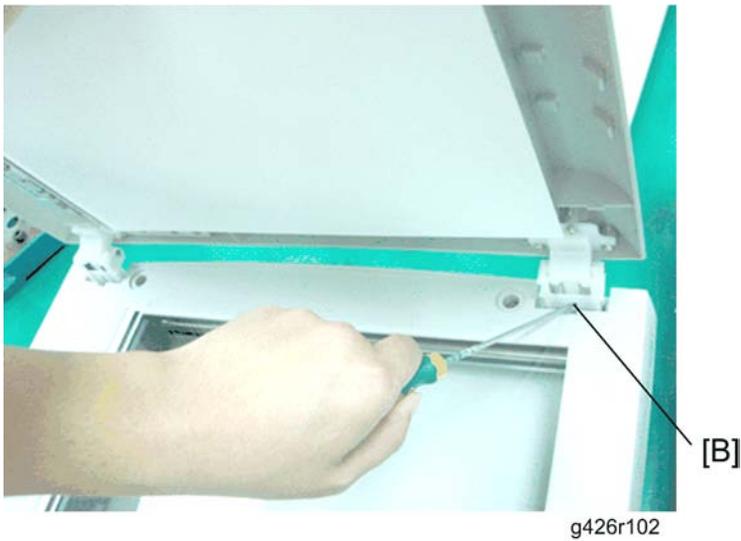
Document Cover



1. Lift the document cover [A], as shown in the figure above.



2. Push the latch of the left hinge (larger of the two) [A] with a small flat screwdriver and lift out the left hinge.



3. Push the spring of the right hinge (smaller of the two) [B] with a small flat screwdriver and lift out the right hinge.

3



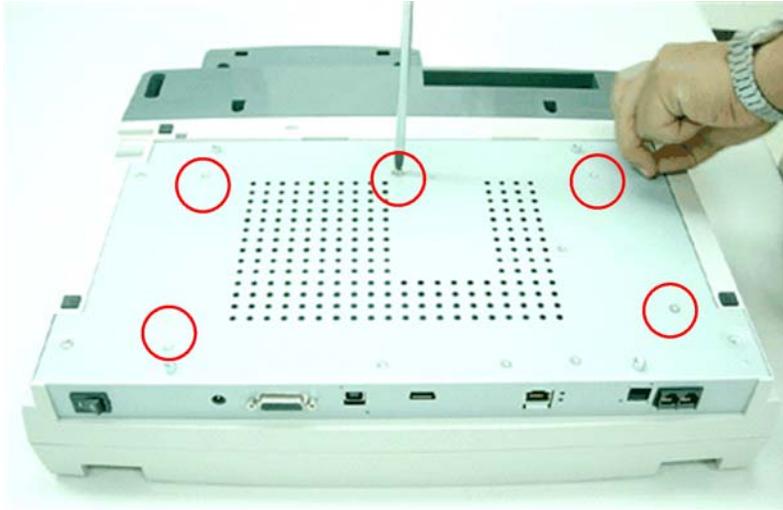
g426r103

4. Remove the document cover, then disconnect the interface cable.

Note

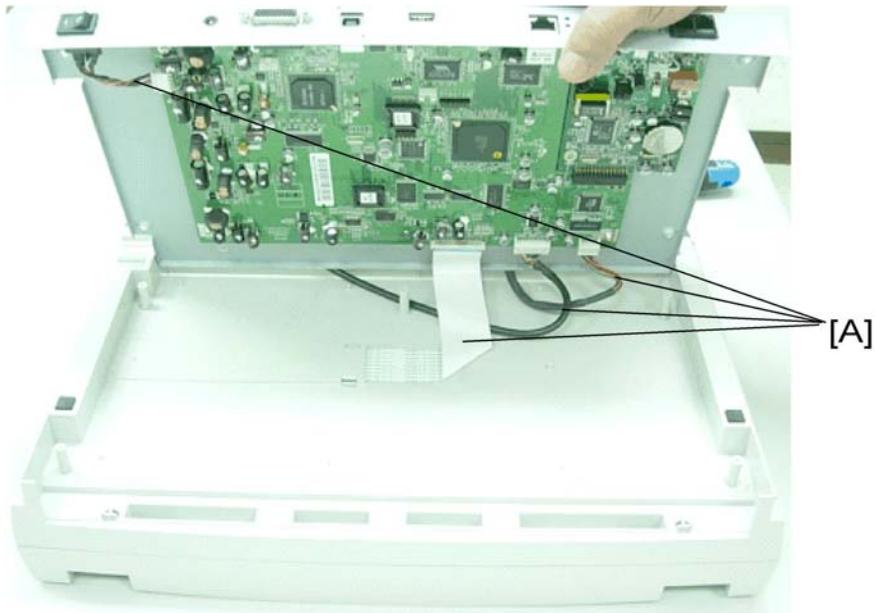
- Before reinstalling the document cover, clean the document cover first.

Main Board



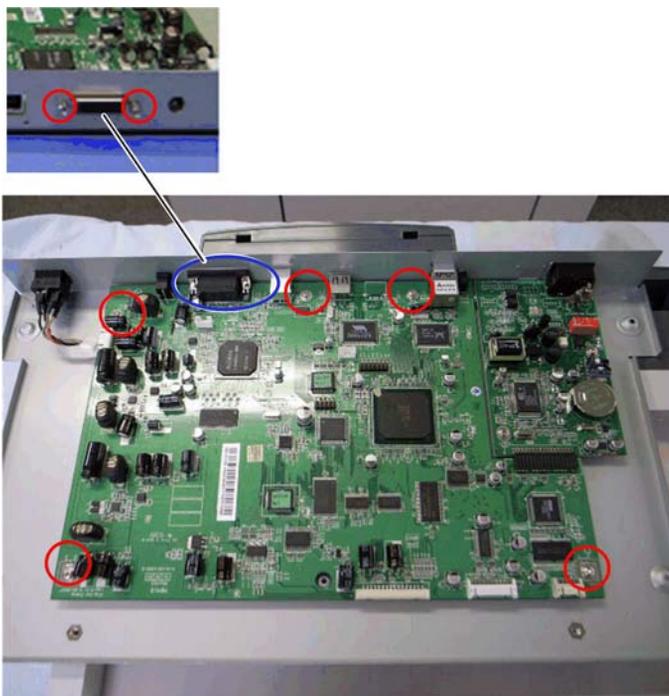
g426r104

1. Turn the machine over to reveal the bottom as illustrated and remove the five fixing screws (🔩: M3x8) on the metal cover.



g426r105

2. Raise the metal cover and remove all cables [A] including the flat cable.



g426r106

3. Remove fixing screws (⌀ x 7) and the connector of the interface cable.



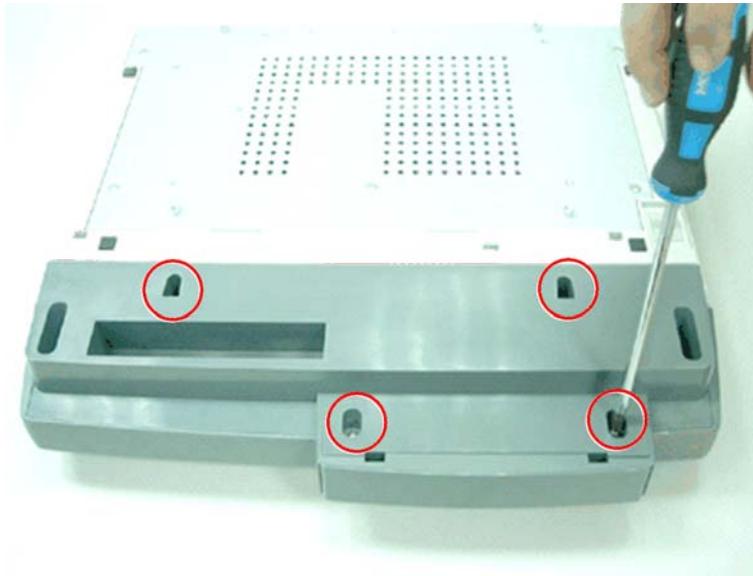
g426r106a



4. Main board

Operational Panel Board

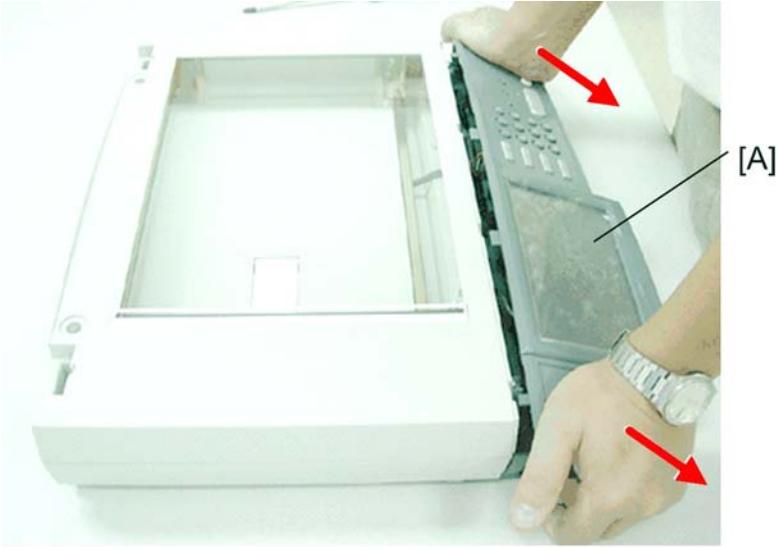
1. Remove the document cover (👉 Document Cover).



g426r107a

2. Turn the machine over as shown above. Remove the four fixing screws (⌀: M3x8) of the operation panel.

3

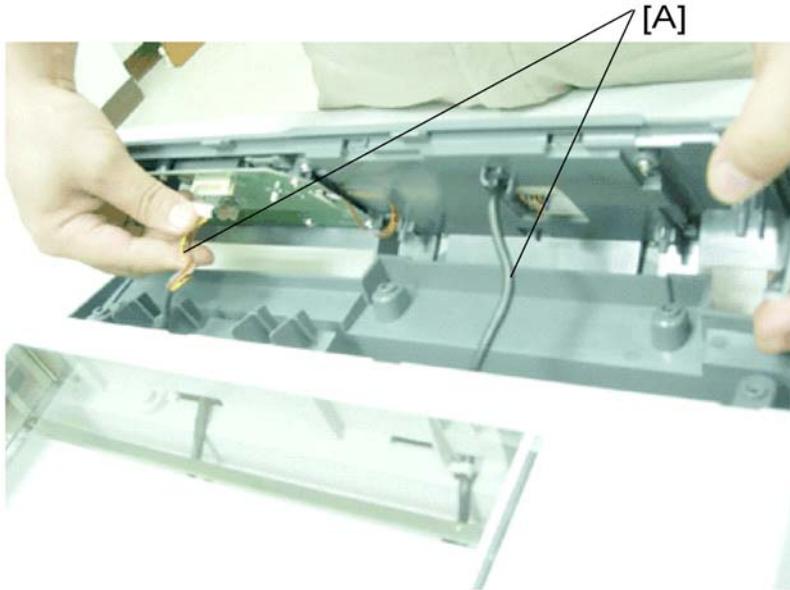


g426r108-9

3. Loosen the operation panel [A] by pushing it forward as shown above.

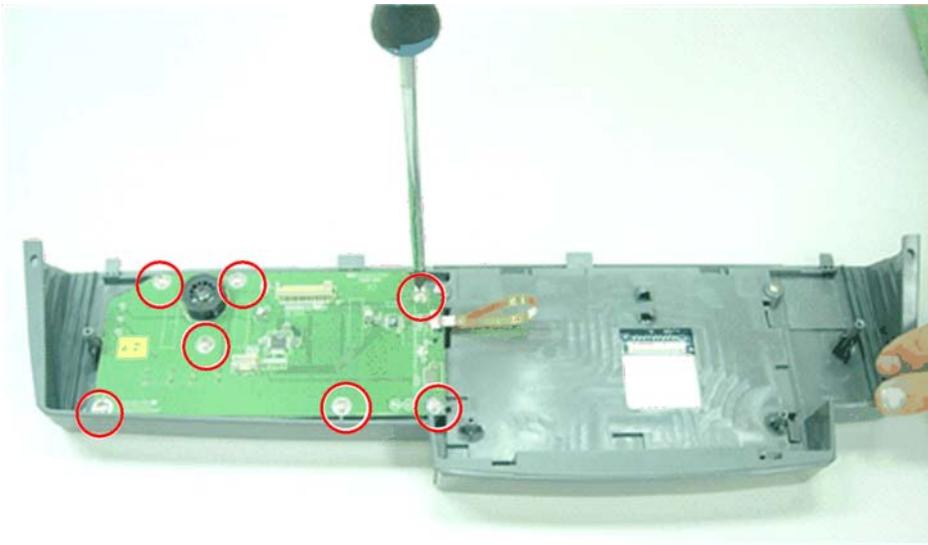
Note

- You are loosening the top half of the front section. The operation panel can be removed separately from the bottom half of the front section of the machine.



g426r110

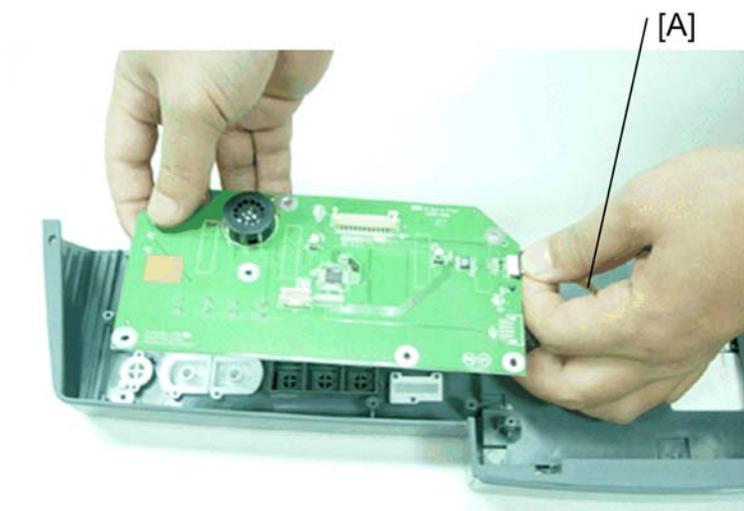
4. Disconnect all cables [A].



g426r111

5. Remove the seven fixing screws (🔩: M3x8) on the operation panel board.

3



g426r112

6. Remove the cable [A] on the operation panel board.

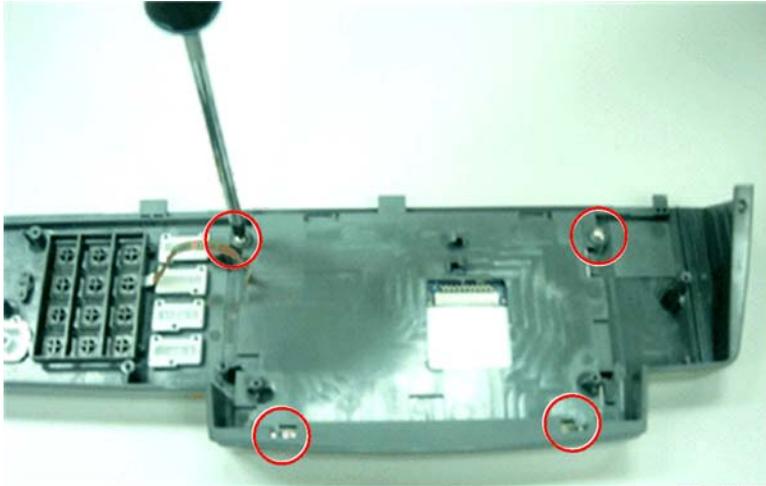


g426r113

7. Operation panel board.

LCD

1. Remove the operation panel (operation panel board).



g426r114

3

2. Remove four fixing screws (🔩: M3x8) on the LCD cover.

Note

- Be careful not to turn the operation panel over at this point, as the various buttons will fall out of their correct positions in the panel.



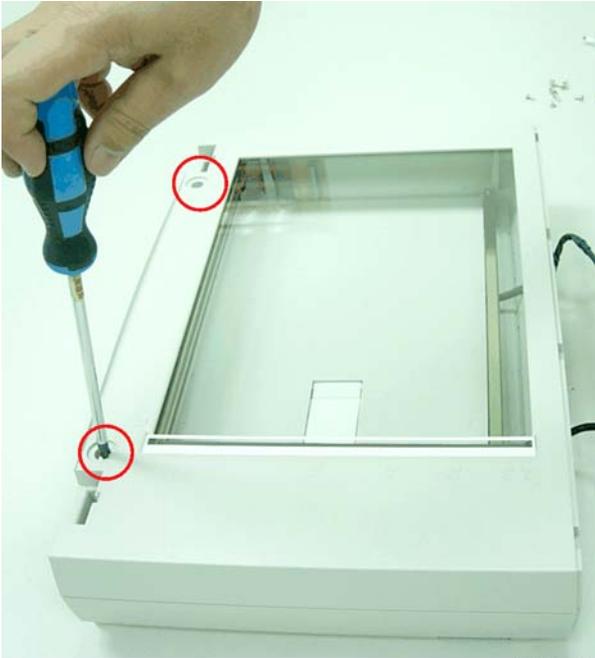
g426r115

3. Remove the LCD panel.

Upper Housing

1. Remove the operation panel (🔧 operation panel board).

3



g426r116

2. Remove two upper housing caps (which cover two fixing screws).
3. Remove the two fixing screws (⌀: M4x10).



g426r117

4. Remove the three fixing screws (⌀: M3x6) on the front of the product.



g426r118

5. Gently remove the upper housing [A].

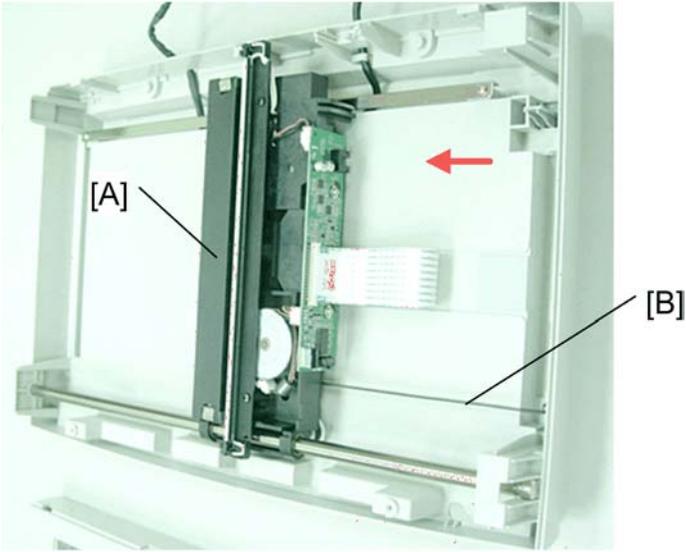
Note

- Before reinstalling the upper housing, clean the glass surface.
- Be sure to use the correct fixing screws when reassembling the upper housing.

Scanning Unit

1. Remove the upper housing (☛ Upper Housing).

3



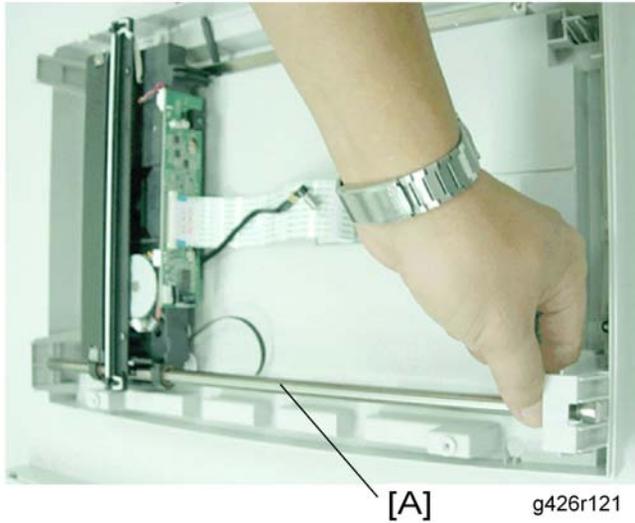
g426r119

2. Move the scanning unit [A] to the center.

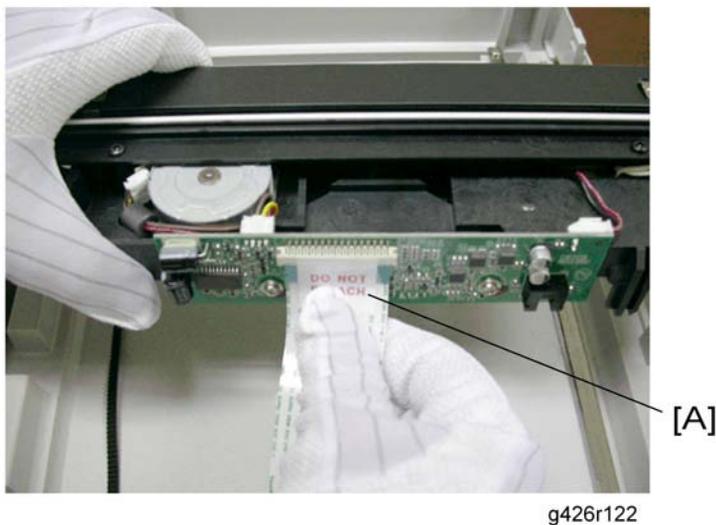


g426r120

3. Unhook the end of the scanner drive belt [B] from the bottom housing.



4. Raise one end of the sliding rod [A] and gently remove it from the scanning unit.

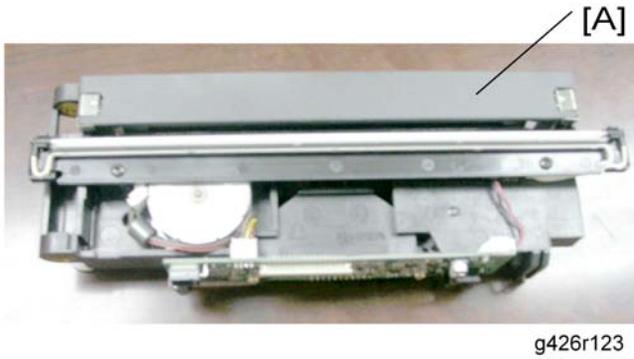


5. Disconnect the flat cable [A]

Note

- Although the sticker indicates "DO NOT DETACH", if you need to remove the cable to replace the Scanning Unit, you must remove this sticker. You will likely have to break the tape at the junction, but the tape is only a safeguard against casual removal and isn't necessary.
- Upon reassembly, be sure to have the flat cable correctly oriented, with the text side facing up, and be sure to push the cable all the way into its socket. Lightly tug at the cable after reconnecting it to verify that it is firmly connected. If the cable is not firmly connected, it will fall out.

3

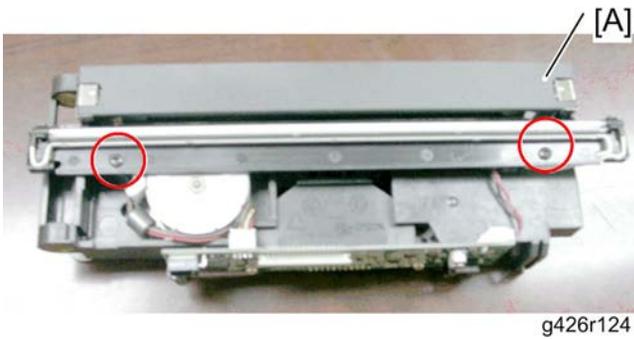


6. Scanning Unit [A].

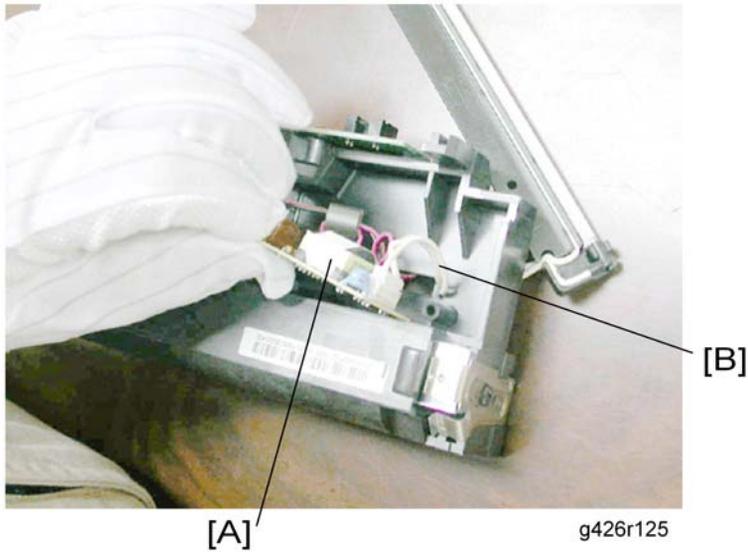
↓ Note

- When reinstalling the scanning unit, be sure not to touch the chips of the CCD board or the lamp of the scanning unit.

Lamp Inverter



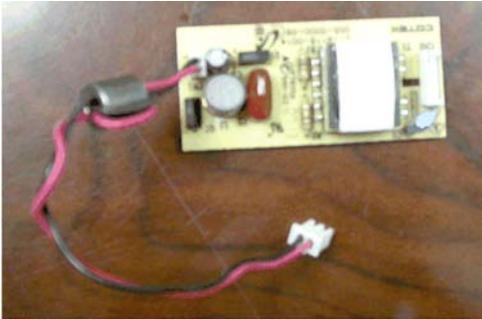
1. Remove the scanning unit [A] (☛ scanning unit).
2. Remove the two fixing screws (☛: M3x6) of the lamp holder.



3. Remove the lamp inverter [A] from the black plastic clip.
4. Disconnect the lamp inverter cable [B].



5. Turn over the scanning unit to disconnect the lamp inverter cable [A].



g426r127

3

6. Lamp inverter

Lamp

1. Remove the scanning unit (☛ scanning unit).
2. Remove the lamp inverter (☛ lamp inverter).
3. Gently remove the lamp from the lamp holder.

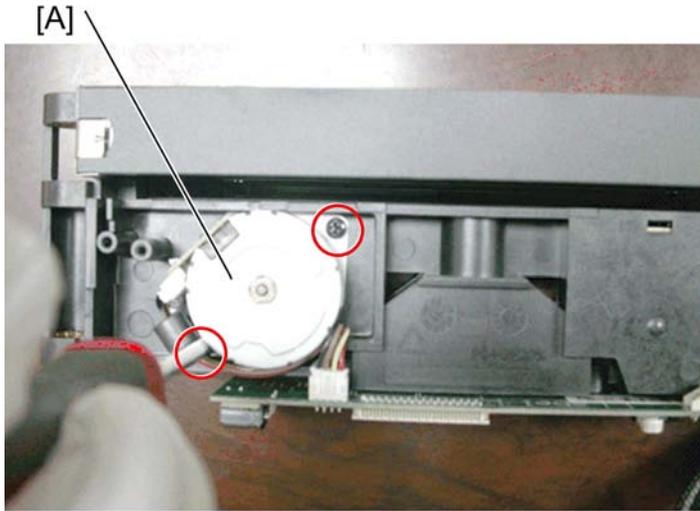


g426r128

4. Lamp.

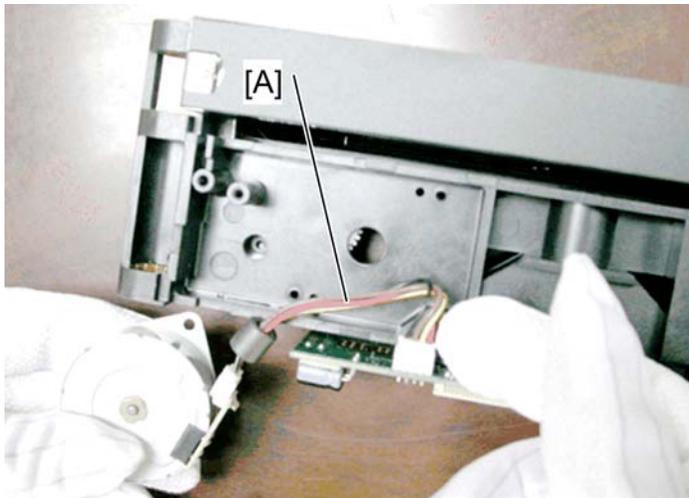
Scanner Motor

1. Remove the scanning unit (☛ scanning unit).
2. Remove the lamp inverter (☛ lamp inverter).
3. Remove the lamp (☛ lamp).



g426r129

4. Loosen the two fixing screws (⚙️: M3x8) from the motor brackets [A].



g426r130

5. Disconnect the motor cable [A] to completely remove the motor.

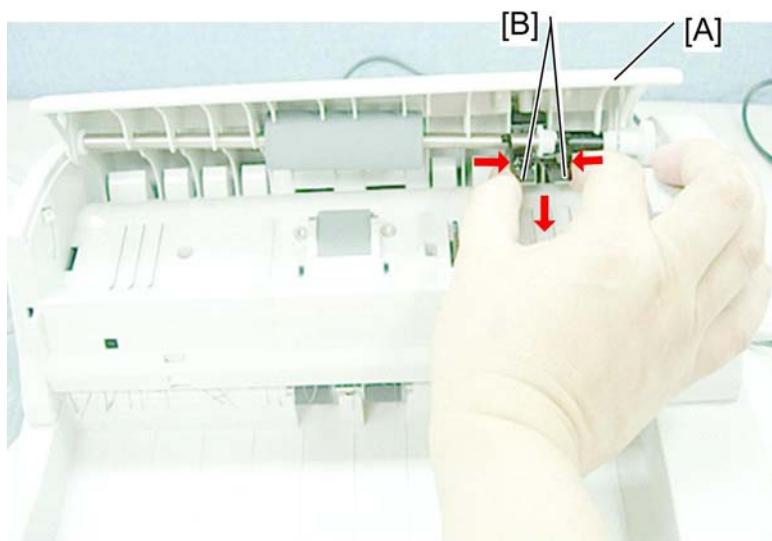


g426r131

6. Motor

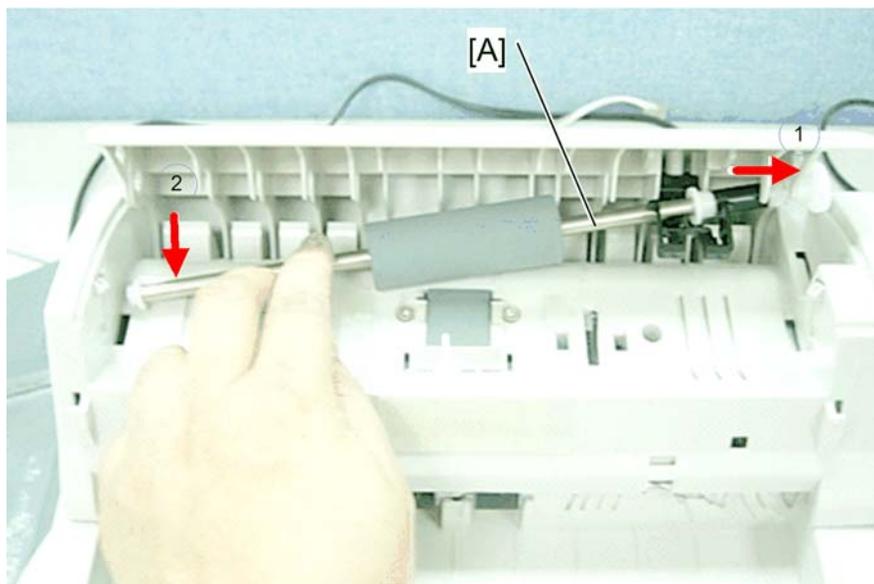
ADF Feed Roller

3



g426r134a

1. Open the ADF front case [A].
2. Hold both ends of the roller stopper [B] and move it down as shown above.



g426r135a

3. Move the ADF feed roller [A] to the right first to loosen and detach the left end of the ADF feed roller, then gently detach the right end of the ADF feed roller from the slot to remove the ADF feed roller.

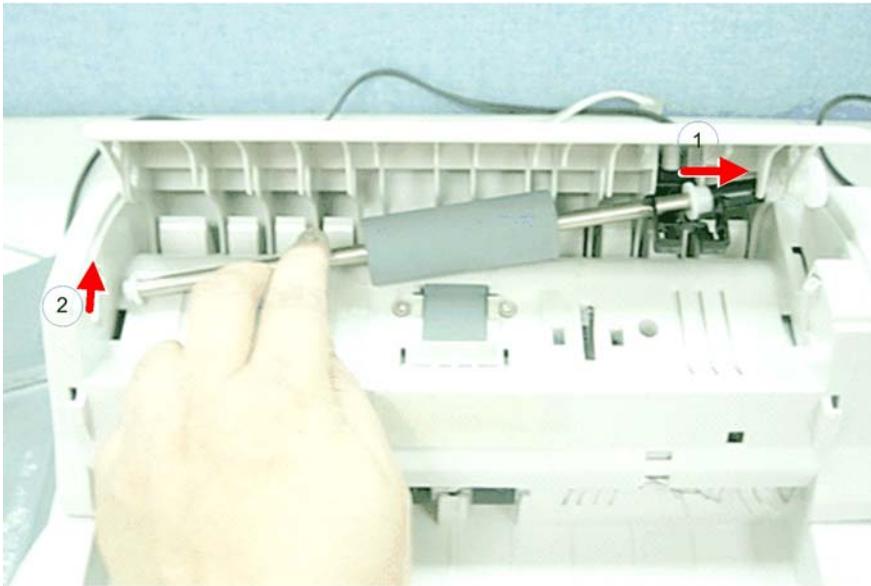


g426r136

4. ADF feed roller

3

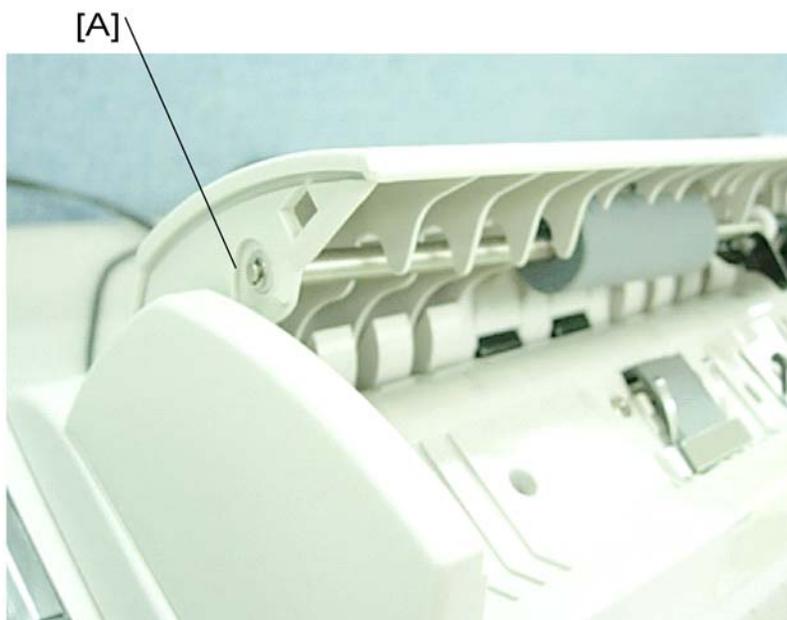
To install the ADF feed roller



g426r135

1. Insert the right end of the ADF feed roller into the slot first, then move the left end of the ADF feed roller up as shown above.

3



g426r137

2. Insert the left end of the ADF feed roller [A] in its original position as shown above.



g426r138

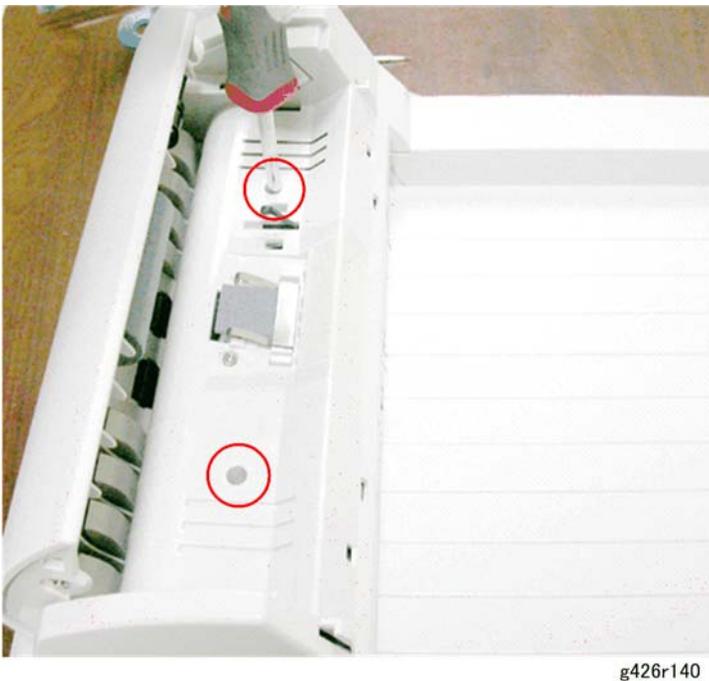
3. Move the roller stopper up and insert it into the slot as shown above.

ADF Upper Case



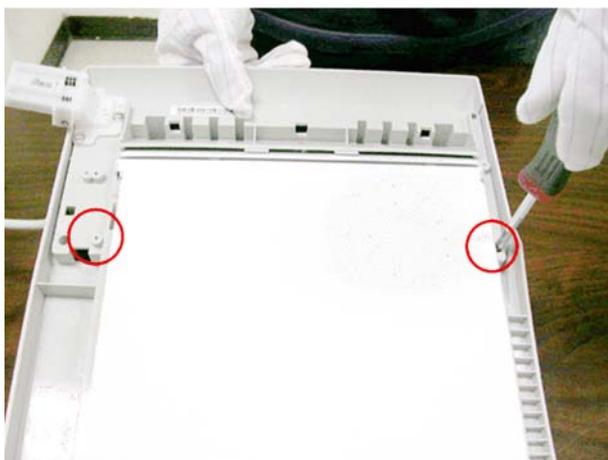
3

1. Remove the Input paper tray by holding both ends and lifting the Input tray up.



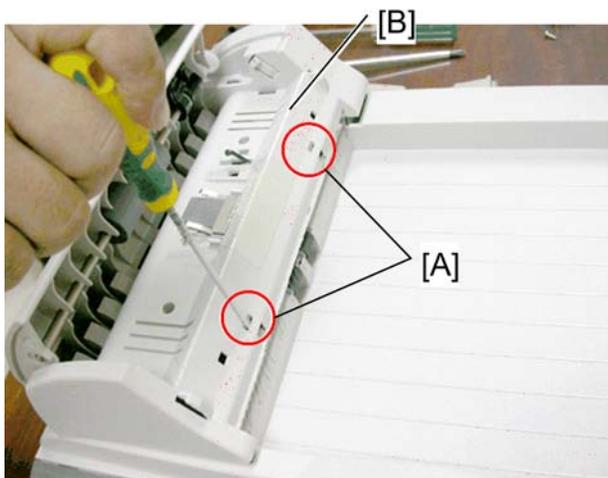
2. Remove the two fixing screws (🔩: M3x10) on the top of the cover.
3. Remove the document cover (👉 Document Cover).

3



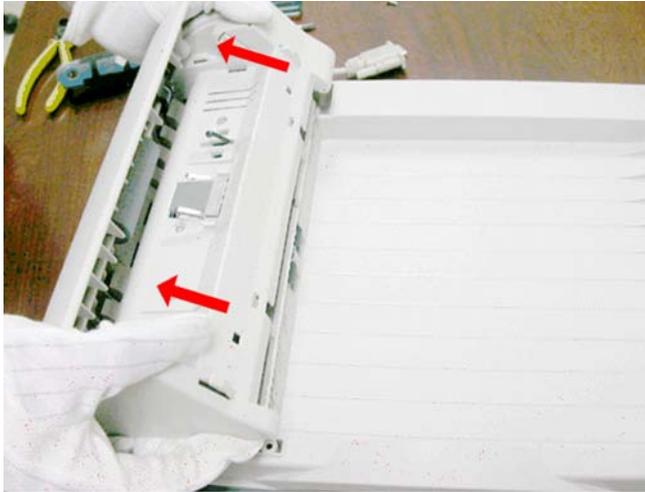
g426r141

4. Turn the document cover over, and remove the two fixing screws (⌀: M3x8) one on each side.
5. Turn the document cover over.



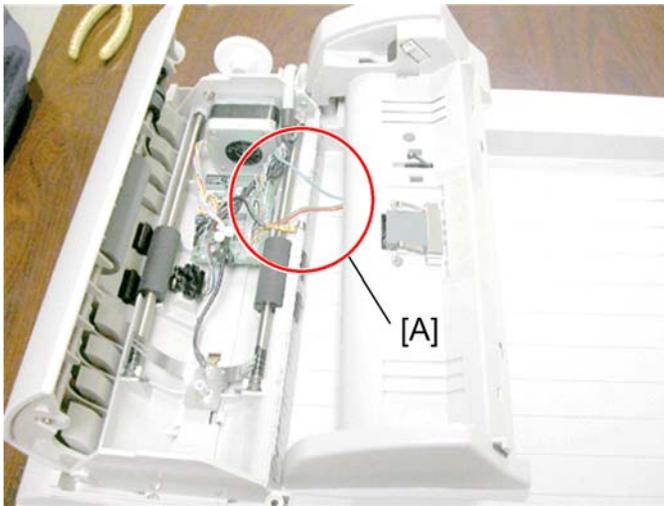
g426r142

6. Insert a flat screwdriver into each of the two indicated slots [A] to release the ADF upper case [B].



g426r143

7. Remove the ADF upper case in the arrow direction to lift it.



g426r144

8. ADF Upper Case

Note

- Remove carefully to avoid breaking the cables [A].

ADF Top Cover

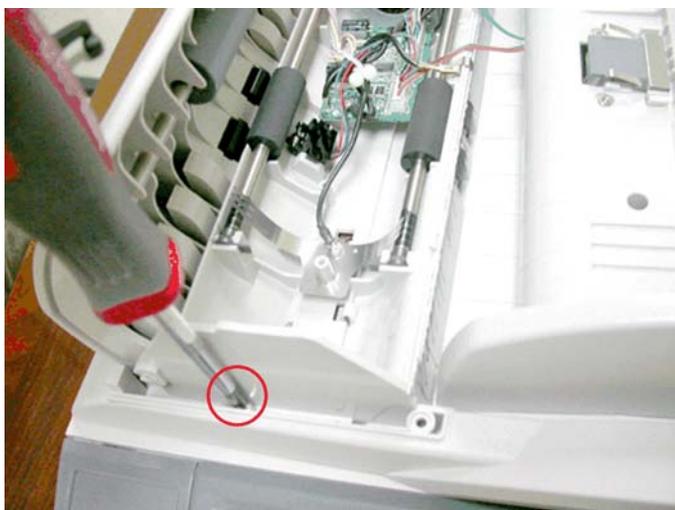
1. Remove the ADF upper case (➡ ADF Upper Case).

3



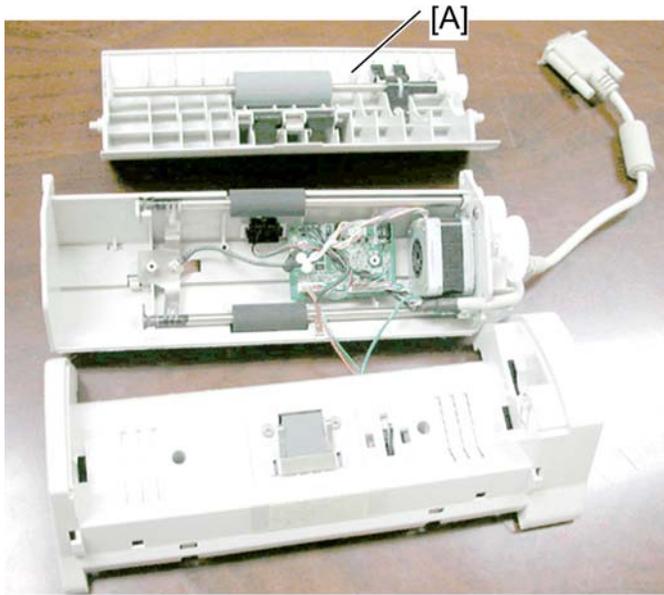
g426r145

2. Remove the fixing screw (⌀: M3x8) on the side of the machine, near the motor gears.



g426r146

3. Remove the fixing screw (⌀: M3x8) on the other side of the ADF unit.



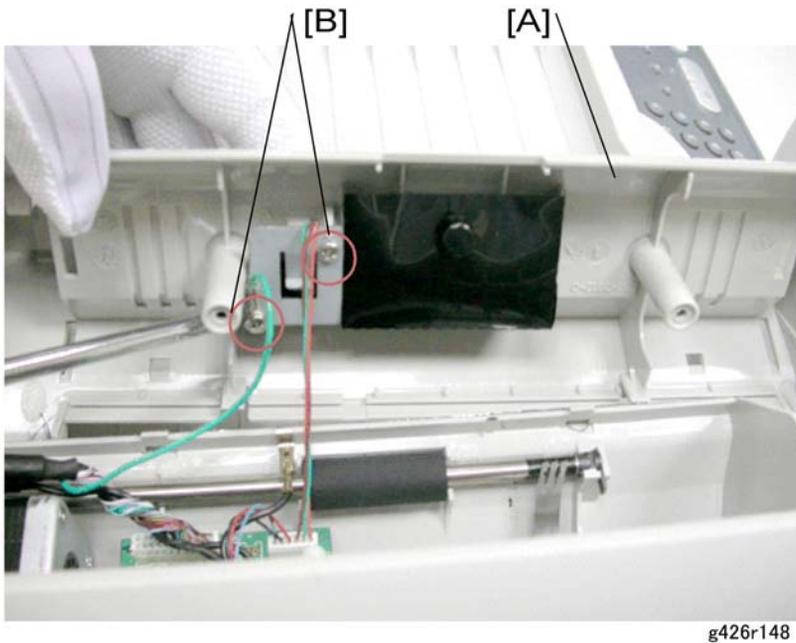
g426r147

4. Remove the ADF front case [A].

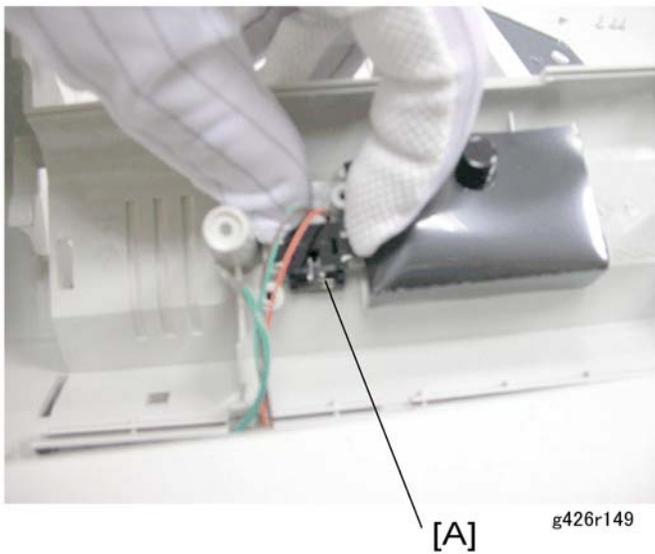
ADF Paper Set / Exit Sensor

1. Remove the ADF front case. (➡ ADF Front Case Removal)

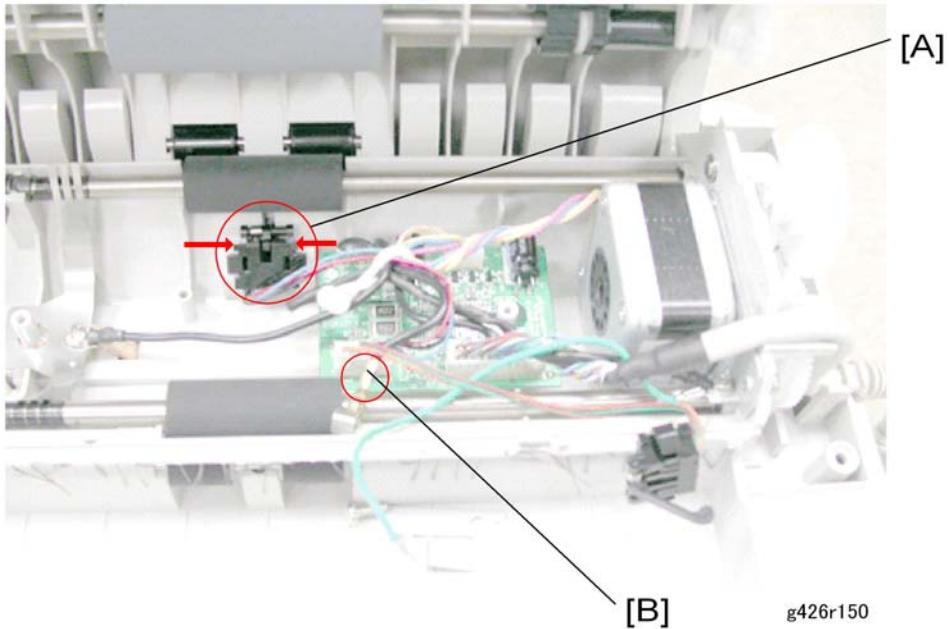
3



2. Raise the ADF upper case [A] to reveal its bottom as shown above.
3. Remove the two fixing screws [B] (⌀: M3x6) on the metal cover of the paper set sensor.

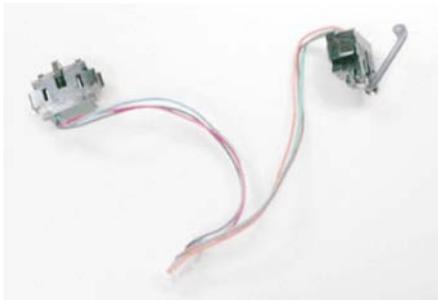


4. Hold both ends of the paper set sensor [A] to remove it from the slot.



g426r150

5. Hold both ends of the paper exit sensor [A] and remove it from the slot.
6. Remove the cable binder and disconnect the sensor cable [B].

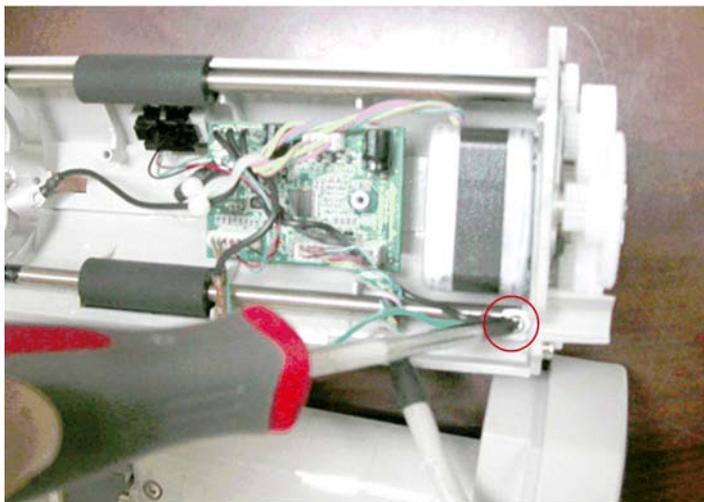


g426r151

7. Paper set / exit Sensor [A].

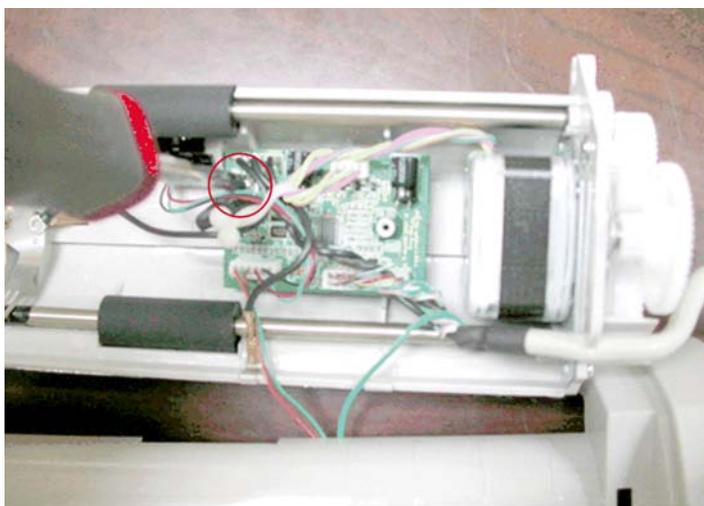
ADF Main Board

1. Remove the ADF front case (➡ ADF Front Case).



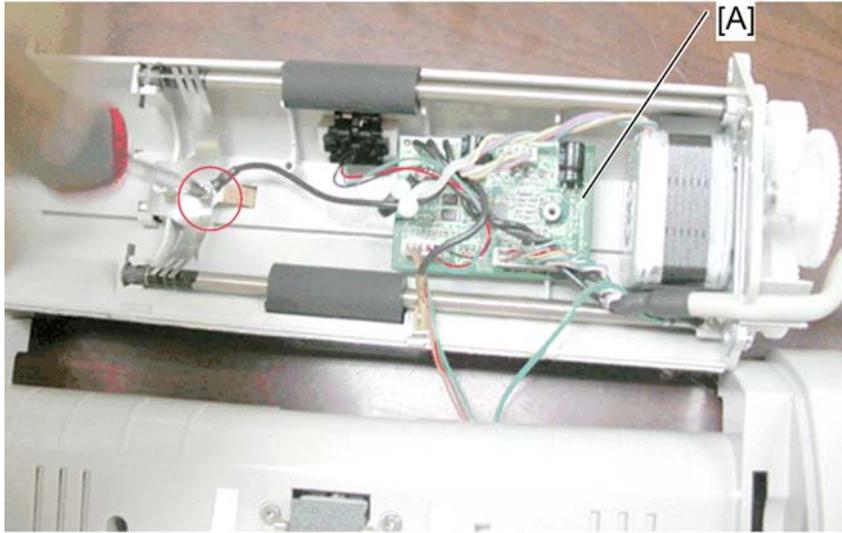
g426r152

2. Remove the fixing screw (🔩: M3x4) at the end of the roller.



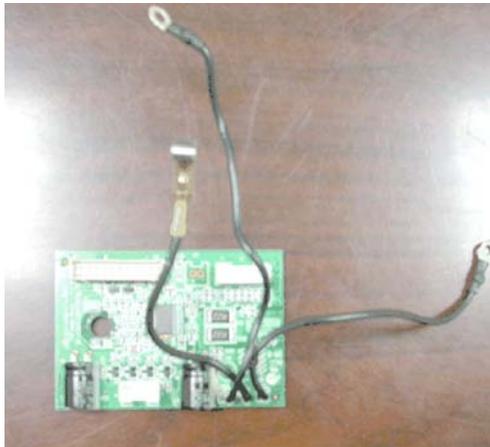
g426r153

3. Remove the fixing screw (🔩: M3x8) on the ADF main board.



g426r154

4. Remove the fixing screw (⚙: M3x8) of the ground wire and unplug all cables to remove the ADF main board [A].



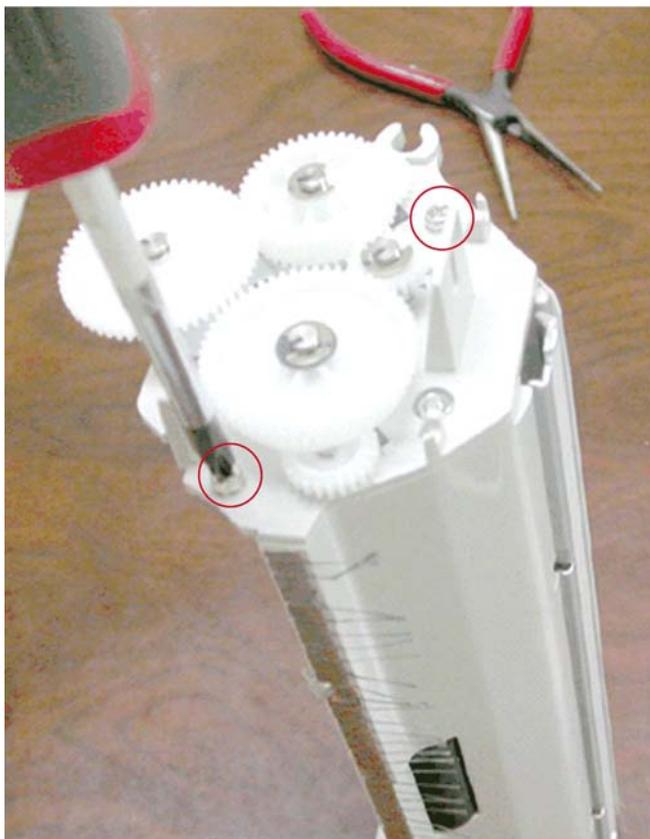
g426r155

5. ADF Main Board

ADF Motor

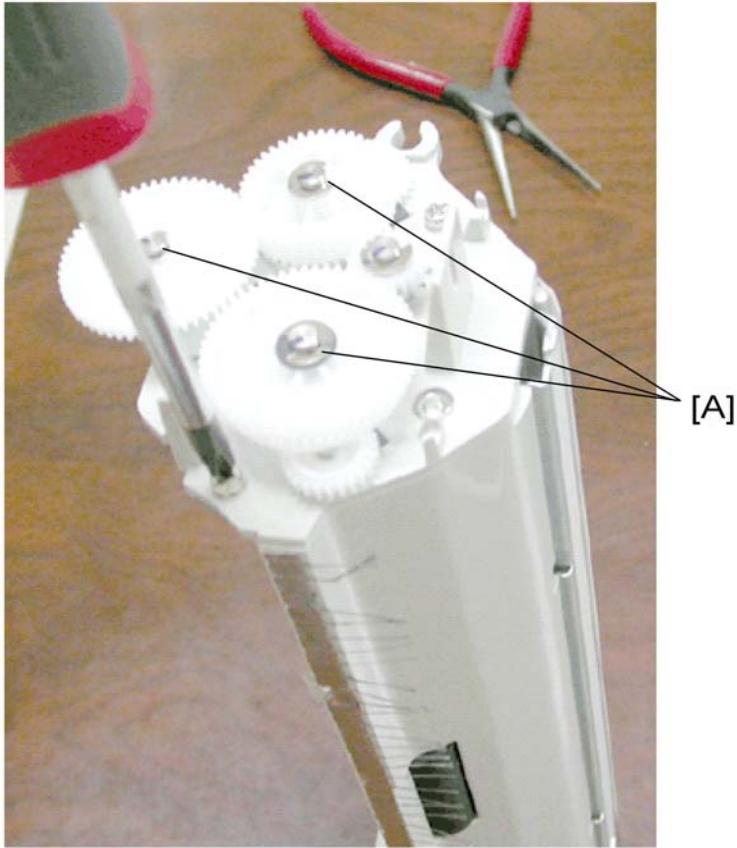
1. Remove the ADF front case (🔧: AD Front Case).

3



g426r156

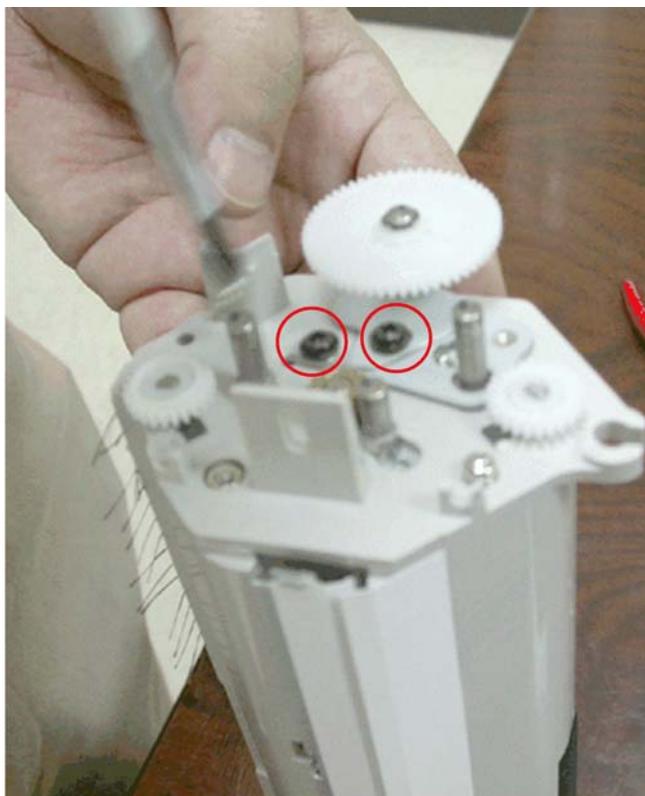
2. Make the ADF unit stand with the gears on the top as illustrated above, and remove two fixing screws (⌀: M3x6).



g426r156a

3. Remove the e-rings on the three gears at the top [A] (Ⓒ x 3).

3



g426r157

4. Remove the three gears at the top and then remove two fixing screws (⌀: M3x5), after that remove the ADF motor.



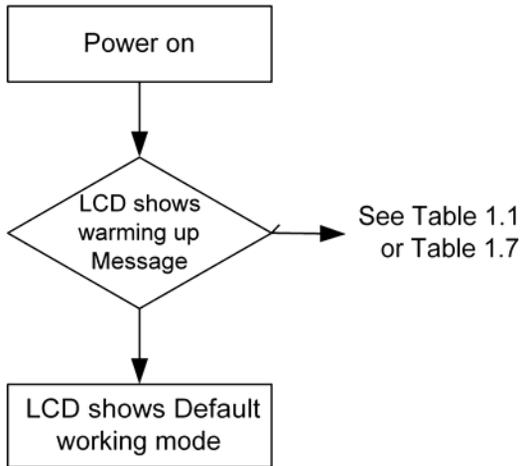
g426r158

5. ADF Motor.

4. Troubleshooting

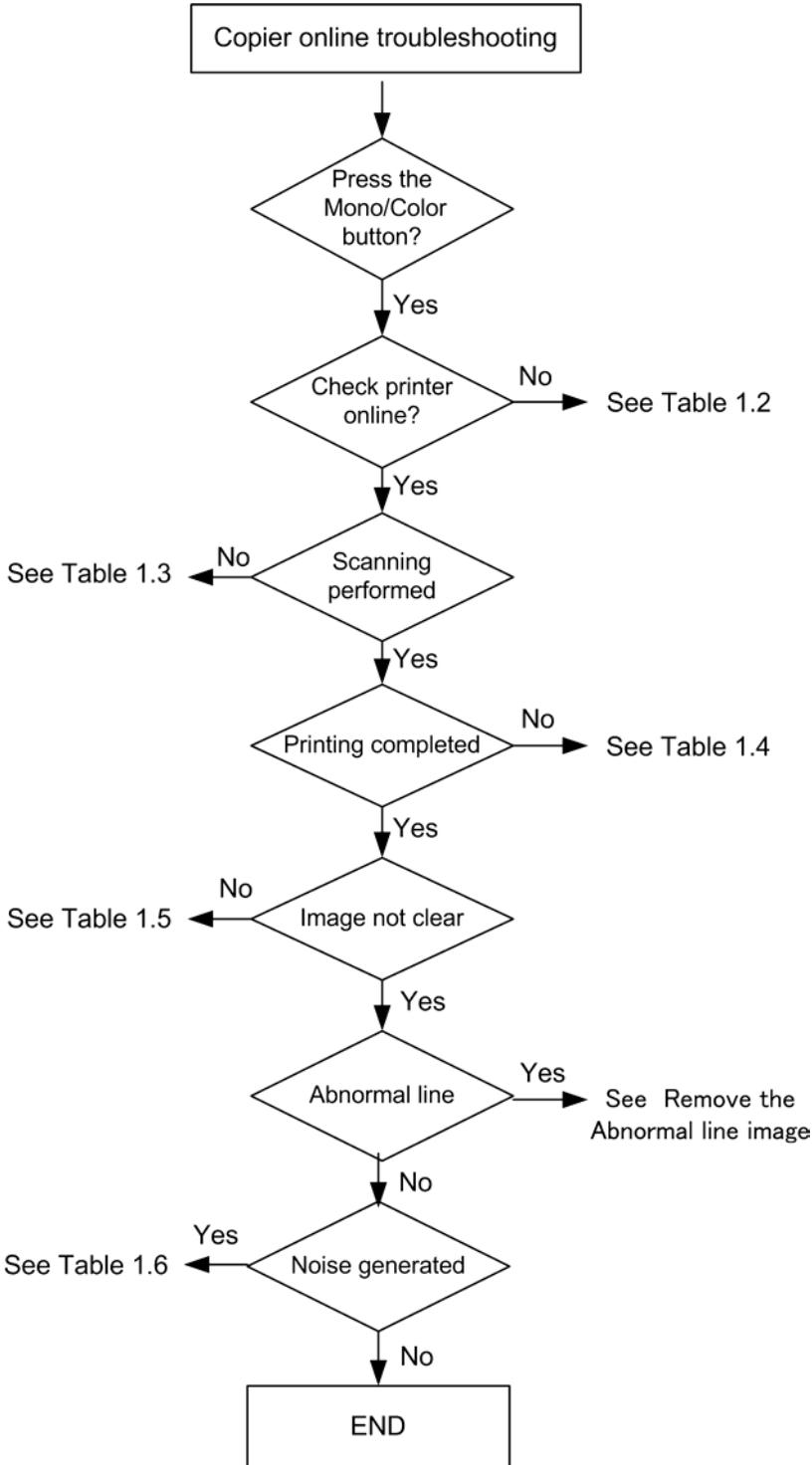
Troubleshooting Flowchart

Turning Machine Power On



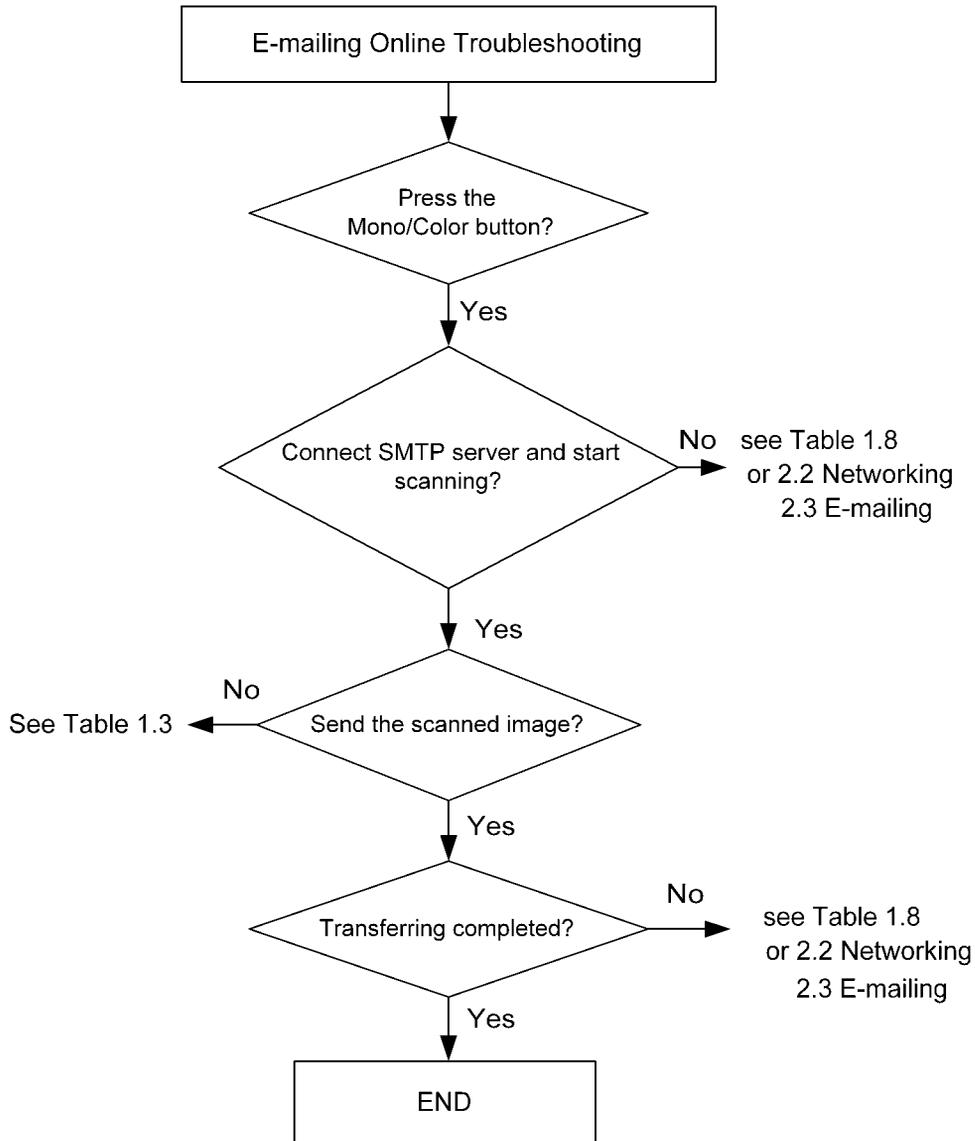
g426t100

Copy Operation

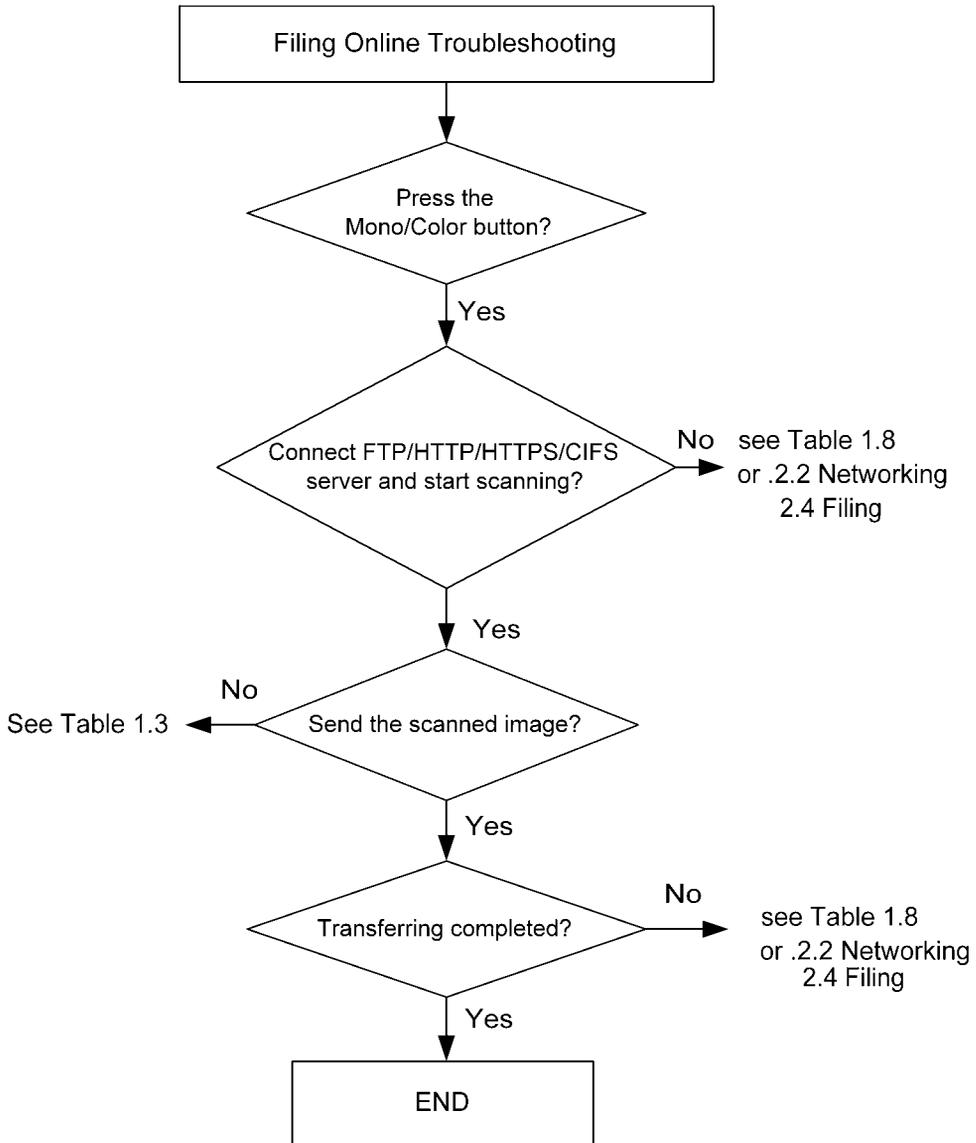


g426t101

E-mail Operation

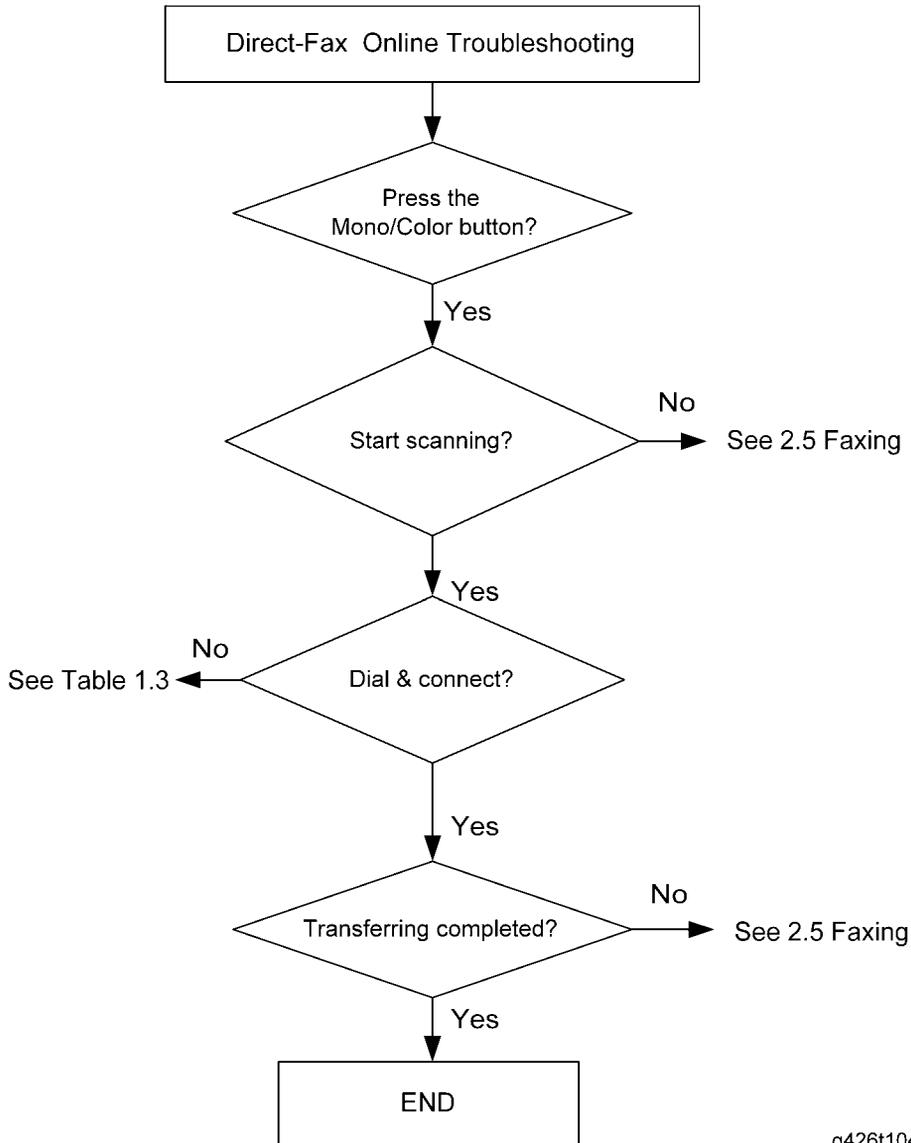


Filing Operation



g426t103

Fax Operation



g426t104

Tables

LCD Does not Display

Table 1.1

Cause	Relevant Unit	Check Method	Maintenance Method
Unplugged from outlet	None	Visual check	Insert the AC plug into the outlet
DC power unplugged from unit	None	Visual check	Insert the DC power adapter cable into the unit
AC voltage failure	None	AC outlet voltage check	None
Power adapter output voltage failure	Power adapter	Output voltage (+24v) check	Replace the power adapter
PCB failure	Main control PCB	Tester check (+24V, GND)	Remove the cause or replace the PCB
LCD module main board connection failure	LCD module main board	Visual check	Plug in the connector and secure it firmly

Printer Does not Respond

Table 1.2

Cause	Relevant Unit	Check Method	Maintenance Method
Printer cable failure	Printer cable	Visual check	Secure printer cable firmly or replace the printer cable
	Main PCB		Replace the PCB
Printer link failure	Printer paper jam	Visual check	Remove paper
	Printer paper empty		Insert paper

Cause	Relevant Unit	Check Method	Maintenance Method
	Printer problem		See printer manual
	Printer busy		Wait till printer ready

Scanning is not Performed

Table 1.3

Cause	Relevant Unit	Check Method	Maintenance Method
Scanner flat cable failure	Scanner flat cable	Visual check	Attach the scanner flat cable
Scanner link failure	Main PCB	Visual check	Replace the PCB
	Scanning unit		Replace the scanning unit

Printer does not Print

Table 1.4

Cause	Relevant Unit	Check Method	Maintenance Method
Wrong printer selected	Printer	Visual check	Make sure the printer information on the LCD display is correct.
Incorrect paper size	Paper tray	Visual check	Replace paper tray or change settings to match type of paper loaded.
Printer problem	None	Visual check	Check printer

Image Unclear

Table 1.5

Cause	Relevant Unit	Check Method	Maintenance Method
Lamp too dark	Lamp	Visual check	Replace the lamp
Dirt on the glass	Glass	Visual check	Clean the glass with clean damp cloth.
Printer toner low	Printer toner	Visual check	Check printer toner or replace the toner
Printer memory not enough	Printer	Visual check	Add printer memory

Noise Generated

Table 1.6

Cause	Relevant Unit	Check Method	Maintenance Method
ADF motor / Scanner motor failure	Motor unit	Visual Check	Replace the ADF motor or the Scanner motor or the gears.
	Main board	None	Replace the main board
Scanning unit failure	Scanning unit	Check scanning unit slack (free-play)	Replace the scanning unit
Dirt on rod / flame	None	Visual check	Clean the rod or the flame with oil

LCD Does not Show Message after Command

Table 1.7

Cause	Relevant unit	Check method	Maintenance method
LCD cable failure	Panel cable	Visual check	Attach the LCD cable and secure it firmly.
LCD problem	LCD	Replace the LCD	Replace the LCD
Push button failure	Operation panel board	Replace the operation panel board	<ol style="list-style-type: none"> 1. Check the panel cable and secure it firmly. 2. Replace the operation panel board.

4

Machine not Connected to Network

Table 1.8

Cause	Maintenance Method
RJ-45 connector is not plugged in	Plug the connector in.
Network cable is damaged	Replace with a good one
IP address is invalid	Ask your network administrator for a valid address.
Subnet Mask is invalid	Ask your network administrator for a valid value.
Gateway IP is invalid	Ask your network administrator for a valid address.

Information Messages

2.1: Scanning and Copying

Message	Problem/Solution
Home sensor error	Restart the machine.

Message	Problem/Solution
	If the message still appears, Check home position sensor. If the home position sensor is malfunctioning, replace the scanning unit.
Lamp error	<p>Restart the machine.</p> <p>If the message still appears, check the following in succession.</p> <ol style="list-style-type: none"> 1. Check if the lamp cable and the inverter cable have been connected firmly. 2. Check the lamp, inverter or main board. If the one of them is malfunctioning, replace it.
ADF paper jam	<p>Open the ADF cover and remove any paper there, then restart the machine.</p> <p>If the message still appears, check the following in succession.</p> <ol style="list-style-type: none"> 1. Check if the ADF cable has been connected firmly. 2. Check if the paper set sensor, paper exit sensor main board, and/or the ADF main board have malfunctioned. 3. Check the paper path. <p>If any one of these has malfunctioned, replace it.</p>
Lock error	<p>Scanning unit is locked.</p> <ol style="list-style-type: none"> 1. Turn off the machine. 2. Find the lock switch underneath the machine and unlock the machine. 3. Restart the machine <p>If the message still appears and simultaneously the scanning unit does not move, even though the motor is making noise, check the following:</p> <ul style="list-style-type: none"> • Scanner motor • Home position sensor <p>If any one of those is malfunctioning, replace it.</p>
Check printer cable or status.	<ol style="list-style-type: none"> 1. Check if the printer cable has been correctly connected. 2. Check if the printer is turned on. 3. Restart the machine and the printer. 4. If the message still appears, check the printer functions.

2.2: Networking

Message	Problem/Solution
The connection has failed. Check network settings.	<p>Ping the IP address of the machine from another PC in DOS prompt. For example, type "Ping 10.1.20.144" in DOS prompt. If the machine does not respond, then perform the following steps.</p> <ol style="list-style-type: none"> 1. Check if the RJ-45 connector is firmly plugged-in. 2. Check the LAN cable. 3. Check the machine's IP address. 4. Check the destination IP address. 5. Check Subnet Mask. <p>Check Gateway IP.</p>
The address is invalid. Check network settings.	
Network is down. Check network settings.	
Network is unreachable. Check network settings.	
Connection aborted by the server. Check network settings.	
Connection reset by the server. Check network settings.	
Connection timed out. Check network settings.	
Unable to reach the destination host. Check network settings..	
Failed to connect mail server. Check network environment.	Check network environment.
Connection error. Check network environment.	
Failed to create socket for DHCP	Check IP address of DHCP server or contact your network administrator for further help.
Failed to search DHCP server.	
Failed to get IP from DHCP server.	
Failed to renew IP from DHCP server.	

2.3: E-Mailing

Message	Problem/Solution
Sequence error	Reboot the machine, and try later. If the error is still there, replace the main board.
Internal device failure	Reboot the machine, and try again. If the error is still there, replace the main board.
Failed to connect mail server	Contact your network administrator for further help.
Failed to get response from mail server.	Contact your network administrator for further help.
SMTP server is empty. Please specify SMTP server in User Tools.	Please specify IP address of the SMTP server by pressing the User Tools button on the panel.
SMTP server address is wrong. Please check SMTP server.	Check the IP address of the SMTP server.
Unpredicted error	Contact your network administrator for further help
Insufficient System Storage	Contact your network administrator for further help.
Mail server doesn't support SMTP service extension	Contact your network administrator for further help.
Mail server doesn't support SMTP log-in authentication.	Contact your network administrator to turn on SMTP log-in option.
SMTP log-in error	Check your log-in user name.
Mailbox Unavailable	Check "To" address.
Processing Error	Contact your network administrator for further help.
Temporary authentication failure	Contact your network administrator for further help on mail server's authentication mechanism. Choose SMTP authentication for E-mail security or turn off the mail server's authentication and try again.

Message	Problem/Solution
Command error	Reboot the machine, and try again. If the error is still there, replace the main board.
Parameters or argument error	<ol style="list-style-type: none"> 1. Check if the Device Name is valid. The Device Name can be found in User Tools>General. 2. Check "From" address. 3. Check "To" address. 4. Contact your network administrator for further help.
Command parameters not implemented	<p>Check if the Device Name is valid. The Device Name can be found in User Tools>General.</p> <p>Or you may contact your network administrator for further help.</p>
Authentication required	<p>Contact your network administrator on mail server's authentication mechanism.</p> <p>Choose SMTP authentication for E-mail security or turn off the mail server's authentication and try again.</p>
Mailbox unavailable	Check "To" address.
User not local	Check "To" address.
Service unavailable	Contact your network administrator for further help.
Mail server does not support SMTP service extension.	Contact your network administrator for further help.
Exceeded storage allocation	<ol style="list-style-type: none"> 1. Check "To" address. 2. Check mailbox storage allocation. 3. Contact your network administrator for further help.
Mailbox name is not allowed	Check "To" address.
Mail action has not been taken.	Check "To" address.
Connection error	<ol style="list-style-type: none"> 1. Check network environment.

Message	Problem/Solution
	2. Check if email attachment size is larger than the mailbox quota.
The transaction has failed.	Contact your network administrator for further help.

2.4: Filing

4

Meaning	Problem/Solution
Can not create a subfolder.	Make sure you have sufficient privileges.
Internal device failure	Reboot the machine, and try later. If the error is still there, replace the main board.
Failed to connect FTP server.	Make sure the FTP server is not shutting down and that the port number is correct. If the error is still there, contact your FTP server administrator.
Unexpected error	Contact your network administrator for further help.
FTP log-in name error	Check your log-in name and try again
FTP password incorrect	Check your password and try again
FTP can't enter this directory.	Make sure you have privileges to enter this directory.
FTP can't verify file existence	Make sure you have privileges to browse this directory.
FTP can't change data transfer type.	Contact your server administrator for further help.
FTP file store error	Make sure you have privileges to store files on the server.
Insufficient storage space in system.	Check FTP server free storage space and contact your server administrator.
File name not allowed.	Change file name to meet naming convention of FTP server's OS.
FTP permission denied.	Check the privileges of your account.
CIFS (User level) can not make subdirectory	This account doesn't have write privileges to create new subdirectories.

Meaning	Problem/Solution
CIFS Network share name incorrect.	Check directory in folder and make sure it follows UNC, such as \\Computer\Share\directory.
Failed to connect CIFS	Check if server supports CIFS (SMB) connection.
CIFS Computer name error	Make sure computer name in the directory is correct.
CIFS dialect negotiation failed.	This CIFS may not support PC NETWORK PROGRAM 1.0 dialect.
CIFS (User level) log-in fail.	Check log-in name and password, and then try again.
CIFS has failed to create file.	Make sure you have full control privileges for relevant shared folder.
CIFS send data error	Check your network administrator for help.
CIFS failed to send file attribute.	Make sure you have full control privileges.
HTTP unauthorized	This HTTP server needs authorization. Make sure your account has correct authorization.
Failed to connect to HTTP	Check Server IP and HTTP ports. Make sure they are correct, or Check whether that server supports HTTP connections.
HTTP Resource not found	If you can't save files on that server, contact your server administrator for help.
HTTP Forbidden	This action is forbidden on this server. This is not unauthorized, but is forbidden.
Unexpected error	Reinstall the latest software, or replace the main board, or contact your server administrator for help
HTTP MKCOL method not allowed	Contact server administrator to change permissions for this privilege.
HTTP MKCOL method not implemented	HTTP server does not support MKCOL to create directory. Give up creating a new directory or create directory at server in advance.
HTTP PUT method not allowed	Contact server administrator to change permission for this privilege.
HTTP internal server error	Contact your server administrator for further help.
HTTP PUT method not implemented	That server does not implement HTTP PUT method. This product can't store files on this server, contact your system administrator for help.
HTTP server unavailable	Contact your server administrator for help.

Meaning	Problem/Solution
HTTP server does not support HTTP version 1.1	That server does not support HTTP version 1.1 (which the product does use), contact your server administrator for help.
POP3 server address is wrong.	Check IP address of POP3.
Failed to connect to POP3 server.	Contact your network administrator for help.
Failed to log-in to POP3 server.	Check log-in name and password.
LDAP server log-in error	Check log-in name and password.
LDAP server IP error	Check IP address of LDAP server. Or contact your network administrator for help.
LDAP port error	Check if the port number is correct.
LDAP user password error	Check if the password is correct.

2.5: Faxing

↓ Note

- When a problem occurs during faxing, only “**Communication Error**” will be indicated on the LCD-display. The information codes which indicate possible causes will only be shown in the **Fax Activity Report**. To print the Fax Activity Report, simply select “**Yes**” or “**Error only**” in the “**Transmission Report**” option after pressing the “**User Tools**” button and choosing **Fax Settings** and then **Options**.

Error Code	Problem/solutions
0	Fax is finished & OK.
0200	An error has occurred, but the cause is unknown as no message was received from the sending (remote) fax machine. <ul style="list-style-type: none"> Check the remote fax machine and then try again.
0201	No Dial Tone "Detect Dial Tone" is enabled and there is no dial tone detected.
0202	Can not get proper modulation for V.34. <ol style="list-style-type: none"> Your fax machine receives a damaged fax transmission from a remote fax machine. The line quality is poor. <ul style="list-style-type: none"> Please try again or use another line.

Error Code	Problem/solutions
0203	<p>No fax response.</p> <p>CED is not detected. The remote modem or fax modem has not sent a fax message within the specified time.</p> <ul style="list-style-type: none"> • Check the remote fax machine and then try again.
0204	<p>Destination line is busy.</p> <ul style="list-style-type: none"> • Wait a few seconds, then try again.
0205	<p>User has cancelled the job during scanning or transmission.</p>
0207	<p>In phase D, when doing a Tx job & receiving CRP</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. 2. The line quality is poor. <ul style="list-style-type: none"> • Please try again or use another line.
0209	<p>Disconnect signal is received during sending or receiving.</p> <p>The remote fax machine may be disconnected.</p> <ul style="list-style-type: none"> • Check the remote fax machine and then try again.
0212	<p>In phase D, when receiving CRP with a count of ≥ 4 or in phase B, when receiving CRP with a count of ≥ 2.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. 2. The line quality is poor. <ul style="list-style-type: none"> • Please try again or use another line.
0213	<p>In phase AB, DIS's content shows Rx & Polling is disabled.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. <ul style="list-style-type: none"> • Please try again or use another line.
0215	<p>In phase AB, DIS's content shows Polling is disabled.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. <ul style="list-style-type: none"> • Please try again or use another line.
0225	<p>In phase B, the training speed is the lowest speed & still receives FTT.</p> <p>The line quality is poor.</p> <ul style="list-style-type: none"> • Please try again or use another line.

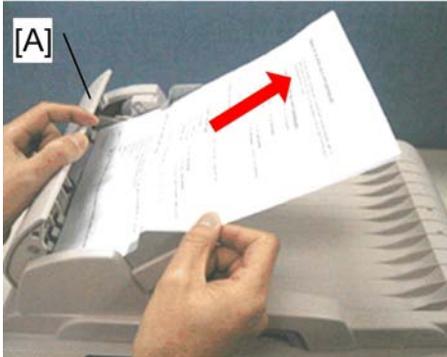
Error Code	Problem/solutions
0226	<p>In phase D, when doing a fax job and receiving PIN & ERR.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. 2. The line quality is poor. <ul style="list-style-type: none"> • Please try again or use another line.
0229	<p>In phase C, when doing a Tx ECM job and it can not send an ECM block successfully.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. 2. The line quality is poor. <ul style="list-style-type: none"> • Please try again or use another line.
0230	<p>When doing Tx Non-ECM job, system can not receive the file attempting to be sent. When doing Tx ECM job, system can not get receive the file attempting to be sent.</p> <ol style="list-style-type: none"> 1. Your fax machine receives a damaged fax transmission from a remote fax machine. 2. The line quality is poor. <ul style="list-style-type: none"> • Please try again or use another line.
0234	<ol style="list-style-type: none"> 1. When doing an Rx job, the system will check whether there is enough free space. 2. Can not create Rx job successfully. 3. Can not create Rx file successfully for writing. 4. In phase D & Non-ECM mode, when receiving EOP; PRI_EOP; MPS; PRI_MPS; EOM; or PRI_EOM, the system unsuccessfully attempts to save Rx file. 5. In phase D & ECM mode, when receiving PPS_EOM; PPS_PRI_EOM; PPS_EOP; PPS_PRI_EOP; PPS_MPS; PPS_PRI_MPS or PPS_NULL, the system unsuccessfully attempts to save Rx file. <p>Memory Full:</p> <ul style="list-style-type: none"> • Check if the printer is connected. If the printer is not connected, the scanned image will be stored in MFP's memory. • Your printer may produce an error message. Check and solve the problems. • Check Send Later jobs. These jobs are waiting (in memory) to be transmitted. Carry out these transmissions to free up some memory. • Current memory is not enough to process the scanning job. <p>Press "Start" to send the pages successfully scanned or "Stop" to abort the job.</p> <p>You may choose a lower resolution or try to send fewer pages at once.</p>
0237	<p>In phase D, when receiving RTN and the country code is "Germany".</p>

Error Code	Problem/solutions
	<ol style="list-style-type: none">1. Your fax machine receives a damaged fax transmission from a remote fax machine.2. The line quality is poor.<ul style="list-style-type: none">• Please try again or use another line.
0238	<p>In phase D, when receiving ERR.</p> <ol style="list-style-type: none">1. Your fax machine receives a damaged fax transmission from a remote fax machine.2. The line quality is poor.<ul style="list-style-type: none">• Please try again or use another line.

Other Troubles

Clearing a Paper Jam

In the event of a paper jam, follow the procedures below to remove the paper:



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1. Gently open the ADF front cover [A] to the left.
2. Carefully pull the paper out of the ADF unit.
3. Close the ADF front cover. The product should now be ready to use.

Removing Abnormal Line Images

Note

- When a scanned image is made by ADF, refer to the details below.

When the scanned image has abnormal lines in it, clean the white area [A] on the glass as indicated below with a clean lint-less cloth.



Reasons why abnormal lines can occur:

1. When the machine receives a scan command, for example, after a user presses the B&W Start or Color Start button, the scanning unit [C] (underneath the white area) which is beneath the document glass begins to move a few steps forward and stops at the white area [A].
2. Then, the paper from the ADF passes through the pickup mylar [B] to allow the scanning unit (underneath the White Area) to capture the image, with motion provided by the paper moving past the scanner.

Therefore, if there is a large enough particle of dust or particle on the white area [A], the scanning unit will capture the dust and scan as a dot. When the paper goes through the pickup mylar from the top of the page till the end of the page, the dot image will be reproduced continuously and then finally become a line.

To avoid poor quality scanned images, be sure to clean the white area [A] occasionally.

5. Service Table

Accessing Fax Service Mode

To access the service mode for the fax function:

1. Reboot the machine and press "2" on the numeric keypad.
2. The screen will indicate the service mode is available.
3. Press the **User Tools** button on the operation panel and then choose **Fax Settings**.
4. Choose the Option tab and then the Service Mode button to display the Service Mode screen. The options are described below in detail.

Service Mode

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Settings	
Item	Description
Activity Report	Choose 'Enable' to print a report showing a record of every 50 communications between the sending and receiving fax machines. The report may contain information and results which is useful to troubleshoot a particular problem. (The default setting is Enable.)
Tone/Pulse	Sets the fax modem to dial out using Tone or Pulse. The default setting is Tone.
Fax Header	Choose Enable to display a fax header, including ID#, date and time, the receiving fax number, and page index to be shown at top of all outgoing faxes. (The default setting is Enable.) For many countries, the fax header is required for a legal fax document.
Attenuator	This setting has a range between 0 to 15 dB. It should be left at its default value of 0 dB.
MF Attenuator	This has settings with a range between 0 to 15 dB. It should be left to its default value of 0 dB.
Transmission Rate	Sets the modem's transmission rate.

Note

- **Settings: 33.6Kbps, 28.8Kbps, 14.4Kbps, 9.6Kbps, 4.8Kbps.** The default setting is 33.6Kbps.

If the fax is indicating communications errors, use this setting to select slower rates to determine if the communications error is caused by the phone line.

5

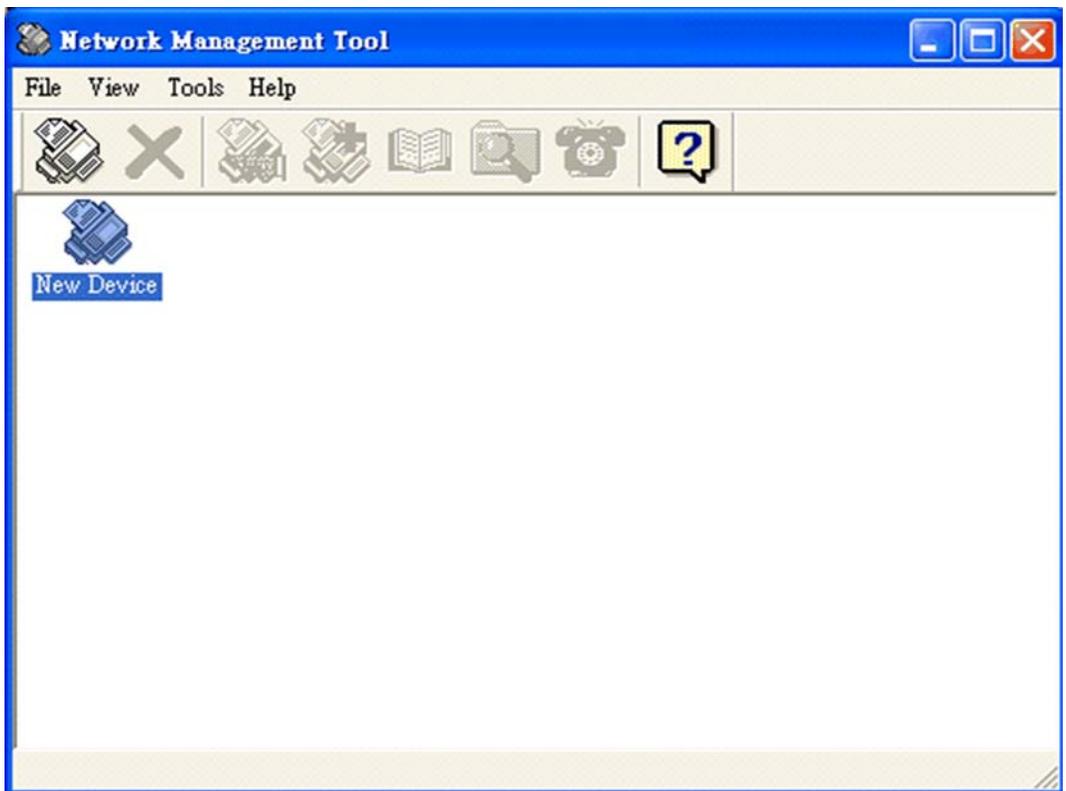
Monitor Control	<p>Sets to turn on or off the modem speaker.</p> <p>Choice: Disable, Type 1, Type 2. The default setting is Disable.</p> <p>Disable silences the speaker.</p> <p>Type 1 turns on the speaker for 10 seconds during dialing and the initial connection, and then goes silent.</p> <p>Type 2 leaves the speaker active for all fax communications.</p>
Pulse Dial Rate	<p>Sets the pulse dialing rate.</p> <p>Choice: 10pps or 20pps. The default setting is 10pps.</p>
Pulse Make Ratio	<p>Choices: 33%, 40%. The default setting is 33%.</p>
Tone Duration	<p>Choices: 75, 85, or 100 microseconds. The default setting is 75 microseconds.</p>
Calling Timer	<p>The waiting time the MFP sends its signal to a remote fax machine. It should be left to its default value of 60 seconds. Or you may enter an alternative value via the soft keyboard.</p>
Test Mode	<p>Click to perform an initial test to check if the transcending signals are correct.</p>
Item	Options
Tone Send Test	<p>Choices: 2100Hz, 1850 Hz, 1650 Hz, & 1100 Hz. The default setting is 2100Hz.</p>
DP Send Test	<p>Choices: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, *, & #. The default setting is 0.</p>
MF Send Test	<p>Choices: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, *, & #. The default setting is 0.</p>
Modem Signal Send Test	<p>Choices: V.34 (33.6 kbps), V.34 (28.8 kbps), V.17 (14.4 kbps), V.17 (12.0 kbps), V.17 (9.6 kbps), V.17 (7.2 kbps), V.29 (9.6 kbps), V.29 (7.2 kbps), V.27 (4.8 kbps), V.27 (4.8</p>

	kbps), V.27(2.4 kbps), V.21 (0.3 kbps). The default setting is V.34 (33.6 kbps).
Off-Hook Test	Click to perform Off-Hook Test.

Updating System Firmware

To update system firmware, please follow these steps:

1. Download the latest firmware from the web site. (file extension .spf)
2. Install the Network Management Tool by placing the Scanner Driver CD-ROM into your CD-ROM drive. In a second, the installation graphic appears.
3. Choose **Network Management Tool** and follow the on-screen instruction to complete the installation.
4. Start **Network Management Tool** by choosing Start>All Programs>IS800C Network Management Tool>IS800C Network Management Tool.



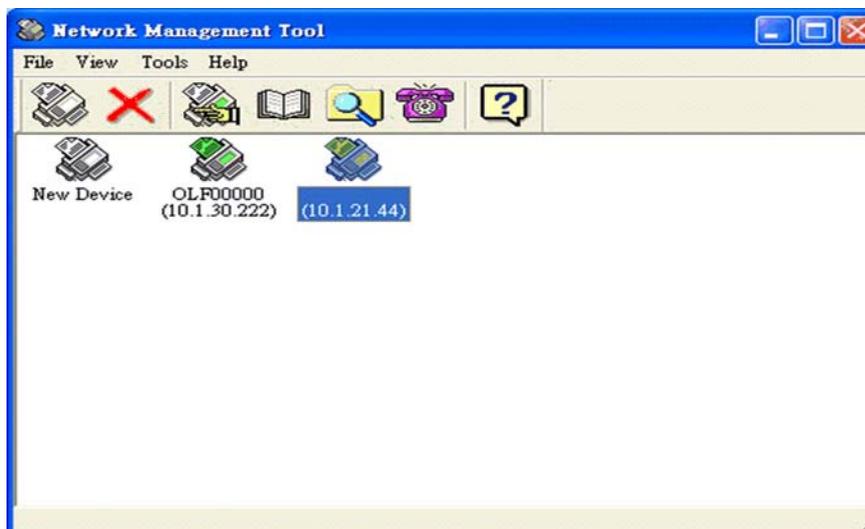
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5. In a second, the **Network Management Tool** main screen appears as above.
6. Choose **New Device** from the **File menu** to prompt the following New Device dialog box. Or you may click the new device tool from the toolbar. Or double click the large new device icon.



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7. Enter the IP address of your machine as illustrated.



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8. In a second, the IS800Cs on the network will be displayed in the main screen as follows.
9. Choose a device which you wish to update its firmware.
10. Choose **Update Firmware** from the **Tools Menu** and then choose the latest firmware file. (.spf file)
11. In a second, The Update OK message will be prompted.
12. Reboot your machine to complete the update.

6. Detailed Section Descriptions

External View

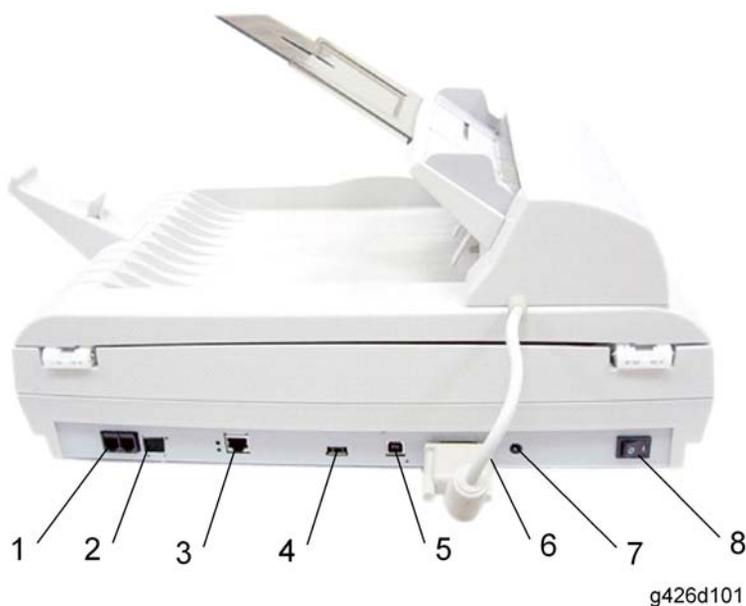
The Front View



1. Input Paper Tray and Paper Support	
2. Document Cover	
3. Document Stopper	
4. Handle	
5. Operation Panel	
6. LCD-display	
7. ADF Unit	

6

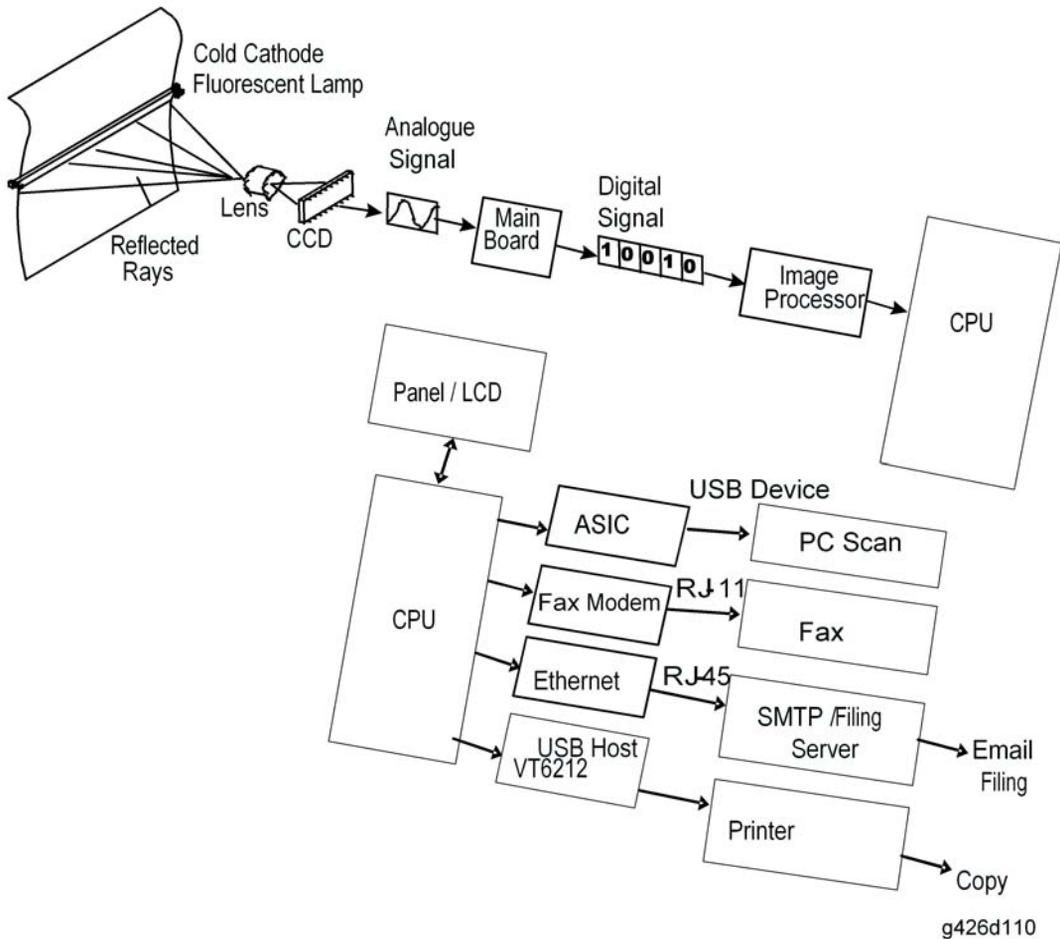
The Connection Ports



1. Line Jack	To connect the product to a "RJ-11" telephone jack (provided by the telephone company with a telephone line).
1. Phone Jack	This Phone jack is currently empty, since no handset is provided with the product.
1. LAN Port	To connect to a network via a LAN cable.
1. USB Printer Port	To connect a printer via a USB cable.
1. USB Port	To connect a computer as a USB scanner.
1. ADF Port	To connect the ADF unit with an ADF cable.
1. 24VDC/2.0A	To connect the power cable.
1. Power Switch	To turn the machine on and off.

Overview

Theory of Operation

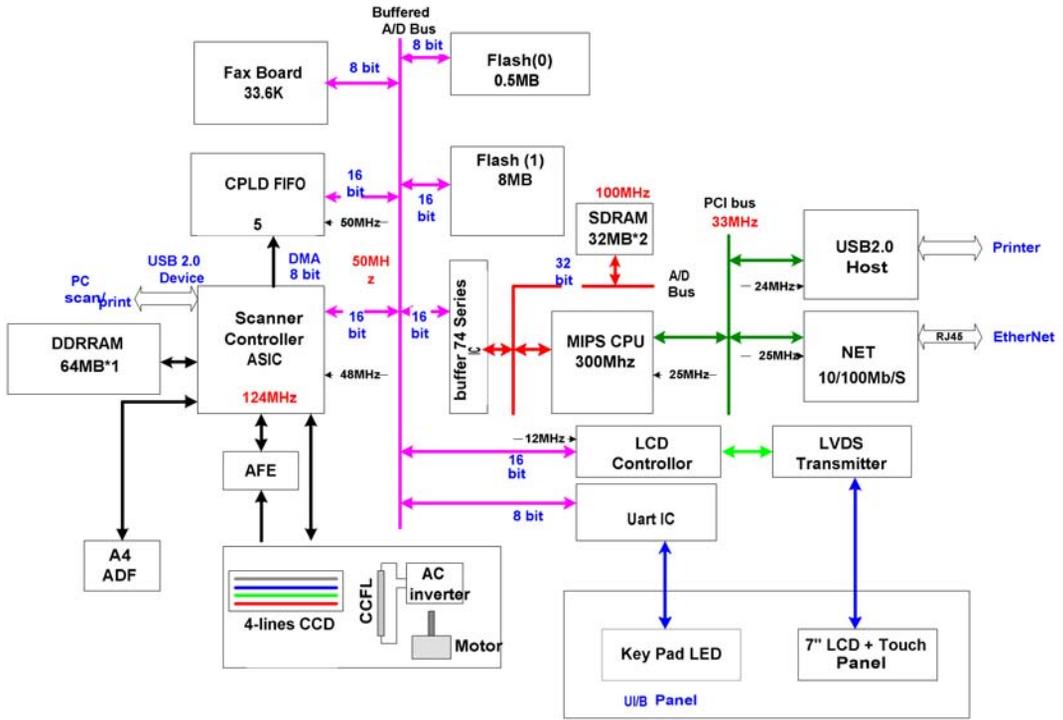


The reflected rays of your original (as shown in the diagram above), pass through the lens and create an image on the CCD (Charged Coupled Device). Then, according to the different light intensity perceived by the CCD, the CCD will transfer this data as an analog signal to the main board, where the signal is then turned into a digital signal.

The digital signal flows to the image processor and on to the CPU (Central Processing Unit). Through the commands from the Operation Panel, the digital signal can go to the 1284 Controller and to a printer for printing or to RJ-45 for SMTP or a file server to send an email or store an image. Or, the digital signal may go to RJ-11 for the modem to send a fax to a G3 fax machine.

Main Control Unit

System Block Diagram

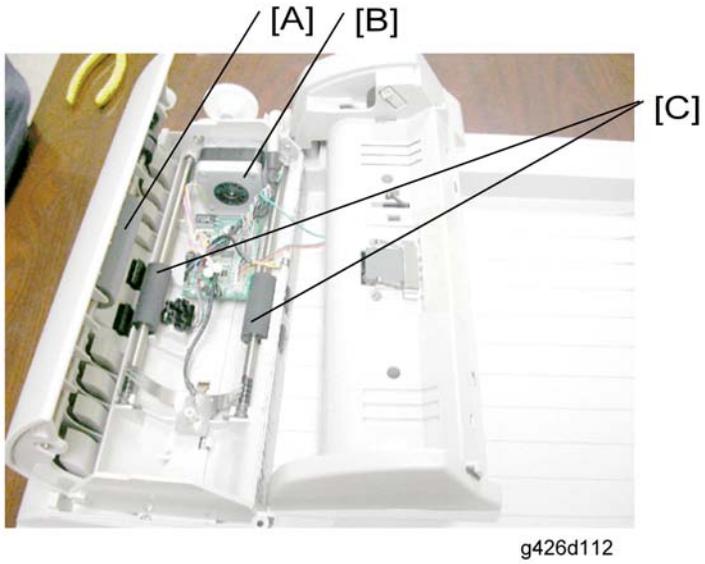


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- LVDS (Low Voltage Differential Signaling):
This IC sends digital data to the LCD Controller.
- CPU SDRAM:
This is the main memory for data. (32MB x 2)
- Flash ROM:
This contains the scanner firmware. (8.5MB)

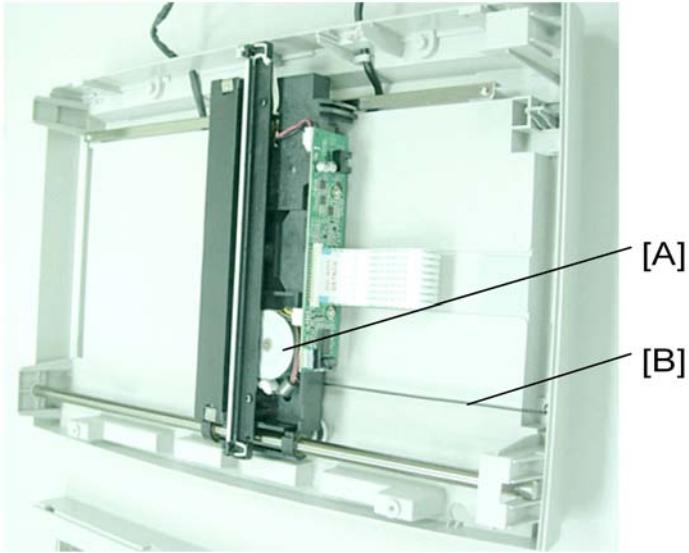
Drive Mechanism

ADF Drive



The ADF motor [B] rotates the ADF roller [A], and feeding roller [C].

Scanner Drive

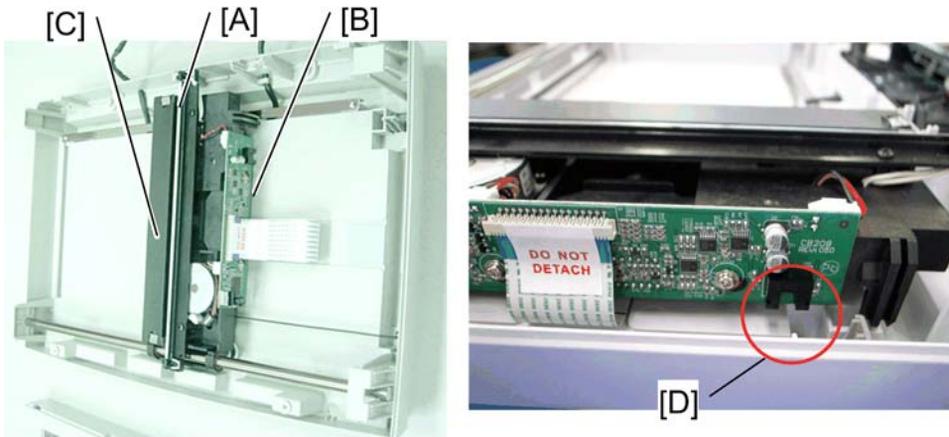


g426d113

6

Scanner motor [A] moves the scan unit through a pulley and a belt [B].

Scanning Overview



g426d114



g426d115

Initializing

- The lamp [A] illuminates the document. The image is reflected onto a CCD [B] (Charge Coupled Device) via several mirrors, and through the lenses.
- When you turn on the machine, the scanning unit [C] moves a step forward and then backward to perform an initial test (including to verify that the scanning unit is unlocked). (If the lock switch has not been set to Unlock, the machine will make a noise.) If the lock switch has been set to "Unlock", the lamp will turn off and on again. After this, the scanning unit moves a few inches forward to perform calibration.
- After the calibration operation is finished, the scanning unit moves to the home position [D].

Scanning Procedure

Platen mode:

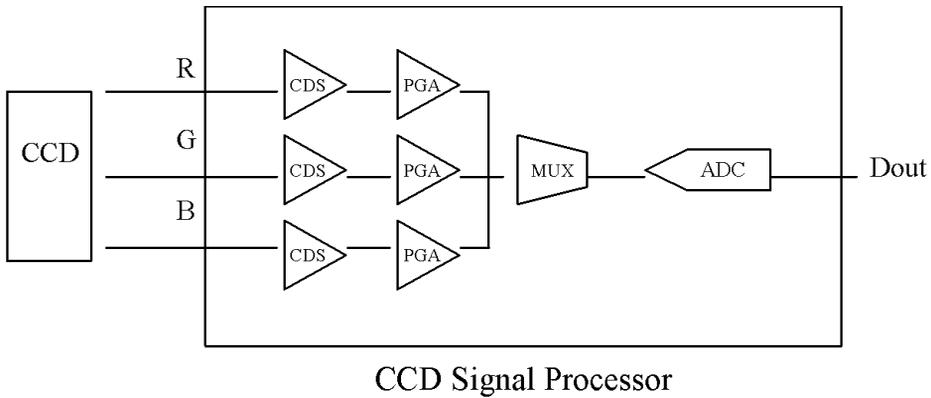
1. When the machine receives a scan command, the scanning unit performs a calibration and then scans the document.
2. After scanning the document, the scanning unit moves to the home position.
3. The scanning unit then stops at the home position.

ADF mode:

1. The scanning unit calibrates itself (moving to the scanning position).
2. The paper from the ADF goes through the pick-up mylar [E].
3. The scanning unit scans the document.
4. After finishing scanning the document, the scanning unit returns to the home position.
5. The scanning unit stops at the home position.

Video Circuit

CCD Signal Processing Circuit



g426d106

The CCD signal processor includes all the necessary circuitry to perform three-channel conditioning and sampling. The signal chain consists of three-channel correlated double sampling (CDS) and programmable gain adjustment of the CCD output (PGA) is a 16 bit analog to digital converter (ADC) quantizes the analog signal.

* PGA: Programmable Gain Amplifier

7. Specifications

Specifications

General Specifications	
Type	A4 Flatbed with ADF
Memory Size	System: 64 Mbytes, Image: 64 Mbytes
Flash Memory Size	8.5 Mbytes
Light Source	Cold Cathode Fluorescent Lamp
Color Output Quality	24 bits Color, 8 bits Gray 4 bits CMYK, 1 bit mono
Optical Resolution	600 x 600 dpi
Network Connection	10/100 Mbits auto-negotiation
Dimensions (W x D x H)	444 x 412 x 272 mm (with ADF)
Weight	6.2 Kg (With ADF)
Warm Up Time	45 seconds
Power Supply	24 Vdc, 2 A
Power Consumption	Working < 36 W Standby < 24 W Sleep < 18 W
USB Printer Port	USB 2.0
USB Device 2.0 Port	VisionMax 800 embedded
LAN Controller	RTL8100CL 10/100 Mb Full compliance with IEEE802.3u 100Base-T Full duplex, IEEE802.3x RJ45 connector

	LED : Link, TX/RX
Power Saving Mode	Time to Off: 5/15/30/60/240 minutes
Acoustic Noise	Standby 45 dB Flatbed Scanning 54 dB ADF Scanning 58 dB
Flatbed Specifications	
Maximum Scanning Area (Flatbed)	8.5" x 11.69"
Warm Up Time	45 seconds
Recovery Time (from sleep mode)	45 seconds
Maximum Document Thickness	13 mm (Cover open when over 13 mm)
Auto Document Feeder Specifications	
Capacity	50 sheets (Xerox 4024 DP 20 lb paper)
Dimensions (W x D x H)	434 x 292 x 177 mm
Weight	1.6 Kg
Document Size	Width: 4.5" ~ 8.5" Length: 5.5" ~ 14"
Paper Feed	Face Up
Paper Weight	16 lb ~ 28 lb (60 g/m ² ~ 105 g/m ²) (0.002" ~ 0.006")
Copy Specifications	
Copy Port	USB 2.0 Host Rev 2.0
Printer Language	PCL5
Multi-Copy Speed (ADF)	B&W: 18 cpm (copies per minute) Speed mode: 11 cpm Speed mode: 11 cpm
Multiple Copies (Copy count)	Up to 99

Copy Print Resolution	600 x 600 dpi
Original Size	Up to Legal (ADF)
Copy Size	Up to Legal
Density Control	1 ~ 7 levels
Zoom	25% ~ 400%, in 1% increments
Paper Supply	Legal, Letter, A4, B5, A5
Scaling	100% 70% (A4 → A5) 78% (Legal → Letter) 86% (A4 → B5) 115% (B5 → A4) 127% (Letter → Legal) 141% (A5 → A4) 93% (whole page)
Network Specification	
Configuration Requirement	IP address Subnet mask Gateway SMTP server/POP3 server FTP server Web server
E-mail Specifications	
Protocol	SMTP, MIME,
Mail Sever Authentication	SMTP-AUTH, POP3
File format	B/W (single bit): PDF, TIFF, M-TIFF Gray (8 bit): PDF, JPEG, TIFF, M-TIFF Color (24 bit): PDF, JPEG, TIFF, M-TIFF
Compression Method	B/W: RAW, G3, G4 Gray: JPEG

	Color: JPEG
Compression Level	Low / Medium / High
Supported Resolution	75, 100, 150, 200, 300, 400, 600 dpi
Default Resolution	200 dpi
Address Book Capacity	Maximum Addresses: 2000 Groups: 100 No. of Addresses in Each Group: 99
Supported Mail Server	Lotus Mail Server 5.0 MS Exchange Server 2000/2003 RedHat 7.0 SendMail
Supported LDAP Server	Windows 2003 Active Directory with SFU (Service for Unix) Windows Server 2000 + MS Exchange 5.5 Lotus Notes R5
Supported Mail Application	Microsoft Outlook 2000 Microsoft Outlook Express 5.0 Microsoft Outlook Express 6 Eudora 4.3.2J Lotus Notes R5
Fax Specifications	
Compatibility	ITU-T G3 (ECM)
Modem Speed	33.6 K
Resolution	Receive (dpi): 200 x 100, 200 x 200, 200 x 400 dpi Send (dpi): 200 x 100, 200 x 200
Compression	MH, MR, MMR
Transmission Speed	Approximately 3 seconds(* 1)
Page Memory	2.5 MB in Flash
Speed Dial	200 sets

Compression	MH, MR, MMR
* 1 : Time of phase C that doesn't contain fax negotiation (ITU No.1 chart, Compression: MMR, Resolution: Standard, Speed: 33.6 kbps).	
Filing Specifications	
Protocol	FTP, HTTP, HTTPS, CIFS
File format	B/W (single bit): PDF, TIFF, M-TIFF Gray (8 bit): PDF, JPEG, TIFF, M-TIFF Color (24 bit): PDF, JPEG, TIFF, M-TIFF
Compression Method	B/W: Raw, G3, G4 Gray: JPEG Color: JPEG
Compression Level	Low / Medium / High
Supported Resolution	75, 100, 150, 200, 300, 400, 600 dpi
Default Resolution	B/W: 200 dpi Gray: 200 dpi Color: 200 dpi
Most Used Folders	5
Number of Filing Folders	40
PC-Scan Specifications	
Operation system	Windows 98SE, Windows 2000, Windows XP, Windows Vista
Interface	USB 2.0
Media Source	Flatbed, ADF/Multi-Page
Color Mode	24-bit Color 8-bit Gray Halftone : Halftone 1 ~ 4, Diffusion Black & White
Resolution Selection	50/72/100/144/150/200/300/600/1200 dpi 50 ~ 1200 dpi

Random

For Flatbed:

Card : 4 x 2.5 (inch)

Photo : 5 x 3.5 (inch)

Photo : 3.5 x 5 (inch)

Photo : 6 x 4 (inch)

Photo : 4 x 6 (inch)

B5

A5

Paper Size Selection

A4

Letter

Scanner Maximum

For ADF:

B5

A5

A4

Letter

Legal