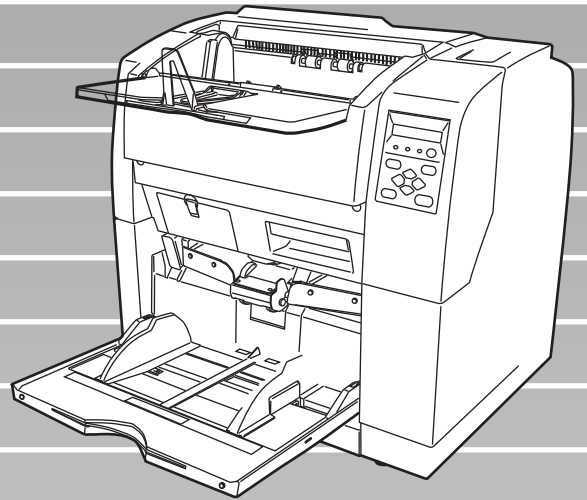




P3PC-E167-01EN

fi-4860C Image Scanner ***Operator's Guide***



INTRODUCTION

Thank you for purchasing the fi-4860C Duplex Color Scanner.

The fi-4860C is an image scanner designed to scan various documents in large quantities. FUJITSU fi series image scanners are known for its high reliability and this scanner is no exceptions. The fi-4860C is designed to give you the best results for your scanning need.

The fi-4860C has the following features.

- **High speed, high quality color scanning capabilities**
Scans documents of Letter/A4 size at the speed of 60ppm/120ipm @200dpi.
- **Highly reliable document handling**
Accepts various thicknesses, sizes and types of documents.
- **Production ready**
High capacity hopper 500sheets of 20lb or 80g/m2 Letter/A4 size and Pre and Post imprinter options. Duplex capability is available as standard feature.

About this manual

The manual provides the following information.

1. BASIC OPERATIONS

This chapter describes basic scanner operations and basic document scanning.

2. SCANNING DOCUMENTS

This chapter describes how to scan various type of documents.

3. DAILY CARE

This chapter describes how to clean the scanner.

4. REPLACING CONSUMABLES

This chapter describes how to replace scanner consumables.

5. SOLVING COMMON PROBLEMS

This chapter describes how to remedy document jams, other trouble, and items to check before contacting the agent where you bought the scanner, and how to check device labels.

6. ADF DOCUMENT SPECIFICATIONS

This chapter describes about documents can be used with this scanner.

7. OPERATOR PANEL MENUS

This chapter describes about Setup-mode and Test-mode.

8. OPTIONS

This chapter describes about options.

9. SCANNER SPECIFICATIONS

This chapter lists the scanner specifications.

The “Installation Guide” is attached to this Scanner. This guide contains necessary information for the scanner and the driver installation, please also read the Installation Guide.

1. SCANNER BASICS

This chapter describes how to prepare the scanner for use.

2. INSTALLATION AND CONNECTIONS

This chapter describes how to install and connect the scanner, and how to install the scanner application.

We hope that this manual is useful in taking full advantage of the fi-4860C Duplex Color Scanner's features.

August, 2002

■ Regulatory Information

FCC Regulations

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



- The use of a shielded interface cable is required to comply with the Class A limits of Part 15 of FCC rules. The length of the SCSI interface cable must be 1.5 meters (5 feet) or less.
 - The length of the AC cable must be 3 meters (10 feet) or less.
-

Canadian DOC Regulations

This digital apparatus does not exceed the Class A limit for radio noise emissions from digital apparatus set out in the Radio interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique dicté par le ministère des Communications du Canada.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

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Use in High-safety Applications

This product has been designed and manufactured on the assumption that it will be used in office, personal, domestic, regular industrial, and general-purpose applications. It has not been designed and manufactured for use in applications (simply called "high-safety applications" from here on) that directly involve serious danger to life and health when an extremely high degree of safety is required, for example, in the control of nuclear reactions at nuclear power facilities, automatic flight control of aircraft, air traffic control, operation control in mass-transport systems, medical equipment for sustaining life, and missile firing control in weapons systems, and when provisionally the safety in question is not ensured. The user should use this product without adopting measures for ensuring safety in such high-safety applications. PFU LIMITED assumes no liability whatsoever for damages arising from use of this product by the user in high-safety applications, and for any claims or compensation for damages by the user or a third party.

About the use of mercury

The scanner lamp contains mercury.

To avoid unexpected injury, read the followings carefully.

Doing following actions may result in serious personal injuries:

- Do not put the substance in the lamp in your mouth as it contains mercury.
- Do not incinerate, crush, or shred the scanner.
- Do not breath the chemical liquid contained in the scanner parts.

Disposing of the scanner should be conducted as required by local ordinances or regulations.

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Windows[®] Me: Refers to Microsoft[®] Windows[®] Millennium Edition operating system.

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Windows[®] XP: Refers to Microsoft[®] Windows[®] XP Professional operating system, and Microsoft[®] Windows[®] XP Home Edition operating system.

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Where there is no distinction between the different versions of the above operating system, the general term "Windows[®]" is used.

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■ **Note, Liability**

READ ALL OF THIS MANUAL CAREFULLY BEFORE USING THIS PRODUCT.
IF NOT USED CORRECTLY, UNEXPECTED INJURY MAY BE CAUSED TO
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■ Preface

Safety Precautions

This manual describes important details for ensuring the safe and correct use of this product. Thoroughly read this manual before you start to use this product. In particular, be sure to read and fully understand the Safety Precautions described in this manual before you use this product.

Also, store this manual in a safe place so that it can be easily referred to during use of this product.

Warning Indications Used In This Manual

This manual uses the following indications to ensure safe and correct use of this product, and to prevent possible danger and injury to the Operator and other persons.



This indication alerts operators to an operation that, if not strictly observed, may result in severe injury or death.



This indication alerts operators to an operation that, if not strictly observed, may result in safety hazards to personnel or damage to equipment.

Symbols Used In This Manual

This manual uses the following symbols in explanations in addition to warning indications.



This symbol alerts operators to particularly important information. Be sure to read this information.



This symbol alerts operators to helpful advice regarding operation.



A TRIANGLE symbol indicates that special care and attention is required.

The drawing inside the triangle shows the specific caution.



A CIRCLE with a diagonal line inside shows action which users are not allowed to do. The drawing inside or under the circle shows the specific action that is not allowed.



Outline characters on a colored background shows instructions users should follow. It may include the drawing which shows the specific instruction.

Screen Examples In This Manual

The screen examples in this manual are subject to change without notice in the interest of product improvement.

If the actual displayed screen differs from the screen examples in this manual, operate by following the actual displayed screen referring to the User's Manual of the scanner application you are using.

Furthermore, the screenshots in this manual are for the FUJITSU TWAIN32 scanner driver and the Image Capturing Software Utilities "ScandAll 21" for Microsoft® Windows®.

■ Safety Precautions



The following describes important warnings described in this manual.

Do not touch the AC cable with wet hands.



Do not insert or disconnect the power plug with wet hands. Doing so might cause electric shock.

Do not damage the AC cable.



A damaged AC cable might cause fire or electric shock.

Do not place heavy objects on AC cables, or pull, bend, twist, heat, damage or modify AC cables.

Also, do not use damaged AC cables or power plugs, and AC cables or power plugs when the power outlet fitting is loose.

Use only specified AC cables and connector cables



Use only specified AC cables and connector cables. Failure to use the included so might cause electric shock and equipment failure.

Use this scanner only at the indicated power voltage. Do not connect to multiple-power strips.



Use this scanner only at the indicated power voltage. Improper power voltage so might cause fire or electric shock.

Also, do not connect to multiple-power strips.

Wipe any dust from the power plug.



Wipe off any dust from metal parts on the power plug or metal fittings with a soft, dry cloth. Accumulated dust might cause fire or electric shock.

Do not install in locations subject to oil smoke, steam, humidity, and dust.



Do not install the scanner in locations subject to oil smoke, steam, humidity, and dust. Doing so might cause fire or electric shock.

Do not use the scanner if you smell strange odor.



If you sense heat coming from devices or detect other malfunctions such as smoke, strange smells or strange noises, immediately press down the power button to turn off the scanner and then disconnect its power plug.

Make sure that the smoke has disappeared, and then contact the agent where you bought the scanner.

Turn the scanner OFF if it is damaged.



If the scanner is damaged for any reason, press down the power button on the scanner and unplug the power cable before contacting the authorized agent.

Do not allow liquids to get inside the scanner.



Do not insert or drop foreign metal objects into the scanner.



Do not scan wet documents or documents with paper clips.



Do not splash or allow the scanner to get wet.



If foreign objects (water, small metal objects, liquids, etc.) get inside the scanner, immediately press the power button to turn off the power and disconnect the power plug from the power outlet.



Then contact the agent where you bought the scanner or Maintenance Service Center.

Pay particular attention to this warning in households where there are small children.

Do not touch the inside of the scanner unless necessary.



Do not disassemble or modify the scanner. The inside of the scanner contains high-voltage components. Touching these components might cause fire or electric shock.



The following describes important cautions described in this manual.

Do not install the scanner on unstable surfaces.



Install the scanner on a desk so that none of its parts protrude outside of the desktop. Also, make sure that the scanner is installed on a flat, level surface.



Do not install the scanner on unstable surfaces. Install the scanner on a level surface that is free of vibration to prevent it from tilting.

Firmly insert the power plug.



Firmly insert the power plug into the power outlet as far it can go.

Do not block the ventilation ports.



Do not block the ventilation ports. Blocking the ventilation ports generates heat inside of scanner, resulting in fire or scanner failure.

Do not place heavy objects or climb on top of the scanner.



Do not place heavy objects on the scanner or use the scanner's top surface for performing other work. Improper installation might cause injuries.

Before moving the scanner, disconnect the power plug from the power outlet.



Do not move the scanner with the power and interface cables connected as this might damage the cables, causing fire, electric shock or injuries.

Before moving the scanner, be sure to disconnect the power plug from the power outlet, and disconnect connector cables. Also, make sure that the floor is free of obstructions.

Protect the scanner from static electricity.



Install the scanner away from strong magnetic fields and other sources of noise. Also, protect the scanner from static electricity as this might cause the scanner to malfunction.

Do not use aerosol sprays near the scanner.



Do not use aerosol sprays, for example, to clean the scanner. Air sprayed from aerosol sprays causes dirt and dust to enter the scanner, resulting scanner failure and malfunction.

Avoid any contact when scanner is in use.



Avoid any contact when scanner is operating as this may cause injuries.

Disconnect the power plug from the power outlet when the scanner is not used for a long period of time.



When the scanner is not used for a long period of time, be sure to disconnect the power plug from the power outlet for safety's sake.

Do not install the scanner in the direct sunlight.



Do not install the scanner in the direct sunlight or near heating apparatus. Doing so might cause heat to build up inside the scanner, causing fire or scanner trouble. Install the scanner in a well-ventilated location.

Do not try to lift and move the scanner alone.



This scanner is heavy. When you carry the scanner, ensure that additional personnel are used.

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1 BASIC SCANNER OPERATIONS

This chapter describes basic scanner operations.

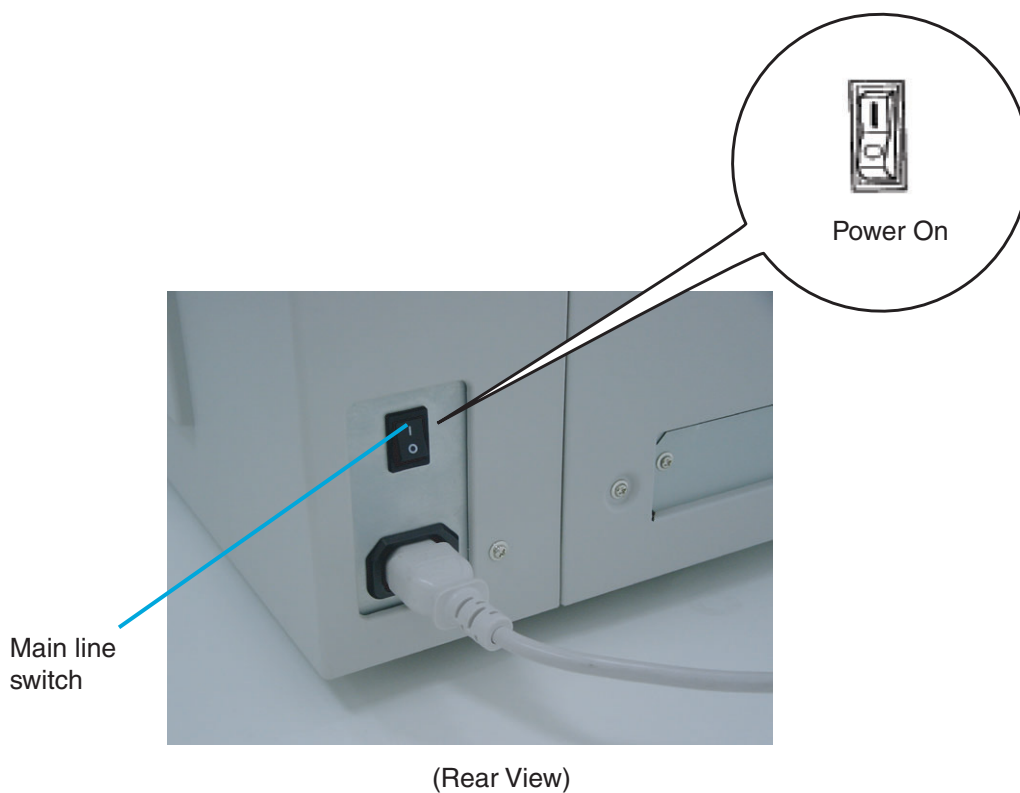
This chapter explains operations using the screens of Windows® XP. Depending on your OS, your PC's screen shots and the operation may be different from this manual. Please be aware that when the FUJITSU TWAIN 32 scanner data source is updated, the screens and operations noted in this chapter may be changed slightly. In this case, please refer to the User's Guide provided with the update.

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1.1 Turning the Scanner ON

■ Turning the power on

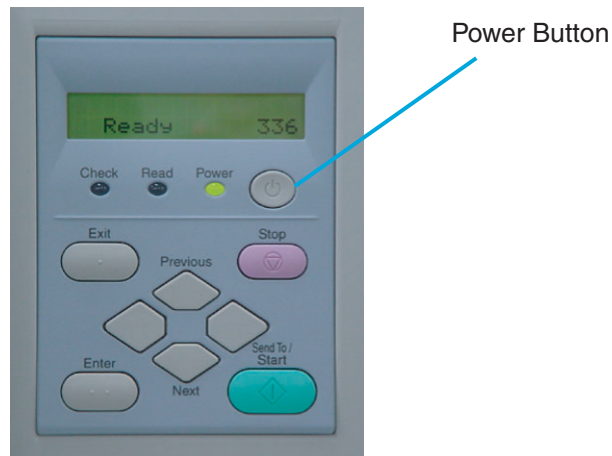
1. Press "I" side of the main line switch located on the back of the scanner.



2. Press the power button on the Operator panel.

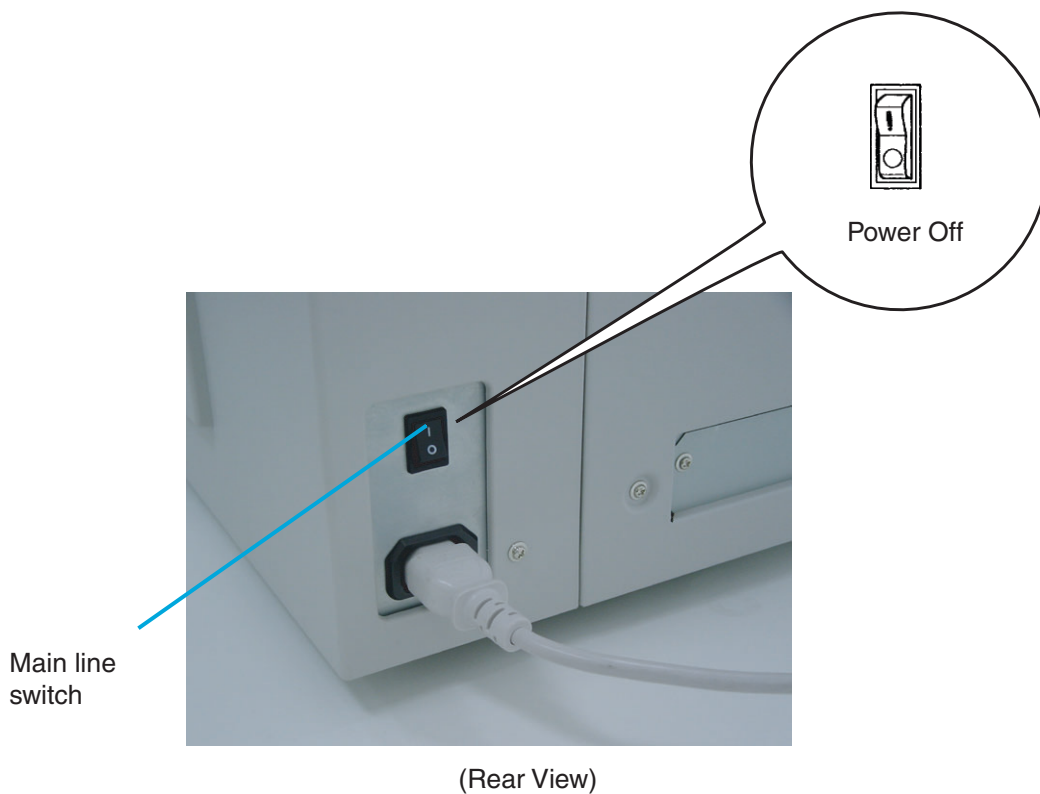
The power turns on and the green Power LED at the Operator panel lights.

Operator panel LCD shows "Ready" to indicate the scanner is in the READY state.



■ Turning the Power off

1. On the Operator panel, press and hold down the Power button for two seconds or longer.
2. Press "O" side of the main line switch located on the back of the scanner.



1.2 Waking up the Scanner from the Power Save Mode

The Power Save Mode keeps the scanner in a low powered state.

If no operation is performed on the scanner for a preset time (15 minutes to 60 minutes depending on the timer setup), the scanner automatically switches to the Power Save Mode. In the Power Save Mode, the Operator panel LCD display goes out. The green LED stays lit.

To wake up the scanner from the Power Save Mode, perform one of the following:

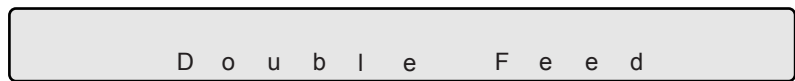
- Load documents on the hopper
- Press a button, except Power button, on the Operator panel
- Send a command from the PC


1.3 Basic Operations of the Operator Panel

This basic operation include how to enter setup mode and test mode.

■ Clearing errors

When an user recoverable error occurs, Check LED blinks to alarm you and the error message is displayed on the LCD. Here is an example of an error message.



Press  button to clear the blinking after the cause of the error is removed.



You can not clear errors with Check LED lit. They are not user recoverable and Check LED stays lit.

Refer to "Appendix 3 Messages of Operator Panel," "Error message (Temporary error)" for the messages.

■ Lifting or lowering the hopper

When the scanner has no error state (Check LED is not lit), the Hopper height position can be changed.




During hopper height adjustment, do not put your hands or anything on or under the hopper to prevent your fingers from getting caught and injured.

If something is caught in the mechanism, the scanner may be damaged.

The Hopper height adjustment function is not valid when:

- Read LED is lit
- The scanning operation is in progress
- The scanner is in test mode (excluding Single feed and Multi feed)
- The scanner is in setup mode

(1) In normal mode (i.e. not in test mode nor in setup mode), the Hopper height changes as follows by pressing  (Exit button) for more than two seconds:

1. When the Hopper is at the bottom position, it moves up to 250 sheet position.
2. When the Hopper is at 250 sheet position, it moves down to the bottom position.
3. When the Hopper is at the highest position, it moves back where it was when the scan operation started.



The Hopper is positioned at the bottom when the power is turned on.

(2) In test mode ([Single feed] or [Multi feed]), the Hopper height changes as follows by pressing ◊(Next button):

1. When the Hopper is at the bottom position, it moves up to 250 sheet position.
2. When the Hopper is at 250 sheet position, it moves down to the bottom position.
3. When the Hopper is at the highest position, it moves back where it was when the scan operation started.



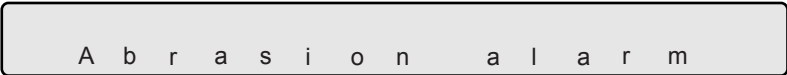
ATTENTION Pressing ◊(Previous button) does not change the position.



HINT The Hopper is positioned at the bottom when the power is turned on.


■ Clearing the consumables replacement message

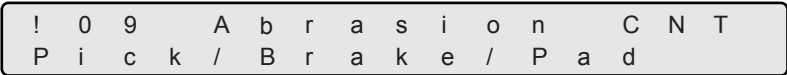
This scanner has the Abrasion counters to estimate life of the consumables. When a counter, a counter for the Pad ASSY, the Pick roller unit, the Brake roller unit, the Front-side lamp or the Back-side lamp reaches the pre-set value, the LCD shows a message that the consumable have expired. Here is an example of the error messages.



A b r a s i o n a l a r m

Enter setup mode. (For the details on how to enter the setup mode, refer to "Chapter 7 OPERATOR PANEL MENUS"

Keep pressing  (Next button) until the LCD shows the following message.



! 0 9 A b r a s i o n C N T
P i c k / B r a k e / P a d

At this screen, you can select the consumable counter to reset. For the details on how to clear consumable counter, please refer to the section "7.3 Setup Mode Details," "9. Abrasion counter reset."


■ Using the setup and the test modes.

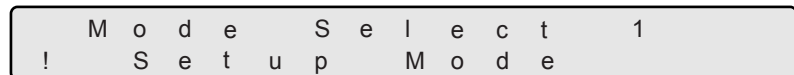
This scanner has the setup mode to customize the setup conditions, and test mode to test the scanner offline.

There are two types of setup modes: A Online setup mode that can be entered during Ready status and a Offline setup mode that can be entered only when the scanner is offline. Available functions differ with the two modes. For the details, refer to "Chapter 7 OPERATOR PANEL MENUS"


To enter these mode, follow the instructions below:

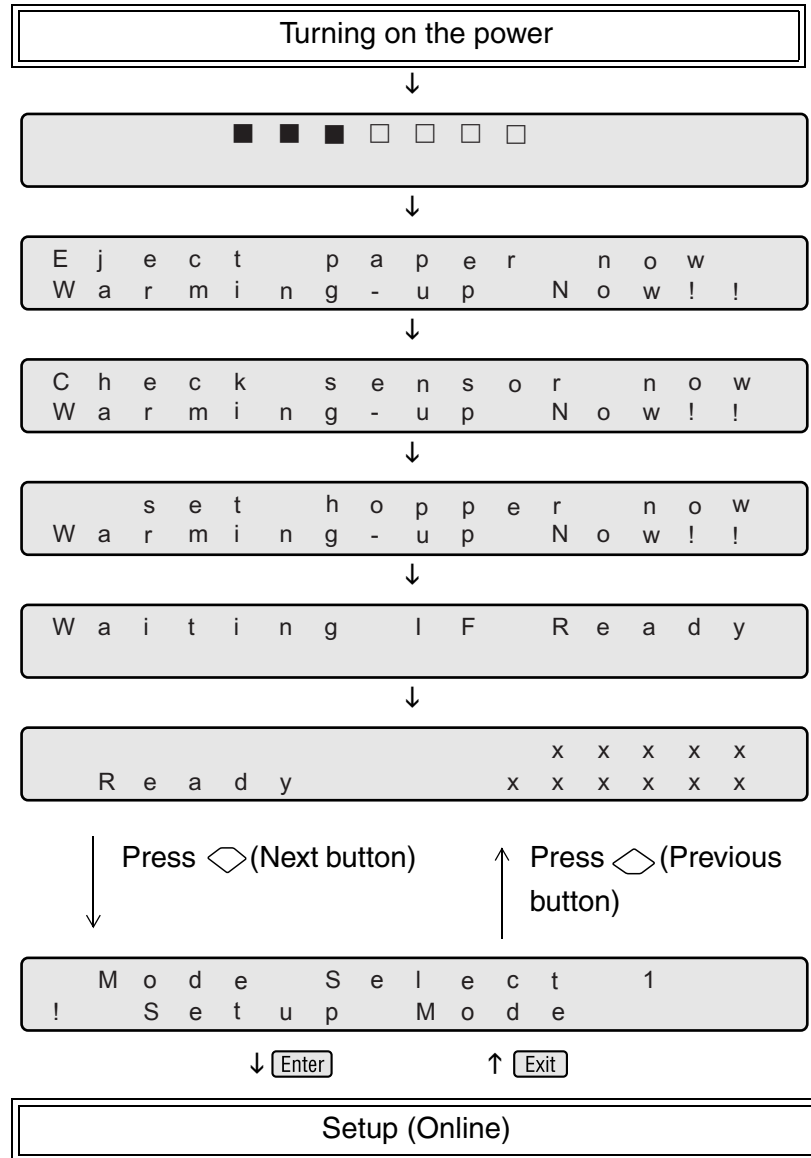
- Online setup mode

When LCD indicates Ready status, press  (Next button). The following message appears.



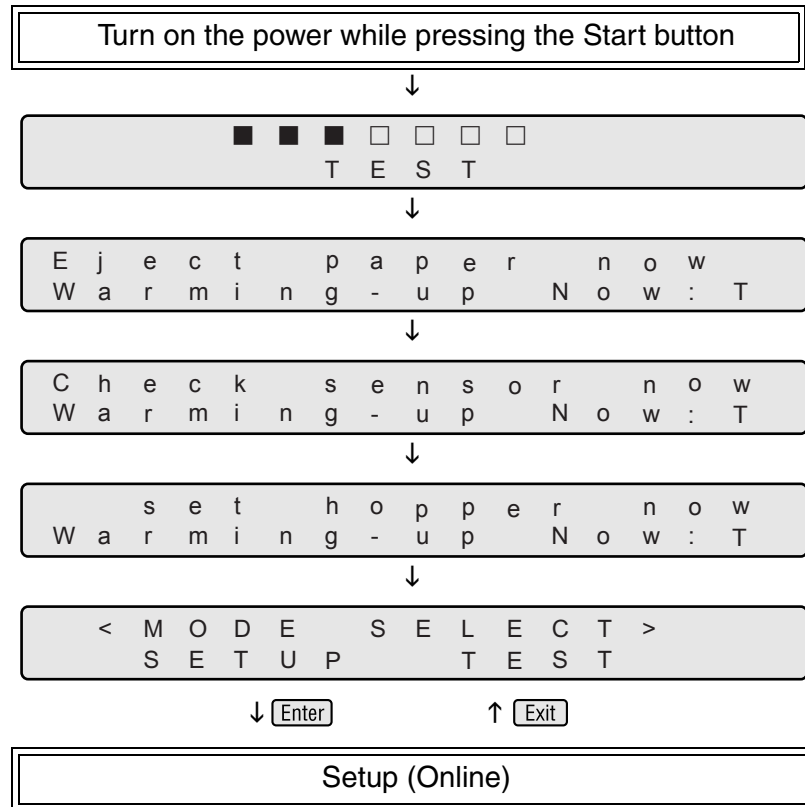
M o d e S e l e c t 1
! S e t u p M o d e

Pressing  (Enter button), the scanner enters Offline setup mode.



- Offline setup mode and Online setup mode

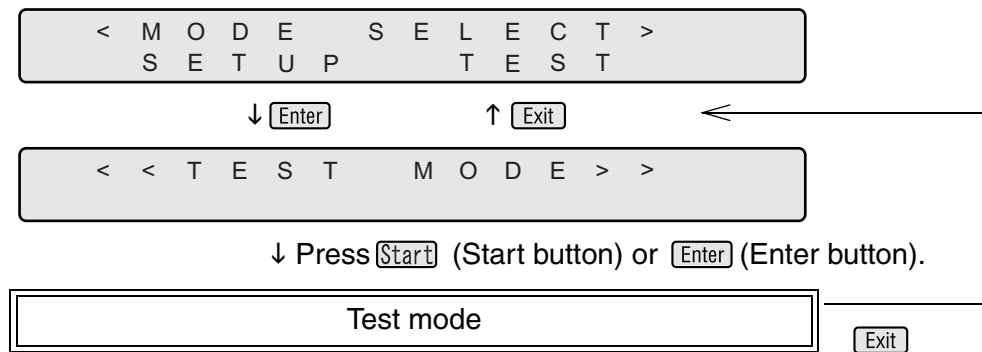
Start Keep pressing Start button and turn on the power.



- To enter setup mode, press ◀ (Left arrow button) or ▶ (Right arrow button) in [<Mode select>] screen to select [Setup] then press **Enter** (Enter button).

To exit this mode, turn off the power.

- To enter test mode, from the [<Mode select>] screen, press ◀ (Left arrow button) or ▶ (Right arrow button) , select [Test] and press [Enter] (Enter button). Please see the following for the Operator panel transition chart.



To exit this mode, turn off the power.

1.4 Setting the Hopper

1. Hold the hand (blue part) of the Hopper. Gently flip the Hopper table down.



1.5 Setting the Stacker

1. Open the stacker.



2. Push the opened stacker table lock into the scanner to lock it in place.

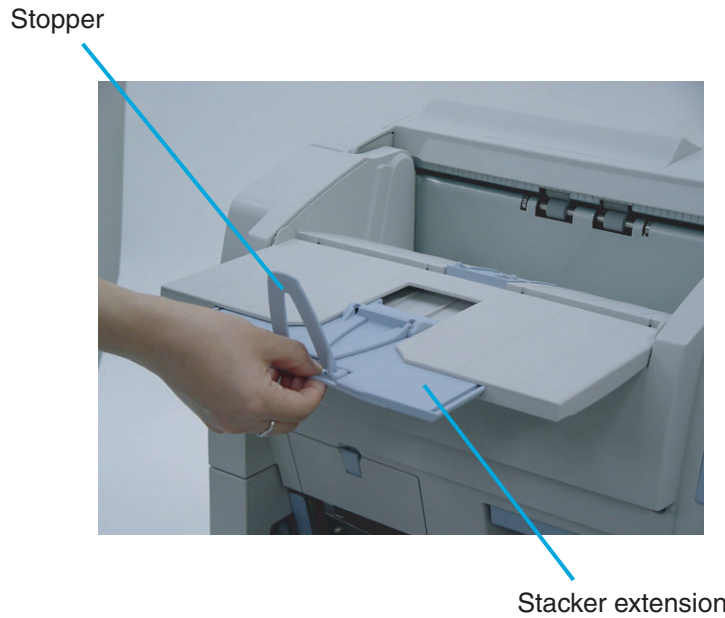


When retracting the stacker, pull out the foldable table a little then fold it.



1.6 Setting the Stacker Extension

1. Hold the center of the blue part of the stacker extension to pull it out.



Do not use the stopper to pull out the stacker extension.
Stopper may be damaged if you pull it.

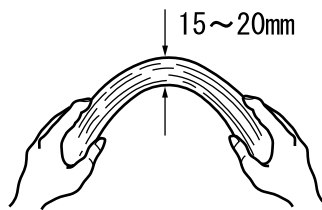
1.7 Loading Documents on the Hopper

1. Straighten the edges of the documents

- 1) Straighten both sides of the document stack.

2. Fan the documents

- 1) Take the stack of documents with thickness of 15mm to 20mm.
- 2) Hold both ends and bend the documents into an arch.



- 3) Firmly holding the document with both hands, bend back the document as follows so that the bent section rises up in the middle of the document as follows.
- 4) Repeat steps 1) to 3) for a few times.
- 5) Rotate the document 90 degrees, and fan again.



3. Load the documents on the hopper.

Place the documents face-up on the hopper table.



Hopper

4. Adjust the Side guides to the document width.

Pressing the lock lever, slide the Side guides so that they touch the document sides.

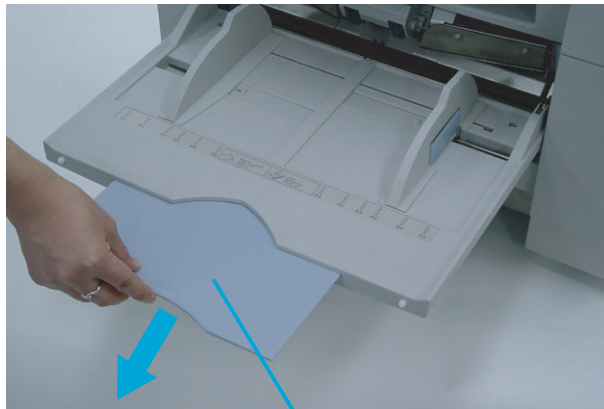
If there is a clearance between the document edges and the guides, the scanned image may be skewed.



Side Guide



- Make sure that the document stack is below the maximum height mark on the inside of the Side guides.
- For loading long documents, extend the hopper extension.



Hopper Extension

- Do not load documents consisting of different sizes.
-

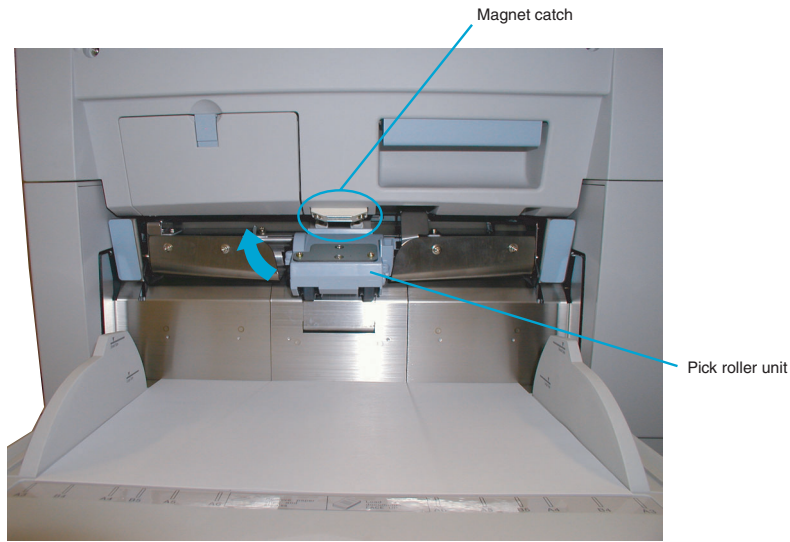
5. Start up the scanner application and scan the documents.

For the details on how to scan using ScandAll 21, refer to the section "1.8 Scanning Documents."

1.8 Inserting Documents Manually

When the scanner is in Manual Feed Mode, set the documents as follows.

1. Lift the Pick roller until it is held by the magnet catch. The hopper table moves up to feed position.



Be careful not to get your fingers or things caught in the mechanism when the hopper table moves up.

2. Place documents face-up at the center of the hopper table.



For information on setting Manual feed time-out, refer to "Chapter 7 OPERATOR PANEL MENUS."

3. Set the Side guides to the width of the documents to scan. Load the documents so that the top edge of the documents contacts to the hopper table guide plate.



Hopper

1.9 Scanning Documents

The following shows the procedure for scanning documents using the "ScandAll 21" application (simply called "ScandAll 21" from here on.)

1. Load the documents on the hopper.

For details on how to load documents, refer to the section "1.6 Loading Documents on the Hopper."

2. Adjust the stacker table to the document size.



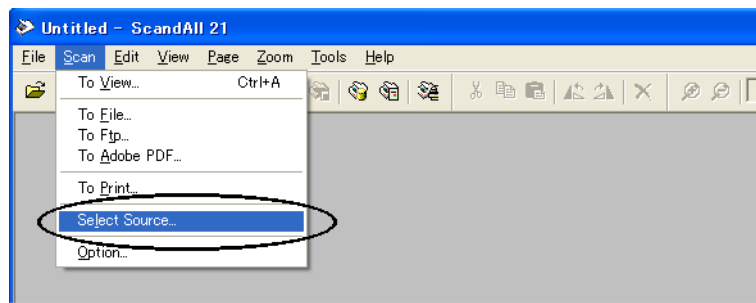
- When long documents are loaded on the hopper, extend the stacker extension.
- When short documents are loaded, adjust the stopper length.

3. Start up ScandAll 21

From [Start] menu, select [Program] - [Scanner Utility for Microsoft Windows] - [ScandAll 21]. This starts up ScandAll 21.

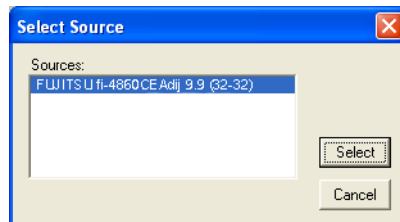
4. Select the scanner to use

Select [Select Source] from the [Scan] menu.

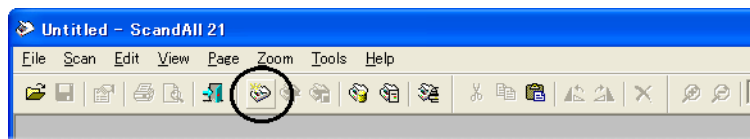


The [Select source] dialog box appears.

Select [FUJITSU fi-4860CEAdij] (WindowsNT®4.0, [FUJITSU TWAIN 32]).
Then click [Select].



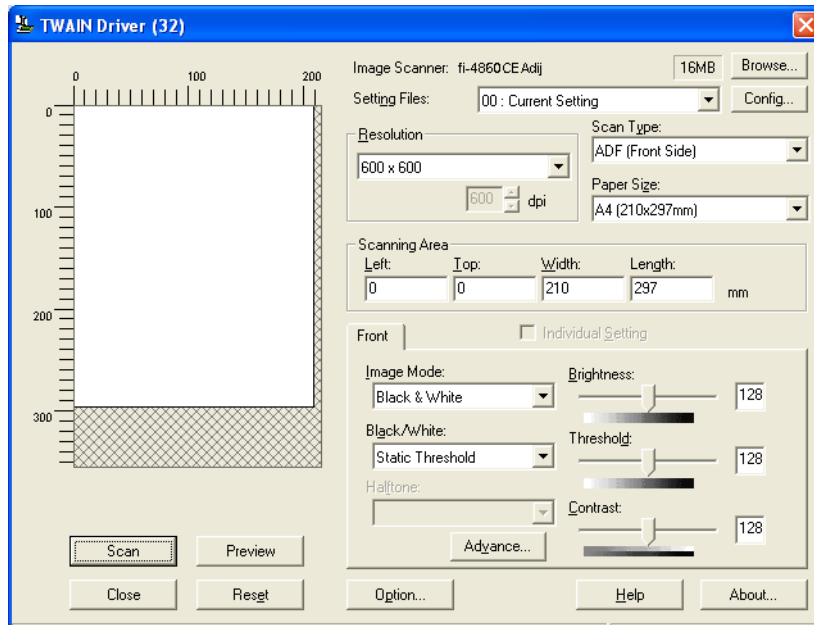
5. Click the [Display in scan preview screen] on the tool bar.



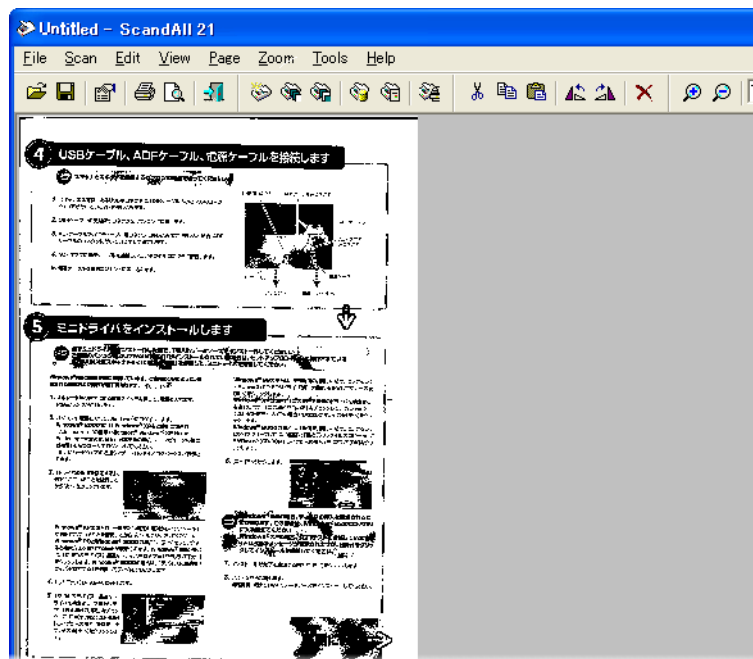
The [TWAINDriver] dialog box (screen for setting the scan conditions) appears.

6. Set the scan resolution, document size and other scan conditions, and click the [Scan] button.

For the details on settings in the [TWAIN Driver] dialog box, refer to the "Scanner Utility for Microsoft® Windows® User's Guide" on the scanner driver CD-ROM.



The document is scanned, and an image of the document appears on the ScandAll 21 screen.



For details on scanning various documents, see "Chapter 2 SCANNING VARIOUS TYPES OF DOCUMENTS".

For details on ScandAll 21 function and operations, refer to ScandAll 21 Help.

2 SCANNING VARIOUS TYPES OF DOCUMENTS

This chapter describes how to scan various types of documents.

This chapter explains operations using the screens of Windows® XP. Depending on your OS, your PC's screen shots and the operation may be different from this manual. Please be aware that when the FUJITSU TWAIN 32 scanner data source is updated, the screens and operations noted in this chapter may be changed slightly. In such case, please refer to the User's Guide provided with the update.

2.1 Scanning Different-size Documents	28
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2.1 Scanning Different-size Documents

When you scan a batch of documents with different widths using the ADF, you may get skewed images from smaller sized documents.

Scanning documents of the same width is recommended.

The following shows the procedure to scan batches of mixed size documents.

- 1. Sort the batch into the stacks of the same width documents.**
- 2. Adjust the side guide to the width of the documents to scan.**
- 3. Separate the job by scanning the same width document stack each time.**

For the explanation on how to scan the documents, please refer to the section "1.8 Scanning Documents."

2.2 Saving Scanned Images in PDF Format

If you would like to save scanned images in PDF format, please install Adobe® Acrobat® 5.0 or later on your PC.

Adobe Acrobat 5.0 can be installed from the Adobe Acrobat CD-ROM provided.

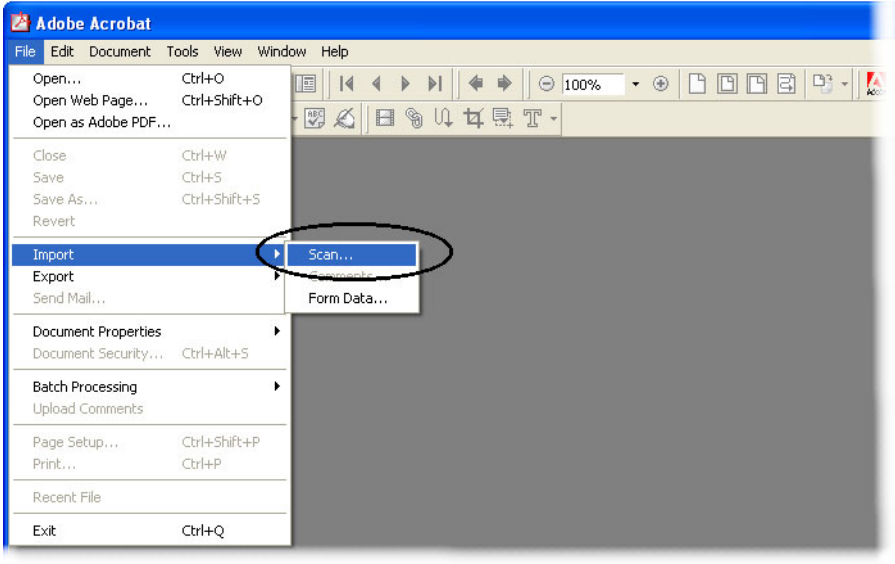
Following shows the procedure for saving scanned images in PDF format.

1. Load the documents on the hopper.

2. Start up Adobe Acrobat 5.0.

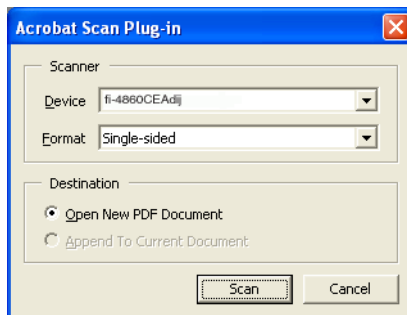
Select [Program] - [Adobe Acrobat] from the [Start] menu. This starts up Adobe Acrobat 5.0.

3. Select [Import] - [Scan] in that order from the [File] menu.



[Acrobat Scan Plugin] dialog box is displayed.

4. Select [FUJITSU fi-4860CEAdj] (WindowsNT@4.0, select [FUJITSU TWAIN 32]) at [Device] and click [Scan] button.

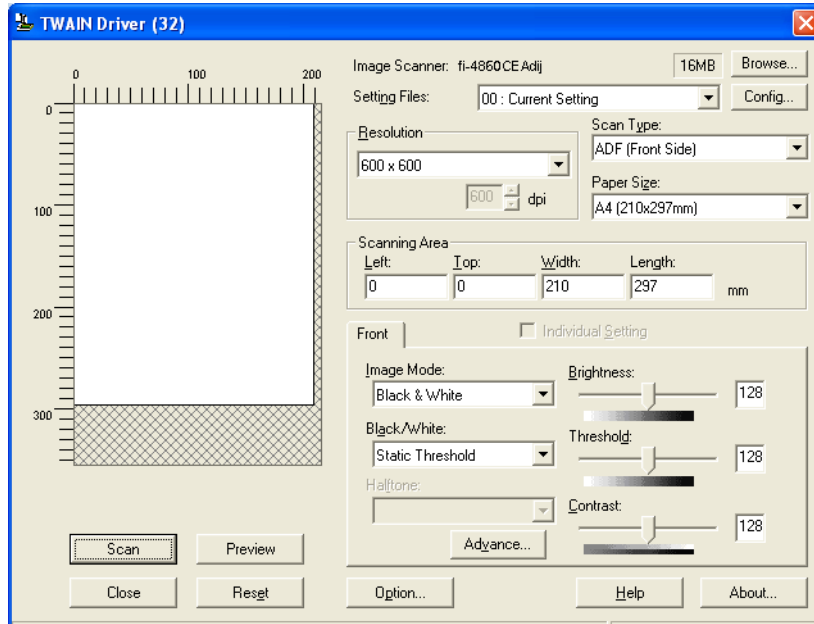


[TWAIN driver] dialog box is displayed.



- Select [Simplex] even if you intend to do duplex scanning.

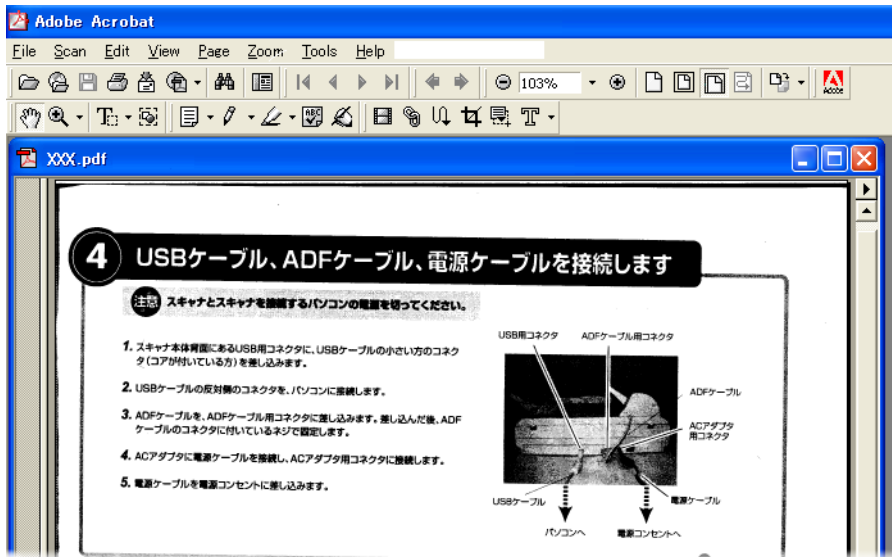
5. Set the scan resolution, document size and other scan conditions, and click the [Scan] button.



Scanning starts, and a message appears asking if you continue scanning.

6. To end scanning, click the [Done] button.

The scanned image is displayed. Save the scanned image in Adobe Acrobat format (PDF).



For the details on Adobe Acrobat 5.0 operations, refer to the Adobe Acrobat 5.0 manual and Help.

2.3 Selecting a Color to drop out

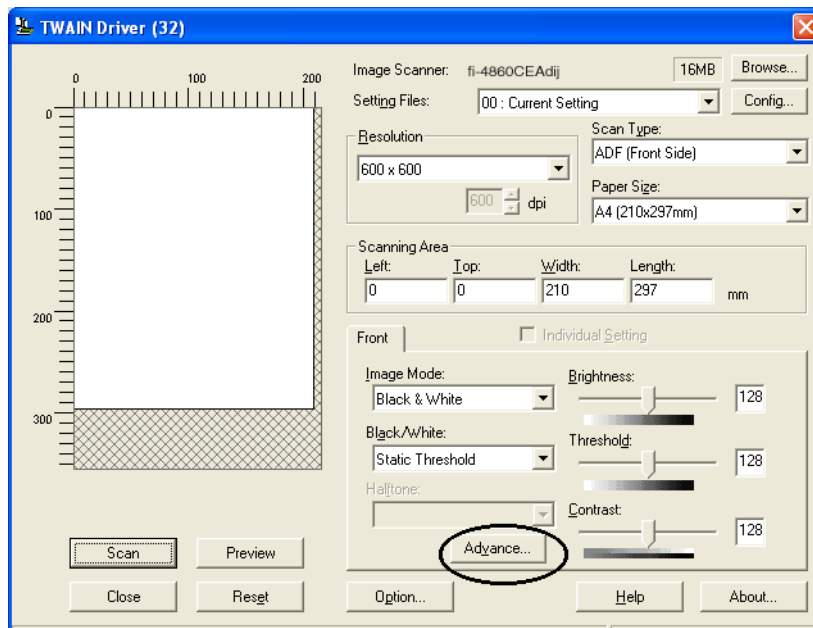
A selected color information (primary colors: red, green, blue) can be removed (dropped out) from the scanned image data.

For example, if the document contains black texts in green frames, you can set the scanner to get only the texts and eliminate the green frames.

To drop out a color, change the setting in the [TWAIN Driver] dialog box and scan.

The following shows how to change the setting of [TWAIN Driver] dialog box.

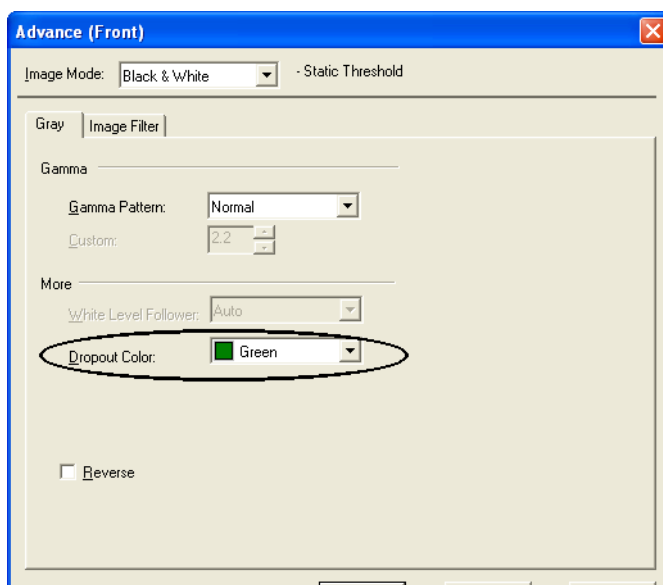
1. Click [[Advance] button in the [TWAIN Driver] dialog box.



The [Advance] dialog box appears.

2. Select the color to drop out from [Dropout Color] under [More].

For example, if the document contains black texts in green frames, you can set the scanner to get only the texts and eliminate the green frames.



3. Click [OK] button.

[TWAIN Driver] dialog box will be redisplayed.

Start scanning from this dialog box and you can drop out the color specified above.

3 DAILY CARE

This chapter describes how to clean the scanner.



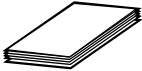


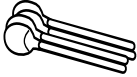
WARNING

When you clean the scanner, turn off the power, and unplug power cable from the outlet.

3.1	Cleaning Materials and Areas Requiring Cleaning	38
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3.1 Cleaning Materials and Areas Requiring Cleaning

■ Cleaning materials

Cleaning materials	Part No.	Remarks
Cleaning sheet 	CA99501-0016	20 sheets/pack (* 1)
Cleaner F2 	CA99501-0014	1 bottle, 100ml/bottle (* 1)
Isopropyl alcohol or Cleaner F1 	CA99501-0013	1 bottle, 50ml/bottle Moisten cloth with this fluid and wipe the scanner to clean. (* 1)
Cotton swab 	Commercially available one	
Lint-free dry cloth	Commercially available one(* 2)	

* 1) To purchase the cleaning material, contact the FUJITSU scanner dealer where you purchased the scanner.

*2) Any lint-free cloth can be used.

■ Cleaning Materials and Cleaning Frequency

The following shows the standard cleaning frequency for each area requiring cleaning.

Part to clean	Standard Cleaning Frequency
Pad	Clean every 100,000sheets
Pick roller	Clean every 100,000sheets
Brake roller	
Separation roller	
Feed roller	
Pinch roller	
Transport path	
Discharge brush	Clean every 100,000sheets
Removable sheet guide	Clean every 200,000sheets
Glass sheet guide	
Document width detection sensor	Clean every 200,000sheets
SF0	
SF1	
SF1.5	
SF2	
Front-side Lamp	Clean every 100,000sheets
Back-side lamp	



Please clean rollers using the cleaning sheet every 50,000 sheets.



You must clean the scanner more frequently when the following documents are scanned.

- Documents on coated paper
 - Documents with printed text or graphics covering almost the entire surface
 - Chemically treated documents such as carbonless paper
-



Do not use aerosol sprays to clean the scanner. The air from the spray may cause dirt and dust to enter the scanner mechanism and resulting scanner failure or malfunction.

Vacuum the scanner instead.



You must clean the following area more frequently when you use fi-486PRFR or fi-486PRRF imprinters. The imprinter ink tend to stick to the document transport path.

- Removable sheet guide
 - Glass sheet guide
 - Feed rollers
 - Pinch rollers
-

3.2 Cleaning the Pad

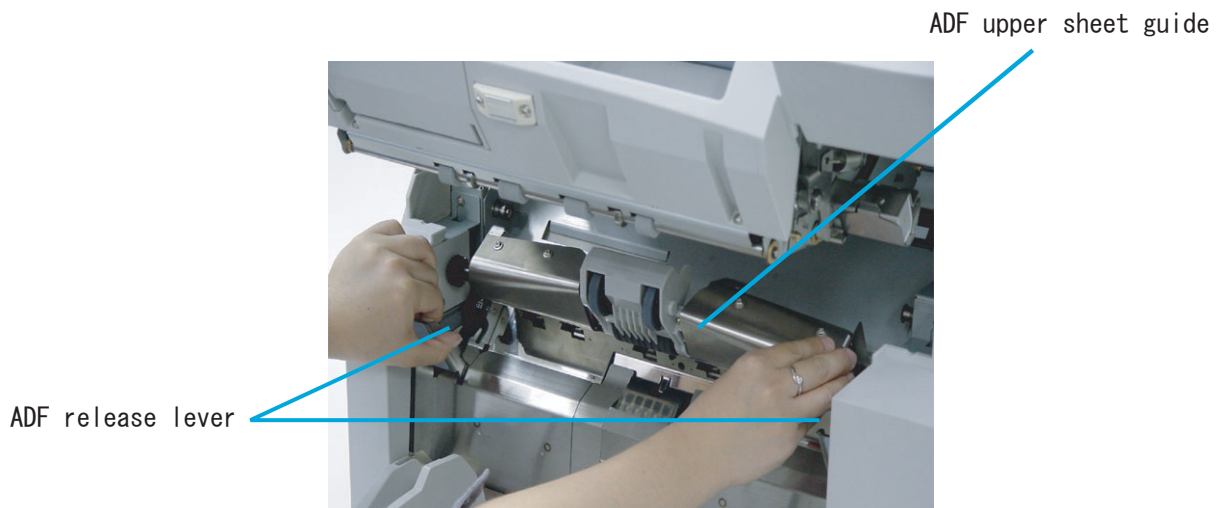
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



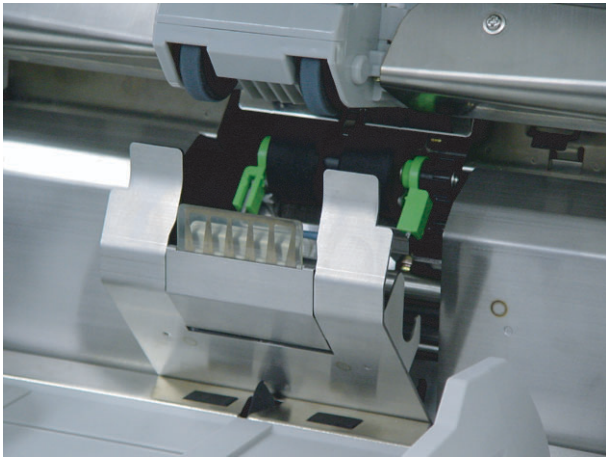
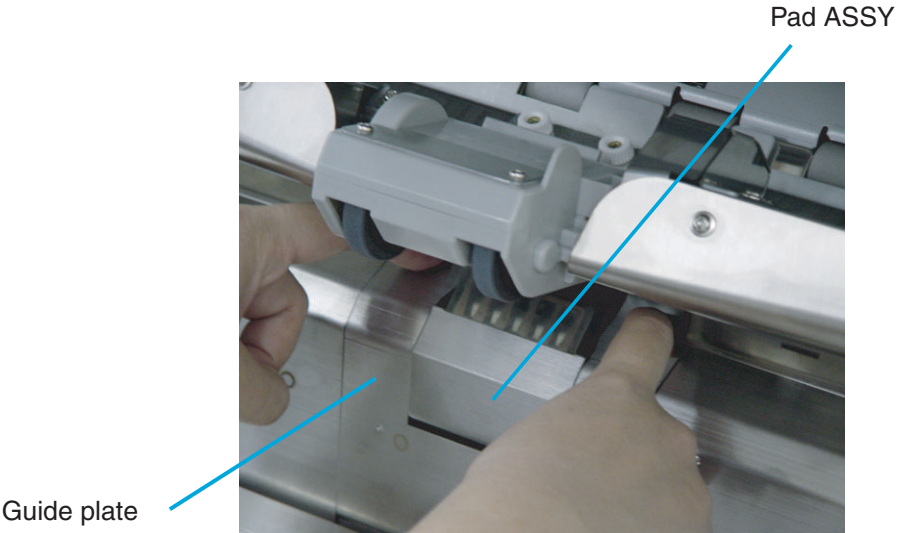
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



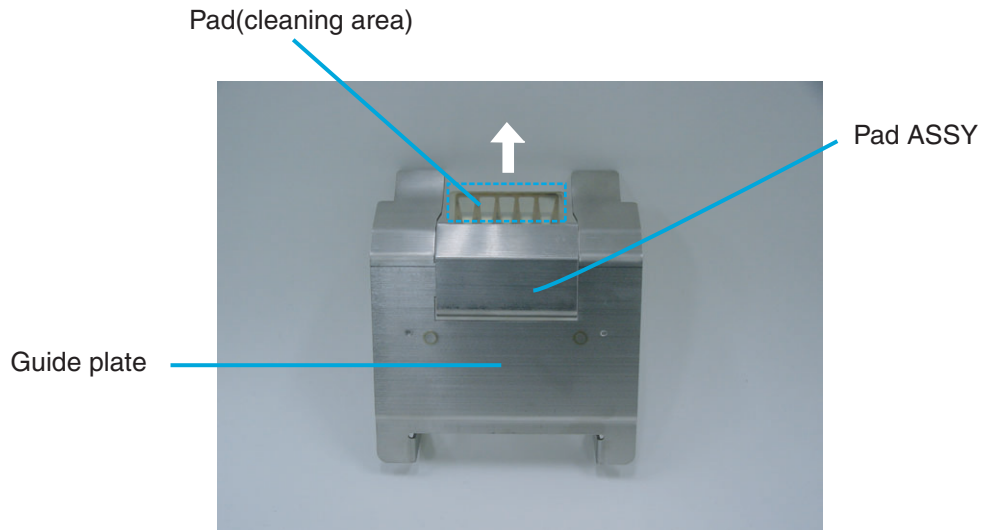
2. Pull the ADF release lever toward you and lift up the ADF upper sheet guide.



3. Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then rotate the plate toward you to remove it.




4. Wipe the translucent rubber part of the Pad ASSY using a lint free cloth moistened with cleaner F1.

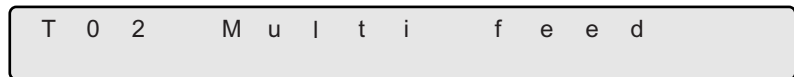


5. Install the guide plate in the reverse order of the removal. You should push it down then push back, so the installation can be done smoothly.
6. Lower the ADF upper sheet guide carefully.
7. Lift the Upper transport unit to release the safety lock and then lower the transport unit carefully.

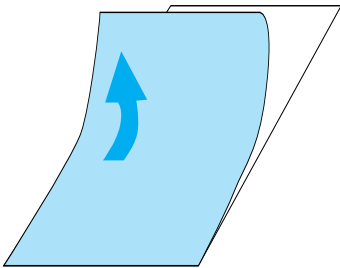
3.3 Cleaning the Rollers

■ Cleaning the rollers with the cleaning sheet

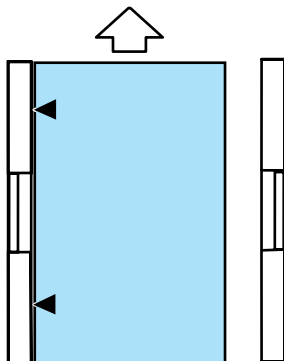
1. Set the Side guide for B4 size width.
2. Set the scanner in Test mode: For the details of the procedure, refer to the section "7.5 Test Mode Details."
3. Press  (Next button) to show the following screen.



4. Remove the protective paper from the cleaning sheet.

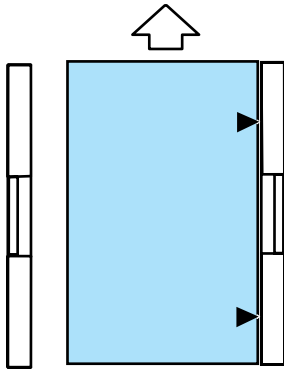


5. Place the cleaning sheet on the hopper table, aligning the left side with the hopper guide and with the adhesive side up. Press  (Start button), then the cleaning sheet is fed.



6. When [Hopper Empty] is displayed, press  (Stop button).

7. Place the same cleaning sheet on the hopper table with adhesive side up by aligning the right side with the hopper guide. Press **Start** (Start button), then the cleaning sheet is fed.



8. When "Hopper Empty" is displayed, press **Stop** (Stop button).
9. Remove the protective paper from a new cleaning sheet and place it with the adhesive side face down.
- Repeat steps 5 through 8. When the cleaning is completed turn off the power.

■ Cleaning the Pick Rollers and the Separation Roller

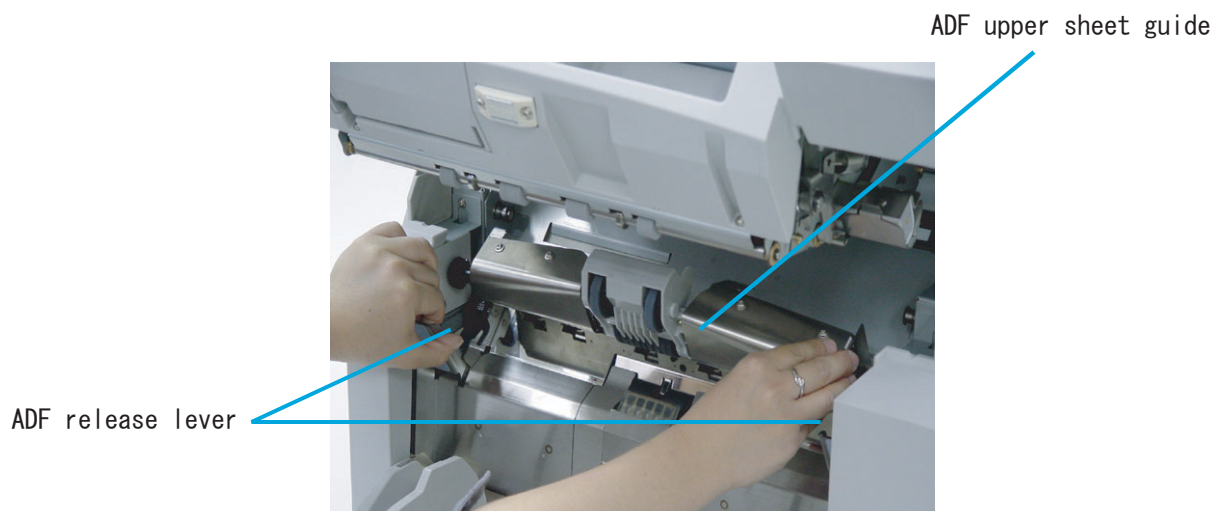
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



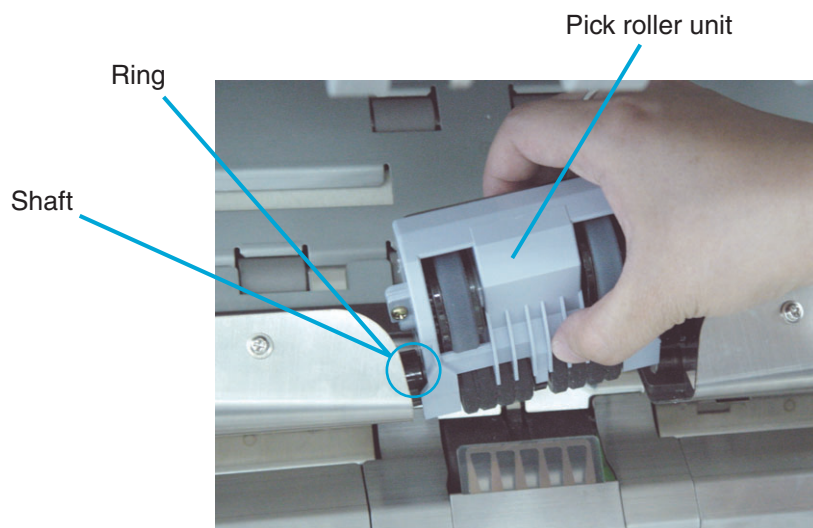
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



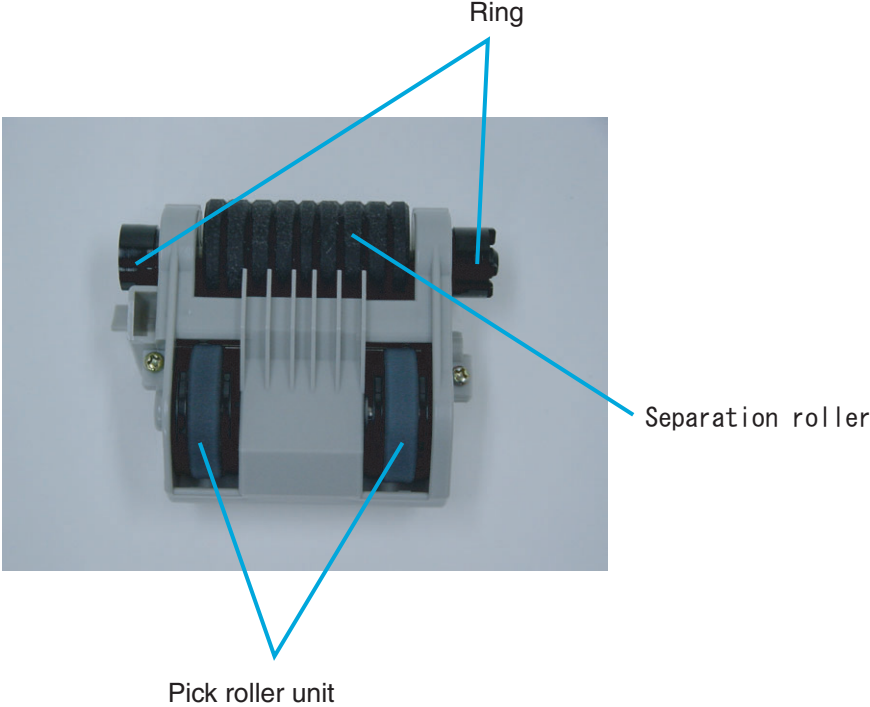
2. While pulling the ADF lever toward you, lift up the ADF upper sheet guide.



3. Slide the Pick roller unit to the left to disengage the clutch ring from the shaft.



4. Wipe both Pick rollers (2 positions) and the Separation roller using a clean lint free cloth moistened with cleaner F1.



5. Install the Pick roller unit in the reverse order of its removal.

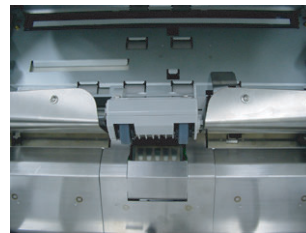


When re-attaching the Pick roller unit, hold the unit as shown. Engage the drive ring onto the drive shaft. Move left and align the clutch ring with the shaft and move right to engage.

Incorrect installation



Correct installation



6. Lower the ADF upper sheet guide carefully.

7. Lift the Upper transport unit a little to release the safety lock and then lower the transport unit carefully.

■ Cleaning the Brake roller unit

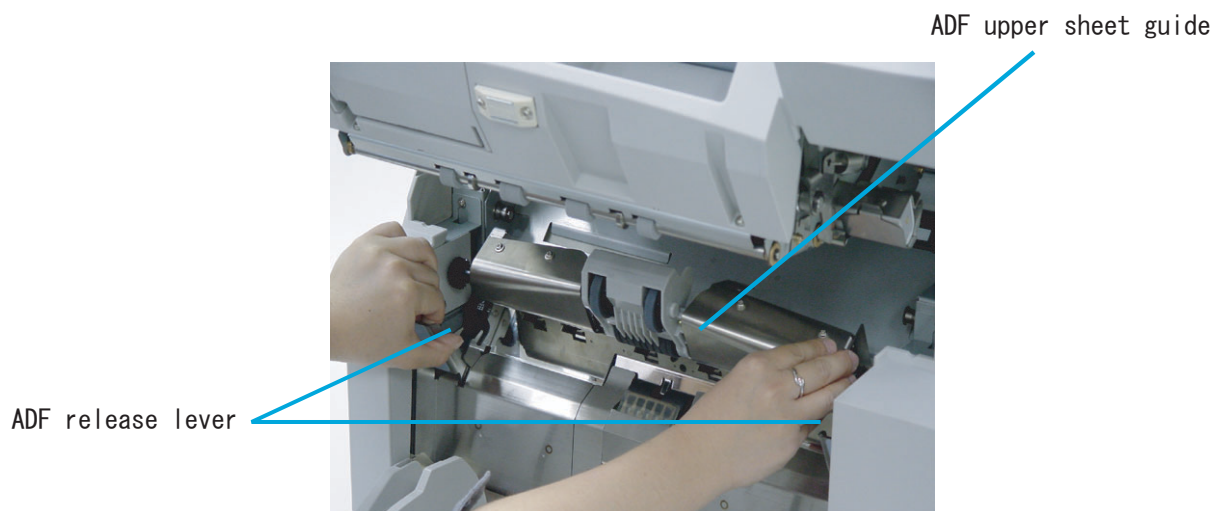
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



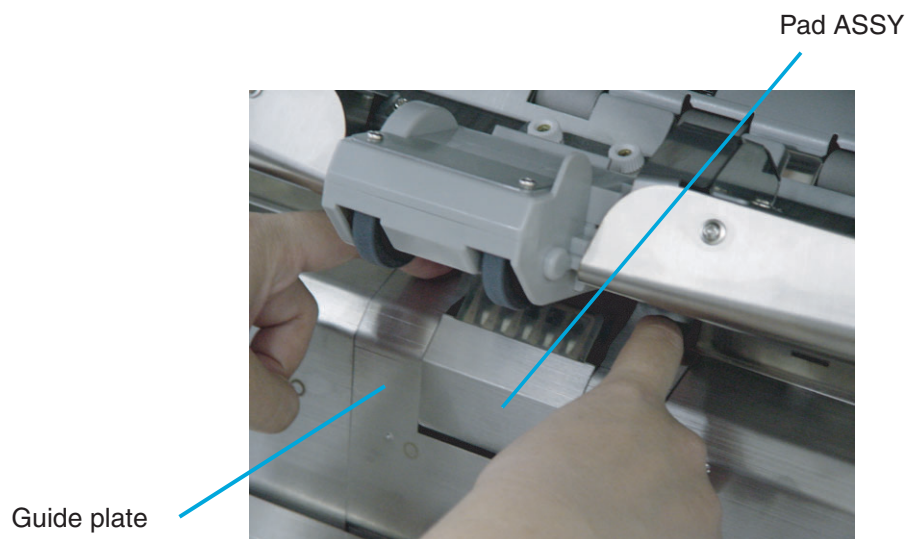
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



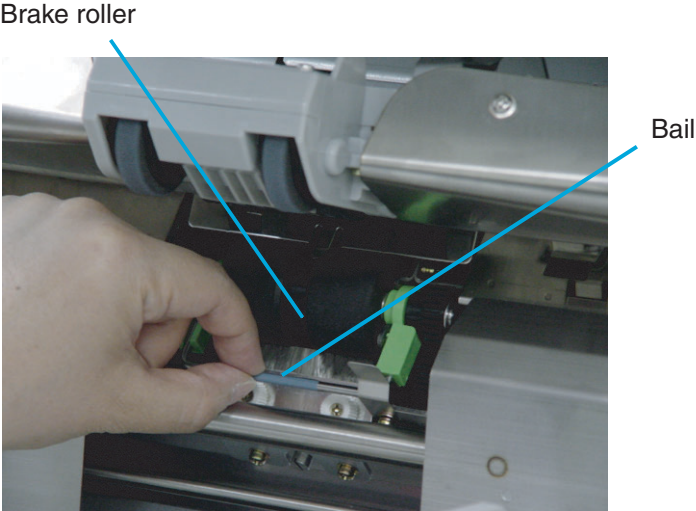
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



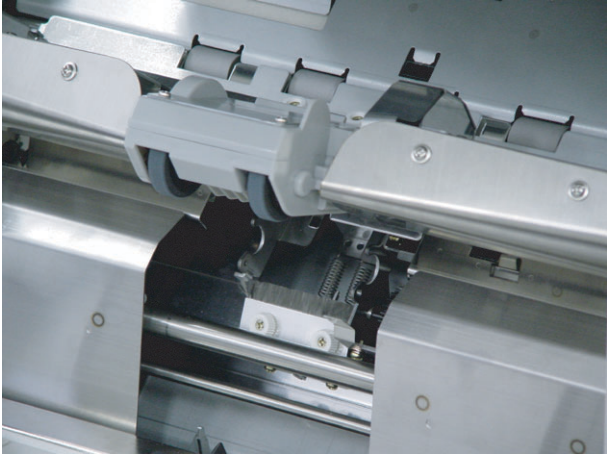
3. Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then pull the plate toward you to remove it.



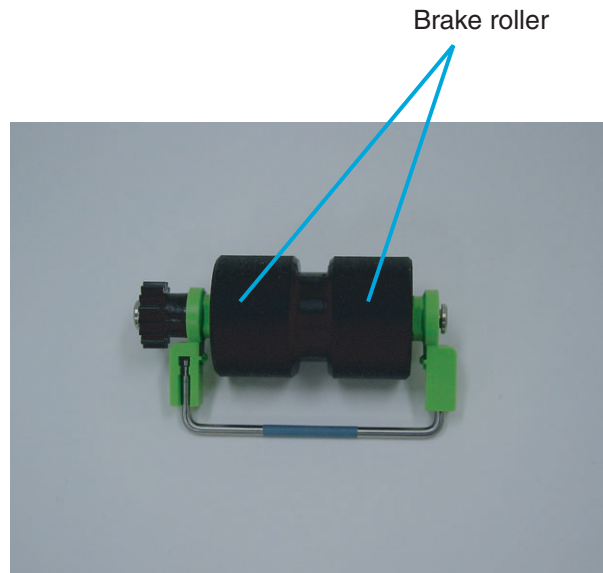
4. Turn the bail of the Brake roller upward and release the lock.



5. Pull the Brake roller toward you to remove it.



6. Wipe the Brake roller unit using a lint free cloth moistened with cleaner F1.



- 7. Re-install the Brake roller unit in the reverse order of its removal. By holding bail toward you, put the Brake roller into bracket and rotate down until it locks in.**
- 8. Install the Guide plate in the reverse order of the removal. By pressing the Guide plate down, and pushing the Guide plate back, you can install it smoothly.**
- 9. Lower the ADF upper sheet guide carefully.**
- 10. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.**

■ Cleaning the Feed rollers

1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.

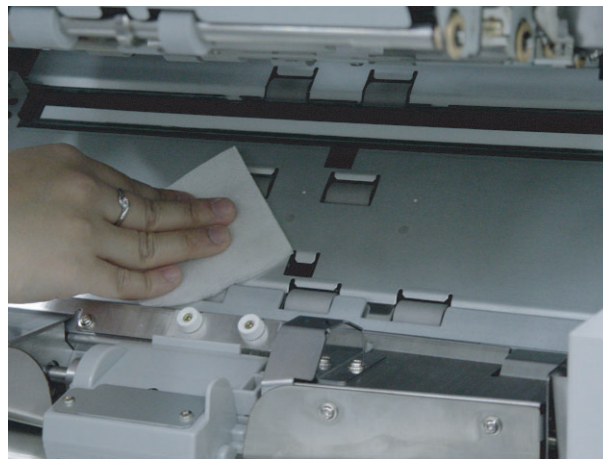
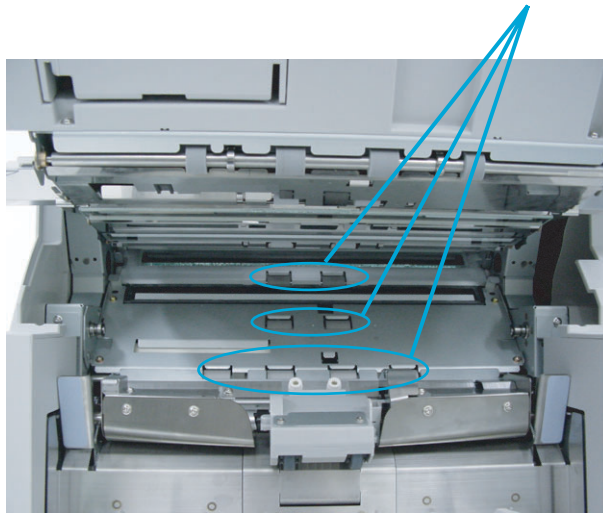


Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



2. Wipe the feed rollers using a lint free cloth moistened with cleaner F2. Wipe the rollers thoroughly. If the rollers have black build-up, the feed reliability is affected.

Metal feed roller(in 12 locations)



Use cleaner F2 only on metal rollers (the Feed rollers).

3. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Cleaning the Pinch rollers

1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.

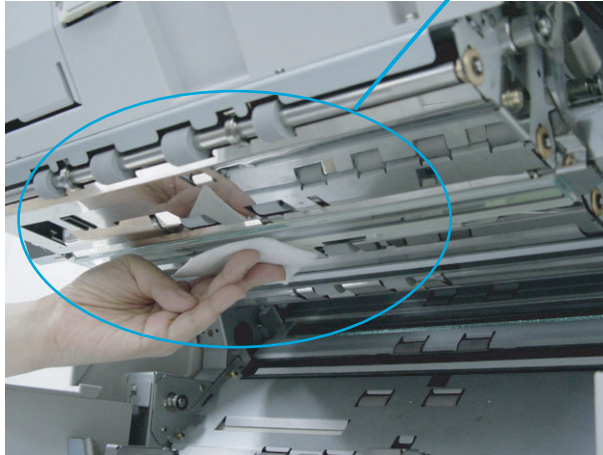


Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



2. Wipe the pinch rollers using a cloth moistened with cleaner F1.

Pinch roller (in 12 locations)



3. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

3.4 Cleaning the Transport Path

■ Cleaning the Transport path

1. Remove documents from the stacker first. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



2. Wipe and clean the whole transport path using a cloth moistened with cleaner F1.

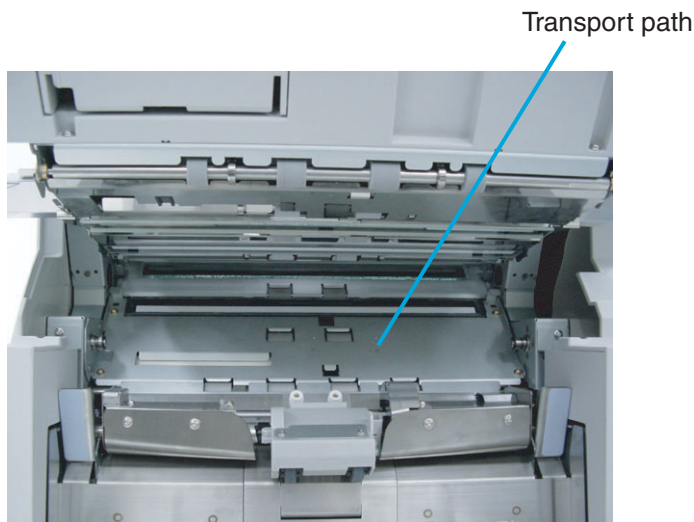


Vacuum the transport path if there are paper dusts in the path.

Do not use aerosol spray to clean the path.



Do not use High Pressure Air to blow dust out of the scanner. This will contaminate the optics and mechanism.



3. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

3.5 Cleaning the Discharge Brush

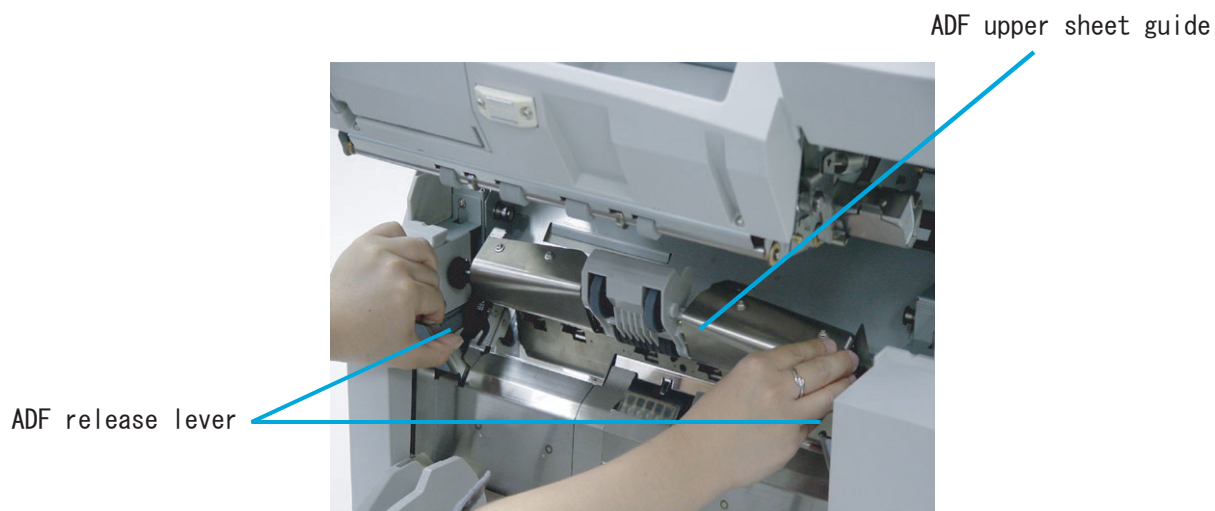
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



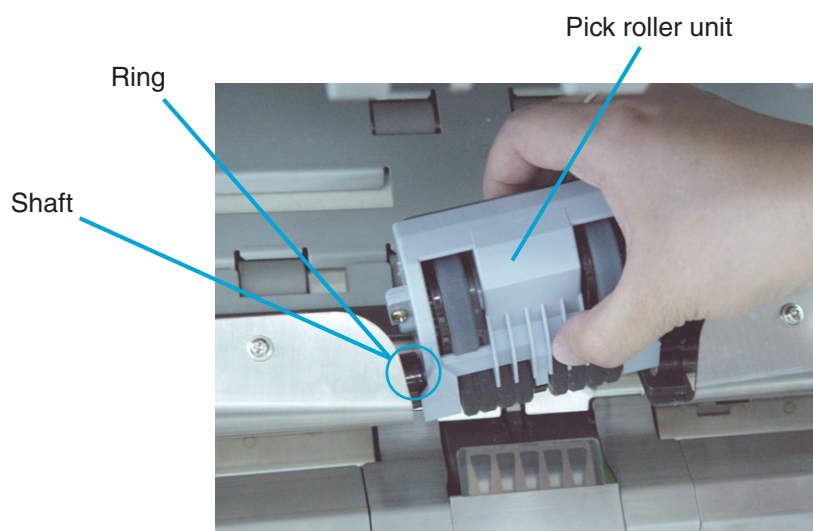
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



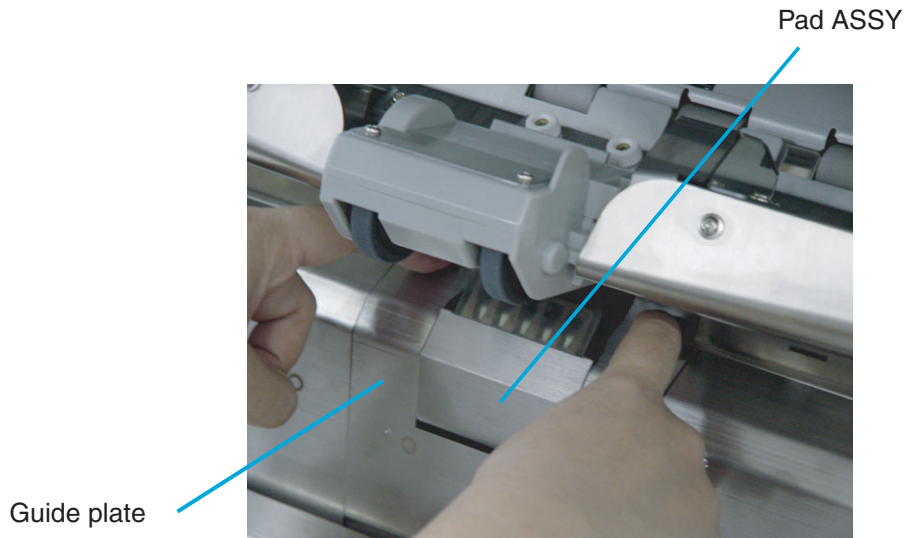
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



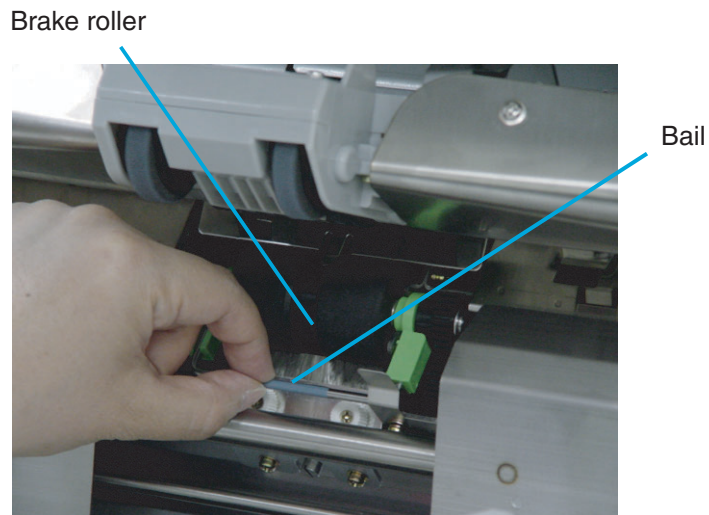
3. Slide the Pick roller unit to the left to disengage the clutch ring from the shaft.



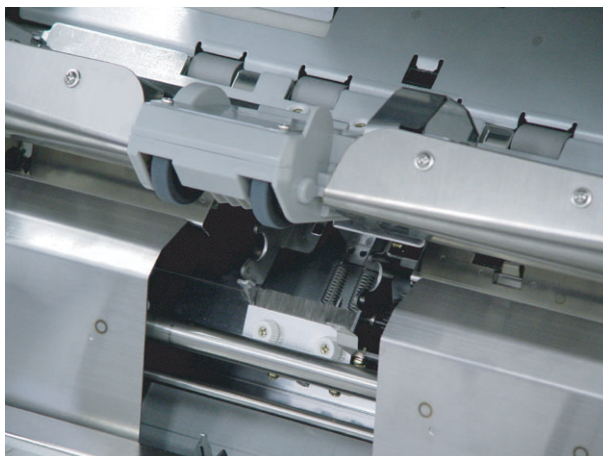
4. Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then rotate the plate toward you to remove it.



6. Hold and rotate the bail of the Pick roller unit upward to release the lock.

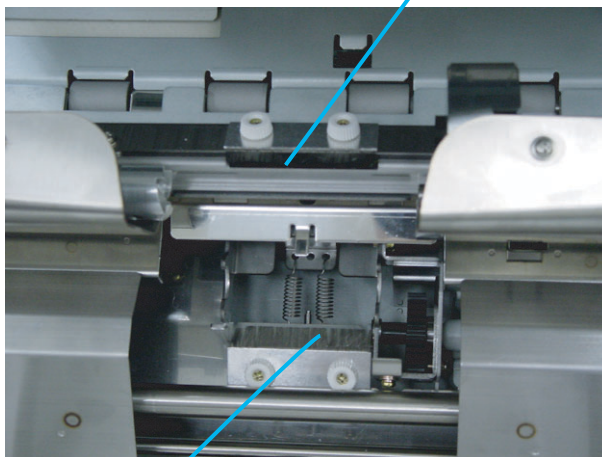


7. Pull the Brake roller unit toward you to remove it.



8. Wipe off the dust from the two discharge brushes: one at the Pick roller side, the other at the Brake roller side.

Discharge brush(for Pick roller unit)



Discharge brush(for brakeroller)

-
- 9. Re-install the Brake roller unit in the reverse order of its removal. By holding the bail toward you, put the Brake roller unit into bracket and rotate down until it locks in.**
 - 10. Install the Guide plate in the reverse order of the removal. You should push it down and rotate back then the installation can be done smoothly.**
 - 11. Lower the ADF upper sheet guide slowly.**
 - 12. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.**

3.6 Cleaning the Glass Surface

■ Cleaning of the removable sheet guide



The Lamps get very hot during use. Wait until the Lamps are cooled before touching.



1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



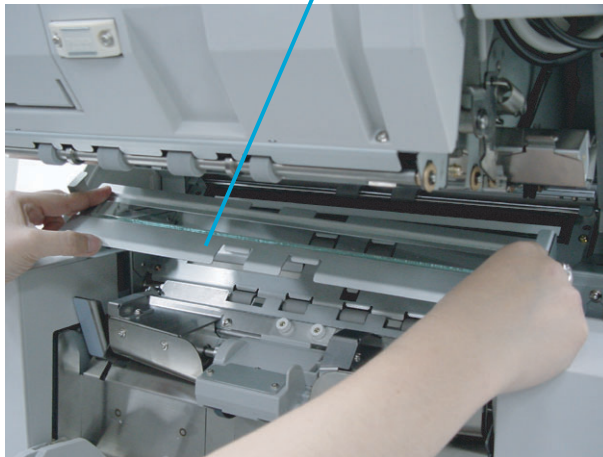
2. Use your index fingers to catch the both ends of the removable sheet guide.



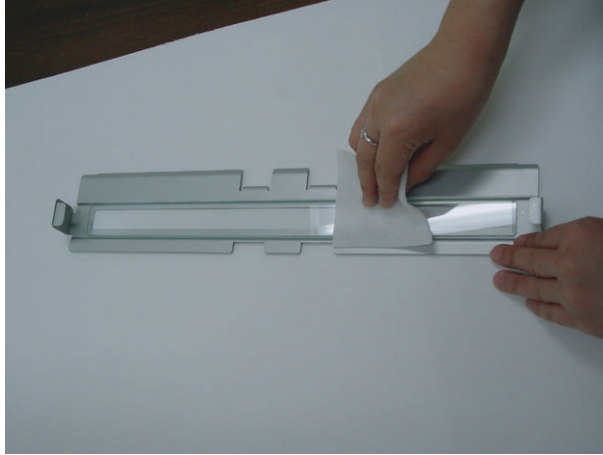
3. Lift the right side a little first.

4. Shift the sheet guide leftward while lifting it up to remove.

Removable sheet guide



5. Wipe the both sides of the glass surface using a clean lint free cloth moistened with cleaner F1.



6. Attach the removable sheet guide in the reverse order of its removal.
7. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Cleaning the Glass Sheet Guide



The Lamps get very hot during use. Wait until the Lamps are cooled before touching.



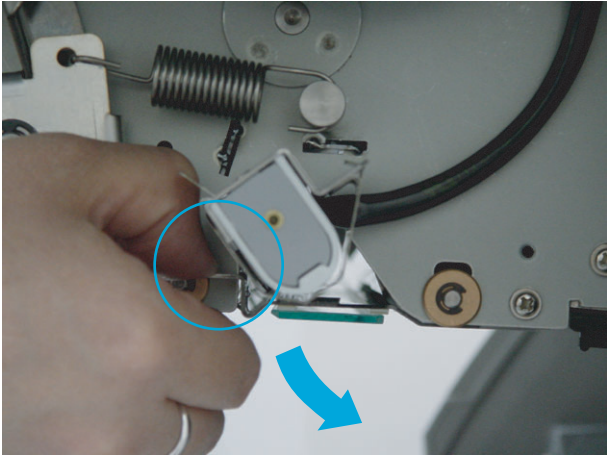
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



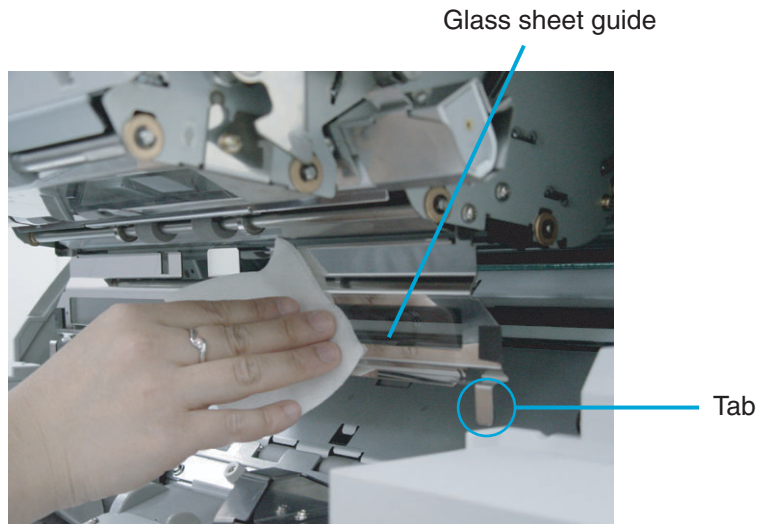
2. Push down on the Glass sheet guide tab to open the Glass sheet guide.



Glass sheet guide



3. Wipe the Glass sheet guide using a clean lint free cloth moistened with cleaner F1.



4. Lift the tabs until the Guide locks in. Close the Glass sheet guide. Make sure that the metal part locks.

5. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

3.7 Cleaning the Sensors

■ Cleaning the document width detection sensors (6 positions)

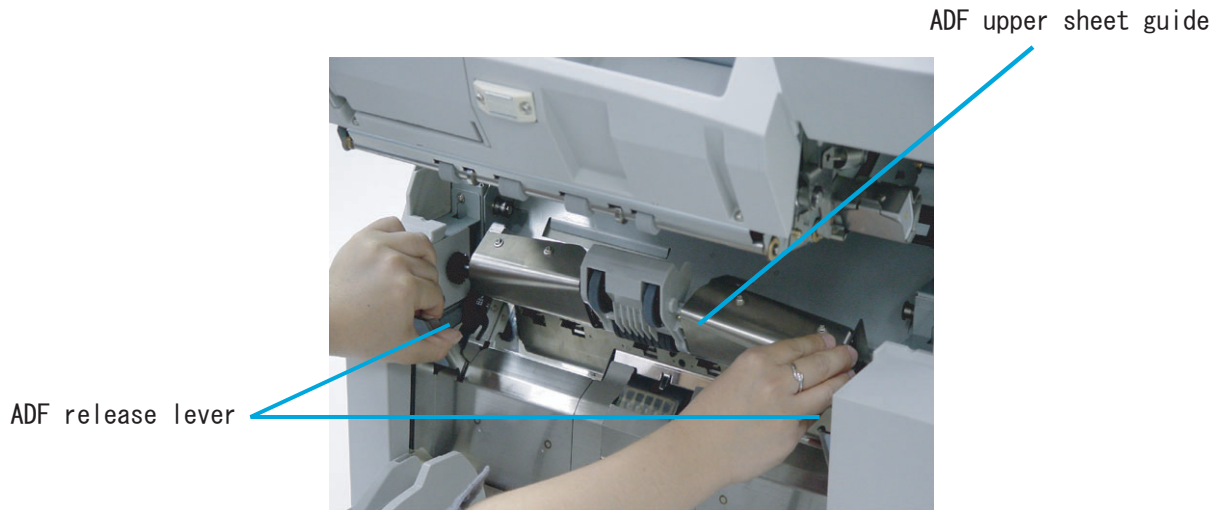
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.

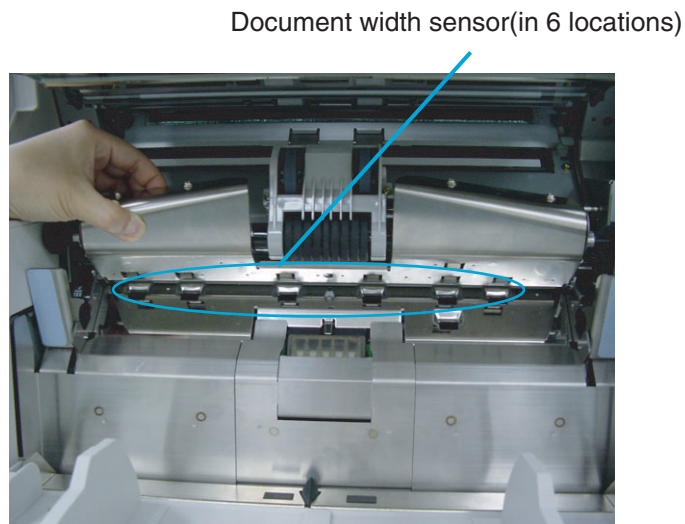


2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



3. Hold the ADF sheet guide with your hand to keep it open.

4. Wipe the six sensor surfaces with a clean lint free cloth moistened with cleaner F1.



5. Lower the ADF upper sheet guide gently.

6. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Cleaning SF0 sensor and SF1 sensor.

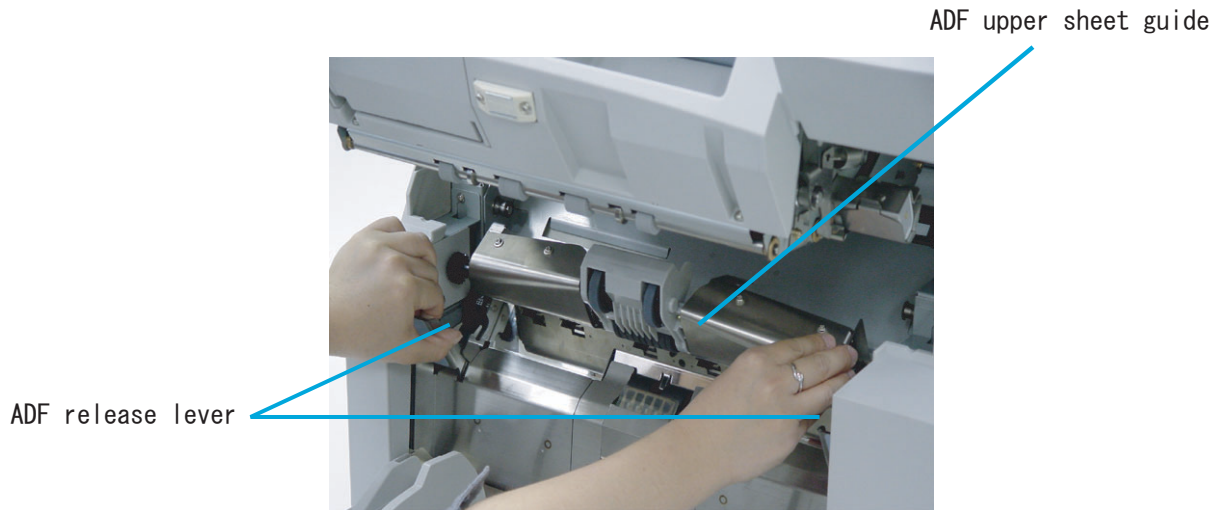
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.

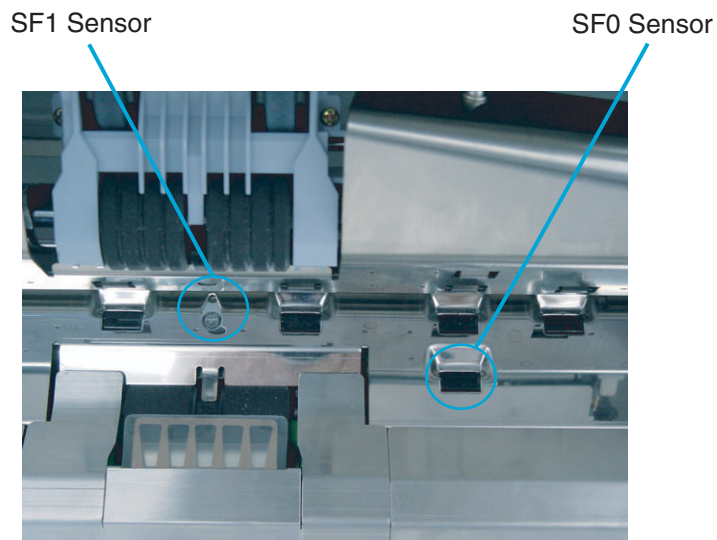


2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



3. Hold the ADF sheet guide with your hand to keep it open.

4. Wipe SF0 and SF1 sensor surfaces with a clean lint free cloth moistened with cleaner F1.



5. Lower the ADF upper sheet guide gently.

6. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Cleaning of SF1.5 sensor and SF2 sensor

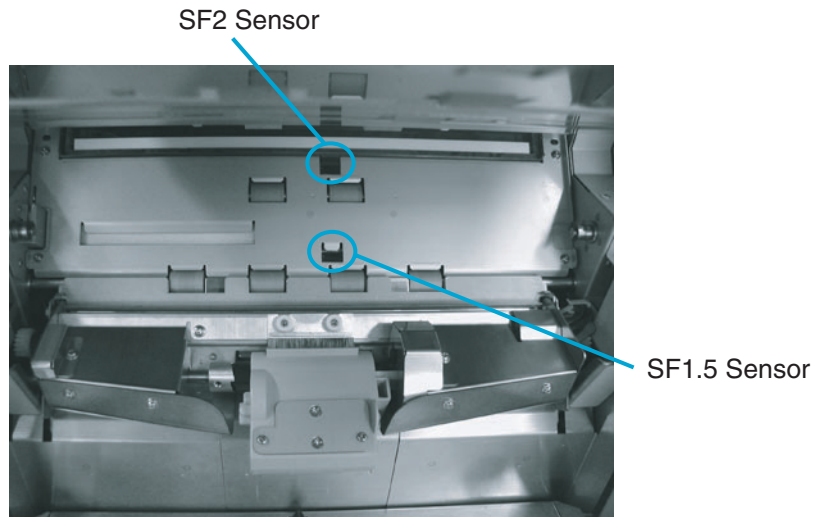
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.

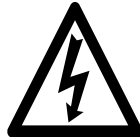


2. Wipe SF1.5 and SF2 sensor surfaces with a clean lint free cloth moistened with cleaner F1.



3. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

3.8 Cleaning the Lamps



Never replace the Lamp without turning off the power.



The Lamps get very hot during use. Wait until the Lamps are cooled before touching.

■ Front-side lamp

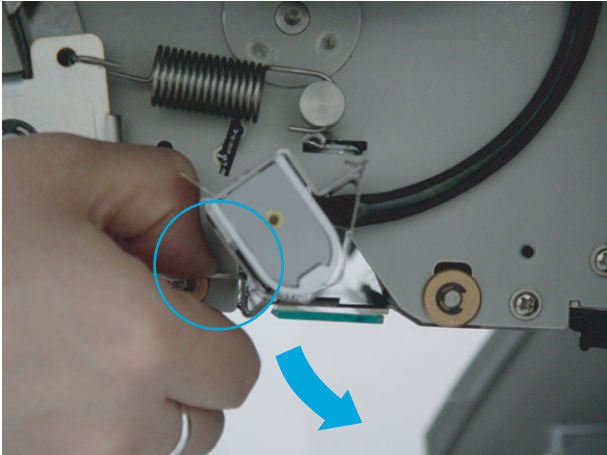
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



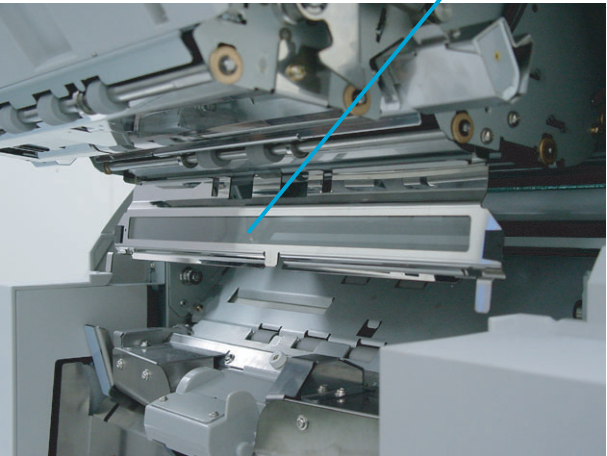
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



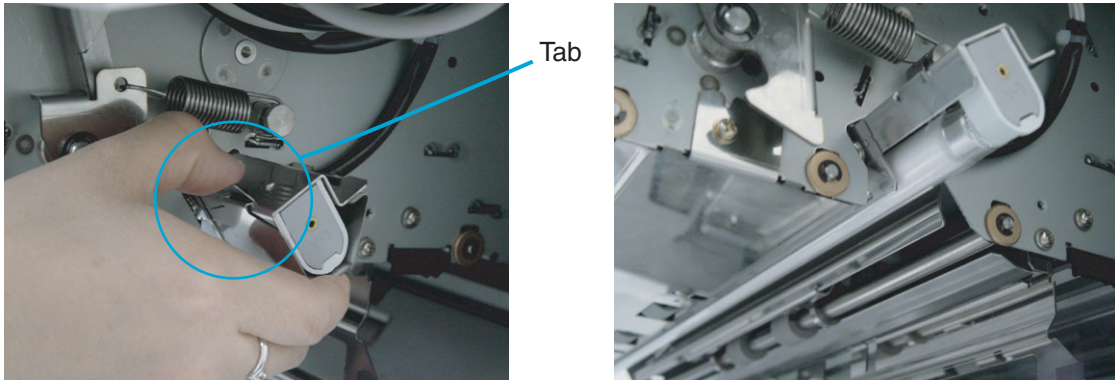
2. Push down on the Glass sheet guide tab to open the Glass sheet guide.



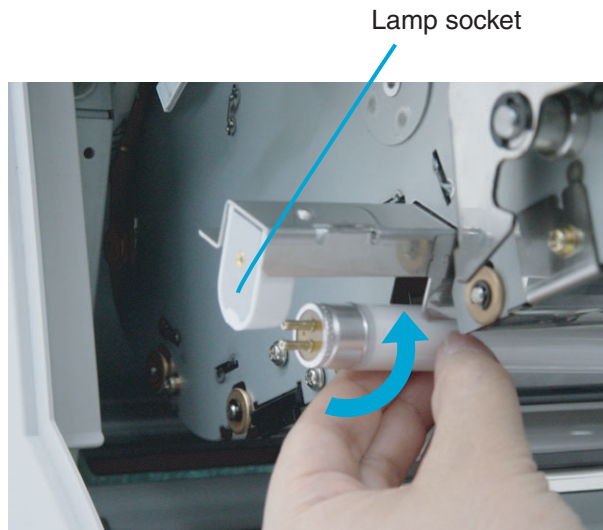
Glass sheet guide



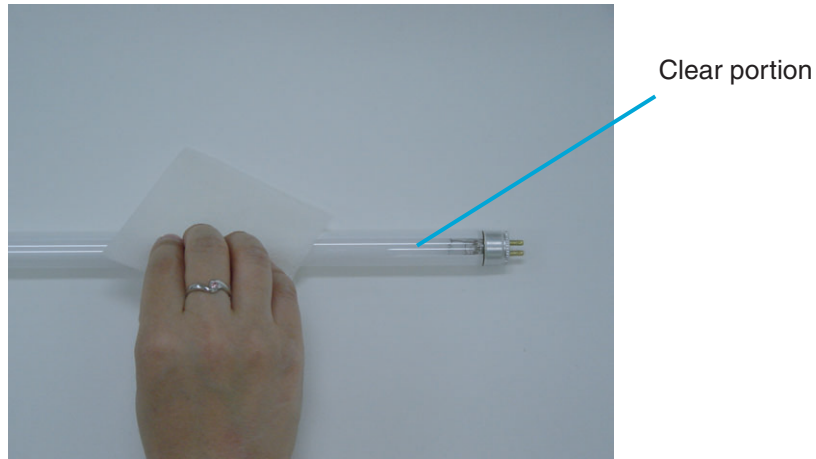
3. Pull down on the tab to release the Lamp socket covers attached to the both ends of the Lamp to remove them.



4. Rotate the Lamp a half turn so that the terminals on each end align with the slot on the Lamp socket and then remove the Lamp from the socket.



5. Clean the clear portion of the Lamp with a clean lint free dry cloth.

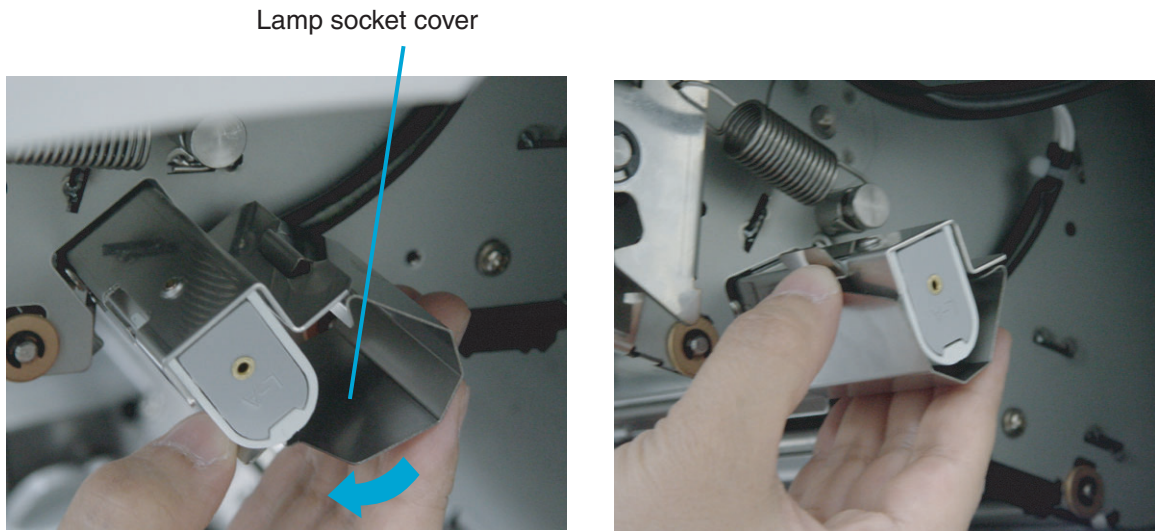


6. Attach the front-side Lamp in the reverse order of its removal. Make sure that the clear portion of the Lamp faces down.



If the Lamp is installed with the clear portion facing incorrect direction, an error due to insufficient light occurs.

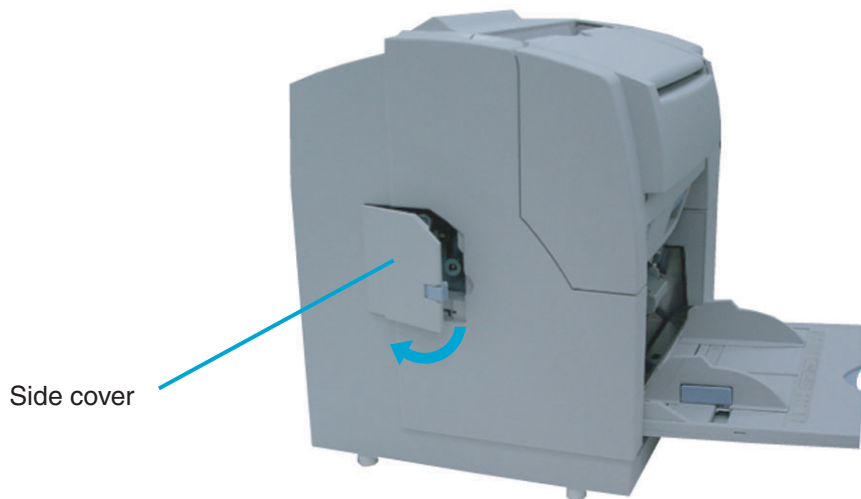
7. Attach the Lamp socket cover in the reverse order of its removal. Engage the socket cover hook to the Lamp frame then rotate forward as shown below, to attach the covers.



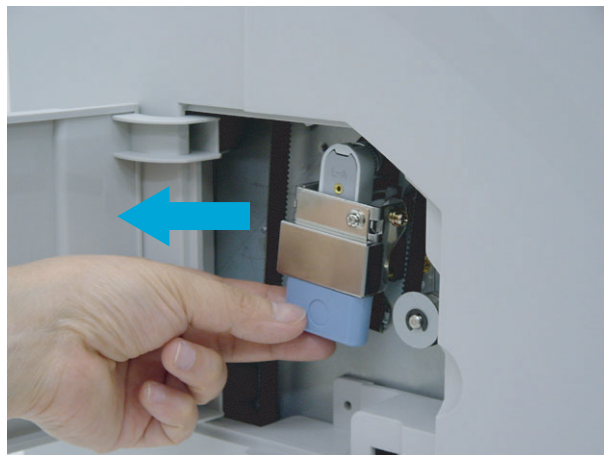
8. Close the Glass sheet guide. Make sure that the guide is fixed firmly.
9. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Back-side lamp

1. Push back blue latch to release the side cover, then open.

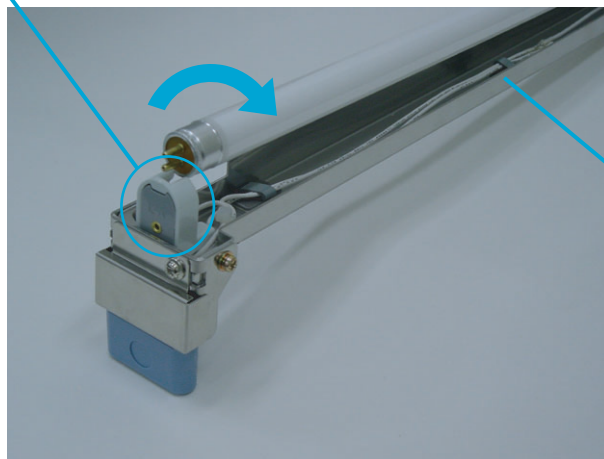


2. Hold the handle (blue part) and pull the Back-side lamp unit out of the scanner.



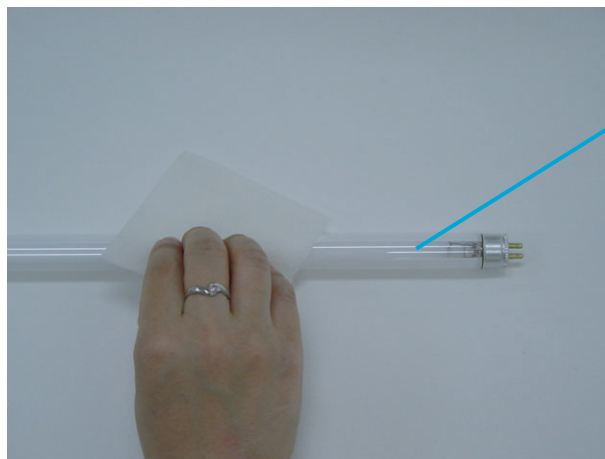
3. Rotate the Lamp a quarter turn so that the terminals on each end align with the slot on the Lamp socket and remove the Lamp from the unit.

Lamp socket



Backside lamp unit

4. Clean the clear portion of the Lamp with a dry cloth.



Clear portion

5. Install the Back-lamp unit in the reverse order of its removal. Make sure that the clear portion of the Lamp faces up.



If the Lamp is installed with the clear portion facing incorrect direction, an error due to insufficient light occurs.

6. Install the Back-lamp in the reverse order of its removal. Make sure the connectors meet properly.



7. Close the side cover. Confirm that the latch is closed securely.

4 REPLACEMENT OF CONSUMABLES

This chapter describes how to replace consumables.

4.1 Consumables and Replacement Cycle.....	86
4.2 How to check the Abrasion Counter.....	87
4.3 Replacing the Pad ASSY.....	88
4.4 Replacing the Pick Roller Unit	93
4.5 Replacing the Brake Roller Unit.....	96
4.6 Replacing the Front-side Lamp.....	99
4.7 Replacing the Back-side Lamp	104

4.1 Consumables and Replacement Cycle

The following table lists the Part No. and the standard replacement cycle of the consumables. It is recommended you stock extra consumables before the ones on the scanner reaches end of life. The consumables must be replaced periodically. You can check the number of scanned pages for the Pad ASSY, the Pick roller unit, the Brake roller unit, and Print cartridge, and you can check the cumulative lamp-on time for the Lamps by referring to each counter on this scanner.

Descriptions	Part No.	Standard replacement cycle
Lamp	PA83950-0290	1,000 Hours(60,000minutes)
Pad ASSY	CA04315-G730	300,000 sheets or 1 year
Pick Roller Unit	PA03296-F711	300,000 sheets or 1 year
Brake Roller Unit	CA04315-F705	300,000 sheets or 1 year
Print Cartridge	CA00050-0262	Black ink cartridge 40,000sheets (10 characters/ sheet)

The replacement cycle is based on the printing on Letter/A4 woodfree paper or wood containing paper documents(64g/m²). The replacement cycle may differ due to paper quality, print density or paper type.

For the purchase of the consumables, please contact the FUJITSU scanner dealer where you purchased your scanner.

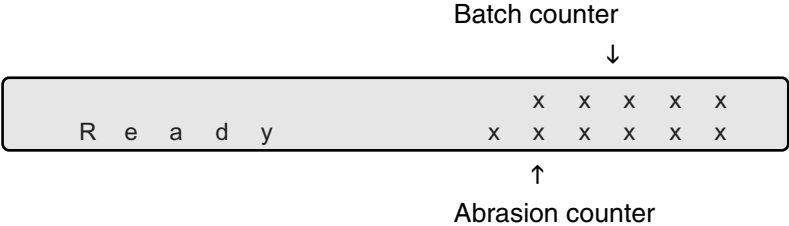


Use the correct Print cartridge. The Scanner may be damaged if the wrong Print cartridge is installed.

4.2 How to check the Abrasion Counter

■ Checking the counter from the Operator panel

The number displayed on the right bottom of LCD in scanner "Ready" status shows the consumables count. The Abrasion counter, shown below indicates the highest cumulative number of sheets scanned by the PAD ASSY, the Pick roller unit or the Brake roller unit.



When the counter is zero, nothing is displayed.
Batch counter indicates the number of scanned pages of one batch.

4.3 Replacing the Pad ASSY

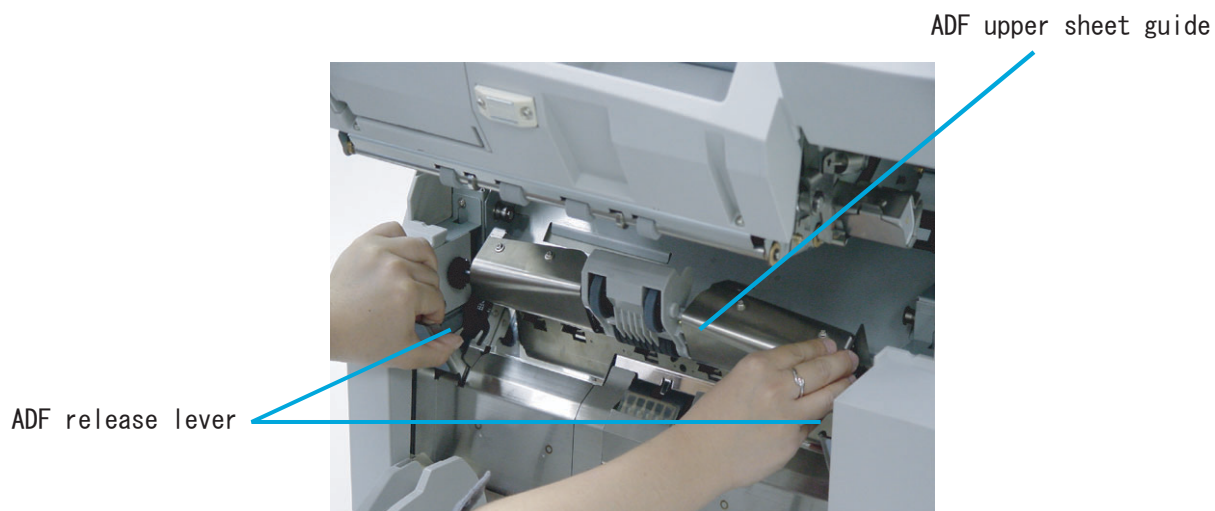
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



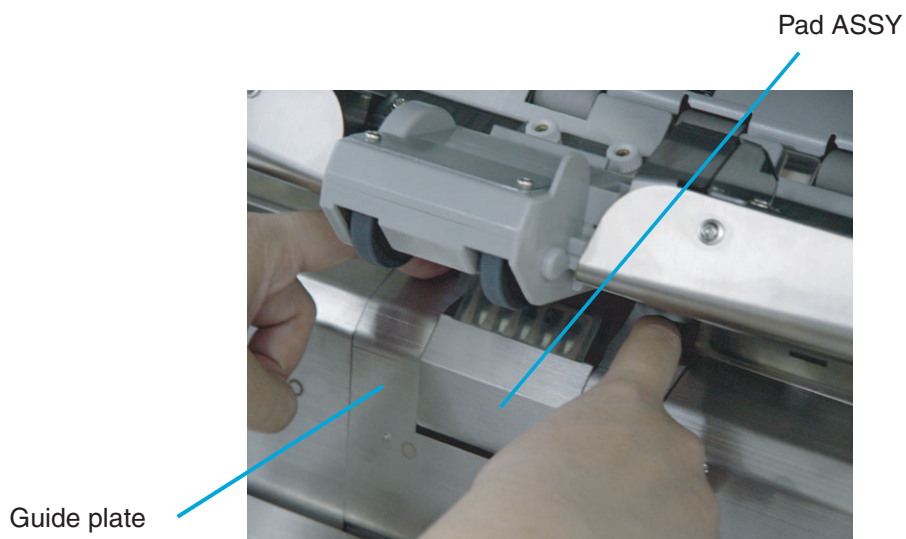
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.

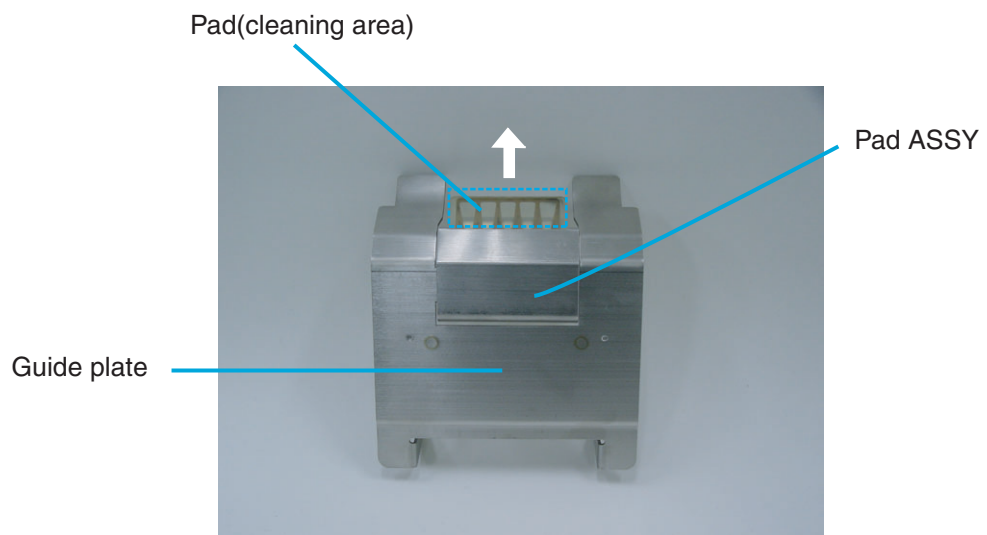
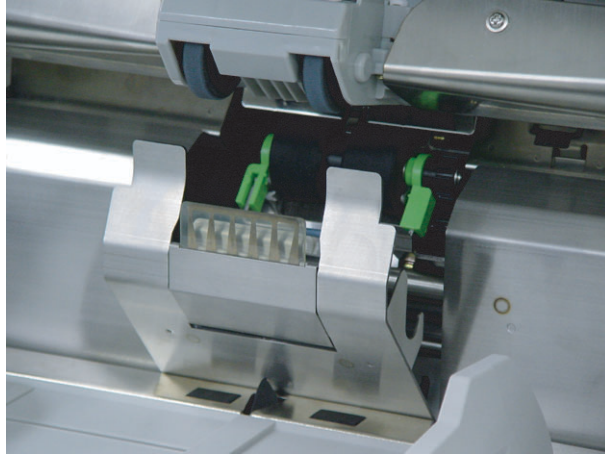


2. Pull the ADF release lever toward you and lift up the ADF sheet guide.

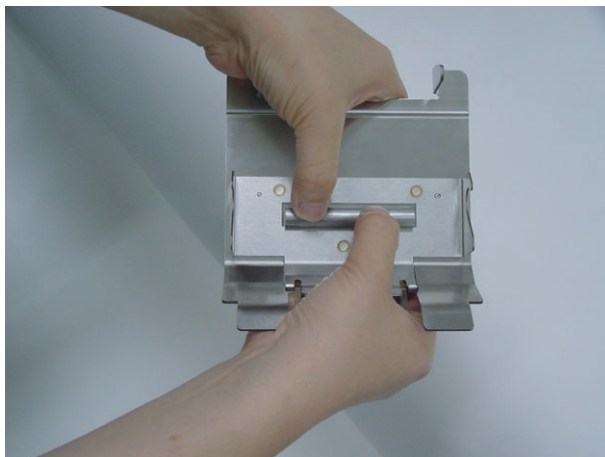


3. Press down on the upper part of the Guide plate with your fingers at the two positions shown and then rotate the plate toward you to remove it.

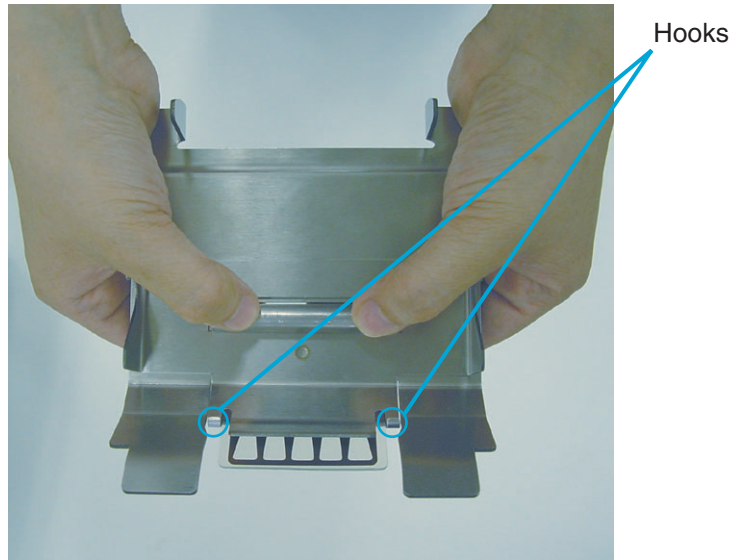




4. Remove the Pad ASSY from the Guide plate by pushing the removal metal scroll down and then release hooks.



5. **Attach a new Pad ASSY by engaging the hooks then pressing scroll into the slot of the Guide plate.**



Confirm that the pad is firmly attached to the guide. Make sure that the two tabs are engaged with the Guide plate.

If not attached firmly, paper feed errors such as document jams may happen.

6. **Install the Guide plate in the reverse order of the removal. By pressing the Guide plate down and pushing the Guide plate back then you can install it smoothly.**

7. **Lower the ADF upper sheet guide gently.**

8. **Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.**

9. **Clear the Pad counter.**

Please refer to the section “7.3 Setup Mode Details”, “9. Abrasion counter reset.”

4.4 Replacing the Pick Roller Unit

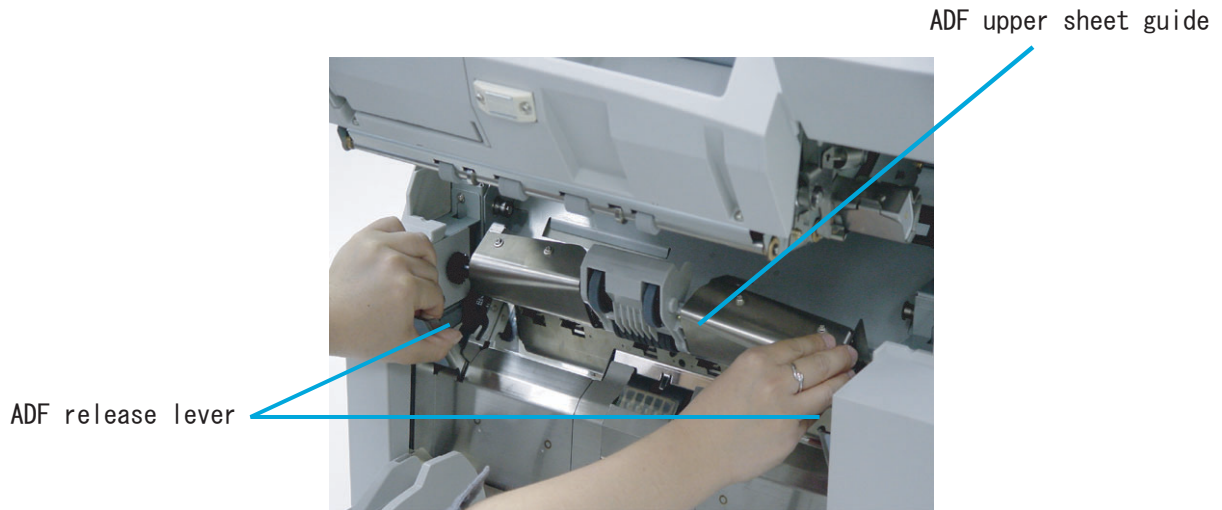
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



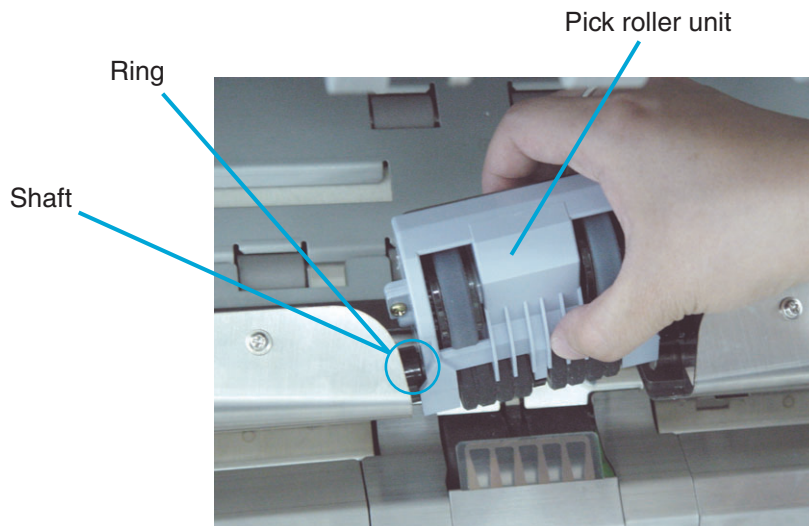
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



2. While pulling the ADF lever toward you, lift up the ADF upper sheet guide.



3. Lift up the Pick roller unit a little. Slide the Pick roller unit to the left to disengage the clutch ring from the shaft.

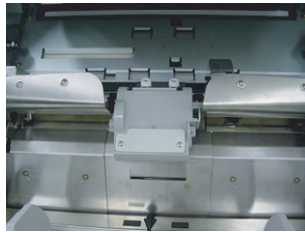


4. Install a new Pick roller unit in the reverse order of its removal.

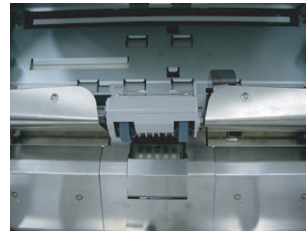


When attaching the Pick roller unit, hold the unit as shown. Engage the drive ring onto the drive shaft. Move left and align the clutch ring with the shaft and move right to engage.

Incorrect installation



Correct installation



5. Lower the ADF upper sheet guide carefully.

6. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

7. Clear the Pick roller counter.

Please refer to the section “7.3 Setup Mode Details”, “9. Abrasion counter reset.”

4.5 Replacing the Brake Roller Unit

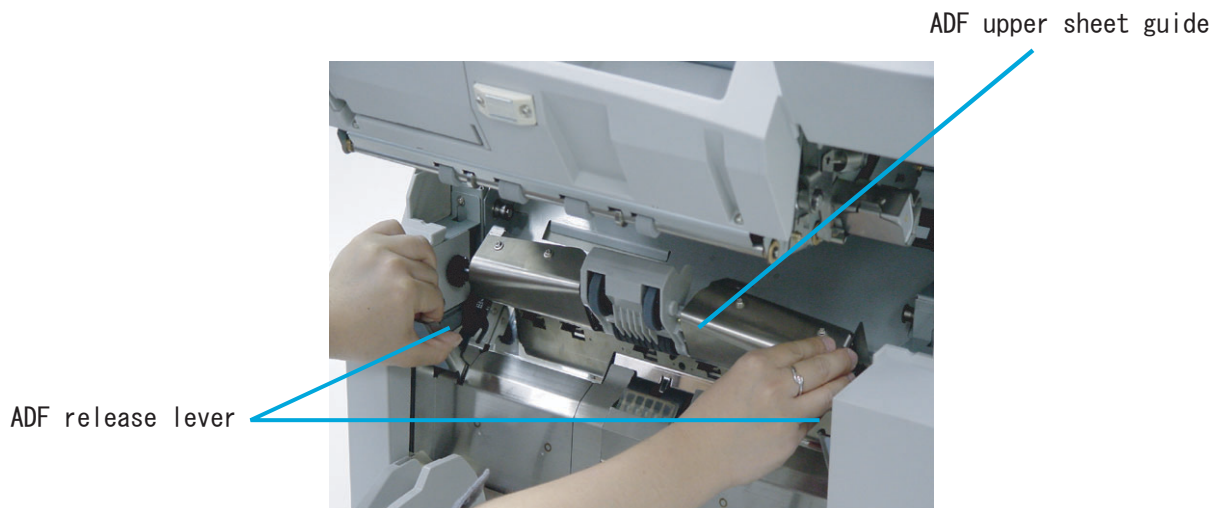
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



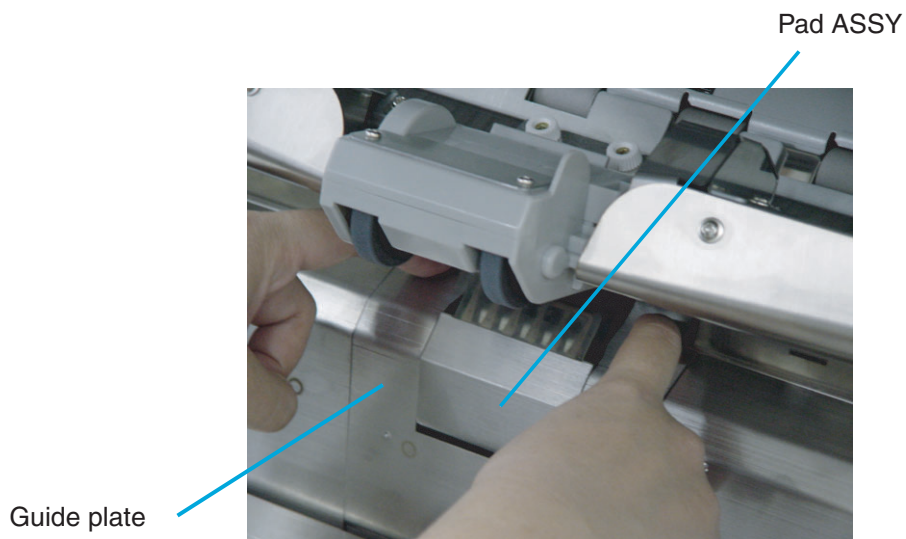
Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



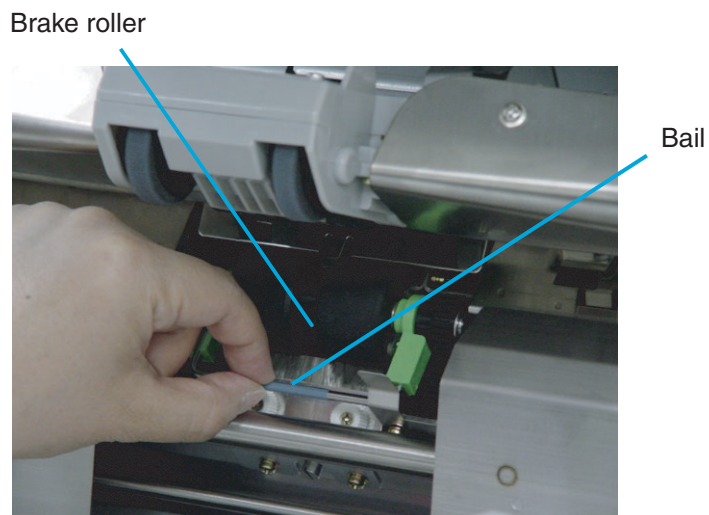
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



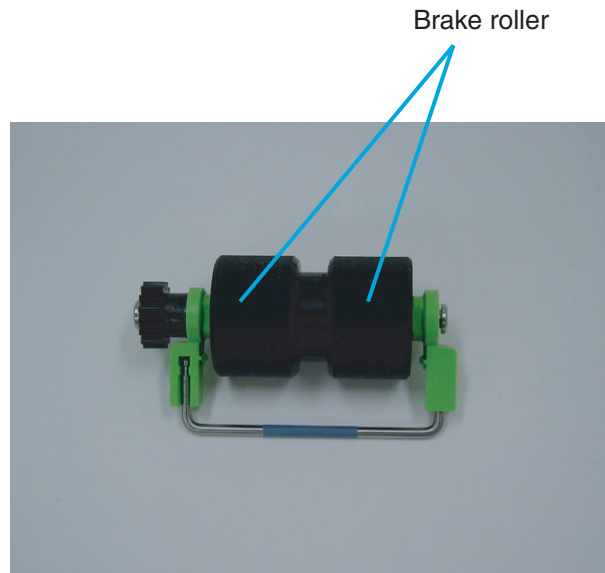
3. Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then pull the plate toward you to remove it.



4. Turn the bail of the Brake roller upward and release the lock.



5. Pull the Brake roller toward you to remove it.



6. Install a new Brake roller unit in the reverse order of its removal. By holding bail toward you, put the Brake roller into bracket and rotate down until it locks in.

7. Install the Guide plate in the reverse order of the removal. By pressing the Guide plate down and pushing the Guide plate back, you can install it smoothly.

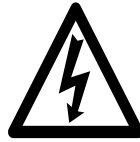
8. Lower the ADF upper sheet guide carefully.

9. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

10. Clear the Brake roller counter.

Please refer to the section “7.3 Setup Mode Details”, “9. Abrasion counter reset.”

4.6 Replacing the Front-side Lamp



Never replace the Lamp without turning off the power.



Wait 5 minutes after turning off the power before touching the Lamp.

4

REPLACEMENT OF CONSUMABLES

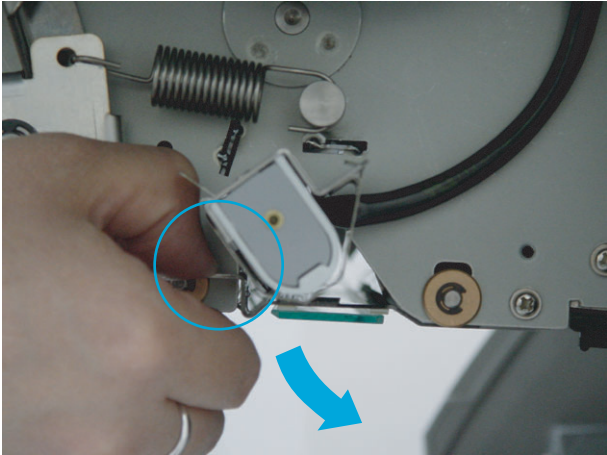
1. Remove documents from the stacker. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



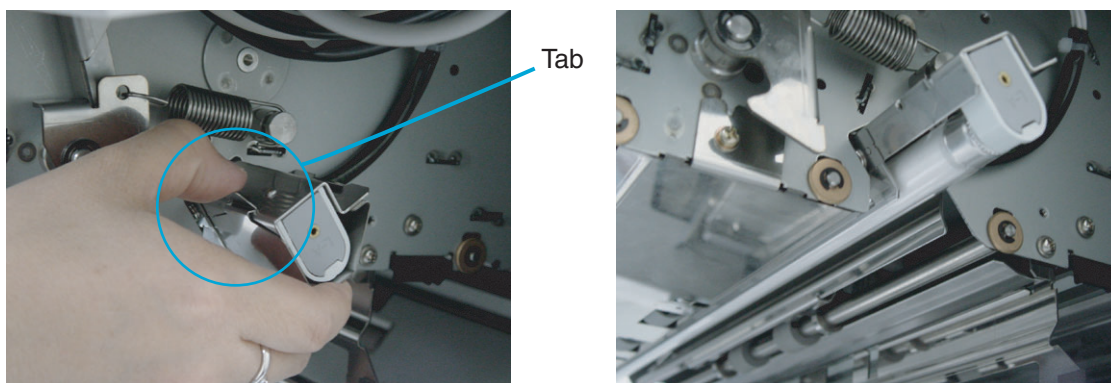
2. Pull down the Glass sheet guide tab and open the Glass sheet guide.



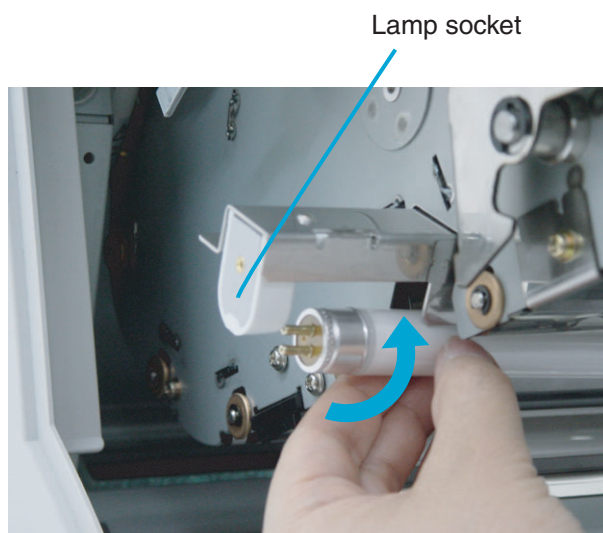
Glass sheet guide



3. Pulling down the Lamp socket covers attached to the both end of the Lamp sockets and remove them.



4. Rotate the Lamp a half turn so that the terminals on each end align with the slot on the Lamp socket and remove the Lamp from the unit.

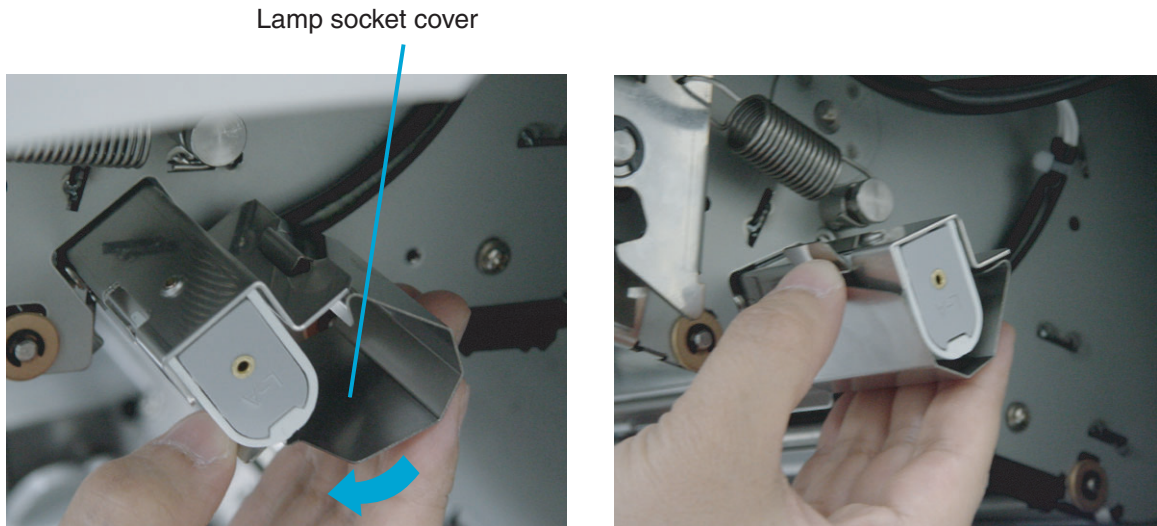


5. Install a new Lamp in the reverse order of the removal. Make sure that the clear portion of the Lamp faces down.



If the Lamp is installed with the clear portion facing incorrect direction, an error due to insufficient light occurs.

6. Attach the Lamp socket cover in the reverse order of its removal. Make sure that the metal part is fixed firmly.



7. Close the glass sheet guide. Make sure that the guide is fixed firmly.
8. Lift the Upper transport unit a little to release the safety lock and then lower the transport unit slowly.
9. Clear the Front-side lamp counter.
Please refer to the section "7.3 Setup Mode Details", "9. Abrasion counter reset."



You can check the cumulative lamp-on time from the Operator panel Test mode.

For the details, refer to the section "7.5 Test Mode Details," "3.Display the cumulative lamp-on time."

4.7 Replacing the Back-side Lamp

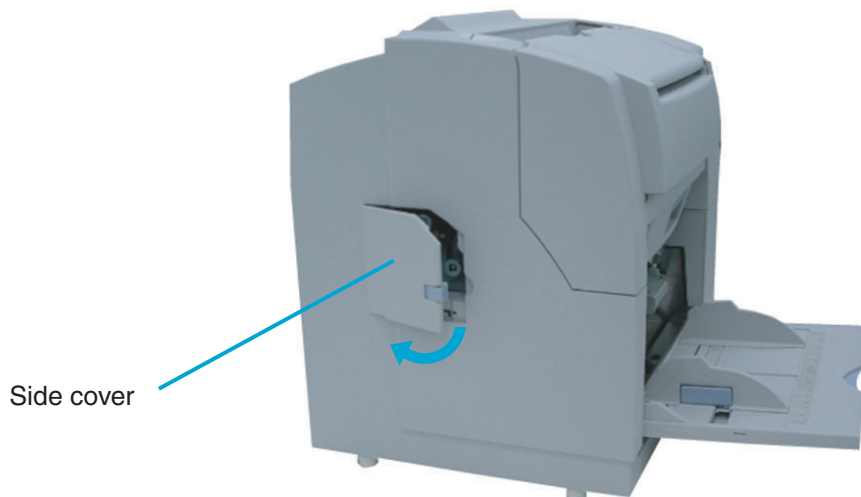


Never replace the Lamp without turning off the power.

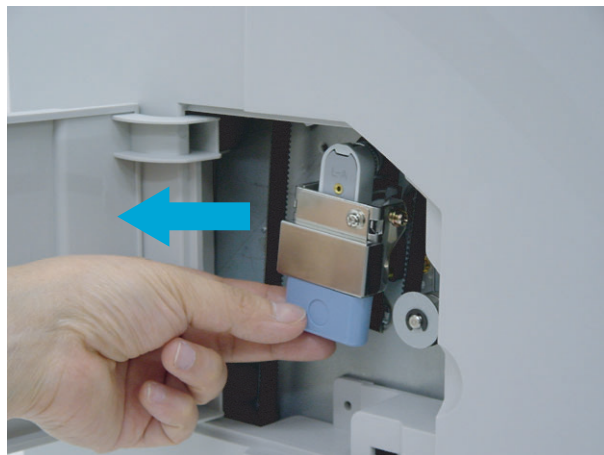


Wait 5 minutes after turning off the power before touching the Lamp.

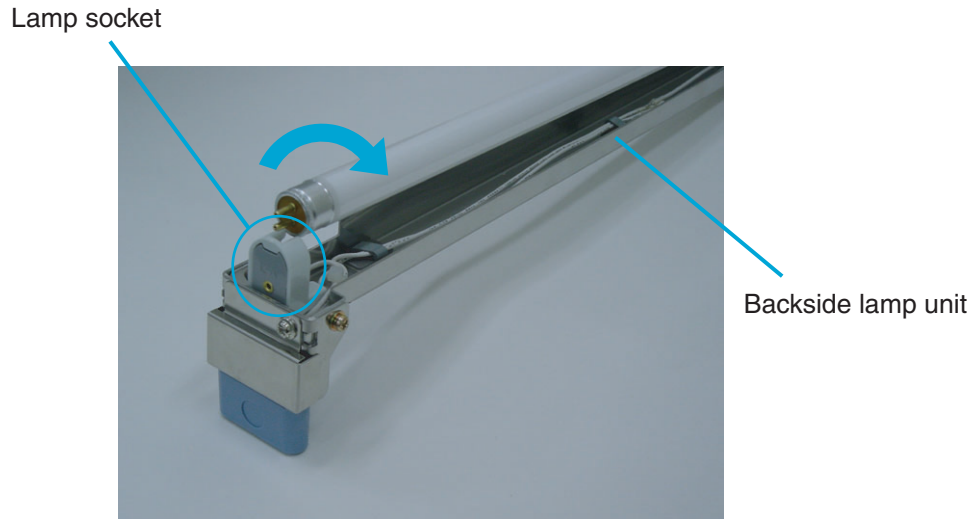
1. Pull and open the side cover.



2. Hold the handle (blue part) and pull out the Back-side lamp unit.



3. Rotate the Lamp a half turn so that the terminals on each end align with the slot on the Lamp socket and remove the Lamp from the unit.



4. Attach a new Lamp following the reverse order of old lamp removal. Make sure that the clear portion of the Lamp faces up.



If the Lamp is installed with the clear portion facing incorrect direction, an error due to insufficient light occurs.

5. Install the Back-lamp unit in the reverse order of its removal. Make sure the connectors meet properly.



6. Close the side cover. Confirm that the cover is closed securely.

7. Clear the Rear-side lamp counter.

Please refer to the section "7.3 Setup Mode Details," "9. Abrasion counter reset."

3



You can check the cumulative lamp-on time from the Operator panel Test mode.

For the details, refer to the section "7.5 Test Mode Details," "3.Display the cumulative lamp-on time."

5 SOLVING COMMON PROBLEMS

This chapter describes how to clear document jams, how to remedy other problems, items to be checked before contacting an authorized service provider and how to check labels on the scanner.



For the details of errors and the problems not described in this manual, please refer to the “Scanner Utility for Microsoft®Windows® User's Guide” on the scanner driver CD-ROM.

5.1 Clearing Document Jams	108
5.2 Troubleshooting.....	115
5.3 Before Contacting a Service Provider	138
5.4 Labels on the Scanner	141

5.1 Clearing Document Jams

If a document jam occurs during feeding, follow the procedure below to remove the jammed documents.



- Be careful not to get injured during jam removal.
 - When removing jammed documents, be careful not to get your neckties or necklaces entangled inside the scanners.
 - The surface of the glass sometimes becomes hot during operation. Take care not to get burned.
-

■ Removing jams from the hopper or the transport path

1. Remove the documents on the stacker.

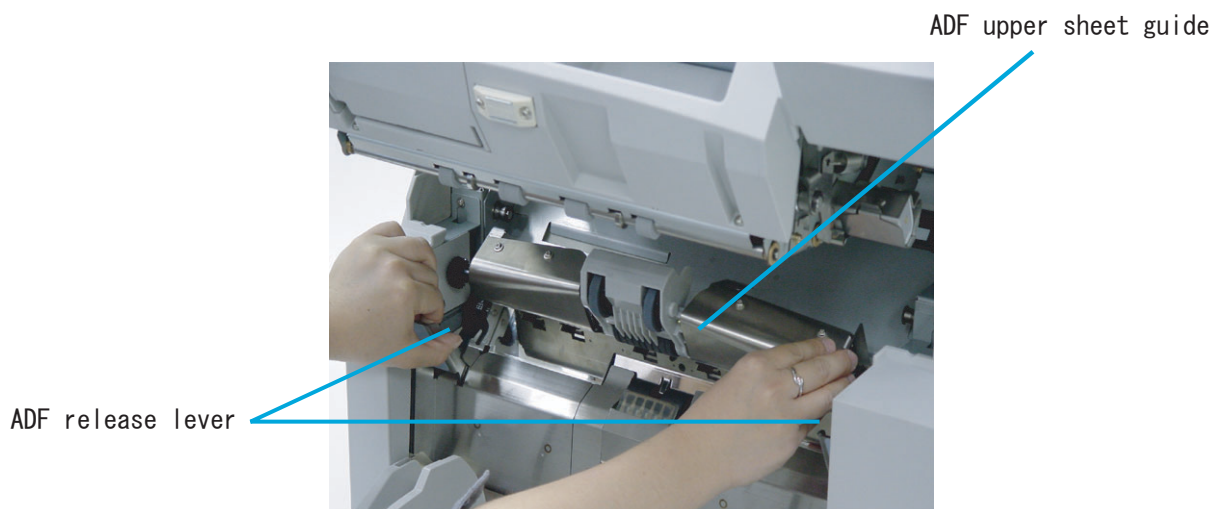
2. Pull up on the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower the transport to engage lock before you put your hands inside of the scanner.



3. While pulling the ADF lever toward you, lift up the ADF upper sheet guide.



4. Remove the jammed document.



- Staples and paper clips etc. can cause document jams.
 - Make sure you check the document and the document transport path for obstructions before you start scanning again.
 - Remove staples and paper clips from the documents before you start scanning.
-

5. Lower the ADF upper sheet guide carefully.

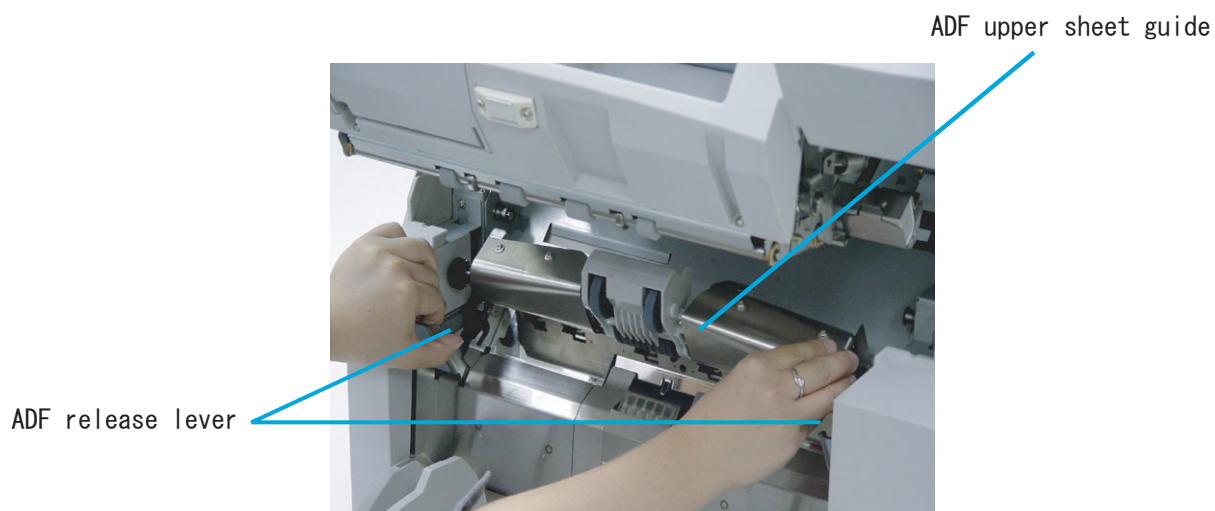
6. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Removing jams from the eject mechanism.

1. Remove the documents on the stacker.

2. Pull up on the lever on the right front of the Upper transport and then raise it.





3. Pull out the jammed document to the stacker.

4. Lift the Upper transport unit fully to release the safety lock and then lower the transport unit carefully.

■ Document separation force adjustment

If the following error occurs frequently, adjust the brake force of the Brake roller using setup mode.

- Double-feed
- Mis-pick
- Paper jam1

1. Enter into the setup mode.

Please refer to the section "1.3 Basic Operations of Operator Panel", "Using the setup and test mode."

The following screen appears.



Choose an appropriate setting based on the thickness of the document you are scanning and the error.

By pressing  (Right arrow button), the LCD display changes items from (5) to (1).

By pressing  (Left arrow button), the LCD display changes items from (1) to (5).


- | | | |
|-----|-----------|------------------------------------|
| (1) | ■ ■ ■ ■ ■ | - Document thickness: Thick |
| (2) | ■ ■ ■ ■ □ | - Document thickness: Medium thick |
| (3) | ■ ■ ■ □ □ | - Document thickness: Average |
| (4) | ■ ■ □ □ □ | - Document thickness: Medium thin |
| (5) | ■ □ □ □ □ | - Document thickness: Thin |

When the desired option appears, press  (Enter button) to select it.

Document separation force setup items are as follows.

Setting	Document thickness	Document separation force	"Double-feed" occurs frequently	"Mis-pick" or "Document jam" occurs frequently
Thick	Thick	Strong	Increase document separation force	Decrease document separation force
Medium Thick	Medium Thick	Less strong		
Mid	Average	Average (Factory default setting)		
Medium Thin	Medium Thin	Medium Easy		
Thin	Thin	Easy		

If Mis-pick occurs frequently, adjust the Pick roller rotation speed.

Press  (Next button) to show the following screen.

!	0	3	P	i	c	k	S	p	e	e	d				
=			F	a	s	t	/	M	i	d	/	S	l	o	w

Press  (Left arrow button) or  (Right arrow button) and select an item.

Press  (Enter button) to select the setting.



The blinking item is the one selected.

Pick speed	Mis-pick occurs frequently.
Fast (Factory default)	↓ Decrease pick speed
Mid	
Slow	



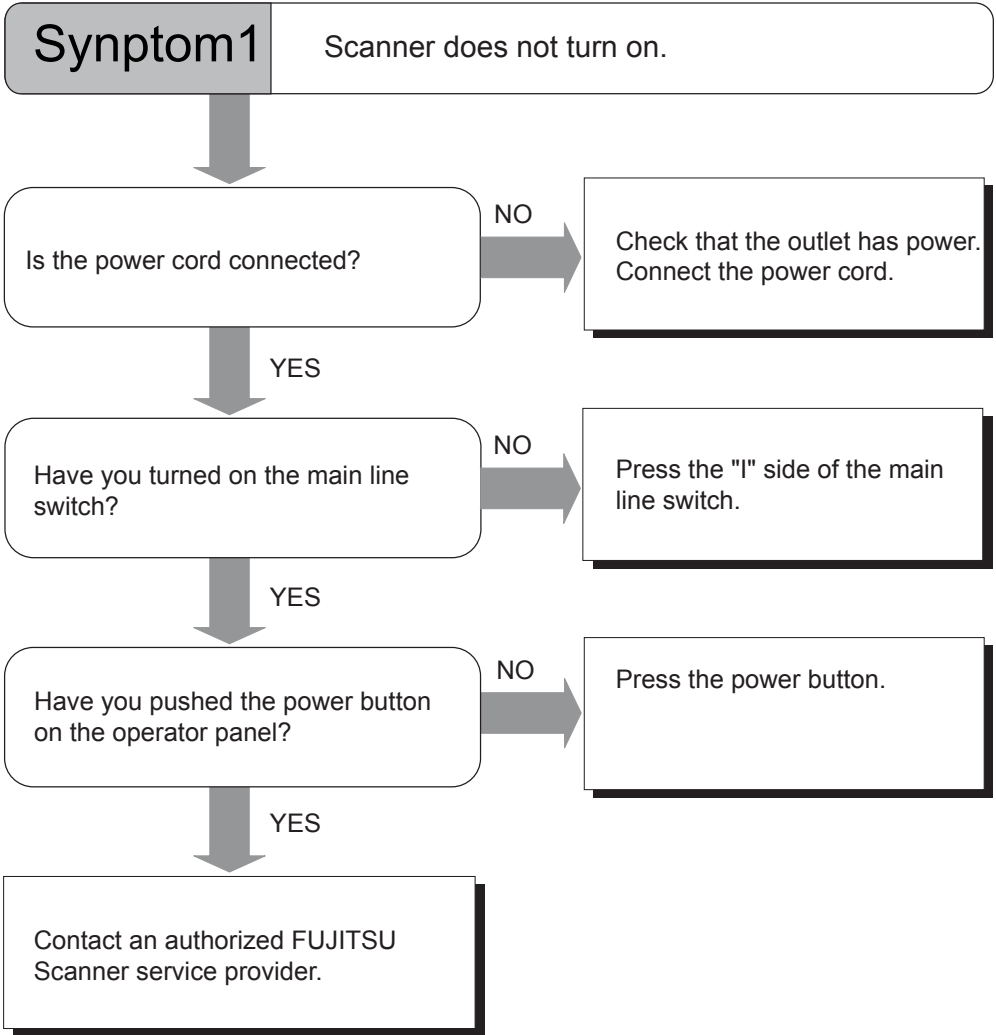
When you set pick speed at "Mid" or "Slow", scanning speed is reduced.

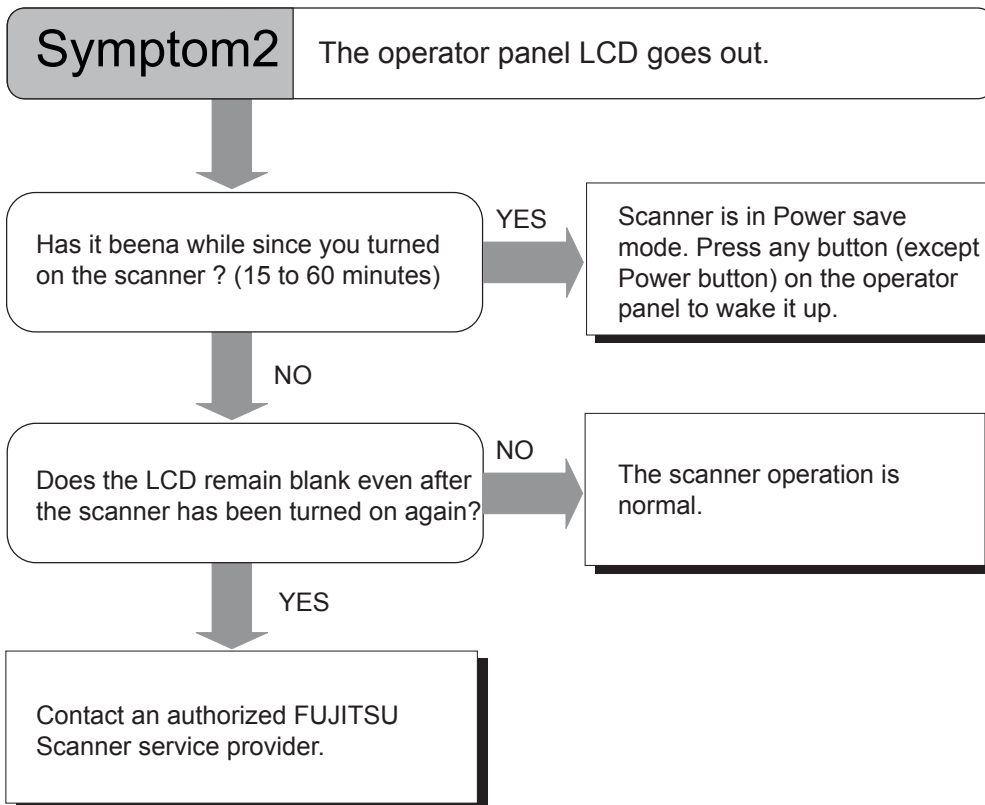
5.2 Troubleshooting

This section describes common troubles during usage and how to remedy the troubles.

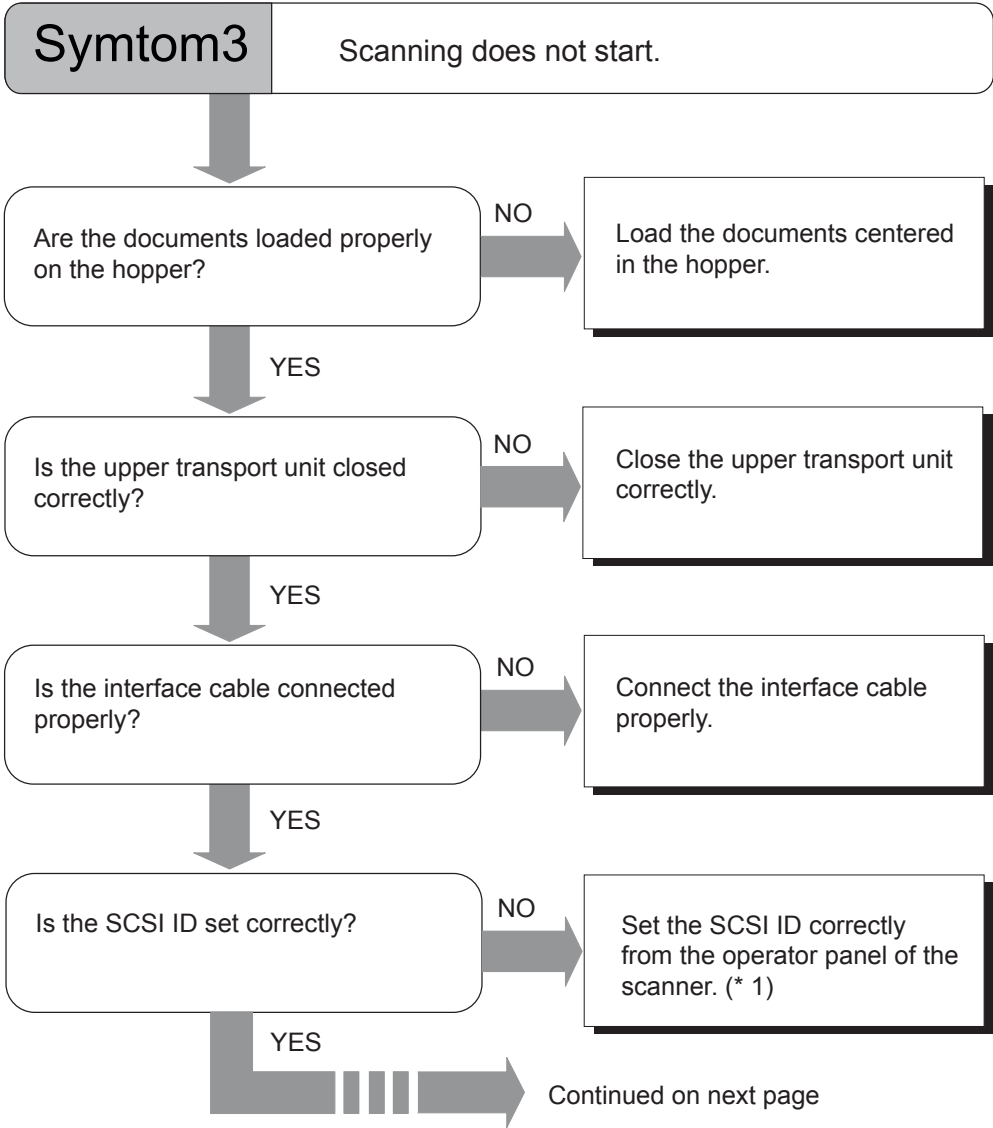
Before you ask for repair service, check the following flowchart to determine the trouble.

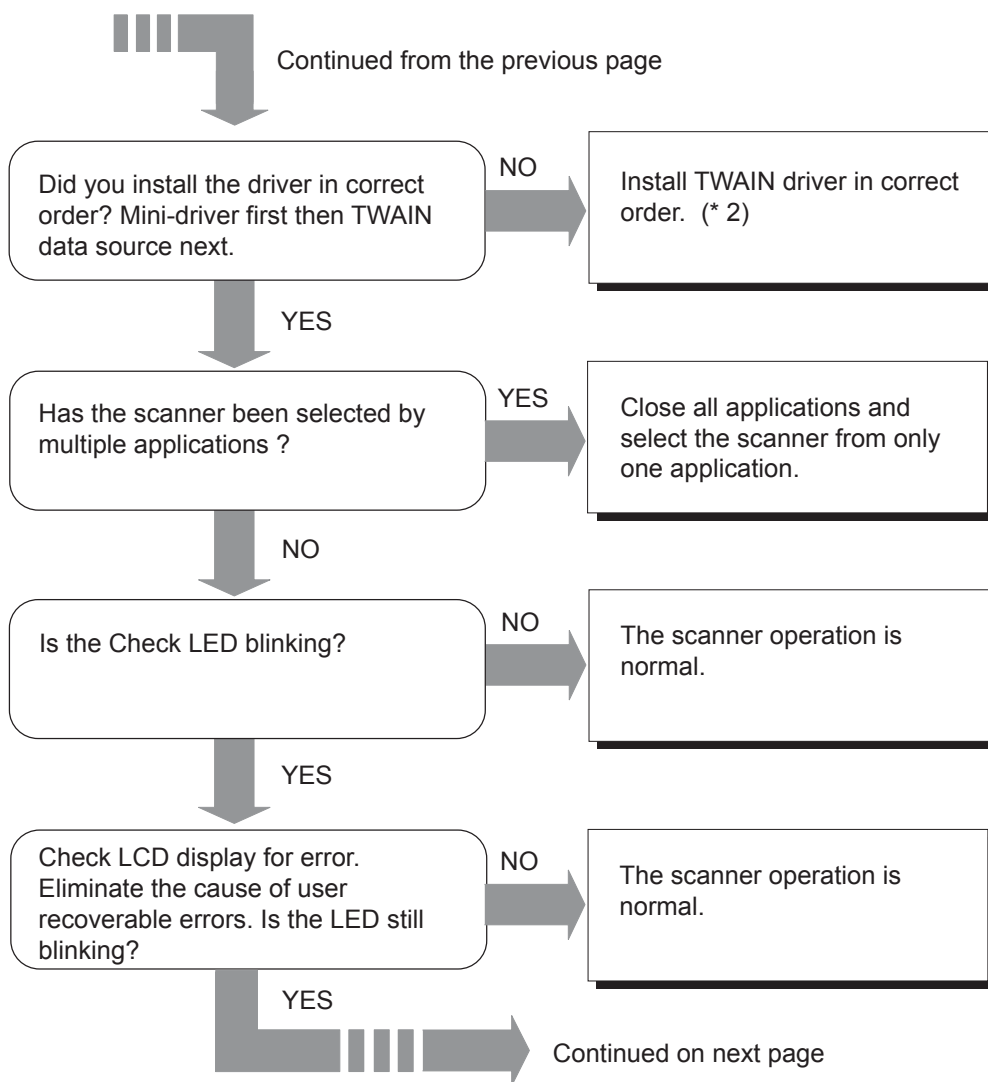
If you can not resolve the trouble after following the flowcharts, please check the items in section "5.3 Before Contacting a Service Provider," and then contact an authorized FUJITSU Scanner service provider.

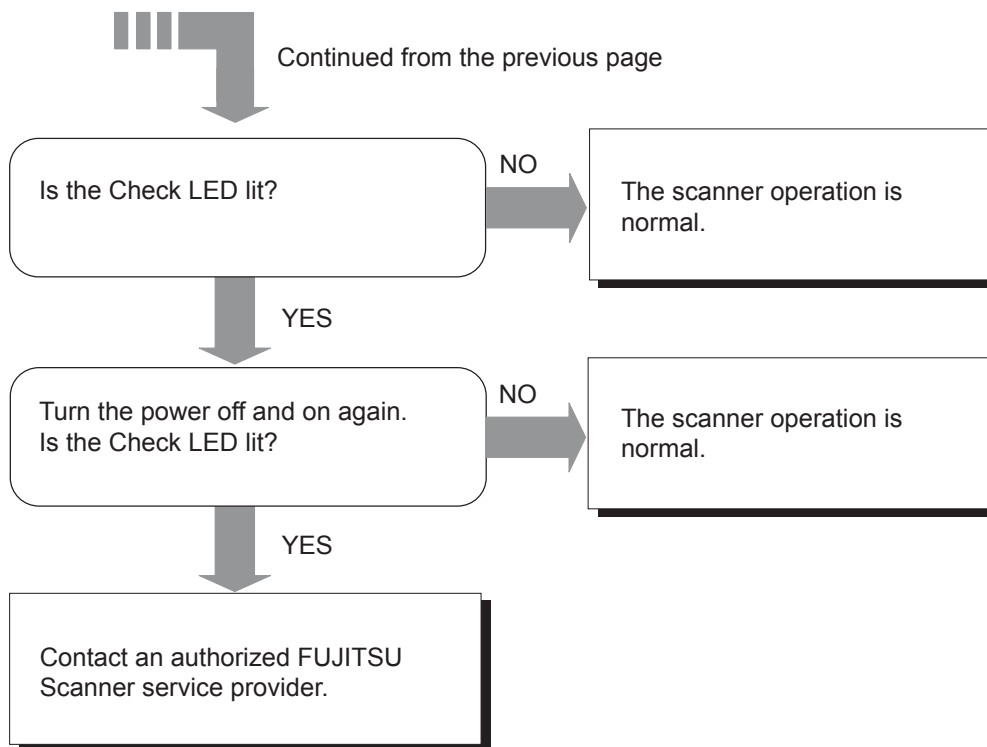




(*) Press any button except Power button. The Power button will not work to wake up the scanner. Pressing the power button more than 2 seconds will turn off the power.

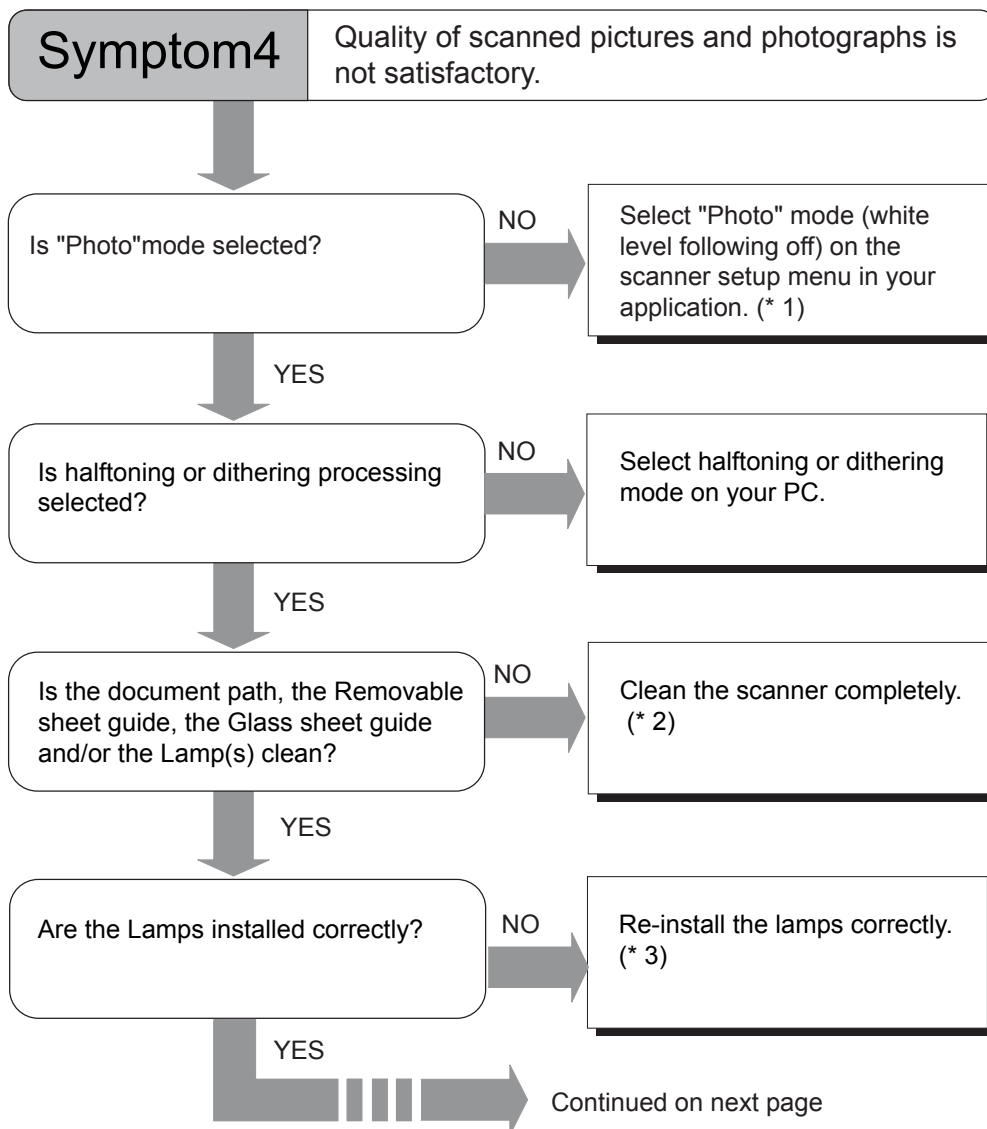






(* 1) For the details on how to set SCSI ID, refer to the section “7.3 Setup Mode Details,” “19. Setting SCSI ID.”

(* 2) For the correct installation of TWAIN driver (i.e. mini driver first), refer to the “fi-4860C Installation Guide,” “2.3 Installing the Scanner Driver and Application.”

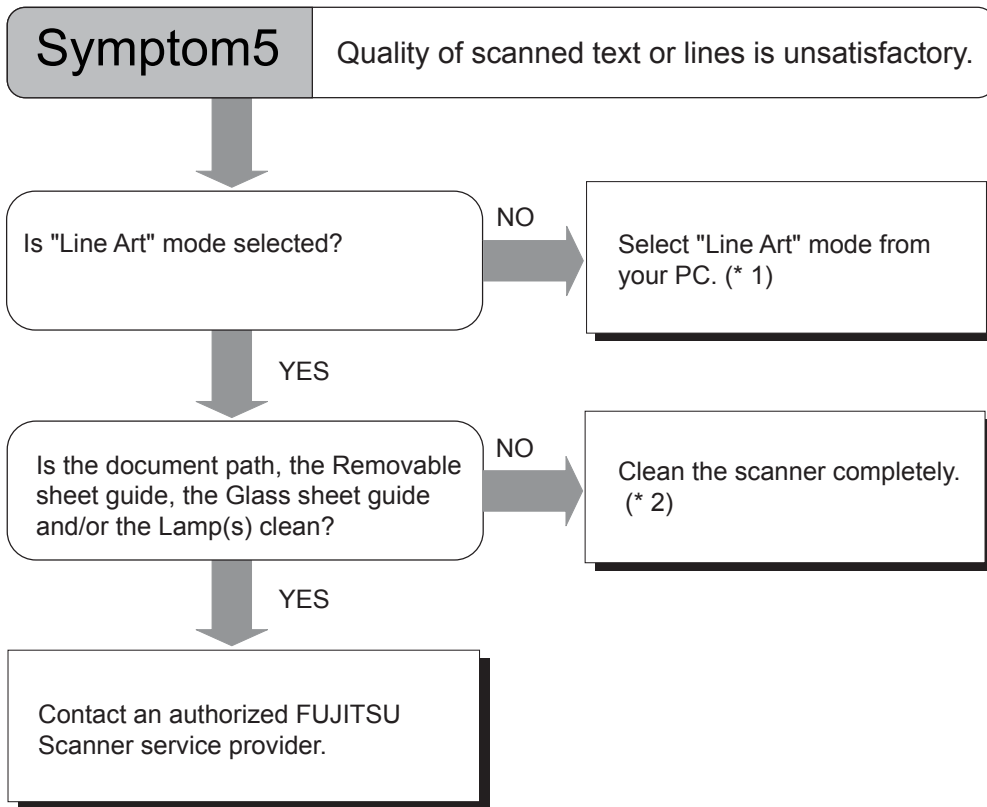




Continued from the previous page

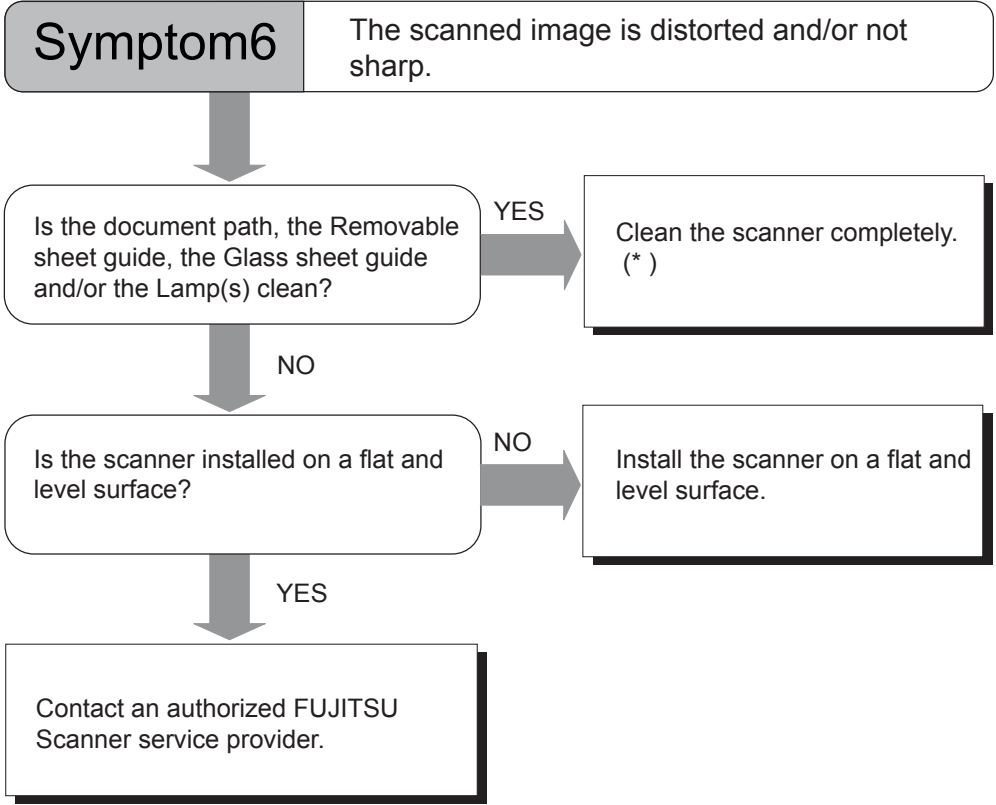
Contact an authorized FUJITSU
Scanner service provider.

- (* 1) If Binary mode is used, the scanned image of photograph may not be good. Depending on the applications used, the method to specify "Photo" mode and the name of the mode can be different. If the application allows you to change the setting from FJTWAIN [TWAIN driver] dialog box, specify [Halftone], [Gray scale] or [24bit Color] for Image Mode. In [Halftone] mode, you have to specify Dither pattern.
- (* 2) For the details of cleaning, refer to "Chapter 3 DAILY CARE."
- (* 3) For the details on how to replace Lamps, refer to "Chapter 4 REPLACING CONSUMABLES."

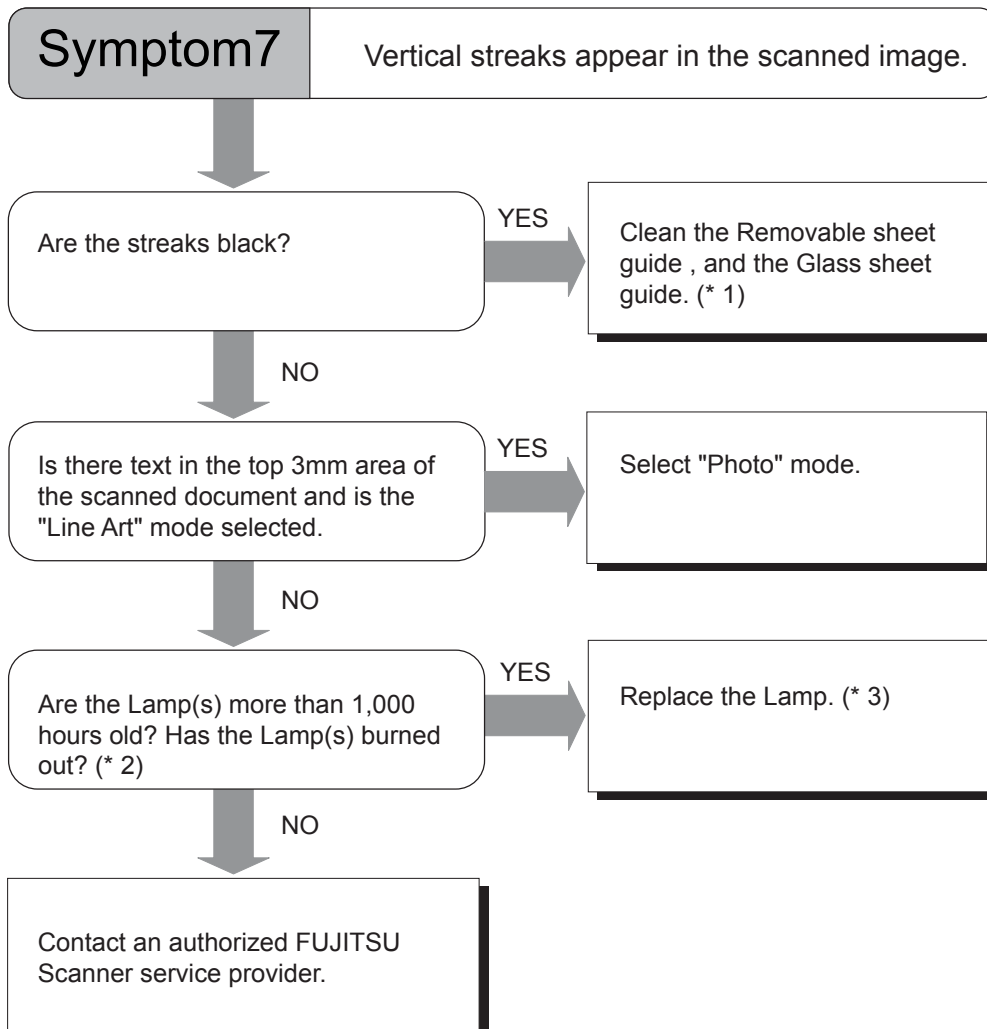


(* 1) If halftone mode is used, the scanned image of text or line art may not be good. Depending on the applications used, the method to specify "Line Art" mode and the name of the mode can be different. If the application allows you to change the setting from FJTWAIN [TWAIN driver] dialog box, specify [Black & White] for Image Mode.

(* 2) For the details of cleaning, refer to "Chapter 3 DAILY CARE."



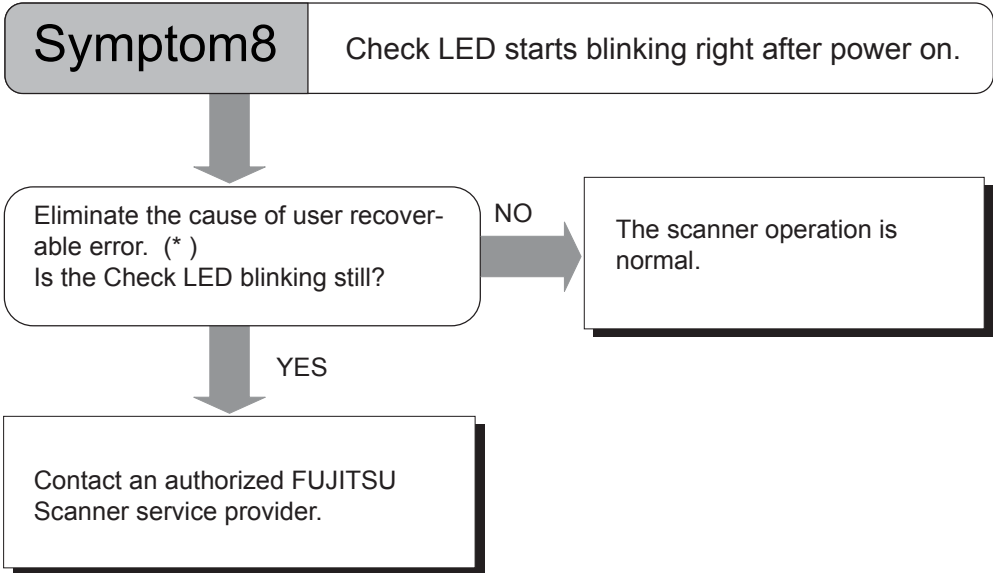
(*) For the details of cleaning, refer to "Chapter 3 DAILY CARE."




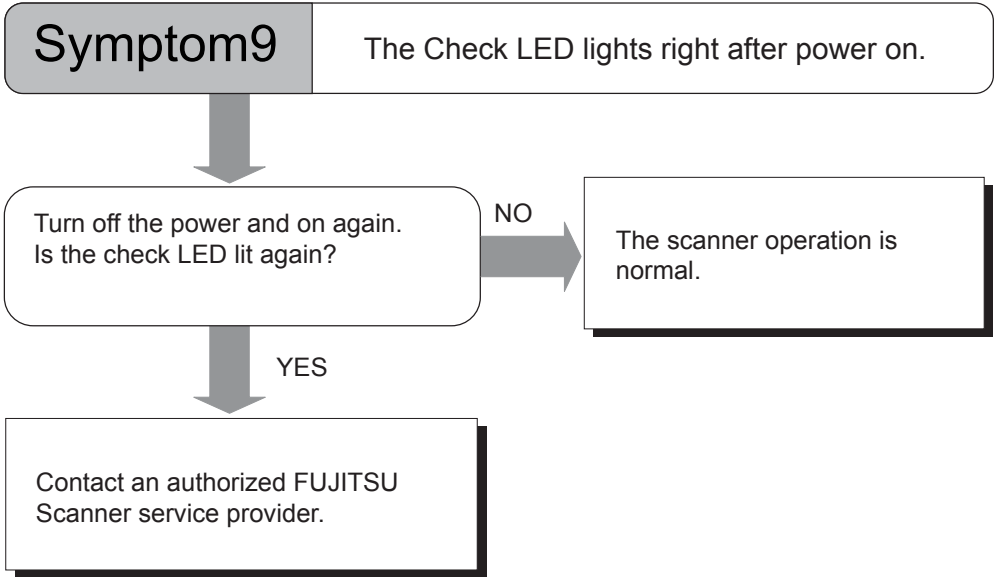
(* 1) For the cleaning of the removable sheet guide, and the glass sheet guide, please refer to "Chapter 3 DAILY CARE."

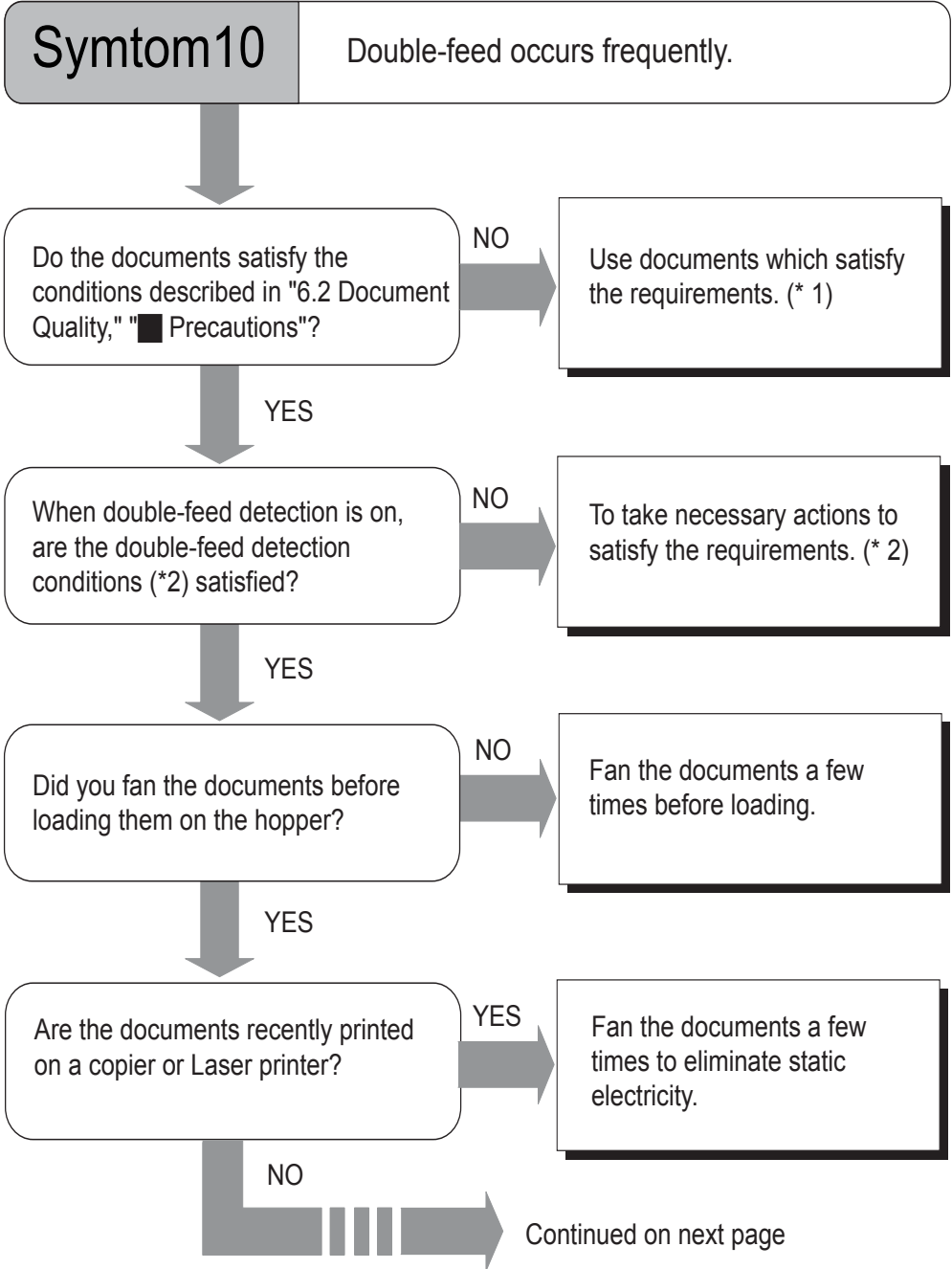
(* 2) For the details on how to check the lamp-on time, please refer to the section "7.5 Test Mode Details," "3. Display the cumulative lamp-on time."

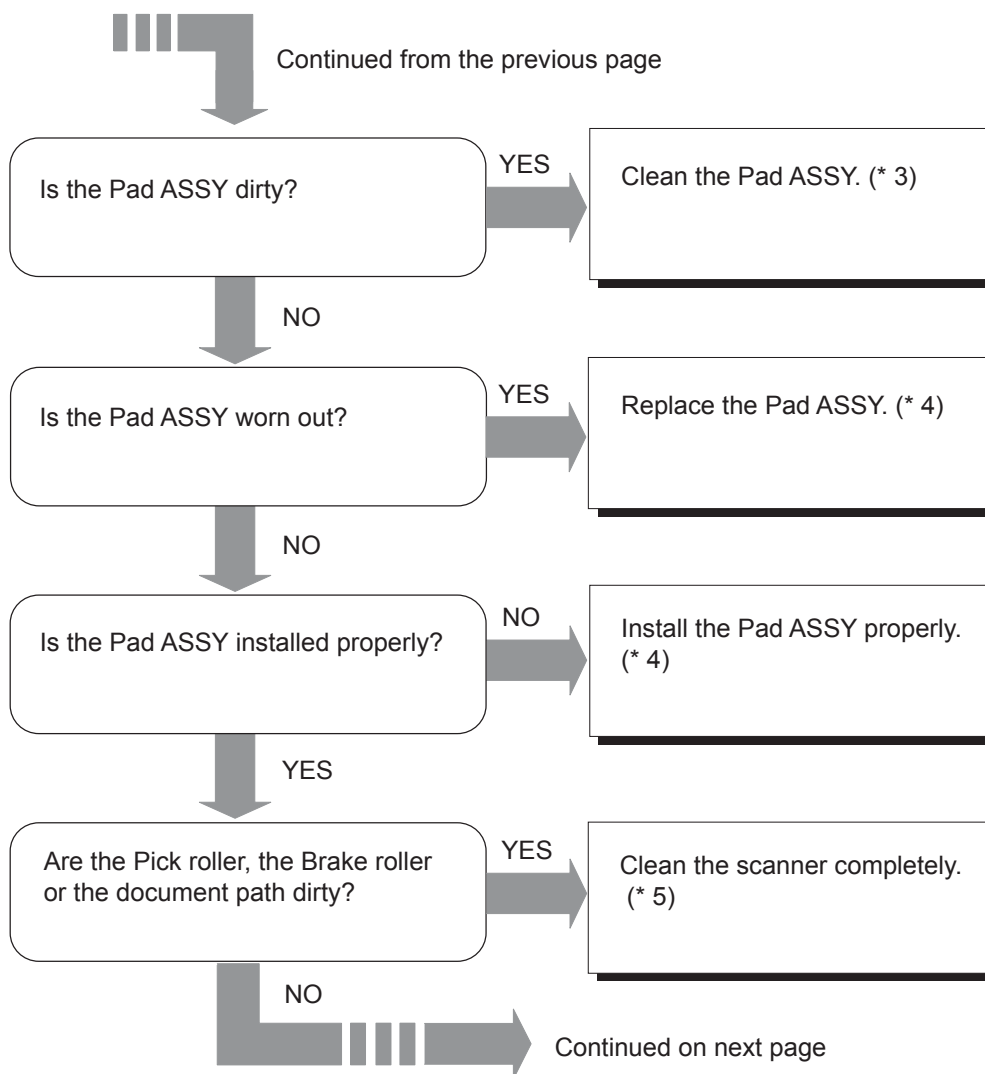
(* 3) For the details on how to replace Lamps, refer to "Chapter 4 REPLACING CONSUMABLES."

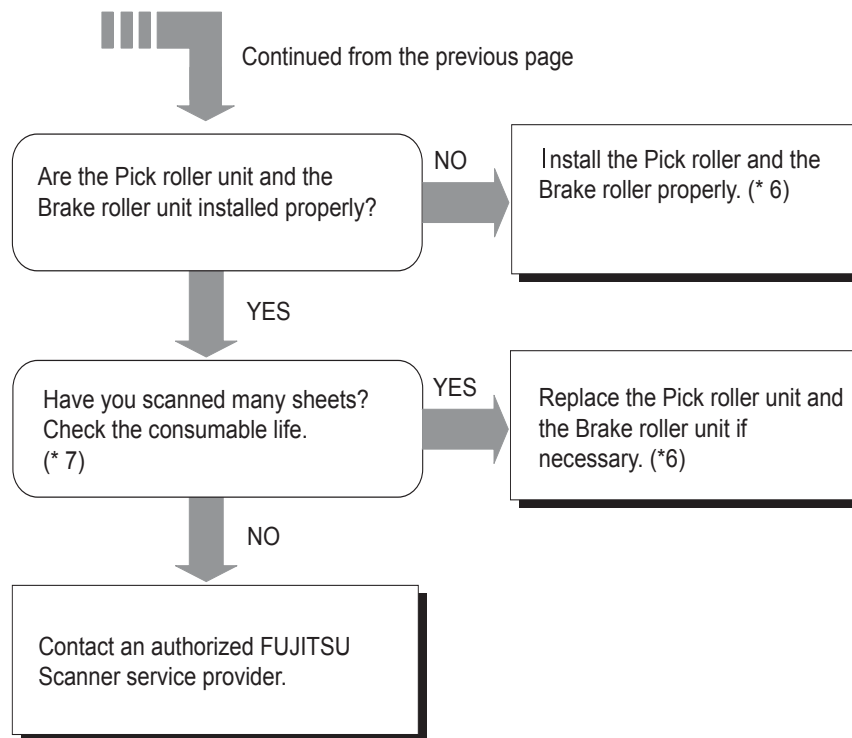


(*) For the message display contents and the error recovery method, refer to “Appendix 3 MESSAGES OF OPERATOR PANEL,” “ Error message (Temporary error).”









(* 1) For the details on required conditions, refer to the section "6.2 Document Quality."

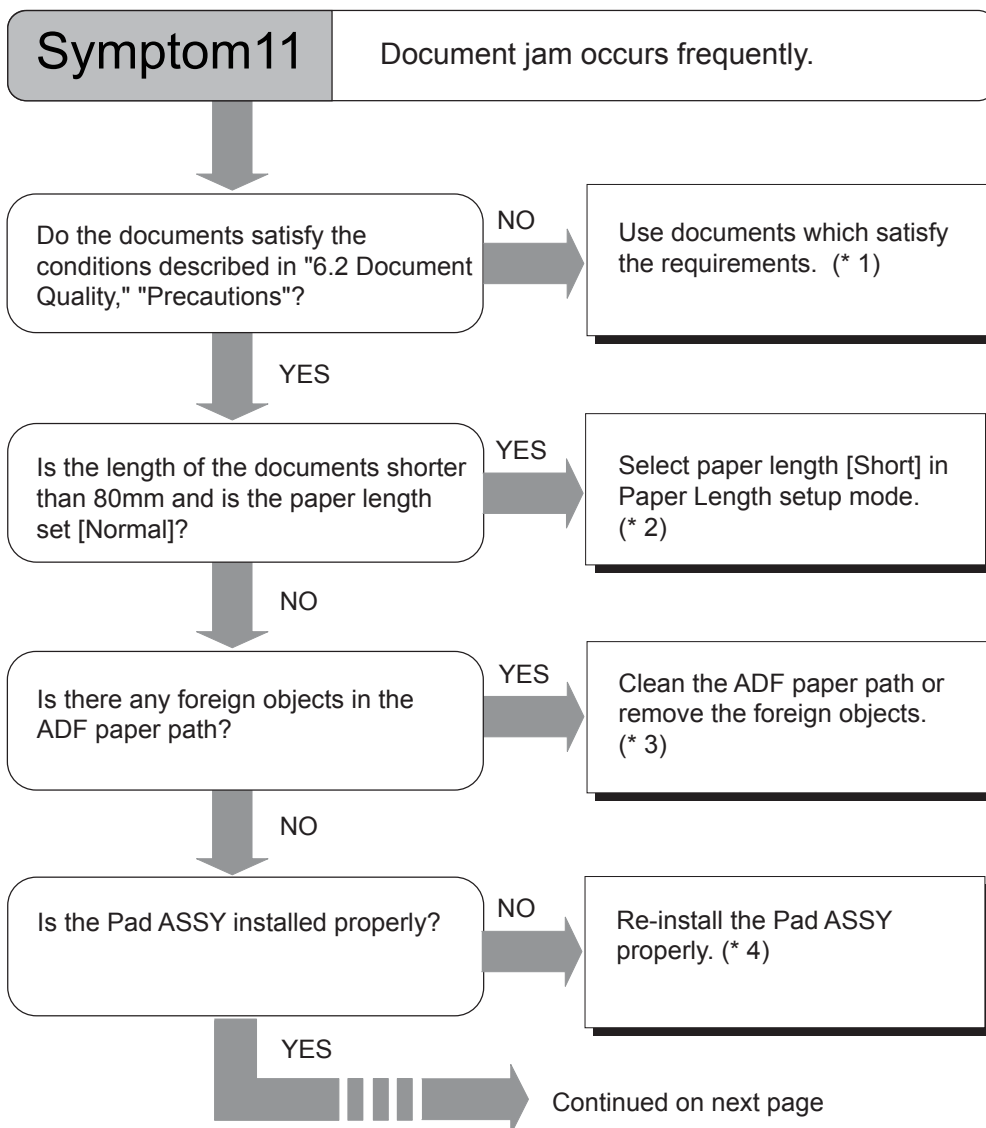
(* 2) For the double-feed detection conditions, refer to "Appendix 2 Double-feed Detection Conditions."

(* 3), (* 5) For the details on how to clean scanner, refer to "Chapter 3 DAILY CARE."

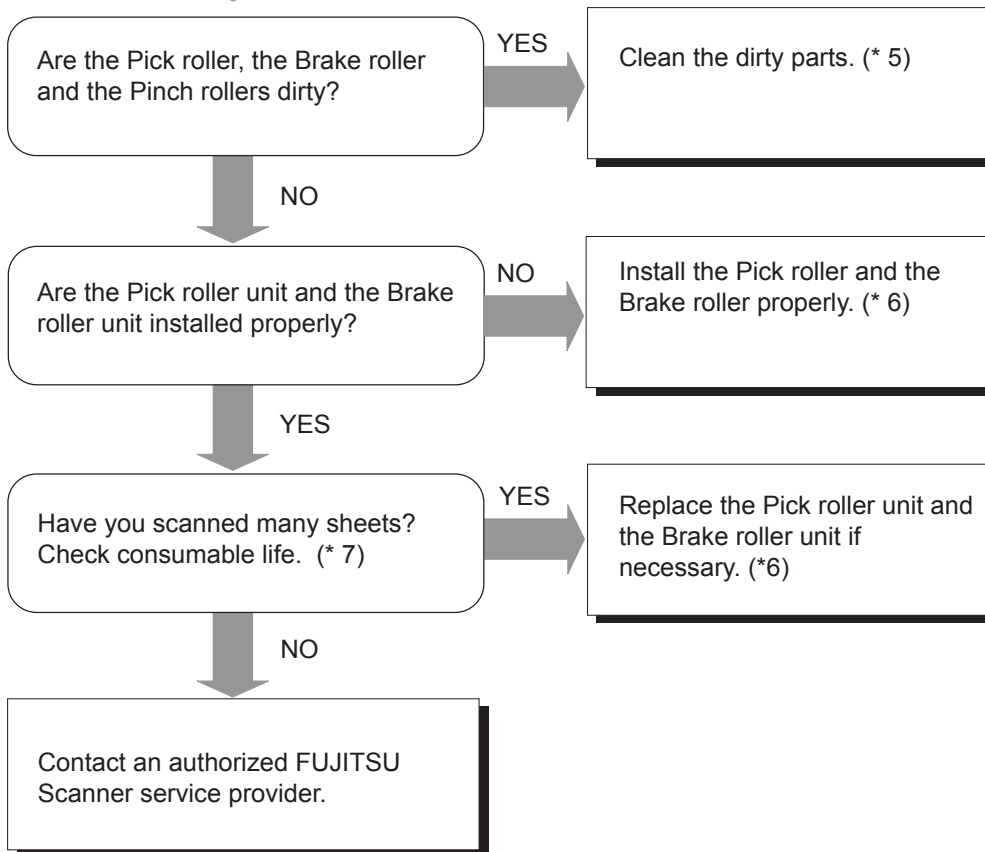
(* 4) For the details on how to replace Pas ASSY, refer to "Chapter4 REPLACING CONSUMABLES."

(* 6) For the details on how to replace and install Pick roller unit and Brake roller unit, refer to "Chapter 4 REPLACING CONSUMABLES."

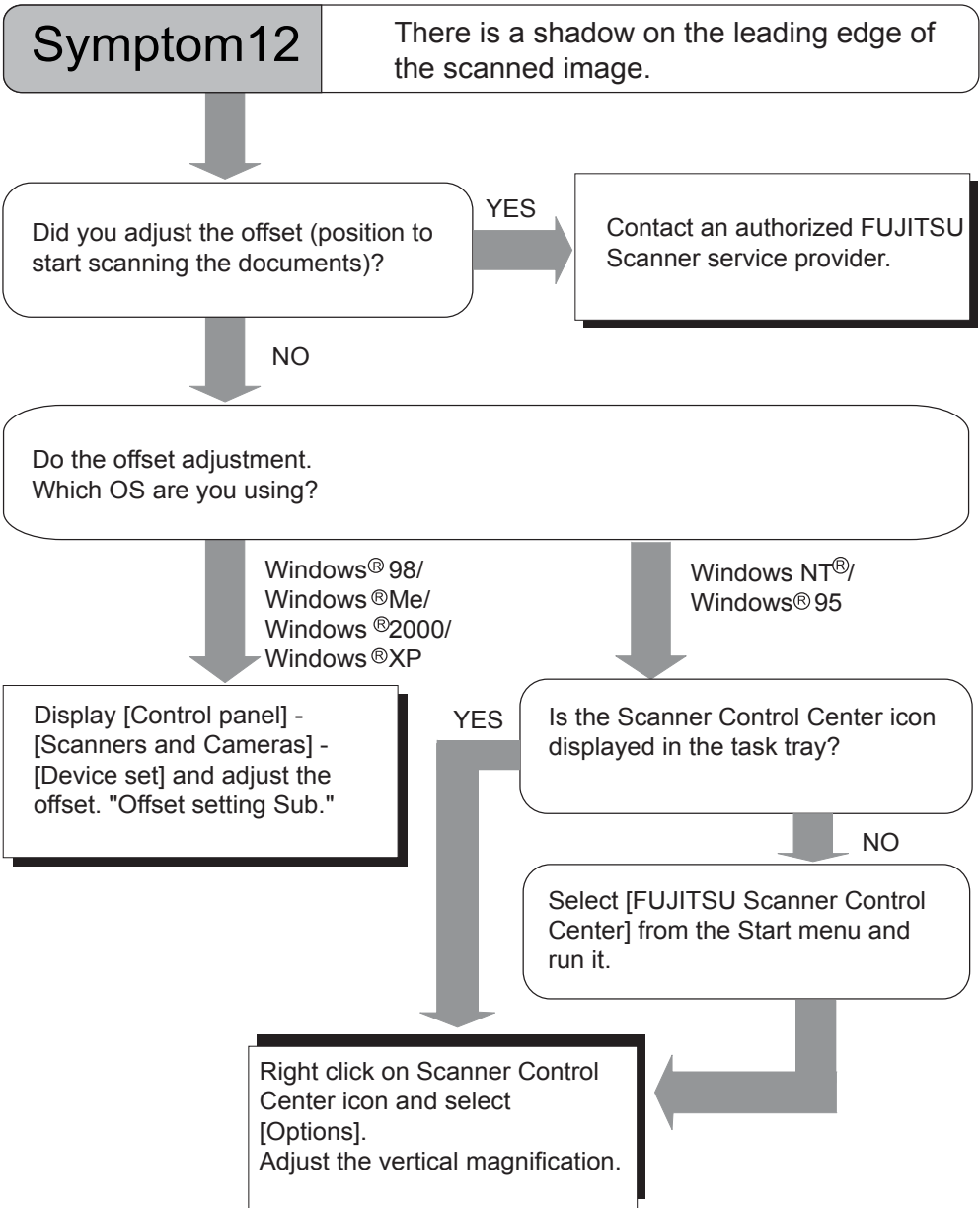
(* 7) Check the wear of rollers. For the method to check the number of sheets scanned for each consumable, refer to "7.3 Setup Mode Details," "9. Abrasion counter reset."

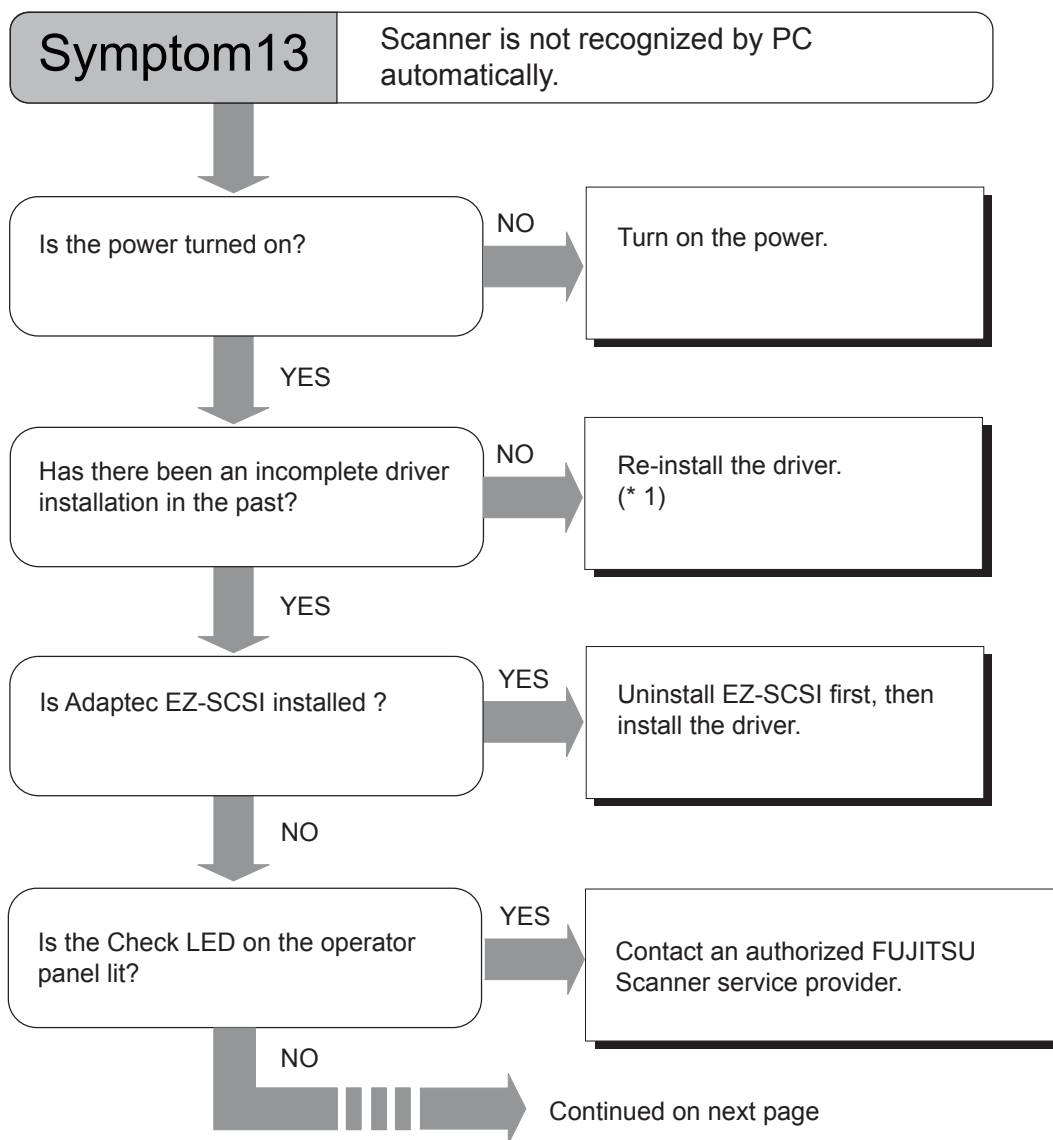


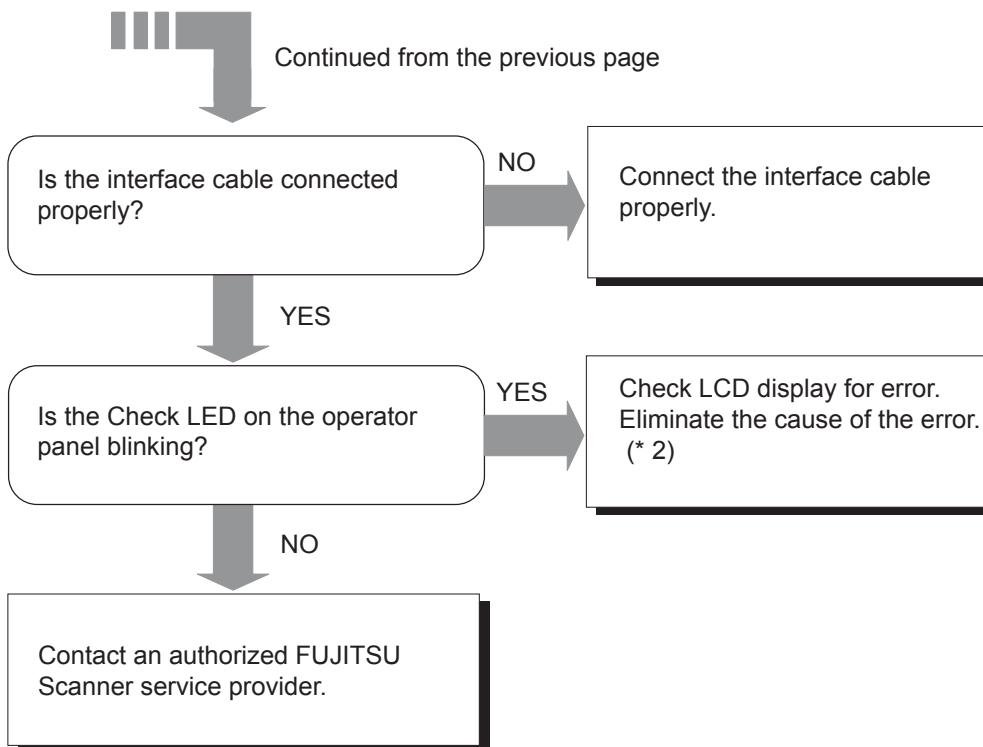
Continued from the previous page



- (* 1) For the details on required conditions, refer to the section "6.2 Document Quality."
- (* 2) For the details on how to set up the Paper Length, refer to "7.3 Setup Mode Details", "10. Setting Short document scan mode (Paper Length setup)."
- (* 3) For the details on how to clean ADF, refer to "Chapter 3 DAILY CARE."
- (* 4) For the details on how to replace Pas ASSY, refer to "Chapter4 REPLACING CONSUMABLES."
- (* 5) For the details on scanner cleaning, refer to "Chapter 3 DAILY CARE."
- (* 6) For the replacement and re-installation of Pick roller unit and Brake roller unit, please refer to "Chapter 4 REPLACING CONSUMABLES."
- (* 7) Check the consumable wear. For the method to check the number of sheets scanned for each consumable, refer to "7.3 Setup Mode Details," "9. Abrasion counter reset."

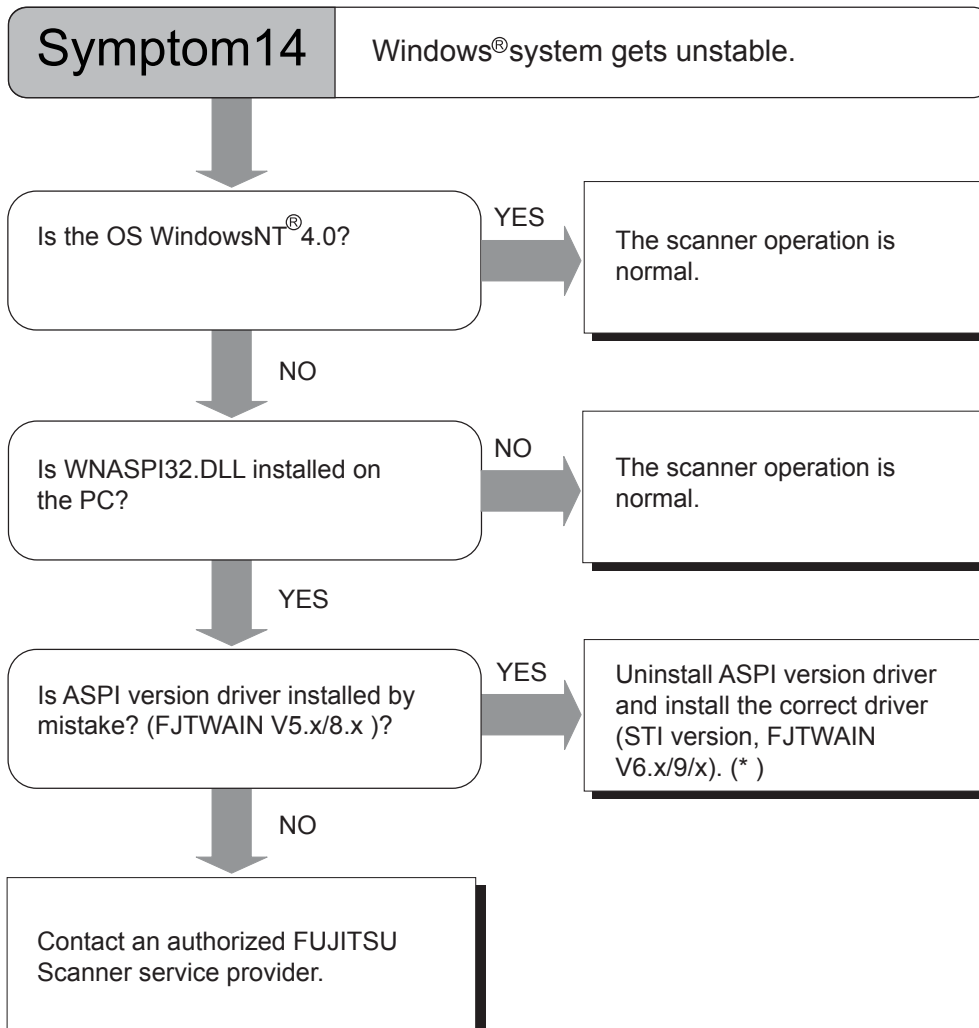






(* 1) For the details on how to install FJTWAIN, refer to "FJTWAIN32 Scanner Driver (Scanner Utility for Microsoft Windows) User's Guide," "3. Installation." The User's Guide is included in the FJTWAIN CD-ROM.

(* 2) For the details of error messages, refer to "Appendix 3 MESSAGES OF OPERATOR PANEL."



(*) For the details on how to install FJTWAIN, refer to “FJTWAIN32 Scanner Driver (Scanner Utility for Microsoft Windows) User’s Guide,” “3. Installation.” The User’s Guide is included in the FJTWAIN CD-ROM.

5.3 Before Contacting a Service Provider

Please check the following items before contacting an authorized FUJITSU Scanner service provider.

■ General descriptions

Items to check	Information
Model	(example) fi-4860C
Serial Number	(example) 000001
Manufacturing date	(example) 2002-08 (August 2002)
Date of purchase	(example) October, 2002
Symptom	
Frequency of trouble	

For the confirmation of manufacturing information, refer to "5.4 Labels on the Scanner."

■ Error Descriptions

■ Problem at the time of PC connection.

Items to check	Findings
OS (Windows) type	(example) Windows 98
Displayed error message	(example) SF0 Sensor dirty
Interface	(example) SCSI interface
Interface controller	(example) Adaptec SCSI Card 29160

■ Document feed trouble

Items to check	Findings
Document type	(example) Copier paper
Main purpose of use	(example) Filing company documents
Last cleaning date	(example) December 2002
Last consumable replacement date	(example) November 15, 2002
Operator panel status at trouble	(example) Paper Jam2

■ **Imaging quality trouble**

Items to check	Findings
Type and version of scanner driver	(example) FJTWAIN 9.9
Interface controller	(example) Adaptec SCSI Card 29160
OS (Windows) type	(example) Windows 2000 Professional
Application software	(example) Acrobat

■ **Others**

Items to check	Information
Can you send both the original document (or scanned grayscale image file) and printed scanned data (or the file) via Fax (or by e-mail)?	

5.4 Labels on the Scanner

This section describes how to check the labels on the scanner.

■ The positions of the labels

The following shows where the two labels are located on the scanner.

Manufacturing Label (example): Indicates scanner manufacturing information.







MODEL	fi-4860C IMAGE SCANNER	SER NO.	XXXXXX
PART NO.	PA03296-B001	Rev. Label	MODEL NAME
	AC100-240V50/60Hz		0 1 2 3 4 5 6 7 8 9
	1 ϕ 2.9-1.5A		0 1 2 3 4 5 6 7 8 9
DATE	200X-XX		0 1 2 3 4 5 6 7 8 9
	45 kg		
PFU Limited		MADE IN JAPAN	

Regulatory label (example): Shows the conforming standards of the scanner.

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

This device complies with Part 15 of the FCC Rules Operation is subject to the following two conditions.
 (1) This device may not cause harmful interference and (2) this device must accept any interference received including interference that may cause undesired operation.

電源を接続する前に必ず設置説明書をご覧ください。
 See installation instructions before connecting to the supply.
 voir la notice d'installation avant de raccorder au réseau.
 Bitte lesen sie die Bedienungsanleitung bevor sie das Gerät in Betrieb setzen.

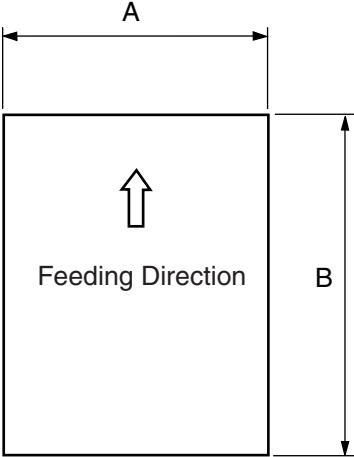
6 ADF DOCUMENT SPECIFICATIONS

This chapter describes the sizes and qualities of documents required for the satisfactory performance of the scanner.

6.1 Document Size.....	144
6.2 Document Quality.....	145
6.3 Hole-punching Prohibited Areas.....	148
6.4 Print Prohibited Area.....	149
6.5 Grounding Color Areas.....	150
6.6 Job Separation Sheet.....	151
6.7 Hopper Capacity.....	152

6.1 Document Size

The following shows the supported document sizes.



Maximum		Minimum	
A	B	A	B
297mm	432mm	74mm	74mm

6.2 Document Quality

This section describes the types and thickness of documents this scanner supports.

■ Document type

The recommended document types are as follows.

- Woodfree paper
- Wood containing paper

When using any other types of paper, test feed a few sheets to ensure the satisfactory scan performance.

■ Document thickness

Paper thickness is expressed by "paper weight."

52g/m²-- 127g/m²
14lb -- 34lb

■ Precautions

The following documents may have difficulty being fed with this scanner. To prevent unexpected problems, conduct preliminary feed testing using the same type of paper as the target documents.

- Document with clips or staples (Not recommended)
- Document written on with ink and still wet
- Document without a constant thickness
- Document with bumps or curls (refer to the HINT on page 120)
- Document with folds or tears
- Tracing paper
- Coated paper
- Carbon paper
- Carbonless paper
- Document smaller than A7 or larger than A3
- Materials other than paper: fabric, metal foil, or transparencies.
- Photosensitive paper
- Perforated or punched documents
- Non-rectangular documents
- Very thin paper



- When scanning a translucent document, set the scanner density to light to avoid image bleed through.
 - To prevent the rollers from getting dirty, avoid scanning documents containing large areas of written or documents filled in with pencil. If scanning of such documents is necessary, clean the rollers frequently.
 - When document jams or double feed happens frequently, please refer to "5.1 Document Jam", "Document separation force adjustment".
-



- Carbonless paper contains chemical substances that may damage the Pad ASSY or rollers. Pay attention to the following.

Cleaning: If mis-pick occur frequently, clean the Pad ASSY and pick rollers.

For the details on cleaning, please refer to "Chapter 3 Daily Care."

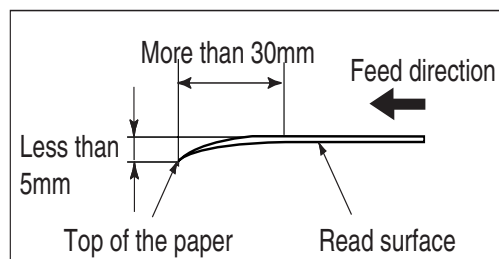
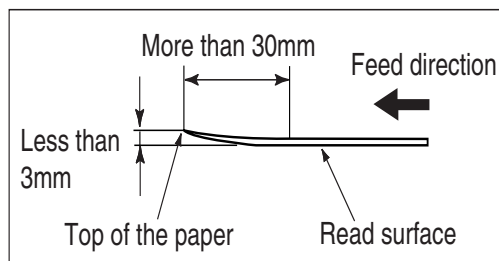
Replacement of parts: The life of the Pad ASSY and Pick roller may be shorter if carbonless papers are scanned.

- When wood containing paper documents are scanned, the life of the Pad ASSY and Pick rollers may become shorter than scanning wood free paper documents.



The leading edge of all documents fed should be flat.

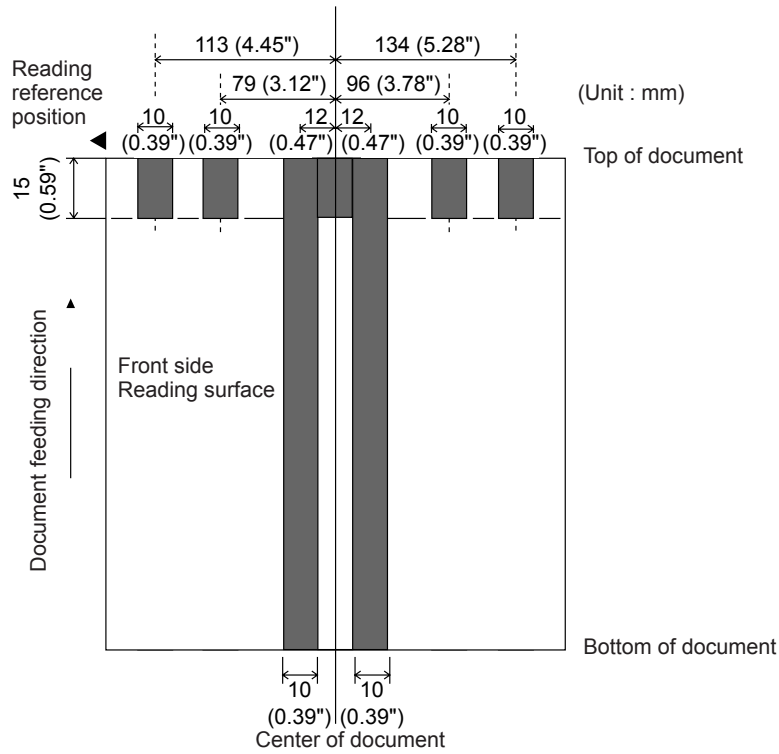
Make sure that the curls at the documents leading edge meet the following tolerances.



6.3 Hole-punching Prohibited Areas

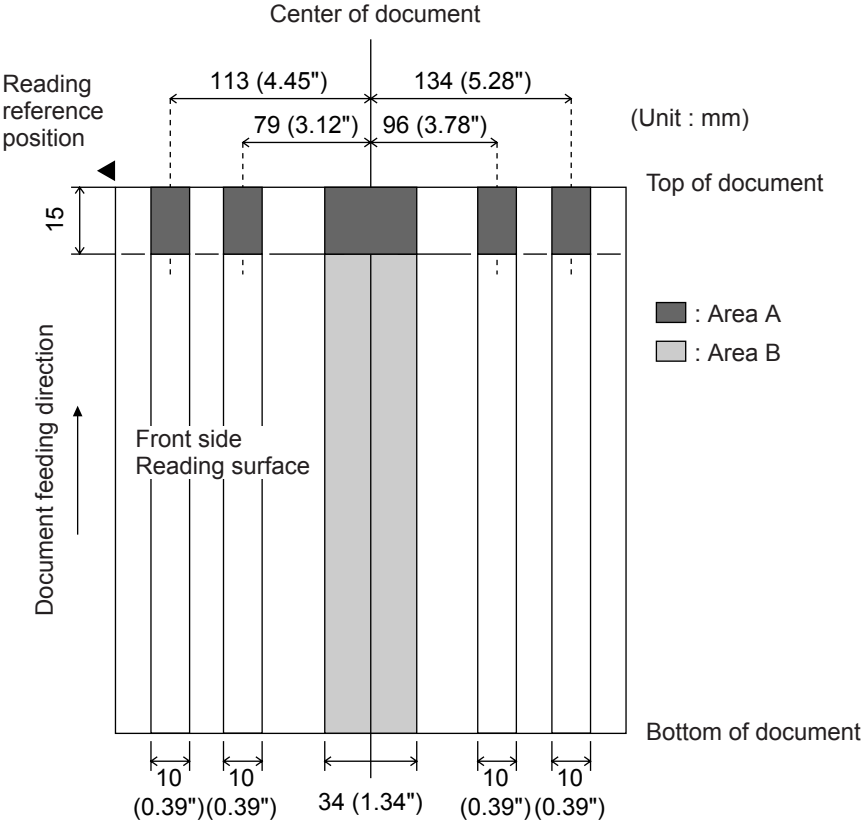
Punched holes in the shaded areas may cause errors.

For job separation sheet requirements, please refer to the section "6.6 Job Separation Sheet."



6.4 Print Prohibited Area

If there is printings in area A, the document size may be mis-detected. If there is printings in area B of a document, it may cause double-feed errors. Following figure shows print prohibited areas on a document. If double-feed detection is to be enabled, it is recommended to avoid printing in these areas. This must be considered when designing forms and document format. For the details of double-feed detection, please refer to "Appendix-2 Double Feed Detection Conditions."

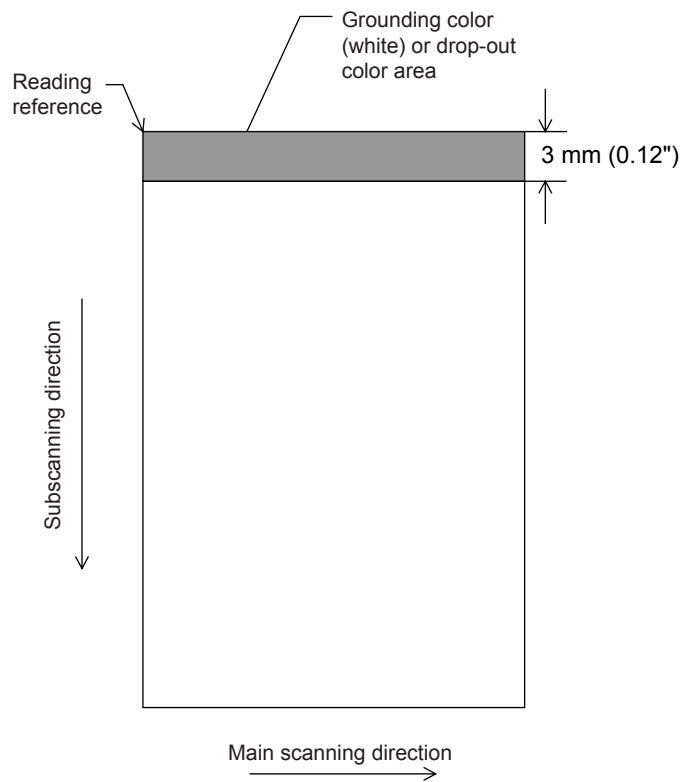


6.5 Grounding Color Areas

The shaded area in the Figure below, top 3mm on both sides of a document, should have paper grounding color (white).

The area can be dropout color. If this cannot be followed, turn the white level follower off when reading.

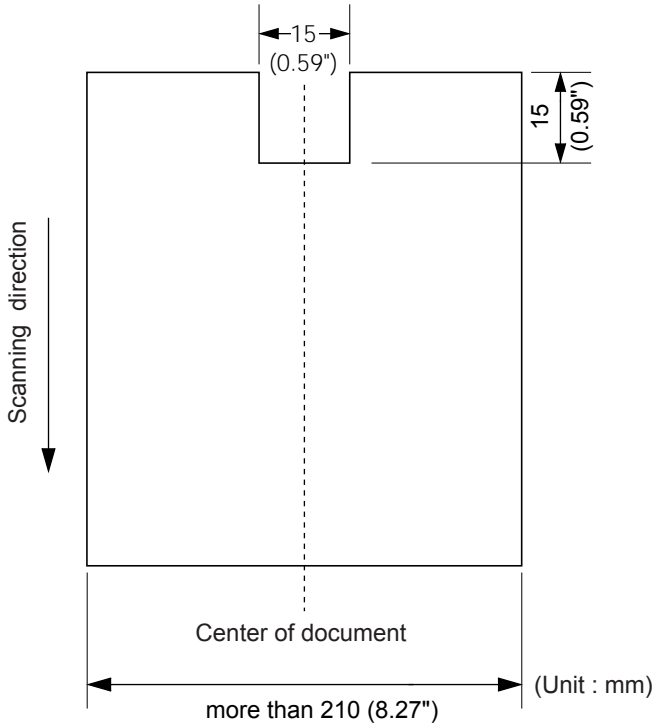
For the details on dropout color, please refer to "Appendix-1 Dropout Color."



6.6 Job Separation Sheet

1. Shape

The following shows the typical format of the job separation sheet.



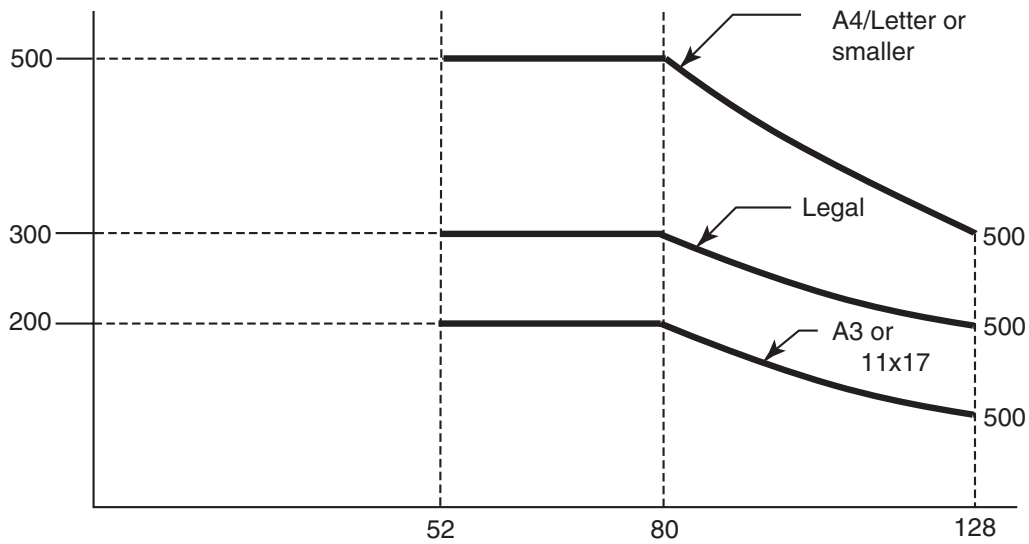
2. Document Specifications

Document width must be A4 width (210mm) or wider.



6.7 Hopper Capacity

The number of pages that can be loaded on the Hopper depends on the paper size and the ream weight. This information is shown in the following graph.



Paper weight conversion table

Paper weight	Conversion							
g/m ²	52	64	75	80	90	104	127	157
lb	14	17	20	21	24	28	34	42

7 SETUP MODE

This chapter explains the setup mode and the test mode of the scanner.

7.1 Setup Mode	154
7.2 Setup mode functions	162
7.3 Setup Mode Details	169
7.4 Test Mode Overview	213
7.5 Test Mode Details	219


7.1 Setup Mode

■ Outline

There are two types of setup mode: Online setup mode that can be entered when the scanner is in "Ready" status, and Offline setup mode that can be entered only when the scanner is offline. Available functions differ with the two modes.


To enter these modes, follow the instructions below:

- Online setup mode


When LCD indicates Ready status, press  (Next button).

The following message appears.

```
M o d e S e l e c t 1
! S e t u p M o d e
```



By pressing  (Enter button), the scanner enters Offline setup mode.


- Offline setup mode


Press and hold  (Start button) and turn on the power.

The Operator panel LCD displays the following message.

```
< M O D E S E L E C T >
S E T U P T E S T
```

Press  (Left arrow button) or  (Right arrow button) and select [Setup].

Press  (Enter button) to enter Offline setup mode.

To quit setup, press  (Exit button).



The blinking item is the one selected.

■ Online setup mode restrictions

In Online setup mode, the scanner setup can be changed without turning off the power.

However, the following items cannot be changed from this mode.

- Consumables counter reset
- SCSI ID change
- Product ID change
- SCSI bus width change
- Interface change
- TPS interface baud rate change

■Function of buttons in setup mode

Button name	Function
◇ [Next]	Displays the next menu item without saving the change. Referred to as Next button in this manual.
◇ [Previous]	Displays the previous menu item without saving the change. Referred to as Previous button in this manual.
◇	Moves to the right item on the menu Referred to as Right arrow button in this manual.
◇	Moves to the left item on the menu Referred to as Left arrow button in this manual.
Enter	- Saves the change and then displays the next menu item - Moves to the lower level menu Referred to as Enter button in this manual.
Exit	Moves to the upper level menu item without saving the change Referred to as Exit button in this manual.

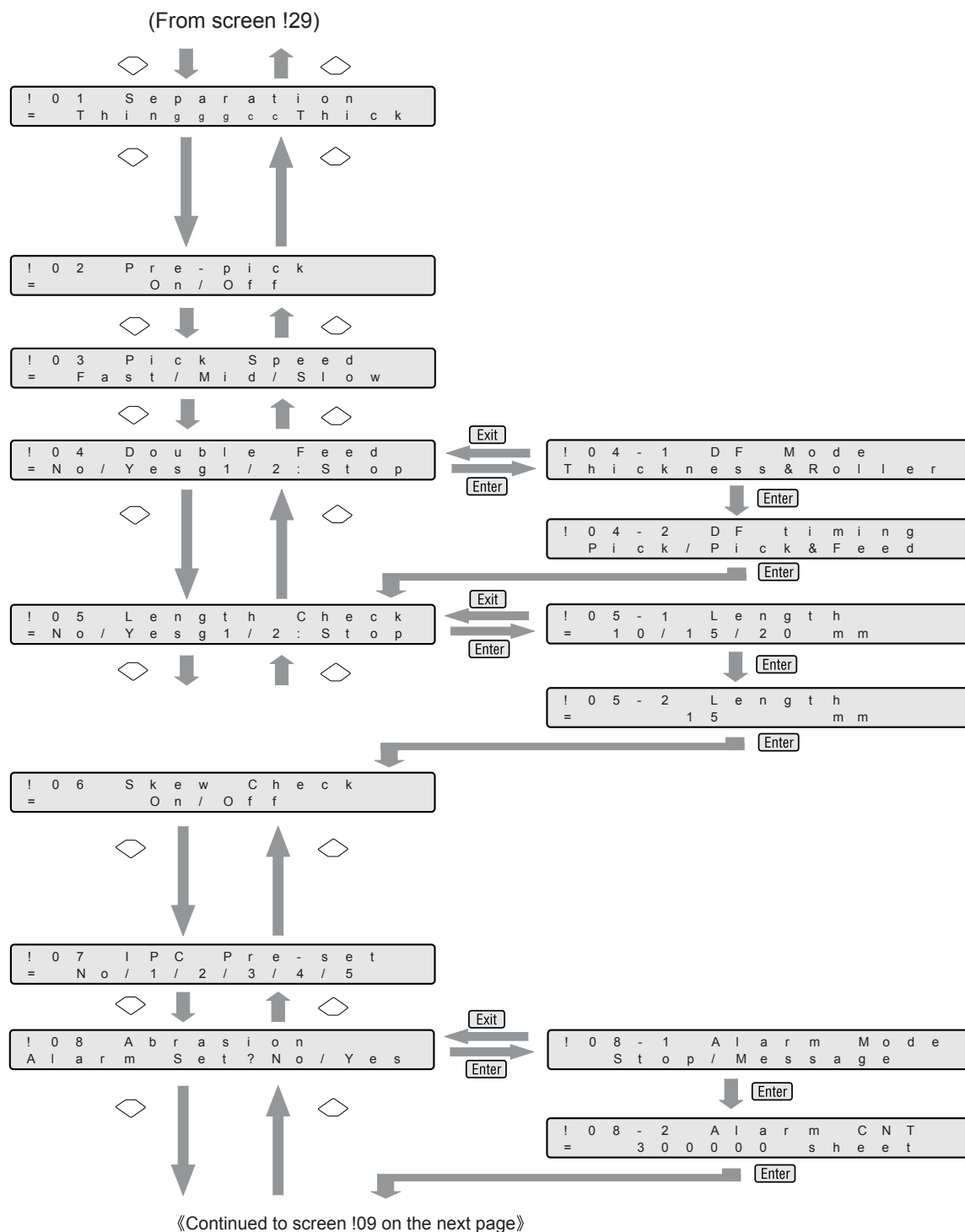
■ Transitions of screens in setup mode

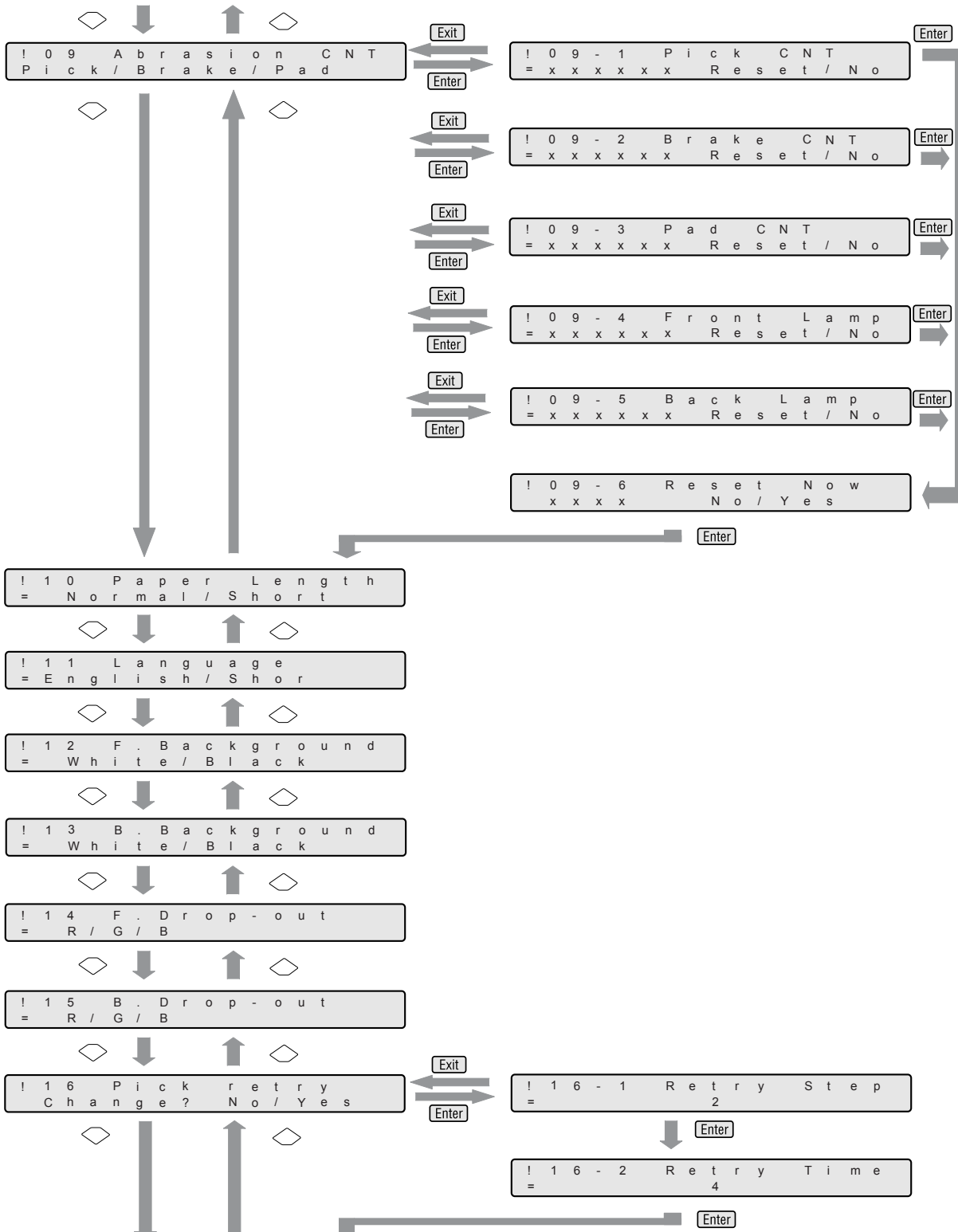
Refer to the next page LCD screen transitions chart for setup mode.

The LCD screen transition chart in the following pages show the concept.

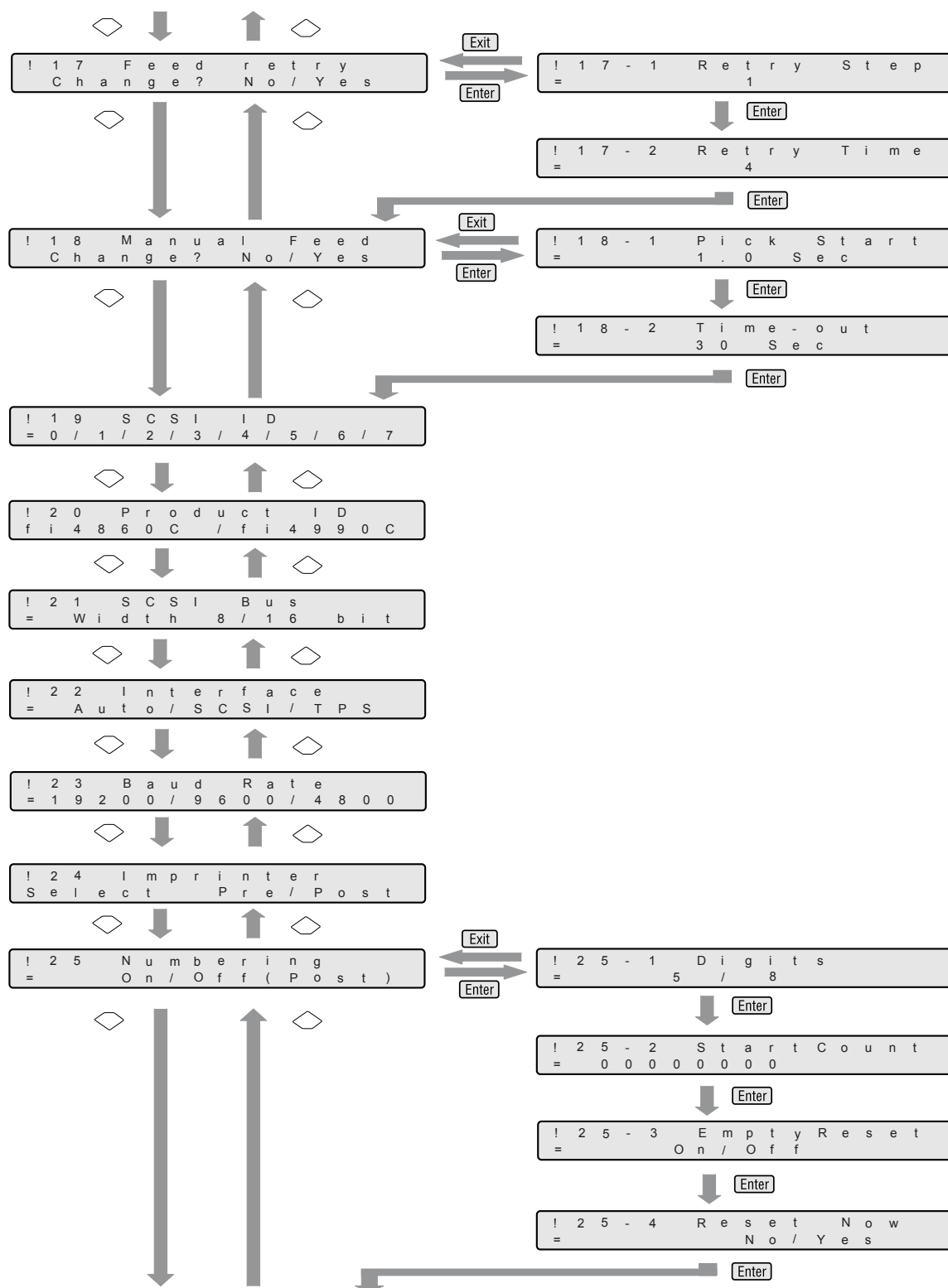
Some of the details are not expressed in the chart.

For the details, please refer to the descriptions in “■Setup mode functions.”

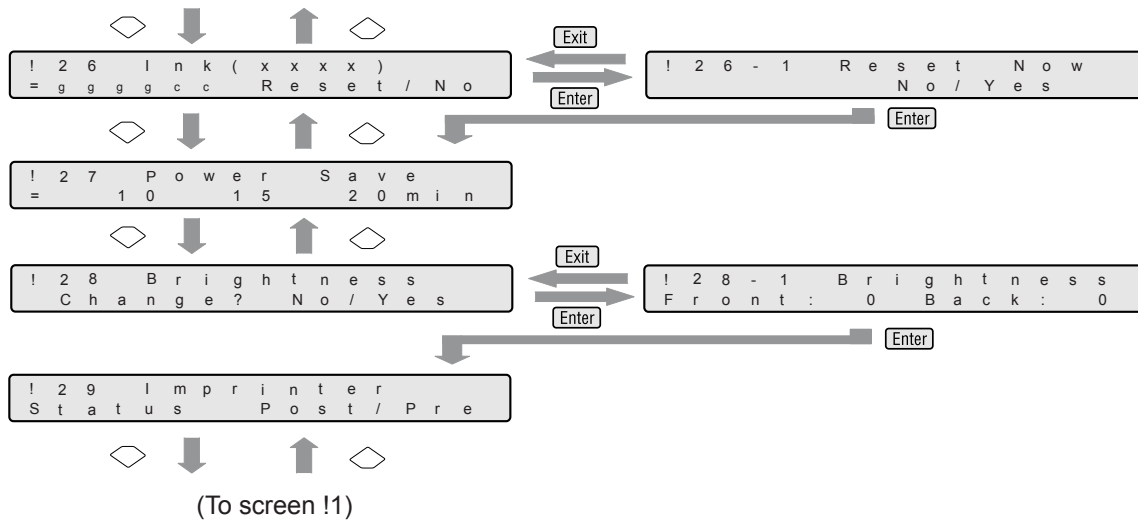




«Continue to screen !17 on the next page»



«Continue to screen !26 on the next page»





The menu screens with dotted line frame appear only when the scanner is in Offline setup mode



Screen 22 and screen 23 appear only when TPS interface board is installed.

Screen 24 appears only when both the fi-486PRFR (Front side imprinter) and the fi-486PRRE (Rear side imprinter) are installed.
Screen 25, Screen 26 and Screen 29 appear when either or both of the fi-486PRFR and the fi-486PRRE are installed.

7.2 Setup mode functions

There are 29 items in setup mode as shown in the following.

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Double Feed	Specifies the double-feed detection mode based on: Detect by: 1: Document thickness 2: Document thickness + Brake roller rotation amount	No/Yes 1: Thickness 2: Thickness + Brake roller	No	Available	Available	Setup done via the PC has the priority.
Length Check	Specifies the double-feed detection based on the document length deviation. There are 3 selections for the acceptable length deviation tolerance as shown right.	No/Yes Yes: 10/15/20mm (0.4/ 0.6/ 0.8 inches) (Tolerance)	No	Available	Available	Setup done via the PC has the priority.
IPC Pre-Set	The scan parameters are set with recommended values automatically. There are 5 choices as shown right.	No 1: 2: 3: 4: 5:	No	Available	Available	

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Abrasion Alarm	Specifies the scanners operation when consumables replacement occurs: stop scanning or message display only. Also specifies the consumable replacement message timing.	Stop/Message 10,000 to 2,560,000 sheets	Stop 300,000	Available	Available	The replacement timing increment/decrement by 10,000 sheets.
Abrasion Counter	Clear the consumable counters (Abrasion counter)	-	-	Not Available	Available	-
Manual Feed	Specifies the pick start time from the time document is manually set.	0.2 to 29.8 sec	1.0 sec	Available	Available	-
	Specifies the waiting time from the read command to document manual insert.	1, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 180, 240, 255 sec	30 sec			

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Skew Check	Specify if skew detection is enabled.	On/Off	Off	Available	Available	Setup done via the PC has the priority.
Separation	Specifies the Brake roller force appropriate for the document thickness	Thick <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> Medium Thick <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Average <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Medium Thin <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Thin <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Average	Available	Available	-
Paper Length	Specifies when scanning the document equal or shorter than length 80mm.	Normal / Short	Normal	Available	Available	-
B.Back-ground (Front)	Specifies the background color (Black or White) for scanning.	White/ Black	White	Available	Available	Setup done via the PC has the priority.
B.Back-ground (Back)	Specifies the background color (Black or White) for scanning.	White/ Black	White	Available	Available	Setup done via the PC has the priority.

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Pre-pick	Enable or disable pre-pick operation, the picking of a document prior to actual feeding. (increase scan throughput)	On/Off	On	Available	Available	Setup done via the PC has the priority.
Picking speed	Specify the Pick roller rotation speed	Fast/ Mid / Slow	Fast	Available	Available	The throughput of the scanner will be affected.
Pick retry	Specify the Pick motor rotation time (Retry Step) and number of retries (Retry Time).	Retry Step : 1 - 7 Retry Time : 1 - 7	Retry Step : 2 Retry Time : 4	Available	Available	-
Feed retry	Specify the Feed motor rotation time *Retry Step) and number of retries (Retry Time).	Retry Step : 1 - 7 Retry Time : 1 - 7	Retry Step : 1 Retry Time : 4	Available	Available	-
F.Drop-out	Specifies the front page dropout color for a monochrome scan.	R G B	G	Available	Available	Setup done via the PC has the priority.



LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
B.Drop-out	Specifies the back page dropout color for a monochrome scan.	R/ G/ B	G	Available	Available	Setup done via the PC has the priority.
Brightness	Adjust the Front/ Back Brightness to compensate for the grayscale level differences between the CCDs.	-6 to +6	0	Available	Available	
SCSI ID	Specifies SCSI ID of the scanner.	0 to 7	5	Not Available	Available	New SCSI ID valid after power cycle
Product ID	Specifies the scanner product ID.	fi4860C/ fi4990C/ 4099D/ M3099G	fi4860C	Not Available	Available	New setting valid after power cycle
SCSI Bus	Specifies SCSI data bus width, 8bit or 16 bit.	16bit/ 8bit	16bit	Not Available	Available	New setting valid after power cycle
Interface	Specifies the interface to use when a optional or third party interface board is installed in the TPS (Third Party Slot).	Auto/ SCSI/ TPS	Auto	Not Available	Available	

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Baud Rate	Specifies the control data transfer rate for TPS interface.	19200/ 9600/ 4800/ 2400	9600	Not Available	Available	New setting valid after power cycle
Imprinter	When both fi-486PRFR(Front side/Pre-print) and fi-486PRRE(Rear side/Post-print) are installed, specifies which one to setup.	Pre/Post	-	Available	Available	-
Numbering	When either fi-486PRFR (Front side/Pre-print) or fi-486PRRE (Rear side/Post-print) is installed, set the numbering parameters.	Numbering : On/Off Digits : 5/8 Initial No.: 5digit: 0-99999 8digit:0-16777215 Reset at hopper empty: On/Off	Numbering : Off Digits : 5 Initial No.: 00000 Reset at hopper empty: On	Available	Available	Setup done via the PC has the priority.
Ink	Shows the remaining ink available. Reset remaining amount ink counter when the Print cartridge is replaced.	-	-	Available	Available	-

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Power Save	Specifies the time before entering Power save mode.	5 to 60minutes	15 minutes	Available	Available	
Language	Specifies the language to use for Operator panel display.	Japanese (Katakana)/ English	-	Available	Available	
Imprinter Status	Shows the installed imprinter type.	-	-	Available	Available	



7.3 Setup Mode Details

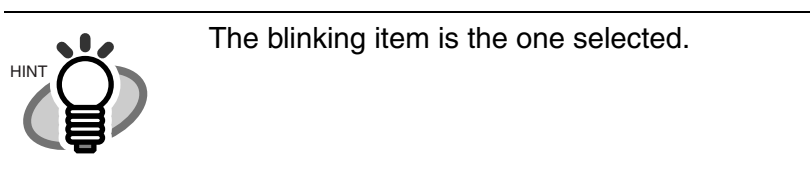
1. Setting the document separation force

1) Press  (Next button) or  (Previous button) and let the scanner show <Screen1>.

<Screen1>




2) At <Screen1>, press  (Left arrow button) or  (Right arrow button) and select the appropriate document thickness.



 (Right arrow button) moves the blinking from (5) to (1).

 (Left arrow button) moves the blinking from (1) to (5).

- (1) ■■■■■ - Document thickness: Thick
- (2) ■■■■□ - Document thickness: Medium thick
- (3) ■■■□□ - Document thickness: Medium
- (4) ■■□□□ - Document thickness: Medium thin
- (5) ■□□□□ - Document thickness: Thin

(3) Press  (Enter button) and make the setting valid.

Press  (Exit button) at the end and the LCD redisplay [Ready] screen.





If the following error occurs frequently, change the setting by referring to the explanation on the table.

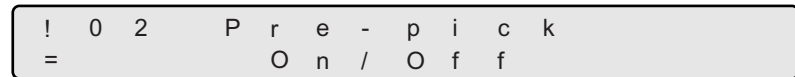
- Double-feed
- Mis-pick
- Paper Jam1


Setting	Document separation force	Double-feed occurs frequently.	Mis-pick or Paper jam1 occurs frequently.
Thick	Strong	Make the document separation force stronger.	Make the document separation force weaker.
Medium Thick	Medium strong		
Medium	Medium (Factory default)		
Medium Thin	Medium weak		
Thin	Weak		

2. Setting Pre-pick


- 1) Press  (Next button) or  (Previous button) and let the scanner show <Screen2>.


<Screen2>



- 2) At <Screen2>, to enable Pre-pick, press  (Left arrow button) and select [On].

To disable Pre-pick, press  (Right arrow button) and select [Off].

- 3) Press  (Enter button) and make the setting valid.

Press  (Exit button) at the end and the LCD display goes back to [Ready] screen.

3. Setting Pick Speed

1) Press ◀ (Next button) or ▶ (Previous button) and let the scanner show <Screen3>.

<Screen3>

!	0	3	P	i	c	k	S	p	e	e	d		
=	F	a	s	t	/	M	i	d	/	S	l	o	w

2) At <Screen3>, press ◀ (Left arrow button) or ▶ (Right arrow button) and select Pick roller rotation speed.



The blinking item is the one selected.

3) Press **Enter** (Enter button) and make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.



Pick roller rotation speed should be set Slow for scanning thin or soft documents, these documents tend to cause a Mis-pick to occur.

Picking speed	When Mis-pick occurs frequently
Fast (Factory default)	↓ Decreases the Pick speed
Mid	
Slow	



When the Pick speed is set at "Mid" or "Slow", the scanner will slow down.

4. Setting Double-feed detection (document thickness)

- 1) Press ◀ (Next button) or ▶ (Previous button) and let the scanner show <Screen4>.

<Screen4>

!	0	4		D	o	u	b	l	e		F	e	e	d	
=	N	o	/	Y	e	s	→	1	/	2	:	S	t	o	p

- 2) At <Screen4>, by pressing ◀ (Left arrow button) or ▶ (Right arrow button), Double-feed detection by document thickness (checking light amount transmitted through page) can be enabled or disabled. In this screen, you specify if Double-feed detection is enabled, set the detection mode and select error processing.

By pressing ▶ (Right arrow button), selection moves from (1) to (3).

By pressing ◀ (Left arrow button), selection moves from (3) to (1).


- | | |
|---------------------------------------|--|
| (1) [No] is blinking: | Document thickness is not checked. |
| (2) [Yes] and [1] are blinking: | Document thickness is checked.
However, scanning continues even if Double-feed is detected and the error message is displayed on the LCD. |
| (3) [Yes] and [2: Stop] are blinking: | Document thickness is checked.
When double-feed is detected, scanning stops. Then the error is reported to the PC. |

If you would like to disable the Double-feed detection, select [No] and press

 (Enter button).







The blinking item is the one selected.

3) When the LCD is showing (2) or (3), pressing  (Enter button) changes LCD display to <Screen 4-1>.

<Screen4-1>

!	0	4	-	1	D	F	M	o	d	e			
=					T	h	i	c	k	n	e	s	s

4) At <Screen4-1>, by pressing  (Left arrow button) or  (Right arrow button), you can select the detection mode.

Each time  (Left arrow button) or  (Right arrow button) is pressed, LCD displays <Screen 4-1> and <Screen4-2> alternately.

<Screen4-2>


!	0	4	-	1	D	F	M	o	d	e					
T	h	i	c	k	n	e	s	s	&	R	o	l	l	e	r

(1) [Thickness] is blinking:

Double-feed is detected by light amount transmitted through paper.

(2) [Thickness & Roller] is blinking:

Double-feed is detected based on the light amount transmitted through paper and Brake roller rotation amount.

By pressing  (Enter button), LCD display changes to <Screen4-3>.

<Screen4-3>


!	0	4	-	2	D	F	t	i	m	i	n	g	
P	i	c	k	/	P	i	c	k	&	F	e	e	d


5) At <Screen4-3>, by pressing ◀ (Left arrow button) or ▶ (Right arrow button), the detection timing can be selected.


- (1) [Pick] is blinking: Double-feed is checked by the document pick timing.
- (2) [Pick & Feed] is blinking: Double-feed is checked by the document pick timing and during feeding.

6) Press **Enter** (Enter button) and make the setting valid.

Press **Exit** (Exit button), and the LCD display goes back to [Ready] screen.

 - Double-feed detection accuracy increases when both thickness and length of documents are checked.

 - When a double-feed is detected and the scanning operation is stopped, the last documents in the hopper or the one ahead of it might have been double fed.

 - Depending on the document type, there are cases when double-feed can not be detected.

5. Setting Double-feed detection (by document length)

- 1) Press ◀ (Next button) or ▶ (Previous button) and let the scanner show <Screen5>.

<Screen5>

!	0	5		L	e	n	g	t	h		C	h	e	c	k
=	N	o	/	Y	e	s	→	1	/	2	:	S	t	o	p

- 2) At <Screen5>, by pressing ◀ (Left arrow button) or ▶ (Right arrow button), Double-feed detection by document length can be enabled or disabled.

By checking the document length for partially over wrapped two sheets that are fed together. In this screen, you can specify if the length checking is done, set the detection conditions, and select the error processing.

By pressing ▶ (Right arrow button), selection moves from (1) to (3).

By pressing ◀ (Left arrow button), selection moves from (3) to (1).

(1) [No] is blinking:

Document length is not checked.

(2) [Yes] and [1] are blinking:

Document length is checked.

However, scanning continues even if Double-feed is detected and the error message is displayed on the LCD.

(3) [Yes] and [2: Stop] are blinking:

Document length is checked.

When double-feed is detected, scanning stops. Then the error is reported to the PC.

If you would like to disable the Double-feed detection, select [No] and press

(Enter button).



The blinking item is the one selected.

- 3) In case of (2) or (3), by pressing **Enter** (Enter button), LCD display changes to <Screen5-1>.

<Screen5-1>

!	0	5	-	1	L	e	n	g	t	h
=	1	0	/	1	5	/	2	0	m	m

- 4) At <Screen5-1>, by pressing **◀** (Left arrow button) or **▶** (Right arrow button), the document length can be specified.

By pressing **▶** (Right arrow button), selection moves from (1) to (3).

By pressing **◀** (Left arrow button), selection moves from (3) to (1).

- | | |
|-----------------------|--|
| (1) [10] is blinking: | The document length difference below 10mm is not detected as an error. |
| (2) [15] is blinking: | The document length difference below 15mm is not detected as an error. |
| (3) [20] is blinking: | The document length difference below 20mm is not detected as an error. |

- 5) Press **Enter** (Enter button) and the setting becomes valid.

Press **Exit** (Exit button), and the LCD display goes back to [Ready] screen.

6. Setting Skew Check

- 1) Pressing ◀ (Next button) or ▶ (Previous button) and let the LCD show <Screen6>.

<Screen6>



- 2) If you want to enable Skew check at <Screen6>, press ◀ (Left arrow button), and select [On].



To disable Skew-check, press ▶ (Right arrow button) and select [Off] then press

(Enter button).

- 3) Press (Enter button) and make the setting valid.



Press (Exit button) at the end and the LCD display goes back to [Ready] screen.

7. Setting IPC pre-set

- 1) Pressing  (Next button) or  (Previous button) and let the LCD show <Screen7>.


<Screen7>


!	0	7		I	P	C		P	r	e	-	s	e	t	
=				N	o	/	1	/	2	/	3	/	4	/	5

- 2) At <Screen7>, the preset items can be selected by pressing  (Left arrow button) or  (Right arrow button).



The blinking item is the one selected.

- 3) Press  (Enter button) and make the setting valid.

Press  (Exit button) at the end and the LCD display goes back to [Ready] screen.



When scanning in Binary mode (Line art), documents type and suitable pre-set pattern relationship is shown as follows:

- The horizontal axis shows the darkness/color of the background against the text/lines on the documents.
- The vertical axis shows the darkness of the text and lines on the documents.

● Document type and IPC preset pattern

	Background darkness		Background color		
	Normal ←	→Dark	Red	Green	Blue
Text Dark- ness	Normal↑	1: Normal Background and normal darkness text			
	↓ Light	2: Mid darkness background and light text	3: Dark background and normal darkness text	4: Red background and light text	5: Green background and light text

*1 to 5 indicates IPC pre-set pattern number.



This setting is invalid in grayscale mode or in color mode.
 Pre-sets are valid only in binary scan mode.
 Validity of each scan parameter when using IPC pre-set in Offline mode, is shown in the following table.

● Validity of scan parameter

	Scan mode	Resolution	Line art/ Photos	Half-tone	DTC	Document sizes	Portrait/ Landscape	Cropping
Valid	X	X	-	-	-	X	X	X
invalid	-	-	X	X	X	-	-	-

	Document selection	Pattern	Contrast	Auto separation	Reverse image	Image emphasis	Outline Extraction	Simplified DTC
Valid	X	-	-	-	X	-	-	-
Invalid	-	X	X	X	-	X	X	X

8. Setting Consumables Replacement Message

1) Pressing ◀ (Next button) or ▶ (Previous button) and let the LCD show <Screen8>.

<Screen8>

!	0	8	A	b	r	a	s	i	o	n				
A	l	a	r	m	S	e	t	?	N	o	/	Y	e	s

2) At <Screen8> , to change Consumables replacement message setup (Abrasion Alarm), press ▶ (Right arrow button) and select [Yes].



The blinking item is the one selected.

Press **Enter** (Enter button) to confirm the selection. <Screen8-1> appears on LCD.
If Consumables replacement message setup change is not required, select [No] and press **Enter** (Enter button).

<Screen8-1>

!	0	8	-	1	A	l	a	r	m	M	o	d	e
S	t	o	p	/	M	e	s	s	a	g	e		

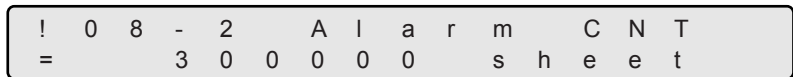
3) At <Screen8-1>, press ◀ (Left arrow button) or ▶ (Right arrow button) to select consumable error process.

(1) [Stop] is blinking: When the consumables replacement limit is reached, the Consumables replacement message (Abrasion alarm) is shown on the LCD and scanning stops.

(2) [Message] is blinking: When the consumables replacement limit is reached, the Consumables replacement message (Abrasion alarm) is shown on the LCD but the scanning continues.

By pressing **Enter** (Enter button), <Screen8-2> appears on the LCD.

<Screen8-2>



4) At <Screen8-2>, specify the number of scans to get Consumables replacement message.

Each time ◀ (Left arrow button) is pressed, the counter value decrements by 10,000.

Each time ▶ (Right arrow button) is pressed, the counter value increments by 10,000.

5) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) , and the LCD display goes back to [Ready] screen.

9. Abrasion counter (Abrasion CNT) reset

1) Pressing ◀ (Next button) or ▶ (Previous button) and let the LCD show <Screen9>.

<Screen9>

!	0	9	A	b	r	a	s	i	o	n	C	N	T
P	i	c	k	/	B	r	a	k	e	/	P	a	d

2) At <Screen9>, select the Abrasion counter to reset.



The blinking item is the one selected.

You can select a counter(s) from the following.

- (1) [Pick] is blinking: Pick roller counter (Pick CNT) can be reset.
- (2) [Brake] is blinking: Brake roller counter (Brake CNT) can be reset.
- (3) [Pad] is blinking: Pad counter (Pad CNT) can be reset.
- (4) [F.Lamp] is blinking: Front-side lamp counter (Front Lamp) can be reset.
- (5) [B.Lamp] is blinking: Back-side lamp counter (Back Lamp) can be reset.

By pressing ▶ (Right arrow button), selection moves from (1) to (5).

By pressing ◀ (Left arrow button), selection moves from (5) to (1).

3) By pressing **Enter** (Enter button), LCD display changes to <Screen9-1>, <Screen9-2>, <Screen9-3>, <Screen9-4>, or <Screen9-5> depending on the selection at <Screen9>.

When [Pick] is selected:

<Screen9-1>

```
! 0 9 - 1   P i c k   C N T
= x x x x x x   R e s e t / N o
```

When [Brake] is selected:

<Screen9-2>

```
! 0 9 - 2   B r a k e   C N T
= x x x x x x   R e s e t / N o
```

When [Pad] is selected:

<Screen9-3>

```
! 0 9 - 3   P a d   C N T
= x x x x x x   R e s e t / N o
```

When [F Lamp] is selected:

<Screen9-4>

```
! 0 9 - 4   F r o n t   L a m p
= x x x x x x   R e s e t / N o
```

When [B Lamp] is selected:

<Screen9-5>

```
! 0 9 - 5   B a c k   L a m p
= x x x x x x   R e s e t / N o
```



[XXXXXX] indicates each Abrasion counter value.

4) At <Screen9-1> , <Screen9-2>, <Screen9-3>, <Screen9-4> or <Screen9-5>, to reset the corresponding counter, press ◀ (Left arrow button) and select [Reset].

Press (Enter button) to confirm the selection, then <Screen9-6> is displayed.

If you do not want to reset the counter, select [No] and press (Enter button).

<Screen9-6>

!	0	9	-	6	R	e	s	e	t	N	o	w
x	x	x	x		N	o	/	Y	e	s		



[XXXXXX] is the counter value of the selected consumable.

- Pick roller counter
 - Brake roller counter
 - Pad counter
 - Front-side lamp counter (lamp-on time)
 - Back-side lamp counter (lamp-on time)
-

5) If reset is really OK, select [YES] and press (Enter button).

To cancel Reset, select [No] and press (Enter button).

Press (Exit button) and the LCD display goes back to [Ready] screen.

10. Setting Short document scan mode(Paper Length setup)

1) Press ◀(Next button) or ▶(Previous button) and let LCD display <Screen10> .

<Screen10>

!	1	0	P	a	p	e	r	L	e	n	g	t	h
=			N	o	r	m	a	/	S	h	o	r	t

2) At <Screen10>, press ◀(Left arrow button) or ▶(Right arrow button) and select the proper setting for the document to scan.



The blinking item is the one selected.

- (1) [Normal] is blinking: This mode is for scanning documents longer than 80mm or 3.15inches.
- (2) [Short] is blinking: This mode is for scanning documents which length is 80mm or less, 3.15inches or less.

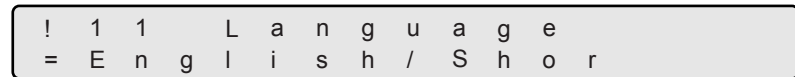
(3) Press **Enter** (Enter button) and make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

11. Setting Language

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen11> .

<Screen11>



- 2) Press ◀ (Left arrow button) or ▶ (Right arrow button) and select the language for LCD display.

- 3) Press (Enter button) and to make the setting valid.

Press (Exit button) at the end and the LCD display goes back to [Ready] screen.

12. Setting Front-side background color

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen12>.

<Screen12>

!	1	2	F	.	B	a	c	k	g	r	o	u	n	d
=		W	h	i	t	e	/	B	l	a	c	k		

- 2) At <Screen12>, to set the background color to white, press ◀ (Left arrow button) and select [White].

To set the background color to black, press ▶ (Right arrow button) and select [Black].

- 3) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

13. Setting Back-side background color

1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen13>.

<Screen13>

!	1	3	B	.	B	a	c	k	g	r	o	u	n	d
=		W	h	i	t	e	/	B	l	a	c	k		

2) At <Screen12>, to set the background color to white, press ◀ (Left arrow button) and select [White].

To set the background color to black, press ▶ (Right arrow button) and select [Black].

(3) Press (Enter button) to make the setting valid.

Press (Exit button) at the end and the LCD display goes back to [Ready] screen.

14. Setting Front-side dropout color

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen14>.

<Screen14>

!	1	4	F	.	D	r	o	p	-	o	u	t
=		R	/	G	/	B						

- 2) At <Screen14>, press ◀ (Left arrow button) or ▶ (Right arrow button) and select the color to drop out.



The blinking item is the one selected.

- (3) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

15. Setting Back-side dropout color

1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen15>.

<Screen15>

!	1	5		B	.	D	r	o	p	-	o	u	t
=				R	/	G	/	B					

2) At <Screen15>, press ◀ (Left arrow button) or ▶ (Right arrow button) and select a color to drop out.



The blinking item is the one selected.

3) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

16. Setting Pick retry

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen16>.

<Screen16>

!	1	6	P	i	c	k	r	e	t	r	y		
	C	h	a	n	g	e	?	N	o	/	Y	e	s

- 2) At <Screen16>, to change Pick motor pick operation time and the number of retries, press ▶ (Right arrow button) and select [Yes]. Press (Enter button) to confirm the selection. <Screen16-1> is displayed.

If the change is not required, select [No] and press (Enter button).

<Screen16-1>

!	1	6	-	1	R	e	t	r	y	S	t	e	p
=							2						



The blinking item is the one selected.

- 3) At <Screen16-1>, pick motor's pick operation time can be specified. Longer pick operation time makes the pick feed amount bigger.

Pressing ◀ (Left arrow button) makes the pick operation time shorter.

Pressing ▶ (Right arrow button) makes the pick operation time longer.

Press ◀ (Left arrow button) or ▶ (Right arrow button), and select the setting.

The range of the pick motor retry steps is 1 to 7.

Press (Enter button) to confirm the selection. <Screen16-2> is displayed.

<Screen16-2>

!	1	6	-	2	R	e	t	r	y	T	i	m	e
=							4						

4) At <Screen16-2>, specify the number of pick retries. By pressing ◀ (Left arrow button), the number of retries decreases. By pressing ▶ (Right arrow button), the number of retries increases.

Press ◀ (Left arrow button) or ▶ (Right arrow button), and select the setting.

The number of the pick retries can be set between 1 to 7 times.

5) Press (Enter button) to make the setting valid.

Press (Exit button) again and the LCD display goes back to [Ready] screen.

17. Setting Feed retry

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen17>.

<Screen17>

!	1	7	F	e	e	d	r	e	t	r	y	
C	h	a	n	g	e	?	N	o	/	Y	e	s

- 2) At <Screen17>, to change Feed motor operation time and the number of retries, press ▶ (Right arrow button) and select [Yes].

Press (Enter button) to confirm the selection. <Screen17-1> is displayed.

If the change is not required, select [No] and press (Enter button).

<Screen17-1>

!	1	7	-	1	R	e	t	r	y	S	t	e	p
=									1				



The blinking item is the one selected.

- 3) At <Screen17-1>, feed motor rotation time can be specified. Longer feed operation time makes the feed amount bigger.

Pressing ◀ (Left arrow button) makes the feed motor operation time shorter.

Pressing ▶ (Right arrow button) makes the feed motor operation time longer.

Press ◀ (Left arrow button) or ▶ (Right arrow button), and select the setting.

The feed motor rotation step range is 1 to 7 steps.

Press (Enter button) to confirm the selection. <Screen17-2> is displayed.

<Screen17-2>

!	1	7	-	2	R	e	t	r	y	T	i	m	e
=									4				

4) In <Screen17-2>, specify the number of retries. By pressing ◀ (Left arrow button), the number of retry decreases. By pressing ▶ (Right arrow button), the number of retries increases. The number of the feed retries can be set between 1 to 7 times. Press ◀ (Left arrow button) or ▶ (Right arrow button), and select the setting.

5) Press (Enter button) to confirm the setting.

Press (Exit button) , and the LCD display goes back to [Ready] screen.

18. Setting Manual Feed mode

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen18>.

<Screen18>

!	1	8	M	a	n	u	a	l	F	e	e	d		
	C	h	a	n	g	e	?		N	o	/	Y	e	s

- 2) At <Screen18>, if the setting change is required, press ▶ (Right arrow button) and select [Yes].



The blinking item is the one selected.

Press **Enter** (Enter button) to confirm the selection then the LCD display changes to <Screen18-1>.

If the change is not necessary, select [No] and press **Enter** (Enter button).

<Screen18-1>

!	1	8	-	1	P	i	c	k	S	t	a	r	t
=					1	.	0	S	e	c			

- 3) At <Screen18-1>, specify the time to start pick from the manual setting of the document (Start time).

By pressing ◀ (Left arrow button), the pick start time decreases.

By pressing ▶ (Right arrow button), the pick start time increases.

The pick start time can be specified to be 0.2 to 29.8 seconds.



Pick start time can be specified by the unit of 0.2 second.

Press (Enter button) then <Screen18-2> is displayed.

<Screen18-2>

!	1	8	-	2	T	i	m	e	-	o	u	t
=					3	0	S	e	c			

4) At <Screen18-2>, specify the wait time (i.e. the time from the PC issues scan command to time out) for manual setting of document.

By pressing (Left arrow button), the wait time becomes shorter.

By pressing (Right arrow button), the wait time becomes longer. .

The wait time can be specified as 1, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 180, 240, or 255 sec.

5) Press (Enter button) to make the setting valid.

Press (Exit button) and the LCD display goes back to [Ready] screen.

19. Setting of SCSI ID

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen19>.

<Screen19>

!	1	9	S	C	S	I	I	D							
=	0	/	1	/	2	/	3	/	4	/	5	/	6	/	7

- 2) At <Screen19>, press ◀ (Left arrow button) or press ▶ (Right arrow button) to select SCSI ID number.



The blinking item is the one selected.

- 3) Press **Enter** (Enter button) and make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.



Changed SCSI ID becomes valid after the scanner power is cycled.

20. Setting of Product ID(Scanner model number)

1) Press ◀(Next button) or ▶(Previous button) and let LCD display <Screen20>.

<Screen20>

!	2	0	P	r	o	d	u	c	t	I	D			
f	i	4	8	6	0	C	/	f	i	4	9	9	0	C

2) At <Screen20>, press ◀(Left arrow button) or ▶(right arrow button) and select Product ID.



The blinking item is the one selected.

The following are the selectable Product IDs.

- (1) fi4860C
- (2) fi4990C
- (3) M4099D
- (4) M3099G

By pressing ◀(Left arrow button), selection moves from (4) to (1).

By pressing ▶(Right arrow button), selection moves from (1) to (5).



Usually, Product ID does not need to be changed.

(3) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

21. Setting SCSI bus width

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen21>.

<Screen21>

!	2	1	S	C	S	I	B	u	s			
=		W	i	d	t	h	8	/	16	b	i	t

- 2) At <Screen21>. If Wide SCSI (68pin) interface is used, press ▶ (Right arrow button) and select [16].

If SCSI-2 (50pin) interface is used, press ◀ (Left arrow button) and select [8].



The blinking item is the one selected.

- (3) Press **Enter** (Enter button) to make the setting valid.

Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

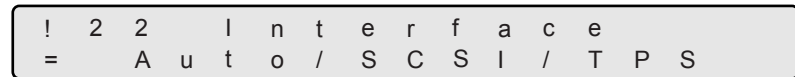


- If 16 bit bus width data transfer is prohibited, specify [8] bit.

22. Setting Interface

1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen22>.

<Screen22>



2) At <Screen22>, press ◀ (Left arrow button) or ▶ (Right arrow button), and select the type of interface.



The blinking item is the one selected.

Available interface settings are as follows:

- (1) [Auto] is blinking: If an interface board, either from third party or optional, is installed in TPS, this interface is used. If not, SCSI interface is used.
- (2) [SCSI] is blinking: SCSI interface is used. The interface on TPS is disregarded.
- (3) [TPS] is blinking: TPS interface is used. The SCSI interface is disregarded.



By pressing ◀ (Left arrow button), selection moves from (3) to (1).

By pressing ▶ (Right arrow button), selection moves from (1) to (3).

(3) Press **Enter** (Enter button) to make the setting valid.



Press **Exit** (Exit button) at the end and the LCD display goes back to [Ready] screen.

23. Setting Baud rate of TPS interface

- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen23>.

<Screen23>

!	2	3		B	a	u	d		R	a	t	e			
=	1	9	2	0	0	/	9	6	0	0	/	4	8	0	0


- 2) At <Screen23>, press  (Left arrow button) or  (right arrow button) and select Baud rate.




The blinking item is the one selected.

Baud rates available are as follows:

- (1) 19200 bps
- (2) 9600 bps
- (3) 4800 bps
- (4) 2400 bps


By pressing  (Left arrow button), selection moves from (4) to (1).

By pressing  (Right arrow button), selection moves from (1) to (4).



It is recommended to set the Baud rate at 9600 bps.

- (3) Press  (Enter button) to make the setting valid.

Press  (Exit button) at the end and the LCD display goes back to [Ready] screen.

25. Setting Imprinter numbering


- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen25>.


<Screen25>


!	2	5		N	u	m	b	e	r	i	n	g		
=				O	n	/	O	f	f	(P	o	s	t)



To show your selection of imprinter or the imprinter to setup, [Pre] or [Post] is displayed.

- 2) At <Screen25>, to enable numbering printing with the imprinter, press  (Left arrow button) and select [On].

Press  (Enter button) to confirm the selection. Then <Screen25-1> is displayed.

If numbering printing is not required, press  (Right arrow button) and select [Off].

Then press  (Enter button) to confirm.

<Screen25-1>

!	2	5	-	1		D	i	g	i	t	s
=					5	/		8			



The blinking item is the one selected.

3) At <Screen25-1>, press ◀ (Left arrow button) or ▶ (Right arrow button) and let your choice of number of digits blink.
Selectable number of digits is listed as below.

(1) [5] is blinking: 5 digit

(2) [8] is blinking: 8 digit

Press  (Enter button), then <Screen25-2> is displayed.


<Screen25-2>

!	2	5	-	2	S	t	a	r	t	C	o	u	n	t
=		0	0	0	0	0	0	0	0					

4) At <Screen25-2>, specify the initial value of numbering.

By pressing ◀ (Left arrow button) or ▶ (Right arrow button), a digit position (blinking on LCD) can be specified.

By pressing ▶ (Next button) or ◀ (Previous button), the number at the digit can be changed.

After putting a initial value for the numbering counter, press  (Enter button) to confirm the initial number. Then, <Screen25-3> is displayed.

<Screen25-3>

!	2	5	-	3	E	m	p	t	y	R	e	s	e	t
=					O	n	/	O	f	f				



Initial number can be increased up to the maximum number (5digit: 99,999/ 8digit: 16,777,215).

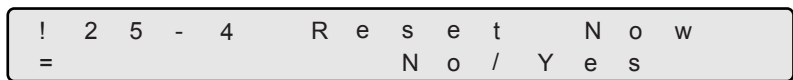
5) At <Screen25-3>, you can specify if the numbering should be initialized to the specified initial value in 4) at hopper empty.

To specify to initialize the numbering counter at hopper empty, press ◀ (Left arrow button) and select [On].

Press (Enter button) to confirm the selection. Then, <Screen25-4> is displayed.

To specify not to initialize the counter at hopper empty but continue incrementing, select [Off], press (Enter button) and then <Screen 25-4> is displayed.

<Screen25-4>



6) At <Screen25-4>, specify if the numbering counter should be initialized immediately to the vlaue specified in 4).

To specify to initialize immediately, press ▶ (Right arrow button) and select [Yes].

To specify not to initialize immediately, select [No] and press (Enter button).

7) Press (Enter button) to make the setting valid.

Press (Exit button), and the LCD display goes back to [Ready] screen.



Command from the PC takes the priority over the setting from the Operator panel.

26. Reset the Ink remain counter of imprinter.

If the following message comes up, prepare the new Print cartridge. If no further printing is impossible, replace the Print cartridge and reset the ink counter. If the Print cartridge is replaced before Print cartridge error occurs, be sure to reset the Ink remain counter.

P l e a s e a n e w I n k
N o w R e a d i n g ! x x x x



[XXXX] is the scanned sheet counter value.

1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen26>.

<Screen26>

! 2 6 I n k (x x x x)
= ■ ■ ■ ■ □ □ R e s e t / N o

Approximate remaining ink amount is shown as below:

■ ■ ■ ■ ■ ■ - Cartridge is full.
 ■ ■ ■ ■ ■ □
 ■ ■ ■ ■ □ □
 ■ ■ ■ □ □ □
 ■ ■ □ □ □ □
 ■ □ □ □ □ □ - Cartridge is low or empty.



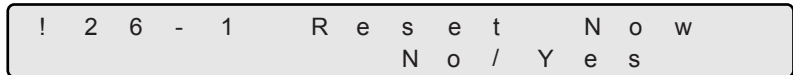
In [XXXX], [Pre] or [Post] is displayed.

2) At <Screen26>, to choose to reset the ink counter, press ◀ (Left arrow button) and select [Reset].

Press (Enter button). <Screen26-1> is displayed.

Not to reset, select [No] and press (Enter button).

<Screen26-1>

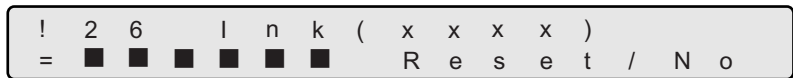


3) At <Screen26-1>, to actually reset the counter, press ▶ (Right arrow button) and select [yes].

To cancel the reset, select [No] and press (Enter button).

4) Press (Enter button) and reset the counter.

The remaining ink amount indication on LCD goes back to full (■■■■■■■■).



5) Press (Exit button), and the LCD display goes back to [Ready] screen.

27. Setting Power save mode

1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen27>.

<Screen27>

!	2	7	P	o	w	e	r	S	a	v	e			
=			1	0			1	5		2	0	m	i	n

2) At <Screen27>, by pressing ◀ (Left arrow button) or ▶ (Right arrow button), select the scanner wait idle time before entering power save mode.





The blinking item is the one selected.

A minimum of 5 minutes to the maximum of 60 minutes can be selected with 5 minutes increment.




The default time recommended by the ENERGY STAR® program is 15 minutes.


28. Setting Brightness


- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen28>.

<Screen28>

!	2	8		B	r	i	g	h	t	n	e	s	s
C	h	a	n	g	e	?		N	o	/	Y	e	s

- 2) At <Screen28>, to adjust the Brightness, press  (Right arrow button) and select [Yes].

Press  (Enter button) to confirm the selection. <Screen28-1> is displayed.







If Brightness adjustment is not required, select [No] and press  (Enter button).

<Screen28-1>

!	2	8	-	1		B	r	i	g	h	t	n	e	s	s
F	r	o	n	t	:	0		B	a	c	k	:	0		



The blinking item is the one selected.

- 3) At <Screen28-1>, to adjust the front-side brightness, press  (Left arrow button) and select [Front].
- If back side needs brightness adjustment, press  (Right arrow button) and select [Back].
- If the brightness needs to be increased, press  (Next button). Each time the button is pressed the brightness value increases by 1.
- If the brightness needs to be decreased, press  (Previous button). Each time the button is pressed, the brightness decreased by 1.
- 4) Press  (Enter button) and make the setting valid.
- Press  (Exit button), and the LCD display goes back to [Ready] screen.

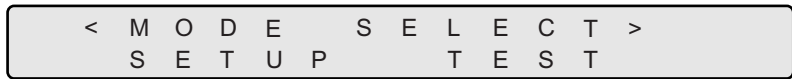
7.4 Test Mode Overview

■ Outline

Scanner operation can be checked in offline test mode.
To enter the test mode, follow the procedures below.

- Test mode

Keep pressing **Start** (Start button) and turn on the power.
Then the Operator panel LCD displays the following message.



Press ◀ (Left arrow button) or ▶ (Right arrow button) and select [Reset].

By pressing **Enter** (Enter button), the scanner enters test mode.

To end the test mode, turn off the power.



The blinking item is the one selected.

■ Button functions in test mode

Button name	Function
◇ [Next]	Displays the next menu item without saving the change. Referred to as Next button in this manual.
◇ [Previous]	Displays the previous menu item without saving the change. Referred to as Previous button in this manual.
◇	Moves to the right item on the menu Referred to as Right arrow button in this manual.
◇	Moves to the left item on the menu Referred to as Left arrow button in this manual.
Enter	- Saves the change and then displays the next menu - Moves to the lower level menu Referred to as Enter button in this manual.
Exit	Moves to the upper level menu without saving the change Referred to as Exit button in this manual.

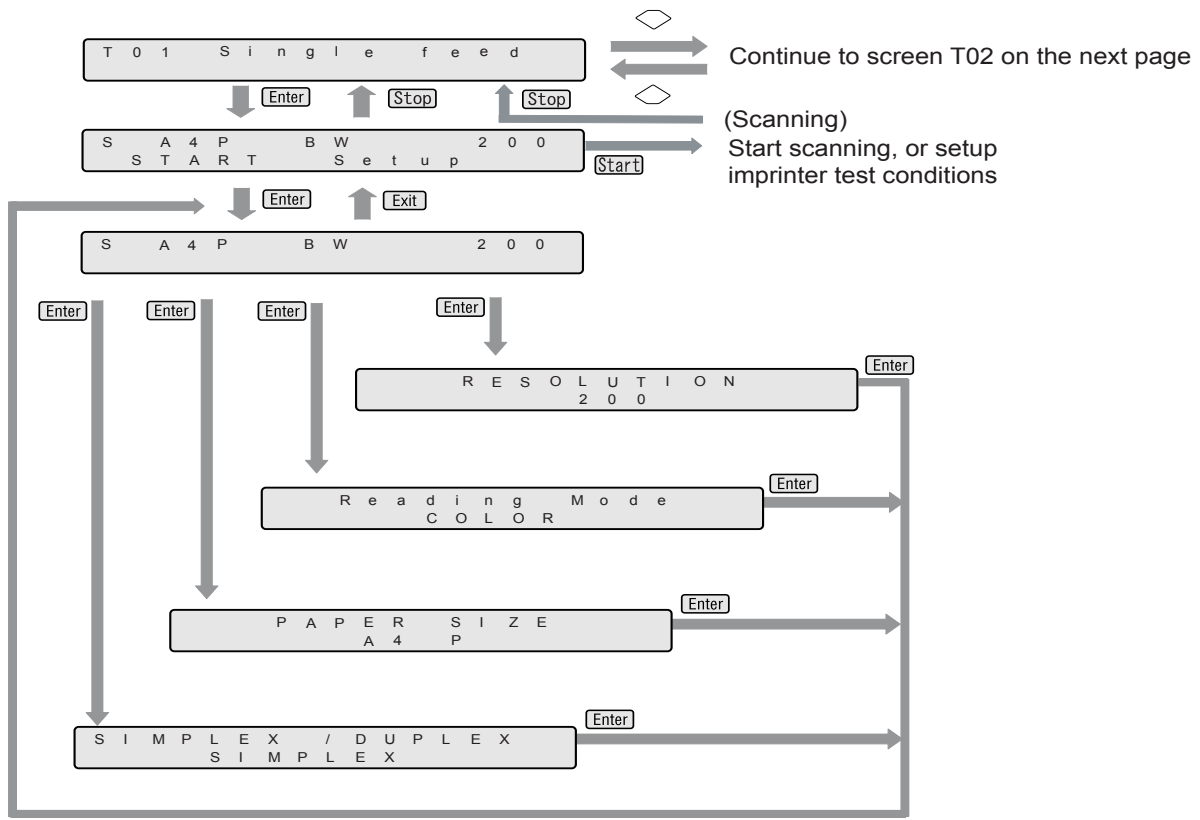
■ Transition of screens in test mode

Refer to the next page.

The LCD screen transition chart in the following pages show the concept.

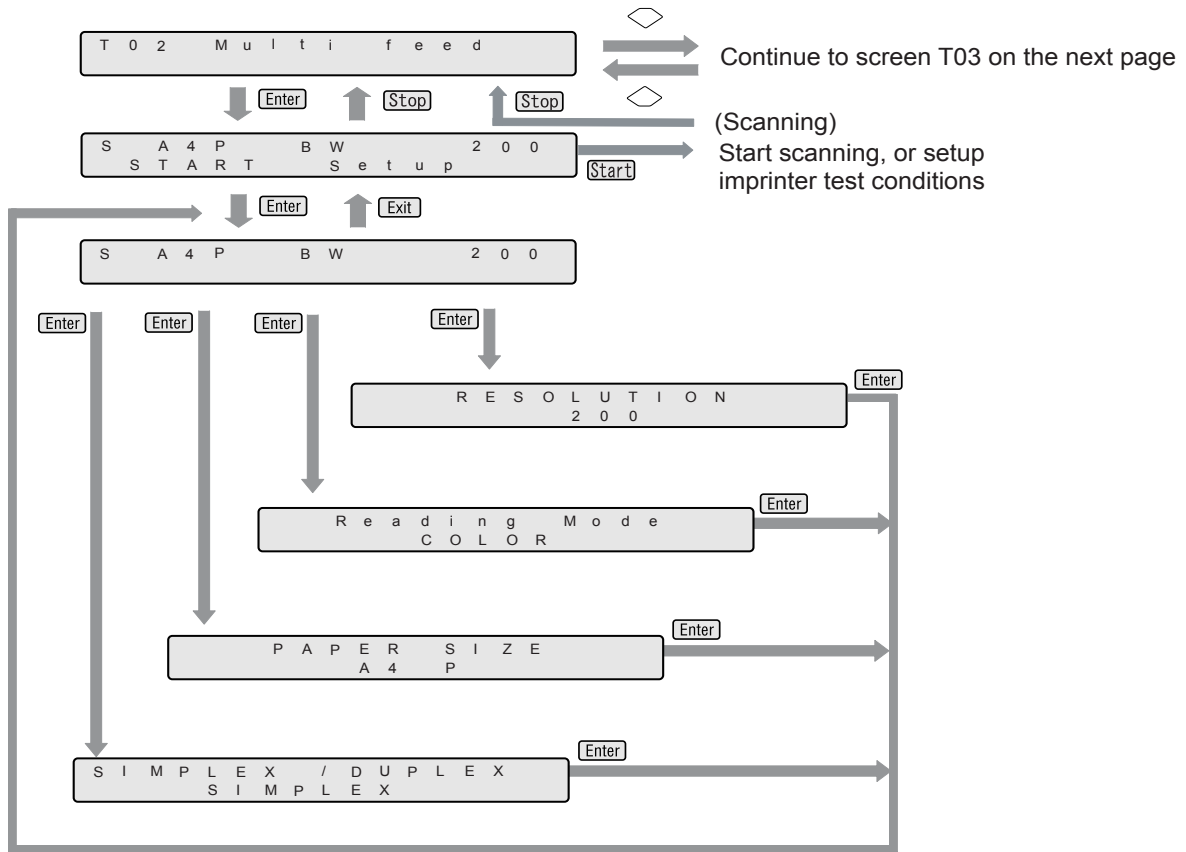
Some of the details are not expressed in the chart.

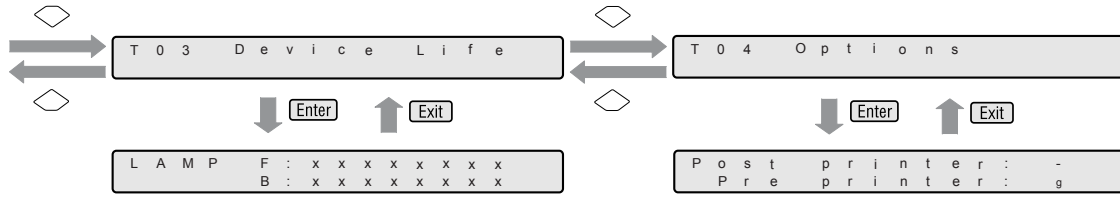
For the details, please refer to the descriptions in “■ Contents of test mode setting”



7

SETUP MODE





7

SETUP MODE

■ Contents of test mode setting

LCD display	Descriptions
Single feed	Scans a sheet of document without connecting to a PC.
Multi feed	Scans documents continuously without connecting to a PC.
Device Life	Shows the cumulative lamp-on time.
Options	Shows the options installation status.

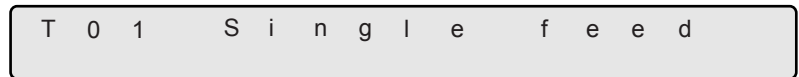
7.5 Test Mode Details

1. Single feed

Without connecting to a PC, the scanner's whole mechanism's operation can be checked. Only one sheet is fed with this test. Scan parameters can be changed for scanning test. Imprinter test print can be performed at the same time.

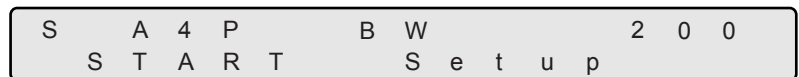
- 1) Place the documents to scan on the hopper.
- 2) Press ◀ (Next button) or ▶ (Previous button) and let the LCD show <Screen50>.

<Screen50>



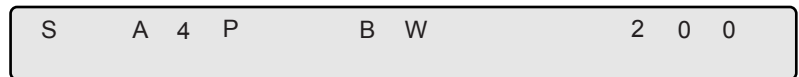
- 3) At <Screen50>, press [Enter] (Enter button) or [Start] (Start button). Then <Screen50-1> is displayed.

<Screen50-1>



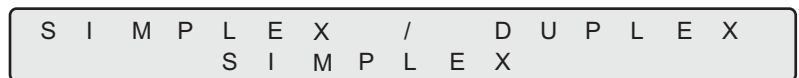
- 4) At <Screen 50-1>, press ▶ (Right arrow button) and select [Setup].
Press [Enter] (Enter button) or [Start] (Start button). Then <Screen50-2> is displayed.

<Screen50-2>



- 5) Specify the scanning conditions.
(1) At <Screen50-2>, select the left most item, [S] in the sample screen, and press [Enter] (Enter button). Then the LCD display shows <Screen50-2.1>.

<Screen50-2.1>



At this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select simplex or duplex.

Press (Enter button) and confirm the setting.

Then the display goes back to <Screen50-2>.

- (2) At <Screen50-2>, select the second item from left, [A4P] in the sample screen, and press (Enter button). Then the LCD display shows <Screen50-2.2>.

<Screen50-2.2>



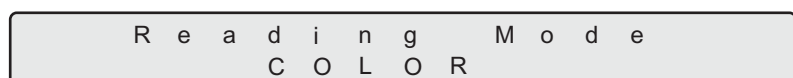
At this screen, press (Left arrow button) or (Right arrow button) and select the document size and the orientation. Following parameters can be specified.

A4 portrait	A4P
B4 portrait	B4P
Legal portrait	LGP
11 x 17 inch portrait	DLP
A3 portrait	A3P
A5 landscape	A5L
B5 landscape	B5L
Letter landscape	LTL
A4 landscape	A4L
A5 portrait	A5P
B5 portrait	B5P
Letter portrait	LTP

Press (Enter button) and confirm the setting. Then the display goes back to <Screen50-2>.

- (3) At <Screen50-2>, select the third item from left, [BW] in the sample screen, and press (Enter button). Then the LCD display shows <Screen50-2.3>.

<Screen50-2.3>



In this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select the scan mode: binary (BW) or color (COLOR).

Press **Enter** (Enter button) and confirm the setting. Then the display goes back to <Screen50-2>.

(4) At <Screen50-2>, select the right most item, [200] in the sample screen, and press **Enter** (Enter button). Then the LCD display shows <Screen50-2.4>.



At this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select scan resolution. Following parameters can be specified.

200: Scan at 200 dpi
240: Scan at 240 dpi
300: Scan at 300 dpi
400: Scan at 400 dpi

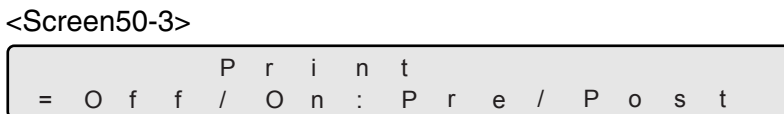
Press **Enter** (Enter button) and confirm the setting. Then the display goes back to <Screen50-2>.

(5) Press **Exit** (Enter button). Then the display goes back to <Screen50-1>.

At <Screen50-1>, select [START], and press **Start** (Start button).

If fi-486PRFR and/or fi-486PRRE is installed, <Screen50-3> is displayed for you to setup imprinter test conditions.

If an imprinter(s) is not installed, the scanner starts scanning operations.



6) At <Screen50-3>, press ◀ (Left arrow button) or ▶ (Right arrow button) and:
Select [On] to do imprinter test while scanning.

Then select the imprinter to use.

If the printer to use is fi-486PRFR, select [Pre].

If fi-486PRRE, select [Post].

If imprinter test is not required, select [Off].



7) Press **Start** (Start button). Scanning operation starts with or without imprinter test .



If you want to quit, press **Stop** (Stop button).
LCD display goes back to <Screen50>.



2. Multi feed

Without connecting to a PC, the scanner's whole mechanism's operation can be checked.
In this test documents are scanned continuously.
Scan parameters can be changed for scanning test.
Imprinter test print can be performed at the same time.

- 1) Place the documents to scan on the hopper.
- 2) Press  (Next button) or  (Previous button) and let the LCD show <Screen51>.

<Screen51>



T 0 2 M u l t i f e e d

- 3) At <Screen51>, press  (Enter button) or  (Start button), then <Screen51-1> is displayed.

<Screen51-1>

S A 4 P B W 2 0 0
S T A R T S e t u p


- 4) At <Screen 50-1>, press  (Right arrow button) and select [Setup].

Press  (Enter button) or  (Start button). Then <Screen51-2> is displayed.

<Screen51-2>



S A 4 P B W 2 0 0


- 5) Specify the scanning conditions.

- (1) At <Screen51-2>, select the left most item, [S] in the sample screen, and press  (Enter button). Then the LCD display shows <Screen51-2.1>.

<Screen51-2.1>

S I M P L E X / D U P L E X
S I M P L E X

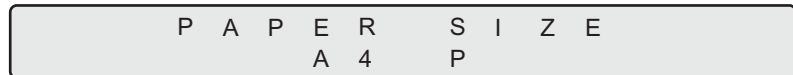
At this screen, press  (Left arrow button) or  (Right arrow button) and select simplex or duplex.

Press  (Enter button) and confirm the setting.

Then the display goes back to <Screen51-2>.

(2) At <Screen51-2>, select the second item from left, [A4P] in the sample screen, and press **Enter** (Enter button). Then the LCD display shows <Screen51-2.2>.

<Screen51-2.2>



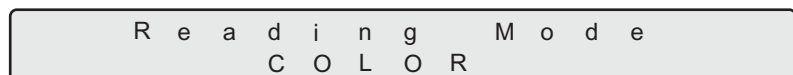
At this screen, press **Left arrow** or **Right arrow** and select the document size and the orientation. Following parameters can be specified.

A4 portrait	A4P
B4 portrait	B4P
Legal portrait	LGP
11 x 17 inch portrait	DLP
A3 portrait	A3P
A5 landscape	A5L
B5 landscape	B5L
Letter landscape	LTL
A4 landscape	A4L
A5 portrait	A5P
B5 portrait	B5P
Letter portrait	LTP

Press **Enter** (Enter button) and confirm the setting. Then <Screen51-2> is redisplayed.

(3) At <Screen51-2>, select the third item from left, [BW] in the sample screen, and press **Enter** (Enter button). Then the LCD display shows <Screen51-2.3>.

<Screen51-2.3>



In this screen, press **Left arrow** or **Right arrow** and select the scan mode: binary (BW) or color (COLOR).

Press **Enter** (Enter button) and confirm the setting. Then the display goes back to <Screen51-2>.

(4) At <Screen51-2>, select the right most item, [200] in the sample screen, and press **Enter** (Enter button). Then the LCD display shows <Screen51-2.4>.



At this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select scan resolution. Following parameters can be specified.

200:	Scan at 200 dpi
240:	Scan at 240 dpi
300:	Scan at 300 dpi
400 sheets:	Scan at 400 dpi

Press **Enter** (Enter button) and confirm the setting. Then <Screen51-2> is redisplayed.

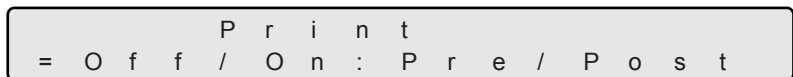
(5) Press **Exit** (Enter button). Then <Screen51-1> is redisplayed.

At <Screen51-1>, select [START] and press **Start** (Start button).

If fi-486PRFR and/or fi-486PRRE is installed, <Screen51-3> is displayed for you to setup imprinter test conditions.

If an imprinter(s) is not installed, the scanner starts scanning operations.

<Screen51-3>



6) At <Screen50-3>, press ◀ (Left arrow button) or ▶ (Right arrow button) and: Select [On] to do imprinter test while scanning.

Then, select the imprinter to use.

If the printer to use is fi-486PRFR, select [Pre].

If fi-486PRRE, select [Post].

If imprinter test is not required, select [Off].

7) Press **Start** (Start button). Scanning operation starts with or without imprinter test.



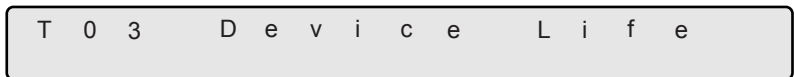
If you want to quit, press **Stop** (Stop button).
The LCD goes back to <Screen51>.

3. Display the cumulative lamp-on time

You can check the cumulative number of lamp-on time.

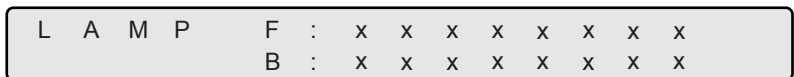
- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen53>.

<Screen53>



- 2) At <Screen53>, press [Start] (Start button) or [Enter] (Enter button). Then <Screen53-1> is displayed.

<Screen53-1>



[F: XXXXXXXX] indicates the cumulative lamp-on time for the Front-side lamp.



[B: XXXXXXXX] indicates the cumulative lamp-on time for the Back-side lamp.

The unit of lamp-on time is minute.

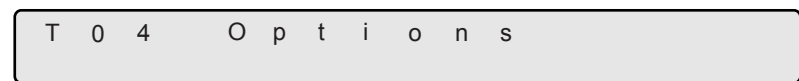
- 3) Press [Stop] (Stop button) or [Exit] (Exit button). Then <Screen53> is redisplayed.



4. Option installation status display

You can check the options installation status.

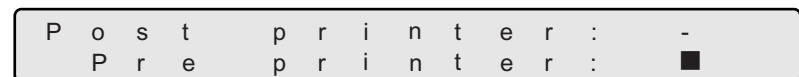
- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen54>.

<Screen54>





- 2) At <Screen54>, press  (Enter button) or  (Start button). <Screen54-1> is displayed.

<Screen54-1>



- If fi-486PRFR is installed, LCD display shows [Pre Printer: ■]. [■] indicates that the printer is installed. If not installed, it shows [Pre Printer:-].
- If fi-486PRRE is installed, LCD display shows [Post Printer: ■]. [■] indicates that the printer is installed. If not installed, it shows [Post Printer:-].

- 3) Press  (Exit button) or  (Stop button). Then <Screen54> is redisplayed.

8 OPTIONS

This chapter describes options for fi-4860C.

8.1 Options	230
8.2 fi-486PRFR (Front side imprinter)	231
8.3 fi-486PRRE (Rear side imprinter)	232

8.1 Options

The following lists options available for the scanner.

Descriptions	Part No.	Remarks
fi-486PRFR	PA03296-D206	Prints information on the front of a document prior to scan
fi-486PRRE	PA03296-D200	Prints information such as serial number on the back of a document after scan

For the details please contact FUJITSU scanner dealer where you purchased the scanner or FUJITSU group company responsible for your country.



-fi-486PRFR is installed at the front side of the document path, inside of the scanner. It prints prior to scanning.
-fi-486PRRE is installed at the rear side of the document path, inside of the scanner. It prints after the scanning.

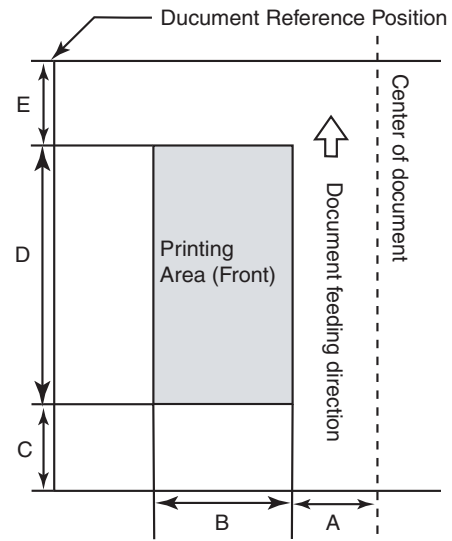


The both imprinters can be installed on the scanner at the same time.
However, only one of them can be printing at a time.
Depending on the application, appropriate imprinter should be specified.

8.2 fi-486PRFR (Front side imprinter)

fi-486PRFR (Front side imprinter) Specifications are described below.

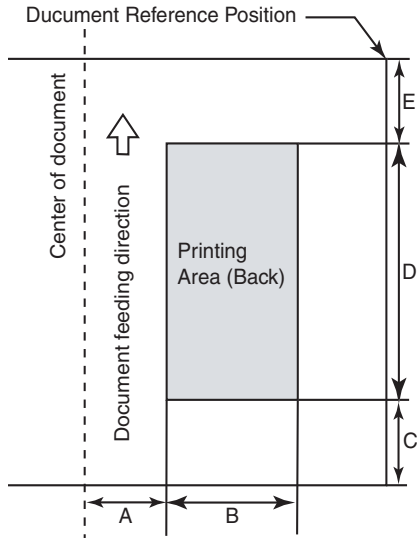
Item	Descriptions
Printing Method	Thermal Ink Jet
Printable characters	Alphabet letters : A to Z, a to z Numeric characters: 0,1 to 9 Symbols : ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ { } -
Maximum printable characters per line	40
Character size	Height 2.91mm x Width 2.82mm
Character pitch	Approximately 3.53mm
Printing area	Printable area is shown as below. A: 40mm or more B: 99mm or less C: 5mm or more D: 140.5mm or less (Max. 40column) E: 5mm or more
Consumables	Print Cartridge



As for the operations and functions of fi-486PRFR (Front side imprinter), refer to the fi-486PRFR Operator's Guide included in the package.

8.3 fi-486PRRE (Rear side imprinter)

fi-486PRFR (Rear side imprinter) Specifications are described below.

Item	Descriptions
Printing Method	Thermal Ink Jet
Printable characters	Alphabet letters : A to Z, a to z Numeric characters: 0,1 to 9 Symbols : ! " # \$ % & ' () * + , - . / : ; < = > ? @ [¥] ^ _ { } -
Maximum printable characters per line	40
Character size	Height 2.91mm x Width 2.82mm
Character pitch	Approximately 3.53mm
Printing area	<p>Printable area is shown as below.</p> <p>A: 43mm or more B: 100.5mm or less C: 5mm or more D: 140.5mm or less (Max. 40column) E : 5mm or more</p> 
Consumables	Print Cartridge

As for the operations and functions of fi-486PRRE (Rear side imprinter), refer to the fi-486PRRE Operator's Guide included in the package.

9 SCANNER SPECIFICATIONS

This chapter describes the Scanner Specifications.

9.1 Basic Product Specifications	234
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9.3 Dimensions	238

9.1 Basic Product Specifications

1	Scanner Type		ADF(Automatic Document Feeder) and Manual feed	-
2	Image sensor		Color CCD x 2	Front/Back
3	Light source		White fluorescent lamp x2	Front/Back
4	Scanning area	Minimum	74mmx74mm, 2.9inch x 2.9 inch	-
		Maximum	A3 or 11x17 in.	-
5	Document thickness		52g/m ² to 127g/m ² or 14lb to 34lb	(* 1)
6	Scanning speed (A4 Portrait) (* 2)	Binary (Black and White)	Simplex 60 ppm Duplex 120 ipm	200dpi
		Grayscale	Simplex 60 ppm Duplex 120 ipm	200dpi
		Color	Simplex 60 ppm Duplex 120 ipm	150 dpi (* 3) 200 dpi (* 3)
7	ADF capacity (* 4)		500 sheets	A4 80g/m ² , or Letter 20lb
8	Optical resolution		400 dpi	-
9	Output resolution	Binary (Black and White)	100, 150, 200, 240, 300, 400 dpi	-
		Grayscale	100, 150, 200, 240, 300, 400 dpi	-
		Color	100, 150, 200, 300, 400 dpi	(* 5)-
10	Grayscale level		8 bits	10 bits internal
11	Output mode of halftone patterns		Dither/Error diffusion	-
12	Interface (* 6)		Ultra Wide SCSI	Shielded, 68 pin half density (Mini DB68)
13	Other functions		JPEG compression	-

- (* 1) For details, see “Chapter 6 ADF Document Specifications”
- (* 2) The scanning speed is the maximum speed of the scanner hardware. The actual speed may be slower due to the system overhead such as data transfer time.
- (* 3) With JPEG enabled
- (* 4) The maximum capacity varies depending on the document thickness. Refer to “Chapter 6 ADF DOCUMENT SPECIFICATIONS.”
- (* 5) A3 and 11 x17in document sizes are not supported at color 400dpi.
- (* 6) Avoid connecting other SCSI devices to the same bus.
It can reduce the scanner throughput.

9.2 Installation Specifications

Item		Specification		
Dimensions (With hopper and stacker retracted)		Depth	Width	Height
		431mm, 17inch	520mm, 20.5inch	523mm, 20.6inch
Space requirements				
Weight (kg)		45 kg, 99lb		
Input power	Voltage	AC100 - 240V±10 %		
	Phase	Single-phase		
	Frequency	50/60Hz + 2%/ -4%		
Power consumption		200W or less		

Item		Specification	
Ambient condition	Device status	Operating	Not operating
	Temperature	15 - 35 degree Celsius 59 - 95 degree Fahrenheit	- 20 - 60 degree Celsius -4 - 140 degree Fahrenheit
	Humidity	20 - 80%	8 - 95%
Heat capacity		172kcal or less	
Shipping Weight (kg)		50kg, 110lb	
Product life		5years or 7,200,000 sheets whichever comes first.	



The product life of this scanner is 5 years or 7,200,000 sheet scans whichever comes first from the date of purchase.

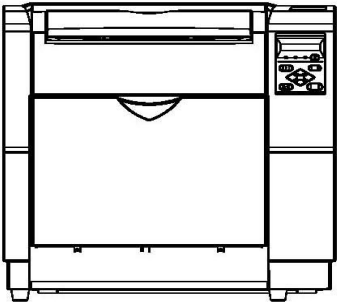
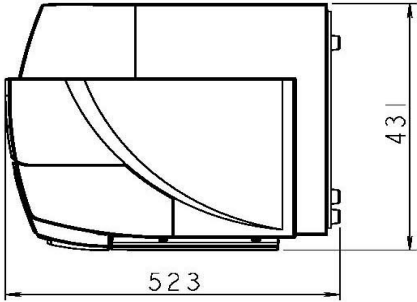
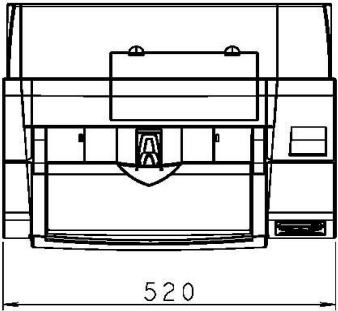


The actual product life may be shorter than the 7,200,000 sheets depending on cleaning, consumables replacement frequency, and the quality of the documents scanned.



If the scanner is used beyond the product life, failures and/or scan performance degradation may occur.

9.3 Dimensions



APPENDIX 1 DROP-OUT COLOR

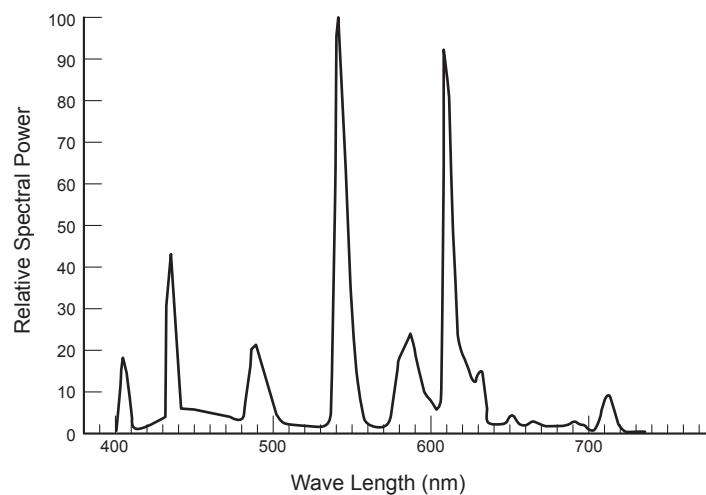
A drop-out color is a color visible by a human eye but not visible to the scanner.

To check the grounding color of document for a drop-out color, use the method and follow the standards given below.

■ Print density measurement

The measurement must be made in one of the following ways:

- A light source using fluorescent.
- Macbeth PCS meter PCM II is used, which requires a filter.



■ Drop-out color standard

In the spectrum of fluorescent lamp the PCS value must satisfy the following standards:

- Maximum: 0.14 or less
- Average: 0.1 or less

APPENDIX 2 DOUBLE-FEED DETECTION CONDITIONS

There are three double-feed detection modes: document thickness, document length, and both document thickness and length. The following conditions must be satisfied in each of these detection modes.

■ Detection by Document Thickness

Sheets of the same thickness shall be set in the ADF at a time.

- Document thickness: 0.065 to 0.15mm
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm) at the leading edge of the document.
- Punched holes are not allowed within 35mm of the vertical center line of the document.
- The deviation in the amount of the light transmitted through background areas must not be less than 10%.

■ Detection by Document Length

Sheets of the same length shall be set in the ADF at a time.

- Document length deviation: 1% or less
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm) at the leading edge of the document.
- Punched holes are not allowed within 35mm of the vertical center line of the document.
- The deviation in the amount of the light transmitted through background areas must not be less than 10%.

■ Detection by Document Thickness and Length

Sheets of the same thickness and length shall be set in the ADF at a time.

- Document length: 0.065 to 0.15mm
- Document length deviation: 1% or less
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm) at the leading edge of the document.
- Punched holes are not allowed within 35mm of the vertical center line of the document.
- The deviation in the amount of the light transmitted through background areas must not be less than 10%.



The type and the conditions of document and the conditions sometimes cause the double-feed detection rate to drop.

APPENDIX 3 MESSAGES OF OPERATOR PANEL

■ Messages of Operator panel

<Not Ready status>
(Initializing)

■ changes to n with progress of time, and when all become n, it move to the following check states.



<Not Ready status>
(Ejecting document)

E j e c t p a p e r n o w
W a r m i n g - u p N o w ! !

<Not Ready status>
(Checking sensor)

C h e c k s e n s o r n o w
W a r m i n g - u p N o w ! !

<Not Ready status>
(Reseting the hop-
per)

s e t h o p p e r n o w
W a r m i n g - u p N o w ! !

<Not Ready status>
(Waiting to initialize
IF board)

W a i t i n g I F R e a d y

<preparing the print cartridge>
(At power on)

P l e a s e p r e p a r e
a n e w l i n k (p r e)

P l e a s e p r e p a r e
a n e w l i n k (p o s t)

P l e a s e p r e p a r e
a n e w l i n k (B o t h)

<Scanning>

P l e a s e a n e w l i n k
N o w R e a d i n g ! x x x x



"xxxx" shows the Batch counter value.

<Scanning>

N o w R e a d i n g ! x x x x



"xxxx" shows the Batch counter value.

<At Low power mode>

When the messages of LCD on the Operation panel disappears and the Power LED lamp lights, the scanner is in Low power mode.



The scanner wake up from Low power mode by one of the following operations.

- Press any button (except Power button) on the Operator Panel.
- Set the documents on the Hopper.
- Send the command from PC.

<Double feed error>
(Scanning)

The following message is displayed while the scanner is scanning continuously in the state where double feed has been detected (by thickness check).

If a double feed detection state is canceled on "Ready" screen after scanning, the upper row of this message disappears.

```
D o u b l e   F e e d  
N o w       R e a d i n g ! x x x x
```



"xxxx" shows the number of Batch counter value.

(Waiting)

The following message is displayed while the scanner is waiting in the state when double feed (check thickness) has been detected.

Press the [Stop] button, and the double feed detection state is canceled.

The upper row of this message, [Double Feedxxxxx] blinks.

```
D o u b l e   F e e d x x x x x  
R e a d y     x x x x x x x x
```



"xxxx"(upper) shows the value of Batch counter.

"xxxxxxx"(lower) shows the value of Abrasion counter or the value of Life counter.

■ Error message (Temporary error)

<Hopper empty>

The following messages are displayed if no documents are on the hopper during the scanning operation. Please place documents on the hopper. Scanning is resumed, when placing documents on the hopper for scanning.

To clear this message, press the [Stop] button.

P a p e r E m p t y x x x x x

(at Double feed)

D o u b l e F e e d x x x x x
P a p e r E m p t y



"xxxxx" shows the number of Batch counter value.

<Paper Jam>

The following message is displayed if a document is jammed in the ADF.

Refer to "Operator guide" included in "User manual CD-ROM" for removing the document remained in the scanner.

P a p e r J a m x



One of "1" - "8" is displayed instead of "x" in the above message example, depending on paper jam types.

<ADF cover open>

The following message is displayed if the ADF cover is not closed completely.

Close the ADF cover completely, to resume scanning.

A D F - C o v e r O p e n

<Double feed error> The following message is displayed, when the double feed is detected by thickness check.
(by thickness check)

D o u b l e F e e d

(by length check) The following message is displayed, when the double feed is detected by length check.

L e n g t h e r r o r

<Miss pick> The following message is displayed, when a document is not picked from the hopper to the ADF.

M i s - p i c k

<Pick over run> The following message is displayed, when a document is picked from the hopper to the ADF but it goes into too much than the normal position.

P i c k o v e r r u n

<Skew error> The following message is displayed, when skewed document is fed from the hopper to the ADF.

I r r e g u l a r p a p e r

<Hopper is full or Pick unit not set> The following message is displayed, when the Pick roller unit is not set correctly or when there are too many documents on the hopper.

H o p p e r o v e r l o a d

<Pick roller unit not set>

The following message is displayed, when the Pick roller unit is not set correctly.
(When the documents are not exist on the hopper.)

```
P i c k   r o l l e r   u n i t  
n o t   s e t
```

<Pick unit not installed correctly>

The following message is displayed, when the Pick roller unit is not set correctly during scanning.

```
P i c k   r o l l e r   u n i t
```

<Break roller not set>

The following message is displayed, when scanning while the Break roller unit is not set correctly.

```
B r e a k   r o l l e r  
n o t   s e t
```

<Separation roller worn out>

The following message is displayed, when the Separation roller is rotated but the Brake roller does not rotate at all.

```
S e p a r a t i o n  
r o l l e r   w o r n
```

<Checking Consumables>

The following message is displayed to notify an consumable has reached its life, when the Abrasion counter value exceeds the preset value (of expected life).

```
A b r a s i o n   a l a r m
```

<Print cartridge not set>

The following message is displayed, when the Print cartridge is not set to fi-486PRFR (Imprinter of front-side) or to fi-486PRRE (Imprinter of rear-side).

```
P r e  
N o   l i n k   C a r t r i d g e
```

```
P o s t  
N o   l i n k   C a r t r i d g e
```

■ Alarm message (Hardware error)

The following messages are displayed, when an error occurs inside the scanner. In this case, please switch on the power supply once again after disconnecting the power supply.

If the same message is displayed again, please contact the FUJITSU Scanner dealer where you purchased your scanner or an authorized FUJITSU scanner service provider.

<Optical alarm >
(Front side)

The following message is displayed, when an error occurs to the front side optical unit.

F r o n t S i d e
O p t i c a l A l a r m

<Optical alarm >
(Back side)

The following message is displayed, when an error occur to the back side optical unit.

B a c k S i d e
O p t i c a l A l a r m

<Motor fuse alarm>
(Toransport motor)

The following messages are displayed, when the fuse of various motors (Toransport motor, Separation motor, Pick motor, Hopper motor) goes out.

F u s e a l a r m
F e e d m o t o r

(Separation motor)

F u s e a l a r m
S e p a r a t i o n m o t o r

(Pick motor)

F u s e a l a r m
P i c k m o t o r

(Hopper motor)

F u s e a l a r m
H o p p e r m o t o r

<Lamp fuse alarm> (Front side) The following message is displayed, when the fuse for the lamp for front side belows out.

```
F u s e a l a r m
F r o n t s i d e l a m p
```

<Lamp fuse alarm> (Back side) The following message is displayed, when the fuse for the lamp for back side belows out.

```
F u s e a l a r m
B a c k s i d e l a m p
```

<Background changer fuse alarm> (Front side) The following message is displayed, when the fuse for changing the Background of front side belows out.

```
F u s e a l a r m
B a c k g r o u n d : F r o n t
```

<Background changer fuse alarm> (Back side) The following message is displayed, when the fuse for changing the Background of back side belows out.

```
F u s e a l a r m
B a c k g r o u n d : B a c k
```

<Background change error> (Front side) The following message is displayed, when the Background of front side is unable to be changed.

```
F r o n t s i d e
B a c k g r o u n d A l a r m
```

<Background change error> (Back side) The following message is displayed, when the Background of back side is unable to be changed.

```
B a c k s i d e
B a c k g r o u n d A l a r m
```


<Hopper over run> The following message is displayed, when the hopper moves over the normal position.

```
H o p p e r   o v e r   r u n
```

<Sensor control error> The following message is displayed, when an error occurs in the sensor control.

```
S e n s o r   C o n t r o l  
A l a r m
```

<Sensor contamination error> The following message is displayed, when an error occurs due to a contaminated sensor.

```
x x x x S e n s o r   d i r t y
```



"xxxx." shows the sensor name (SF0, SA4, etc.)

<Sensor error> The following message is displayed, when a sensor error occurs

```
x x x x S e n s o r   e r r o r
```



"xxxx." shows the sensor name (SF0, SA4, etc.)

<Temperature error> The following message is displayed, when the temperature inside the scanner becomes higher than normal.

```
T e m p e r a t u r e  
a l a r m
```

<Power supply error>

The following message is displayed, when an error occurs in the Power supply.

```
P o w e r   s u p p l y
e r r o r
```

<EEPROM Alarm>

The following message is displayed, when an error occurs in EEPROM.

```
A D D R E S S   x x H
E E P R O M   A l a r m
```



The EEPROM address where the error occurs is displayed in [xx] digit in the above sample screen.

<VDCC Read/Write error>

The following message is displayed, when an error occurs during accessing to the area of VDCC.

```
V D C C 2   R / W   E r r o r
```

(MDC timeout)

The following message is when MDC time out error occurs during initial diagnose process.

```
M D C   T i m e o u t
```

<Dither/Gamma Read/Write error>

The following message is displayed, when an error occurs during access to the Dither/Gamma RAM.

```
D i t h e r / G a m m a
R / W   E r r o r
```

<Temporary memory Read/Write error>

The following message is displayed, when an error occurs during accessing to the temporary memory (RAM).

```
T e m p M e m   R / W e r r o r
```

<MDC download error>

The following message is displayed, when an error occurs during downloading the firmware to MDC.

```
M D C   d o w n l o a d
      E r r o r
```

<Imprinter alarm>

The following message is displayed, when an error occurs in the fi-486PRFR (Imprinter of front-side) or the fi-486PRRE (Imprinter of rear-side).

```
P r e
l m p r i n t e r   A l a r m
```

```
P o s t
l m p r i n t e r   A l a r m
```

<Command alarm>

The following message is displayed, when an error occurs in the command sequence from PC.

(MDC command timeout 1)

```
C o m m a n d   E r r o r 1
```

(MDC command timeout 2)

```
C o m m a n d   E r r o r 2
```

(SDC command Sequence error)

```
C o m m a n d   E r r o r 3
```

(MDC response error)

```
C o m m a n d   E r r o r 4
```

(SCSI response time out)

```
C o m m a n d   E r r o r 5
```

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