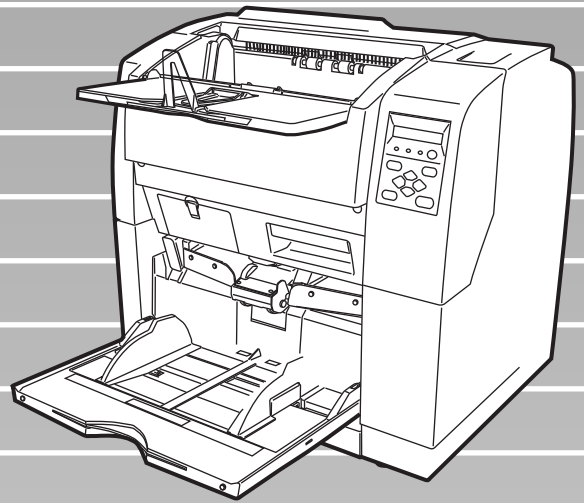




P3PC-1692-01ENZO

fi-4860C2 Image Scanner Operator's Guide



INTRODUCTION

Thank you for purchasing the fi-4860C2 Duplex Color Scanner.

The fi-4860C2 is an image scanner designed to scan small to double letter documents in large quantities. FUJITSU fi series image scanners are known for high reliability and this scanner is no exceptions. The fi-4860C2 is designed to give you the best results for your production scanning needs.

The fi-4860C2 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 500 sheets of 20 lb or 80 g/m² Letter/A4 size and 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, scanner troubleshooting, 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 documents that can be used with this scanner.

7. OPERATOR PANEL MENUS

This chapter describes Setup-mode and Test-mode.

8. OPTIONS

This chapter describes the options available for this product.

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-4860C2 Duplex Color Scanner's features.

■ Regulatory Information

FCC Regulations

This equipment has been tested and found to comply with the limits for a Class B 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. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is located.
- Consult your dealer or an experienced radio/TV technician.

FCC warning: 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 B 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 B limit for radio noise emissions from digital apparatus set out in the Radio interference Regulations of the Canadian Department of Communications.

This Class B digital apparatus complies with Canadian ICES-003.

Le présent appareil numérique n'émet pas de parasites radioélectriques dépassant les limites applicables aux appareils numériques de la classe B et prescrites dans le Règlement sur le brouillage radioélectrique dictées par le Ministère des Communications du Canada.

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

Bescheinigung des Herstellers / Importeurs

Für den fi-4860C2 wird folgendes bescheinigt:

- In Übereinstimmung mit den Bestimmungen der EN45014(CE) funktentstört
- Maschinenlärminformationsverordnung 3.GPSGV: Der höchste Schalldruckpegel beträgt 70 dB (A) oder weniger, gemäß EN ISO 7779.

International ENERGY STAR® Program

As an ENERGY STAR® Partner, PFU LIMITED has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.


The International ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the penetration of energy efficient computers and other office equipment. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, monitors, printers, facsimiles, copiers, scanners, and multifunction devices. Their standards and logos are uniform among participating nations.



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 with 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

	Lamp(s) inside this product contain mercury and must be recycled or disposed of according to local, state, or federal laws.
---	---

To avoid unexpected injuries;

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

Illegal Copying

Reproducing bills, coins, government securities and passports, licenses issued by public author or civilian organizations, official documents, private paper is illegal and subject to punishment.

Copyright

Literary works like books, paintings, wood block prints, maps, drawings, and photographs should not be reproduced without the rightful person's permission.

Trademarks

Microsoft, Windows and Windows NT are registered trademarks of Microsoft Corporation in the United States and/or other countries.

ISIS, QuickScan and their respective logos are trademarks or registered trademarks of EMC Corporation in the United States.

Adobe, the Adobe logo, and Acrobat are either registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Other product names are the trademarks or registered trademarks of the respective companies.

How Trademarks Are Indicated In This Manual

References to operating systems (OS) are indicated as follows:

Windows 95: Microsoft® Windows® 95 operating system.

Windows 98: Microsoft® Windows® 98 operating system.

Windows Me: Microsoft® Windows® Millennium Edition operating system.

Windows 2000: Microsoft® Windows® 2000 Professional operating system.

Windows XP: Microsoft® Windows® XP Professional operating system, and Microsoft® Windows® XP Home Edition operating system.

Windows NT: Microsoft® Windows NT® 4.0 Server operating system and Microsoft® Windows NT® 4.0 Workstation operating system.

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

Manufacturer

PFU LIMITED

International Sales Dept., Imaging Business Division, Products Group

Solid Square East Tower, 580 Horikawa-cho, Saiwai-ku, Kawasaki-shi Kanagawa 212-8563, Japan

Phone: (81-44) 540-4538

All Rights Reserved, Copyright © PFU LIMITED 2006

■ Note, Liability

READ ALL OF THIS MANUAL CAREFULLY BEFORE USING THIS PRODUCT. IF THIS PRODUCT IS NOT USED CORRECTLY, UNEXPECTED INJURY MAY BE CAUSED TO USERS OR BYSTANDERS.

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

While all efforts have been made to ensure the accuracy of all information in this manual, PFU assumes no liability to any party for any damage caused by errors or omissions or by statements of any kind in this manual, its updates or supplements, whether such errors are omissions or statements resulting from negligence, accidents, or any other cause. PFU further assumes no liability arising from the application or use of any product or system described herein; nor any liability for incidental or consequential damages arising from the use of this manual. PFU disclaims all warranties regarding the information contained herein, whether expressed, implied, or statutory.

■ 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.

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 may not perform.

The drawing inside or under the circle shows the specific action that is not allowed.



Outline characters on a colored background show instructions users should follow.

It may also include the drawing that 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 while 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, ScandAll 21 Image Capturing Utility Software, FUJITSU ISIS scanner driver, QuickScan™ image capturing software and Adobe® Acrobat®.

About Maintenance

The user must not perform repairs on this scanner. Contact the store where you purchased the scanner or an authorized FUJITSU Image Scanner service provider to make repairs to this product.

■ Safety Precautions



The following describes important warnings described in this manual.

Do not touch the Power cable with wet hands.



Do not touch the power plug with wet hands. Doing so might cause electric shock.

Do not damage the Power cable.



A damaged Power cable might cause fire or electric shock.

Do not place heavy objects on Power 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 correct cables 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 and current. Improper power voltage and current 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 the device 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 a strange odor coming from the scanner.



If you detect heat coming from the device or detect other problems such as smoke, strange smells or noises, immediately turn off the scanner and disconnect its power plug.

Make sure that the smoking has stopped, and then contact the store where you purchased the scanner or an authorized FUJITSU scanner service provider.

Turn the scanner OFF if it is damaged.



If the scanner is damaged for any reason, turn off the scanner and unplug the power cable before contacting the store where you purchased the scanner.

Do not put liquids inside the scanner.



Do not insert or drop metal objects into the scanner. Do not scan wet documents or documents with paper clips or staples. Do not splash or allow the scanner to get wet.



If foreign objects (water, small metal objects, liquids, etc.) get inside the scanner, immediately turn off the scanner and disconnect the power plug from the power outlet, contact the store where you purchased the scanner or the Maintenance Service Center. Pay particular attention to this warning in households where there are small children.



Do not touch the inside of the scanner.



Do not take apart 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 or table, 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.

Install the scanner on a strong surface that will support the weight of the scanner and any other devices on that surface.

Firmly insert the power plug.



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

Do not block the ventilation ports.



Do not block the ventilation ports. Blocking the ventilation ports generates heat inside the scanner, which may result in fire or scanner failure.

Do not place heavy objects or stand 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 use may 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 interference. 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 to clean the scanner. Aerosol sprays cause dirt and dust to enter the scanner, resulting in scanner failure and malfunction.

Avoid any contact when the scanner is in use.



Avoid touching any part of the scanner mechanism or paper when scanning 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.

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 excessive 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 or move the scanner alone.



This scanner is heavy (99lbs/45kg). When you lift the scanner, ensure that additional personnel are used.

■ FUJITSU Group Offices

Please send your comments on this manual or on FUJITSU products to the following addresses:

FUJITSU COMPUTER PRODUCTS OF AMERICA, INC.

1255 East Arques Avenue Sunnyvale,
CA 94085-4701, U.S.A.

Phone: (1-408)746-7000

Technical Assistance Center:
(1-800)626-4686

Fax: (1-408)746-6910

Website: <http://www.fcpa.fujitsu.com/>

E-mail: info@fcpa.fujitsu.com

FUJITSU CANADA, INC.

6975 Creditview Road Unit 1
Mississauga, On L5N 8E9 Canada

Phone: (1-905)286-9666

Fax: (1-905)286-5988

Website: <http://www.fujitsu.ca/>

E-mail: imaging@fujitsu.ca
(For Sales Questions)
scantech@fujitsu.ca
(For technical questions)

FUJITSU EUROPE LTD.

Hayes Park Central, Hayes End Road,
Hayes Middlesex UB4 8FE, U.K.

Phone: (44-208)573-4444

Fax: (44-208)573-2643

Website: <http://www.fel.fujitsu.com/>

FUJITSU DEUTSCHLAND GmbH.

Frankfurter Ring 211, 80807 München,
Germany

Phone: (49-89)323-78-0

Fax: (49-89)323-78-100

Website: <http://www.fdg.fujitsu.com/>

E-mail: hotline_scanner@fdg.fujitsu.com

FUJITSU ITALIA S.p.A.

Via Nazario Sauro, 38
20099 Sesto San Giovanni (MI), Italy

Phone: (39-02)26294.1

Fax: (39-02)26294.201

Website: <http://www.fis.fujitsu.com/>

E-mail: mbarondi@fis.fujitsu.com

FUJITSU ESPAÑA Services, S.A.U.

Camino Cerro de los Gamos, 1 28224,
Pozuelo de Alarcon, Madrid, Spain

Phone: (34-91)784-9000

Fax: (34-91)784-9379

Website: <http://es.fujitsu.com/>

E-mail: info@mail.fujitsu.es

FUJITSU AUSTRALIA LTD.

Fujitsu House 2 Julius Avenue
North Ryde, N.S.W 2113 Australia

Phone: (61-2)9776-4555

Fax: (61-2)9776-4024

Website: <http://au.fujitsu.com/>

FUJITSU ASIA PTE.LTD.

20 Science Park Road, #03-01, Tele Teck
Park Singapore Science Park II, Singapore
117674

Phone: general (65)6512-7555
query (65)6512-7431

Fax: (65)6512-7499

Website: <http://www.fapl.fujitsu.com>

E-mail: query@sg.fujitsu.com

FUJITSU TAIWAN LTD.

19th Fl., No39, Sec.1, Chung-hwa Rd.,
Taipei, Taiwan

Phone: (886-2)2311-2255

Fax: (886-2)2311-2277

Website: <http://tw.fujitsu.com/>

**FUJITSU SYSTEMS BUSINESS
(THAILAND) LTD.**

12th Fl., Olympia Thai Tower, 444
Rachadapisek Road, Samsennok,
Huay kwang, Bangkok 10310, Thailand

Phone: +66 (0) 2500-1500

Fax: +66 (0) 2500-1555

Website: <http://th.fujitsu.com/>

FUJITSU MALAYSIA SDN.BHD.

Level 1 & 2

3505 Jalan Teknokrat 5

63000 Cyberjaya

MALAYSIA

Phone: general (603)8318-3700

query (603)8318-3700 (ext 375)

Fax: (603)8318-8700

Website: <http://www.fujitsu.com/my/>

E-mail: WriteToUs@fms.my.fujitsu.com

FUJITSU HONG KONG LTD.

10/F., Lincoln House, 979 King's Road,
Taikoo Place, Island East, Hong Kong

Phone: (852)2827-5780

Fax: (852)2827-4724

Website: <http://hk.fujitsu.com/>

E-mail: scanner@fujitsu.com.hk

FUJITSU KOREA LTD.

Susong Tower Building, 83-1

Susong-Dong, Jongno-Gu, Seoul,
Republic of Korea

Phone: (82-2)3787-6159

Fax: (82-2)3787-6164

Website: <http://kr.fujitsu.com/>

E-mail: webmaster@kr.fujitsu.com

FUJITSU PHILIPPINES, INC

2/F, United Life Building, 837 A. Arnaiz
Avenue (Pasay Road),

Legaspi Village, Makati City 1229,
Philippines

Phone: +63 (2) 812-4001

Fax: +63 (2) 817-7576

Website: <http://ph.fujitsu.com>

**Imaging Business Division,
PFU LIMITED**

Solid Square East Tower, 580

Horikawa-cho, Saiwai-ku, Kawasaki-shi,
Kanagawa 212-8563, Japan

Phone: (81-44)540-4658

Fax: (81-44)540-4639

Website:

<http://imagescanner.fujitsu.com>

E-mail: scanners@pfu.fujitsu.com

PFU LIMITED**(Corporate headquarters)**

Nu 98-2 Unoke, Kahoku-shi,
Ishikawa 929-1192, Japan

Phone: (81-76)283-1212

Fax: (81-76)283-4689

CONTENTS

INTRODUCTION	i
Regulatory Information	iii
Note, Liability	viii
Preface	ix
Safety Precautions.....	xii
FUJITSU Group Offices.....	xviii
 1 BASIC SCANNER OPERATIONS.....	1-1
Turning the Scanner ON	1-2
Waking the Scanner from the Power Save Mode	1-5
Basic Operations of the Operator Panel	1-6
Setting up the Hopper	1-14
Setting up the Stacker	1-15
Setting the Stacker Extension	1-17
Loading Documents on the Hopper	1-18
Inserting Documents Manually	1-21
Scanning Documents	1-23
How to use the Scanner Driver	1-27
 2 SCANNING VARIOUS TYPES OF DOCUMENTS	2-1
Scanning Documents with different widths	2-2
Saving Scanned Images in PDF Format	2-3
Selecting a Color to drop out	2-9
Skipping blank Pages	2-11
Detecting Double-Feeds (Multi-Feeds)	2-13
Correcting skewed Documents	2-15
 3 DAILY CARE.....	3-1
Cleaning Materials and Areas Requiring Cleaning	3-2
Cleaning the Pad	3-5
Cleaning the Rollers	3-8
Cleaning the Transport Path	3-22
Cleaning the Discharge Brush	3-24
Cleaning the Glass Surface	3-29
Cleaning the Sensors	3-35
Cleaning the Lamps	3-41

4	REPLACEMENT OF CONSUMABLES	4-1
	Consumables and Replacement Cycle	4-2
	How to check the Abrasion Counter	4-3
	Replacing the Pad ASSY	4-4
	Replacing the Pick Roller Unit	4-9
	Replacing the Brake Roller Unit	4-12
	Replacing the Front-side Lamp	4-15
	Replacing the Back-side Lamp	4-20
5	SOLVING COMMON PROBLEMS	5-1
	Clearing Document Jams	5-2
	Troubleshooting	5-8
	Before Contacting a Service Provider	5-29
	Labels on the Scanner	5-31
6	ADF DOCUMENT SPECIFICATIONS	6-1
	Document Size	6-2
	Document Quality	6-3
	Hole-punching Prohibited Areas	6-6
	Print Prohibited Area	6-7
	Background Color Areas	6-8
	Job Separation Sheet	6-9
	Hopper Capacity	6-10
7	OPERATOR PANEL MENUS	7-1
	Setup Mode	7-2
	Setup mode functions	7-9
	Setup Mode Details	7-16
	Test Mode Overview	7-67
	Test Mode Details	7-72
8	OPTIONS	8-1
	Options	8-2
	fi-486PRFR (Pre-imprinter)	8-3
	fi-486PRRE (Post-imprinter)	8-4
	fi-486TRK (Thinner paper Roller Kit)	8-5

9	SCANNER SPECIFICATIONS.....	9-1
	Basic Product Specifications	9-2
	Installation Specifications	9-3
	Dimensions	9-5
APPENDIX 1	DROP-OUT COLOR.....	AP-1
APPENDIX 2	DOUBLE-FEED (MULTI-FEED) DETECTION CONDITIONS	AP-2
APPENDIX 3	MESSAGES ON THE OPERATOR PANEL	AP-5
INDEX	.....	IN-1

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 driver, or the FUJITSU ISIS scanner driver 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.

1.1 Turning the Scanner ON	1-2
---	------------

1.2 Waking the Scanner from the Power Save Mode	1-5
--	------------

1.3 Basic Operations of the Operator Panel	1-6
---	------------

1.4 Setting up the Hopper	1-14
--	-------------

1.5 Setting up the Stacker	1-15
---	-------------

1.6 Setting the Stacker Extension	1-17
--	-------------

1.7 Loading Documents on the Hopper	1-18
--	-------------

1.8 Inserting Documents Manually	1-21
---	-------------

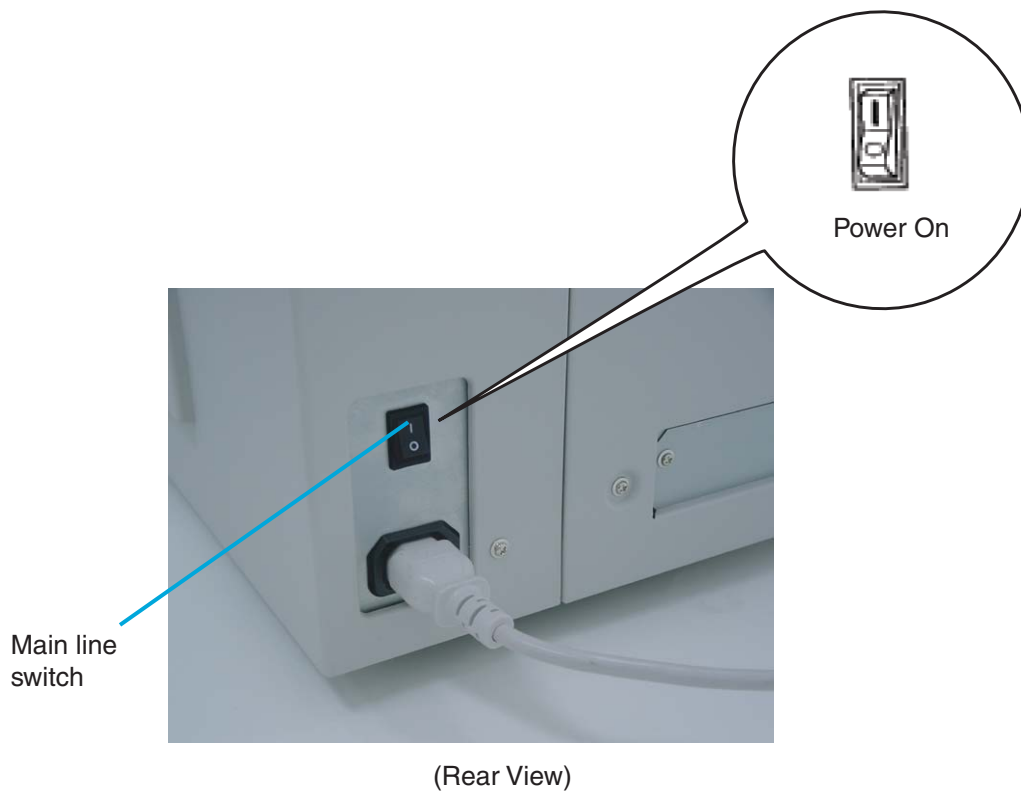
1.9 Scanning Documents	1-23
-------------------------------------	-------------

1.10 How to use the Scanner Driver	1-27
---	-------------

1.1 Turning the Scanner ON

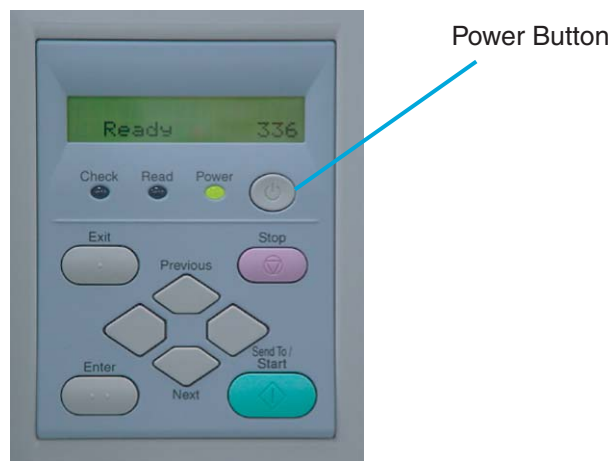
■ Turning the power on

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



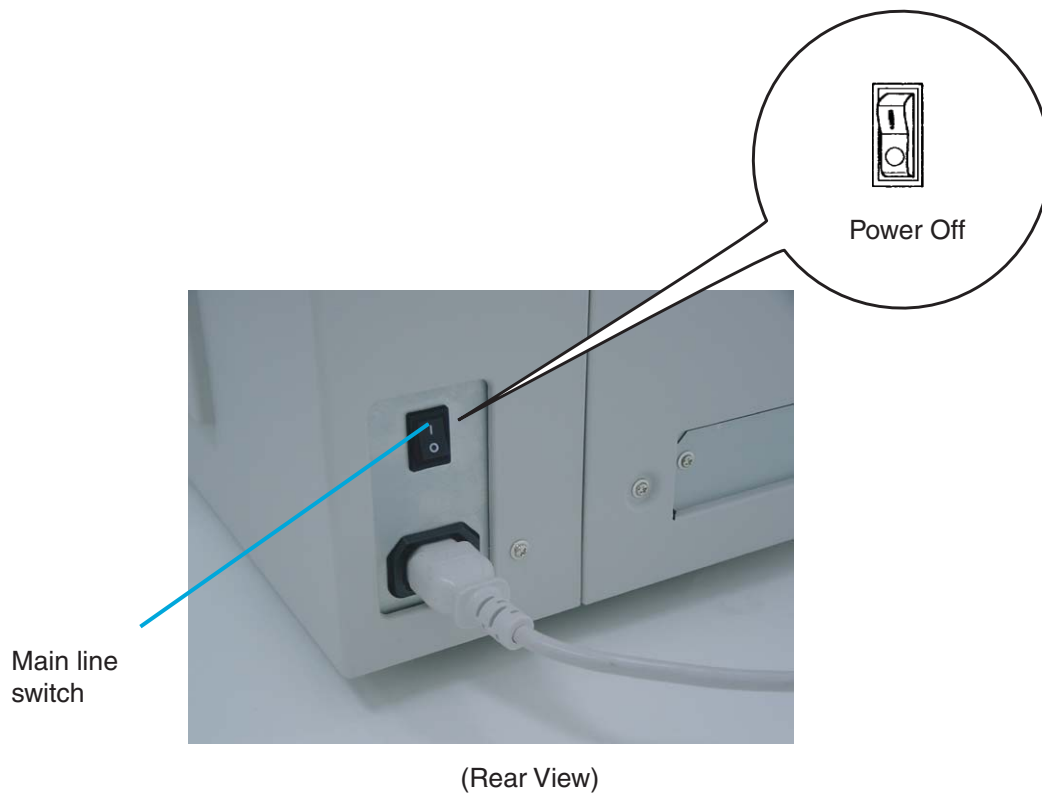
2. Press the power button on the Operator panel.

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 the Scanner from the Power Save Mode

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

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 while the green LED stays lit.

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

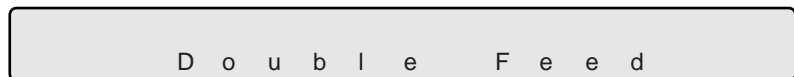
- Load documents on the hopper
- Press a button, except Power button, on the Operator panel
- Send a command from the PC


1.3 Basic Operations of the Operator Panel

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

■ Clearing error messages

When an user recoverable error occurs, The “Check” LED blinks to warn 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.



If you cannot clear errors with Check LED lit. They are not user recoverable errors.

Refer to "Error mesage (Temporary error :Check LED blinking)" on page AP-9 for the messages.

■ Lifting or lowering the hopper


When the scanner has no errors (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 available when:

- The “Read” LED is lit
- A 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 to 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 to where it was when the scan operation started.



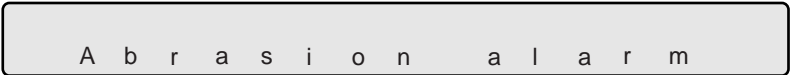
Pressing ◀ (Previous button) does not change the position.



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

■ Clearing the consumables replacement message

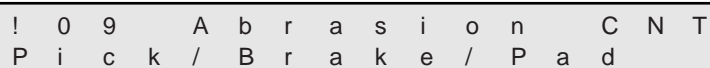
This scanner has Abrasion counters to estimate service life of the consumables. When a counter (for the Pad ASSY, the Pick roller unit, the Brake roller unit, the Front-side lamp or the Back-side lamp) reaches the pre-set value, the LCD shows a message that the consumable's service life has expired. 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 "7 OPERATOR PANEL MENUS" on page 7-1.

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 a consumable counter to reset. For the details on how to clear consumable counter, please refer to the section "7 Setup Mode Details" on page 7-16.

■ Using the setup and the test modes.

This scanner has the setup mode for customizing the setup conditions, and a test mode for testing the scanner offline.

There are two types of setup modes: The Online setup mode that can be entered during Ready status and the Offline setup mode that can be entered only when the scanner is offline. Available functions are different depending on the mode. For the details, refer to "7 OPERATOR PANEL MENUS" on page 7-1.

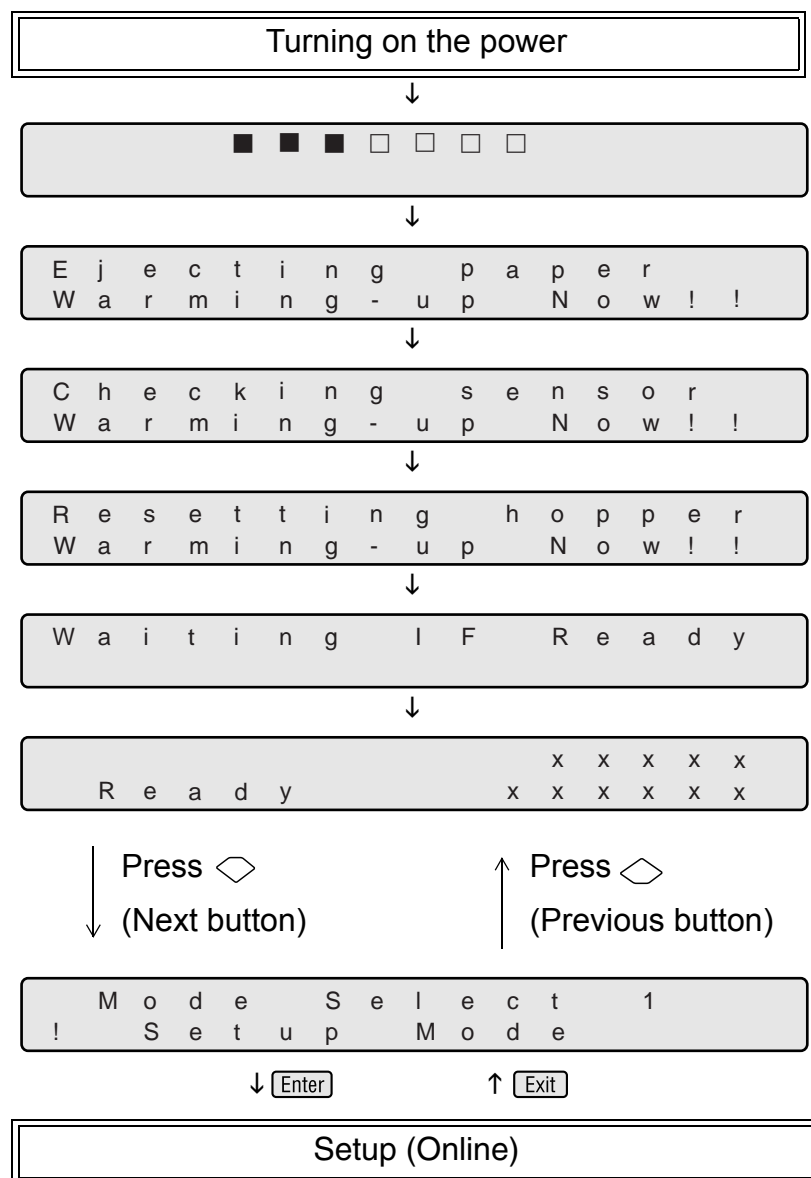
To enter these modes, follow the instructions below:

- Online setup mode

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

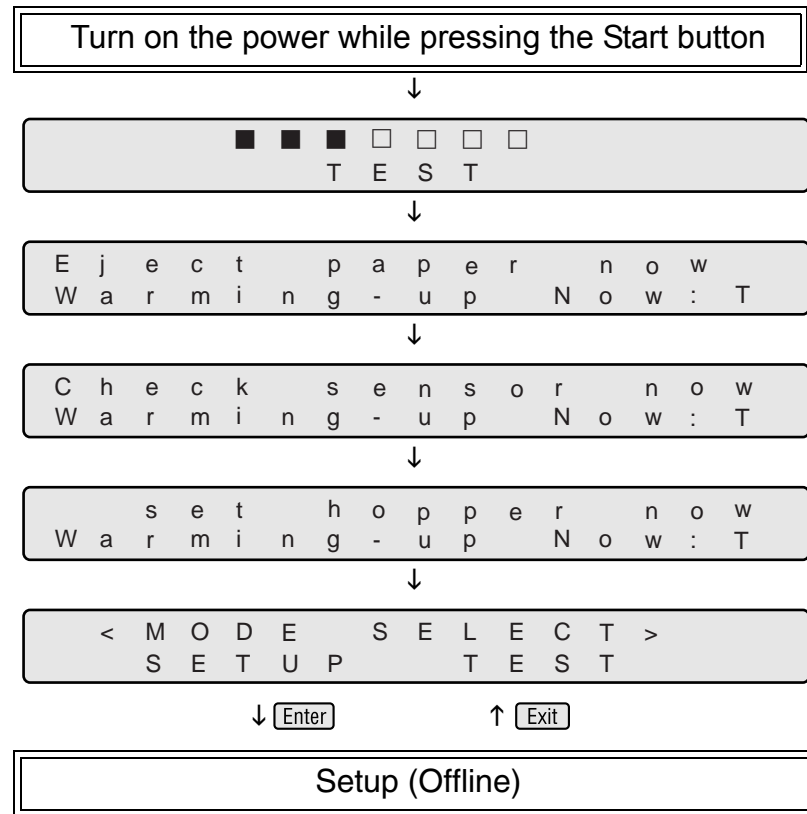
M	o	d	e	S	e	l	e	c	t	1
!	S	e	t	u	p	M	o	d	e	



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



- Offline setup mode and test mode

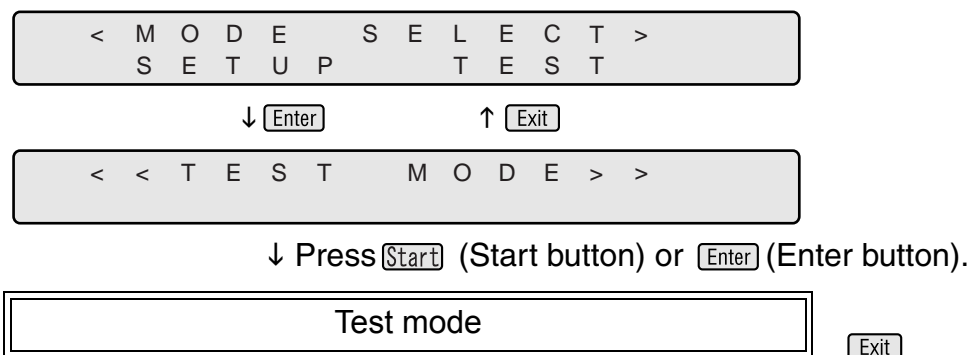
Keep pressing **Start** (Start button) and turn on the power.



- To enter the 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 the 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 Operator panel transition chart below.



To exit this mode, turn off the power.

1.4 Setting up the Hopper

1. Gently flip down the Hopper table by pulling the blue handle.



1.5 Setting up the Stacker

1. Flip open the stacker.



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

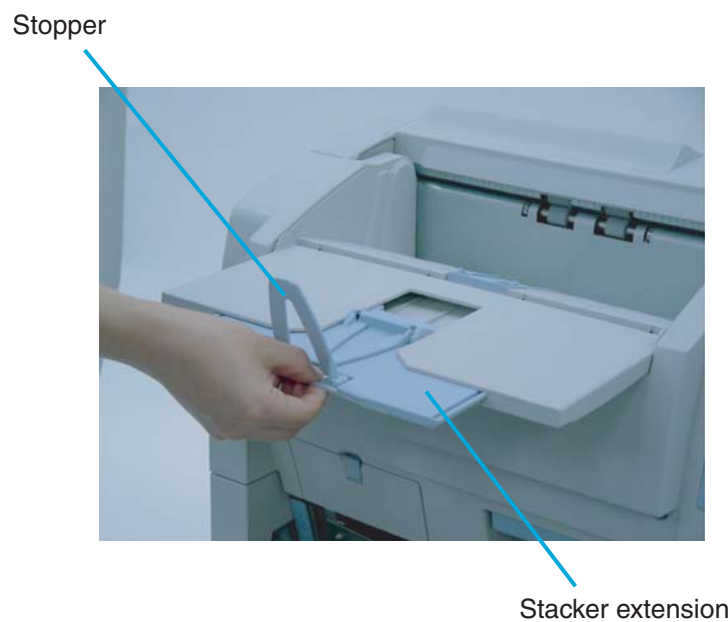


When closing the stacker, pull out the stacker a little then fold it closed.



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.

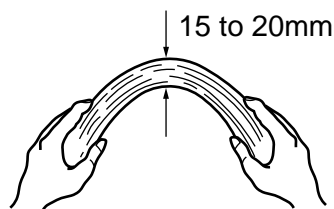
1.7 Loading Documents on the Hopper

1. Straighten the edges of the documents

- 1) Straighten both sides of the document stack.

2. Fan the documents

- 1) Take a stack of documents with thickness of 15mm to 20mm (1/2 to 3/4 inch).
- 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 contact the document sides.

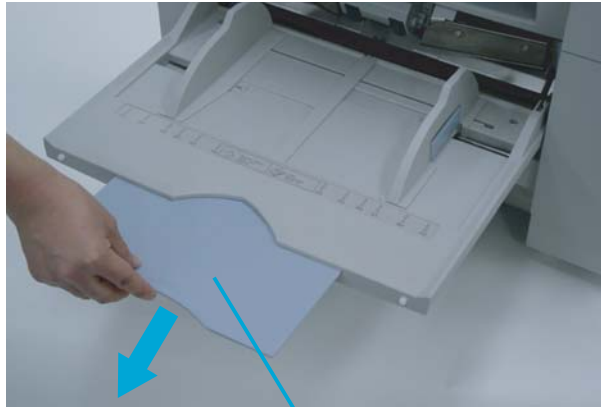
If there is space between the document edges and the guides, the scanned image may be skewed.



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

- A batch which consists of different sizes may cause feeding problems.
-

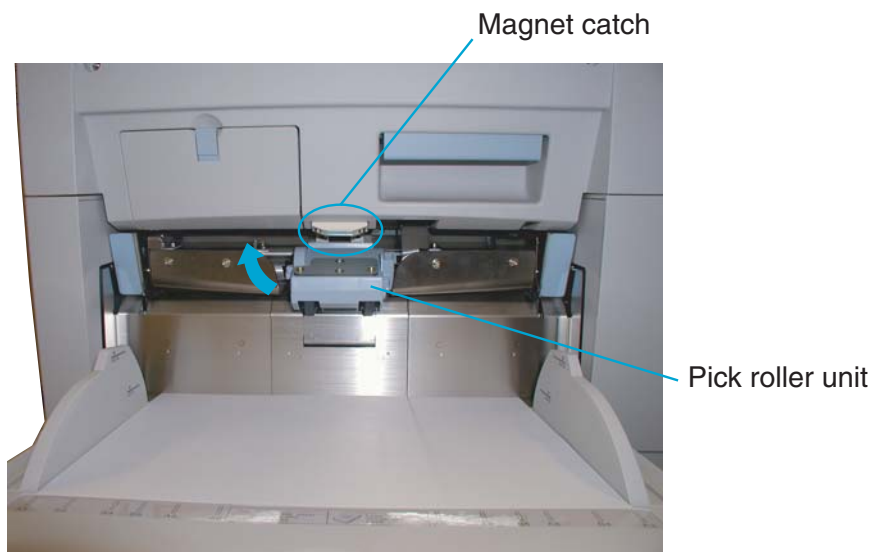
5. Start up the scanner application and scan the documents.

For the details on how to scan using ScandAll 21, refer to the section "1.9 Scanning Documents" on page 1-23.

1.8 Inserting Documents Manually

To setup the scanner for Manual Feed Mode:

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



Be careful not to get your fingers or anything 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 timeout, refer to "7 OPERATOR PANEL MENUS" on page 7-1.

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



Hopper

1.9 Scanning Documents

For scanning with the VRS, a software provided with the scanner, refer to the VRS user's manuals available in the VRS installation CD.

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

1. Load the documents on the hopper.

For details on how to load documents, refer to the section "1 Loading Documents on the Hopper" on page 1-18.

2. Adjust the stacker table to the document size.



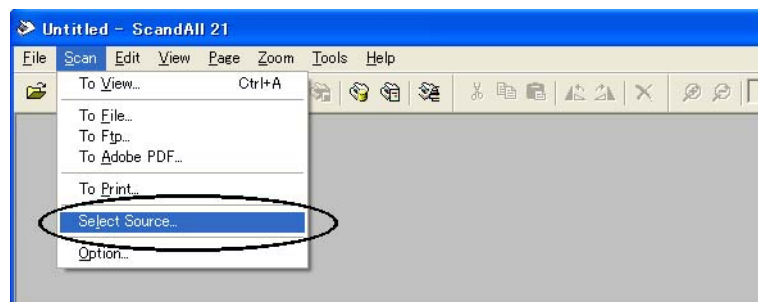
- For loading long documents on the hopper, extend the stacker extension.
- For loading short documents on the hopper, adjust the stopper length.

3. Start up ScandAll 21

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

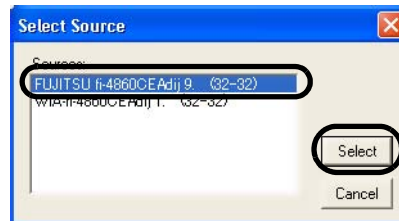
4. Select the scanner to use

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

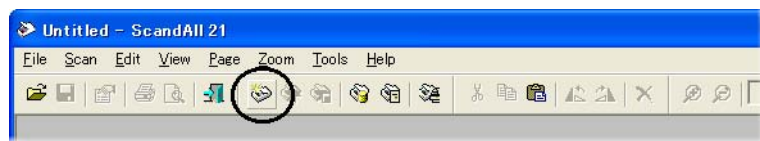


The [Select source] dialog box appears.

Select [FUJITSU fi-4860CEAdij] (for TWAIN32 V8, [FUJITSU TWAIN 32]).
Then click [Select].



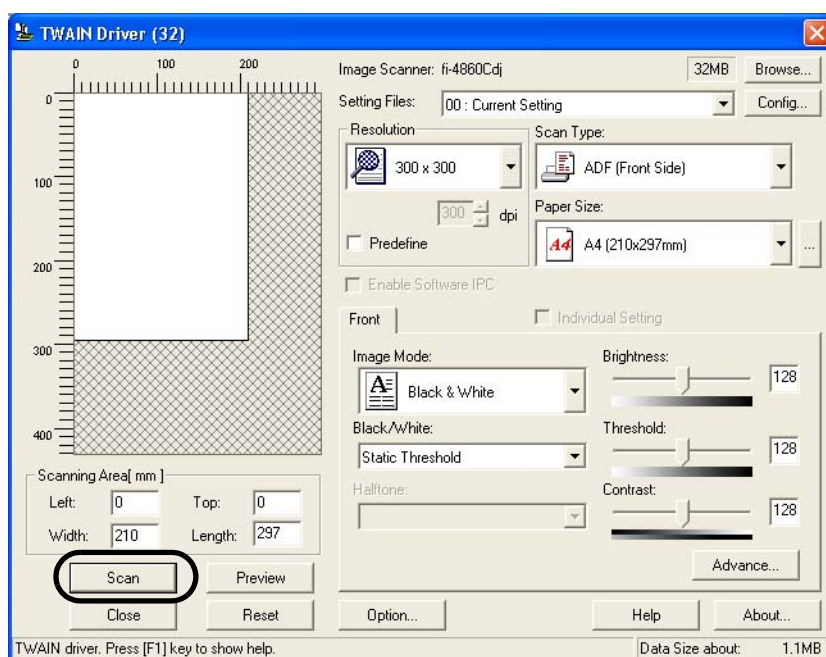
5. Click the [Display in scan preview screen] on the tool bar.



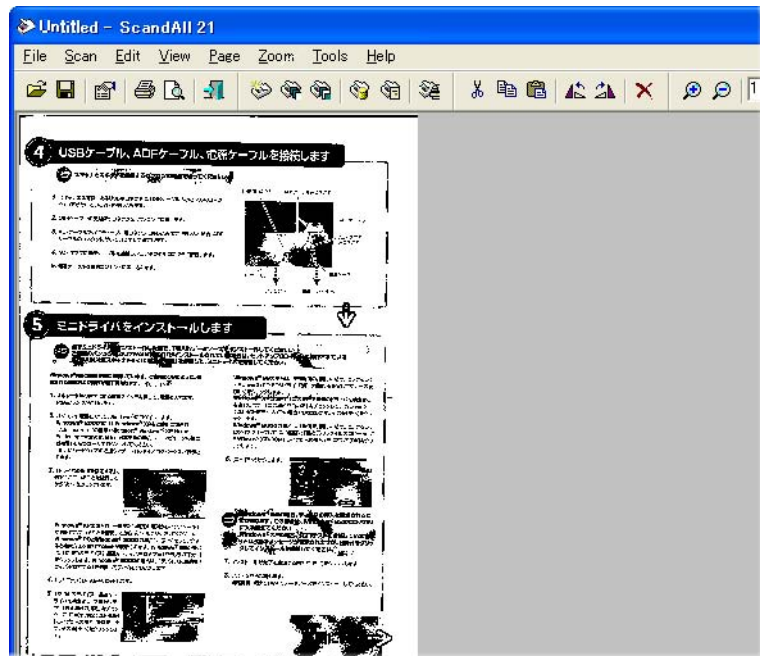
The [TWAINDriver] dialog box (screen for setting scanning conditions) appears.

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 image of the scanned document appears on the ScandAll 21 screen.



For details on scanning various types of documents, refer to "2 SCANNING VARIOUS TYPES OF DOCUMENTS" on page 2-1.

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

1.10 How to use the Scanner Driver

■ FUJITSU TWAIN32 Scanner Driver

FUJITSU TWAIN32 Scanner Driver is designed for scanning documents with FUJITSU image scanner fi series by using application software that complies with the TWAIN standard.

The following describes the procedure with examples of ScandAll 21 for ordinary scanning by using this driver software.

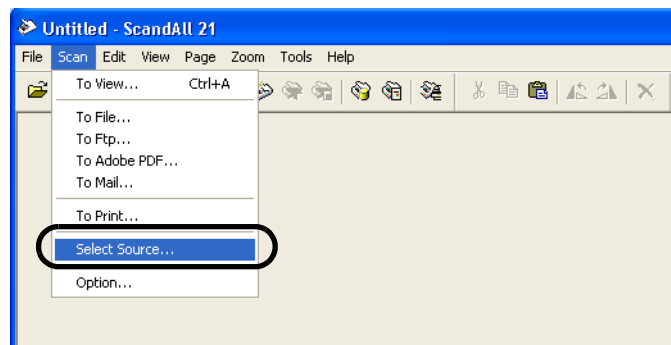
● Procedure for Basic Scanning Operation

1. Startup the application.

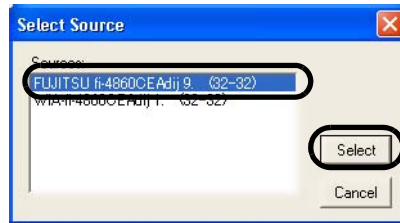
From the [Start] menu, select [Programs]-[Scanner Utility for Microsoft Window] and click [ScandAll 21].

2. Select your scanner on the window below.

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



3. Select the scanner to use, then click the [Select] button.



Select

- [FUJITSU fi-4860CEAdij] for FUJITSU TWAIN32 V9
or
- [FUJITSU TWAIN32] for FUJITSU TWAIN32 V8
then click the [Select] button.

4. Load the documents on the scanner.

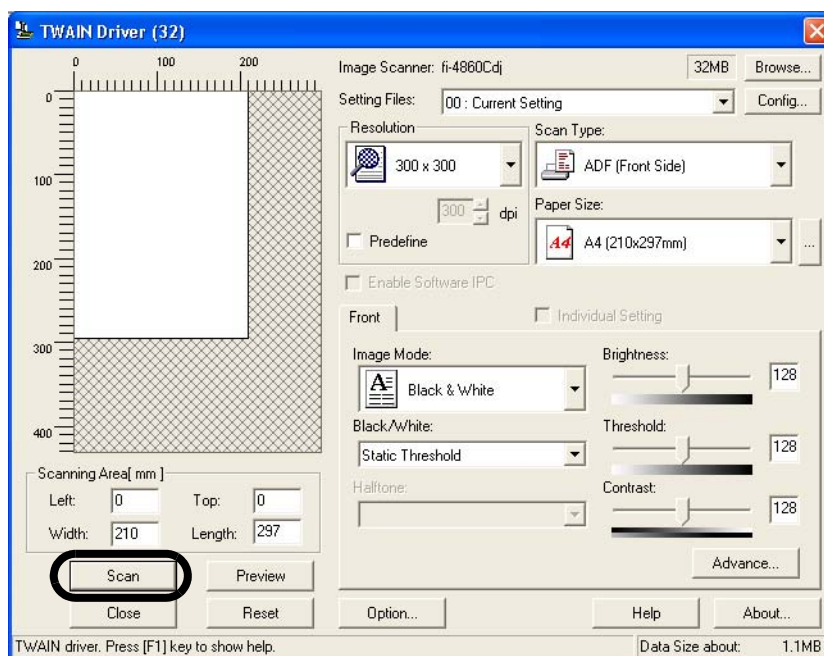
For details on loading documents, refer to "1.7 Loading Documents on the Hopper" on page 1-18.

5. Open the TWAIN Driver window.

Select [Scan To View] from the [Scan] menu.

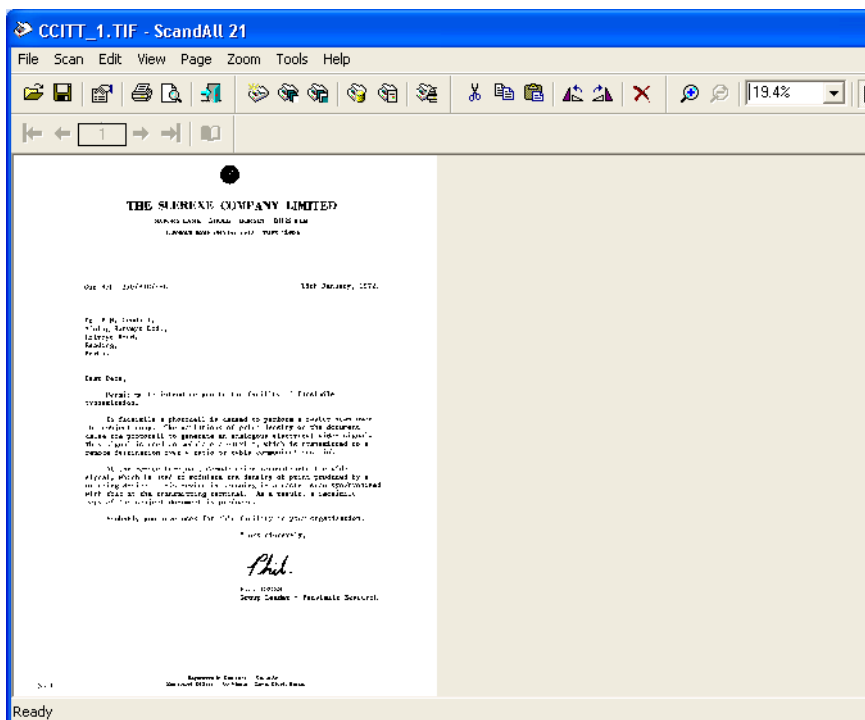
- ScandAll 21 provides scanning methods as follows:
- [To View...] :Displays scanned images on the window.
- [To File...:] :Saves scanned images as files (*.BMP, *.TIF, *.JPG) on your hard disk.
- [To FTP...:] :Transfers scanned images to a FTP server.
- [To Adobe PDF...:] :Saves scanned images as PDF files.
(*Adobe Acrobat must be installed beforehand.)
- [To Microsoft Share Point Portal Server...] :Transfers scanned images to Microsoft Share Point Portal Server.
- [To Mail...] :Launches mailer software and attaches scanned images to e-mail.
- For details, refer to "ScandAll 21 Help".

6. Configure settings for scanning and click the [Scan] button.



For details about the settings on this window, refer to "Setting Window for FUJITSU TWAIN32 Scanner Driver." on page 1-31.

⇒The images of scanned documents are displayed on the [ScandAll 21] window.



Depending on the settings of the application software, images may not be displayed.

For details, refer to the documentation or Help file of your application.

e.x.) When you select [To File...] from the [Scan] menu of ScandAll 21, images of scanned documents are not displayed on the window.

7. Save the scanned images.

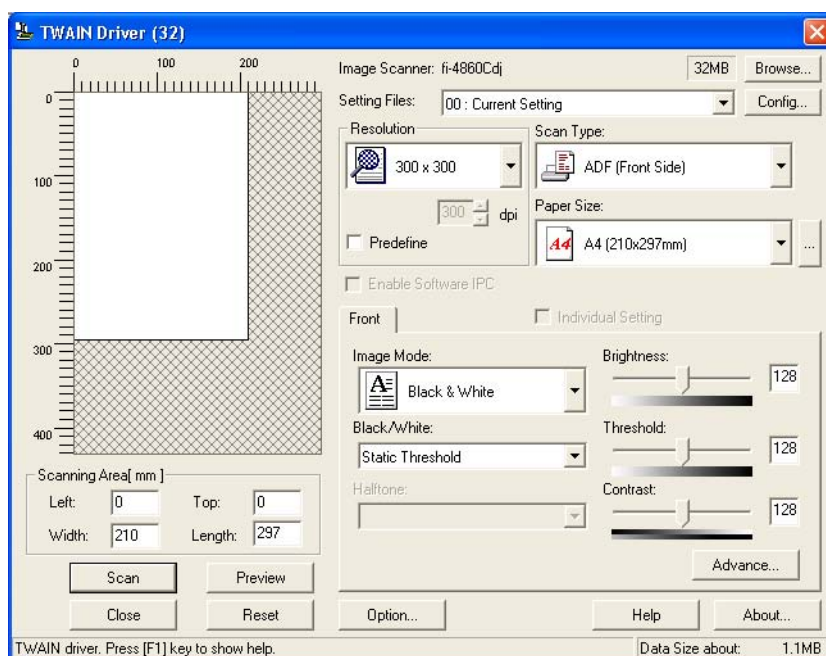
Select [Save As...] from the [File] menu to save the scanned images.

If you wish to start another scanning, return to procedure 4.

8. End the application.

Select [Exit] from the [File] menu.

● Setting Window for FUJITSU TWAIN32 Scanner Driver.



You can perform settings for the FUJITSU TWAIN32 Scanner Driver on this window.

The following describes the main setting items.

- For details on each functions, refer to "FUJITSU TWAIN32 Scanner Driver Help" (appears by pressing [Help] or [F1] button).
- Depending on the type of your scanner, available setting items or range of setting values vary.

Resolution

Specifies the resolution of scanning.

It can be specified by selecting a default value from the list or customizing.

By marking the [Predefine] checkbox, you can select one from three predefined settings as [Normal], [Fine], [Super Fine] to scan documents instead of setting details by yourself.

Otherwise, you can change the details of the predefined settings on the [Resolution Setting] window, which appears when you click on the [...] button.

Scan Type

Specifies the feeding method, the side(s) to be scanned (Front Side, Back Side, Duplex) or details of Long page (the size of documents longer than Ledger/A3).

Paper Size

Select the size of documents to be scanned from this list.

Windows for customizing the paper size will appear when you click on [...] besides the list. You can save any document size as a customized setting (up to three) or for changing the order of the paper size in the list.

Image Mode

Specifies the image type for the scanned documents.

Black & White	Documents are scanned in binary (black and white).
Halftone	Documents are scanned with halftone processing in black and white.
Grayscale	Documents are scanned with 256 gradations from black to white.
Color	Documents are scanned in color. For this mode, you can select 24 bit Color, 256Color or 8 Color.

[Scan] button

Starts scanning documents with the current settings.

[Preview] button

Documents are scanned preliminarily before the actual scanning.

You can confirm the image of the documents in the preview window.

[Close] button

Saves the current settings and closes this window.

[Reset] button

Used to undo changes of settings.

[Help] button

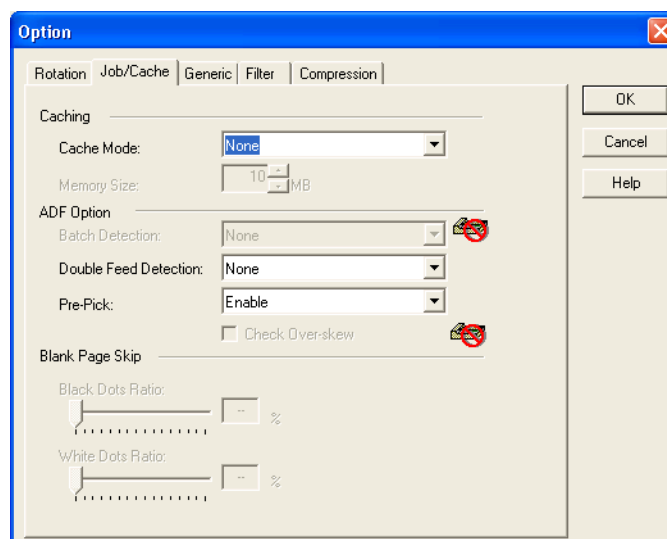
Opens the "FUJITSU TWAIN32 Scanner Driver Help" window. The window also opens by pushing the [F1] key.

[About...] button

Opens an information window about the FUJITSU TWAIN32 Scanner Driver's version.

[Option...] button

You can set up the details of optional functions from the window below.



[Rotation] tab

Select this tab when setting image rotation, detection of document size and skew, etc.

[Job/Cache] tab

Select this tab when setting cache mode, job controls, double-feed (multi-feed) detection, blank page skipping, etc.

[Generic] tab

Select this tab to change the unit displayed on the Setting Window for the FUJITSU TWAIN32 Scanner Driver. (Millimeters, Inches, and Pixels are available)

[Filter] tab

Select this tab for setting the image processing filter(s).

Page Edge Filler: Fills up the margins of the scanned documents with a selected color.
Digital Endoser: A character string, such as the alphabet and numbers, can be added in the scanned document.

[Compression] tab

Select this tab for setting the compression rate of JPEG Transfer.

[Advance...] button

Click this button for settings of the advanced image processing.

You can set Edge Extract, Gamma Pattern, White Level Follower, Dropout Color, Reverse, etc.

[Config...] button

Click this button for configuring the Setting Files.

You can save the changed settings as a Setting File. From next scanning, the settings are quickly changed by using these Setting Files.

For details of each function, refer to the "FUJITSU TWAIN32 Scanner Driver Help".

■ FUJITSU ISIS Scanner Driver

FUJITSU ISIS Scanner Driver is designed for scanning documents with FUJITSU image scanner fi series by using application software that complies with the ISIS standard.

The following describes the procedure with examples of QuickScan™ for ordinary scanning by using this driver software.

The procedure may vary depending on your application. If you use an application other than QuickScan™, please refer to its Guide or Help for further information.

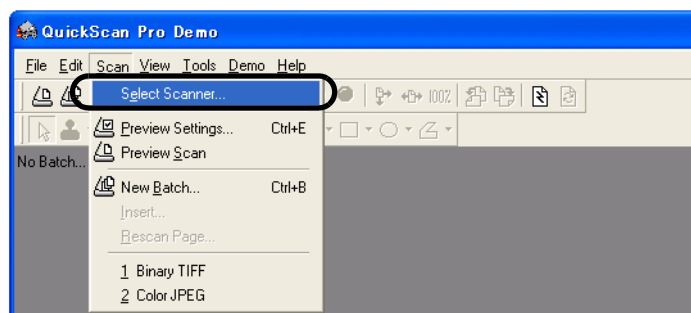
● Procedure for Basic Scanning Operation

1. Startup the application.

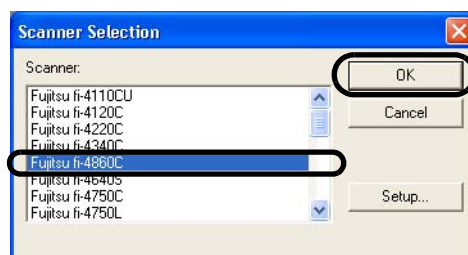
From the [Start] menu, select [Programs]-[QuickScan] and click [QuickScan].

2. Select your scanner on the window below.

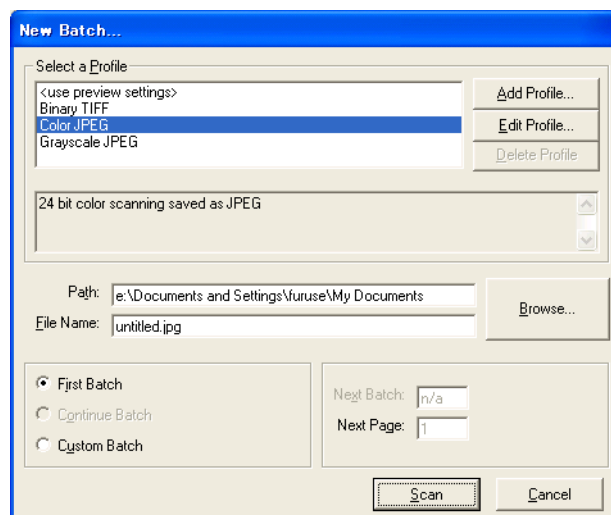
Select [Scan] - [Select Scanner] on the menu bar.



3. Select “Fujitsu fi-4860C”, then click the [OK] button.



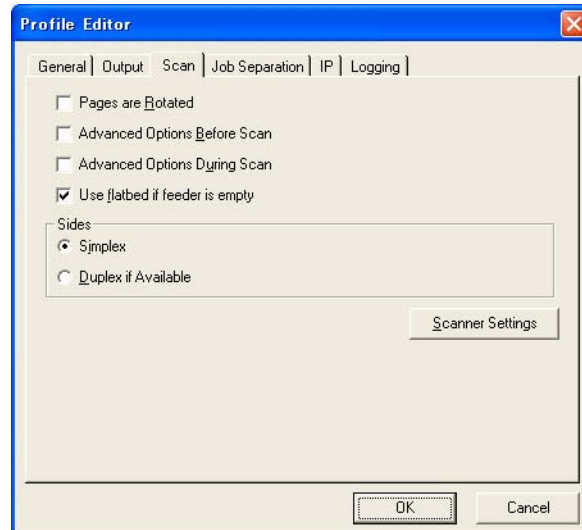
4. Select [Scan] - [New Batch] on the menu bar.
5. Select the profile for scanning.



- When creating a new profile
Select one from already existing profiles and click [Add Profile...] button.
⇒ A new profile will be created based on the profile you select.
- When changing the settings of already existing profiles
Select one from already existing profiles and click [Edit Profile...] button.
⇒ The settings of the selected profile can be changed.
- When deleting a profile
Select the one to delete and click [Delete] button.
⇒ The selected profile will be deleted.
When you added, edited or deleted a profile, go to the procedure 10.

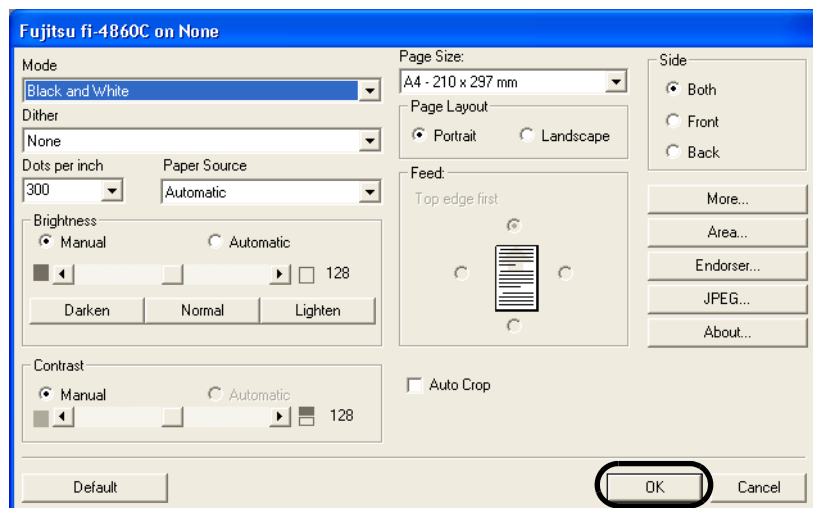
6. Open the window of ISIS Driver.

Select the [Scan] tab and click the [Scanner Settings] on the [Profile Editor] window.



⇒The configuration window of ISIS driver appears.

7. Configure settings for scanning and click the [OK] button.



For details on this dialog box, refer to "Configuration Window of FUJITSU ISIS Scanner Driver" on page 1-38.

8. The [Profile Editor] window appears. Click the [OK] button to return to [New batch] dialog.

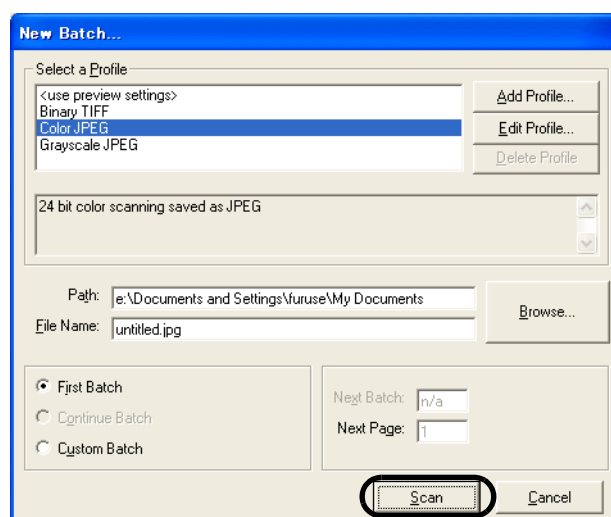


Configure other settings of the profile, if necessary.

Refer to the "QuickScan Overview" or the "QuickScan Help" for further information on functions and operations of QuickScanTM. After the installation of QuickScan, it is registered in the [Start] menu.

9. Load the documents on the scanner.

10. Click the [Scan] button.



⇒Scanned images are displayed on the window.

Refer to the "QuickScan Overview" or the "QuickScan Help" for further information on functions and operations of QuickScan. After the installation of QuickScan, it is registered in the [Start] menu.

● Configuration Window of FUJITSU ISIS Scanner Driver

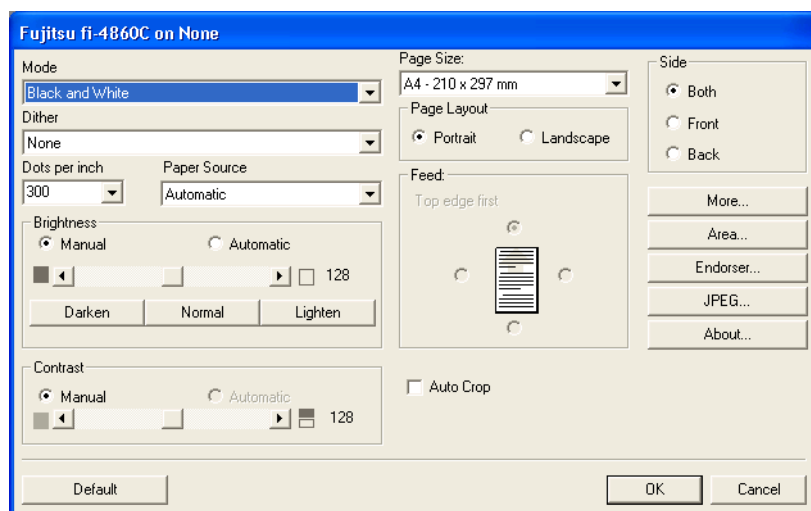


Image Mode

Select a color mode suitable for the purpose from the menu.

Black and White	Scans data in binary (black and white). Distinguishes black from white according to the fixed threshold. This scanning mode is suitable for scanning line drawings and text documents.
256-level Gray	Scans data with 256 gradations from black to white. This mode uses 8 bits per pixel. This mode is suitable for scanning monochrome photographs.
24-bit Color	Scans data as full-color images using 24 bits per pixel. This mode is suitable for scanning color photographs.

Dots per inch

Specifies the number of pixels (dots) per inch.

Select a fixed resolution from the list.

A higher resolution produces finer images, but requires much more memory.

Dither

Select the halftone pattern for halftone scanning. This setting is available when "Black and White" is selected in the "Mode".

Dither Pattern 1	This setting is suitable for scanning dark photographs.
Dither Pattern 2	This setting is suitable for scanning dark-colored documents containing both text and photographs.
Dither Pattern 3	This setting is suitable for scanning light photographs.

Dither Pattern 4	This setting is suitable for scanning light-colored documents containing both text and photographs.
Error Diffusion	This function minimizes differences of color levels due to subtractive color process by diffusing the difference to the adjacent pixels. This mode is suitable for scanning images of photographs, etc.

Brightness

Sets the brightness of the entire image. Specify the brightness as a number within the range of 1 (dark) to 255 (bright). To brighten the entire image, increase the value of the setting. To darken the entire image, decrease the value.

Contrast

Sets the contrast between light and shadow of the scanned image. Specify the contrast as a number within the range of 1 (low [soft]) to 255 (high [sharp]). Increasing this value makes the contrast sharper.

Paper Source

Selects the scanning method.

Feeder	Scans only one sides of documents specified with the scanner.
Duplex	Scans both front and the back sides of documents. When this option is selected, the both sides of documents are scanned simultaneously.

Paper Size

Selects a paper size according to the size of the document to be scanned. Select a standard paper size from the list.

Page Layout

Specifies orientation of the documents as portrait or landscape.

Auto Crop

Automatically detects the document's page size, and the output will be adjusted to the detected page size. Document skewing is automatically detected and corrected for the output image. This function is available when Black and White or 256-level Gray is selected at the Image Mode.

[Side]

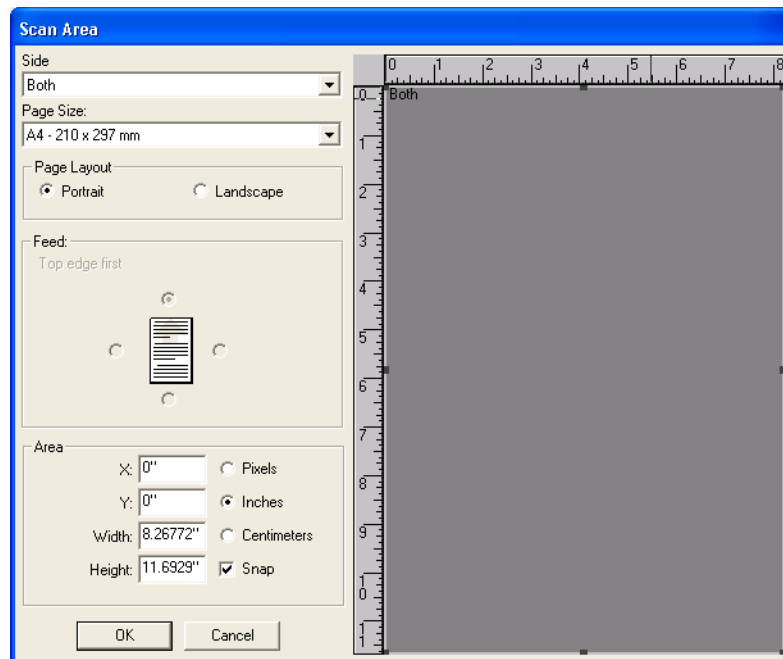
The settings of this window are applied to the selected document side (Both, Front, Back).

[More...] button

Opens the [More Settings] window. Used for setting advanced features.

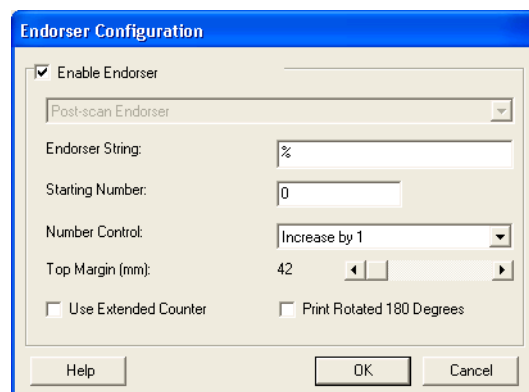
[Area...] button

Opens the [Scan Area] dialog box.
Specify scan area for the document size.
The size can be set by dragging the frame with mouse.
Otherwise, enter any value for the setting.



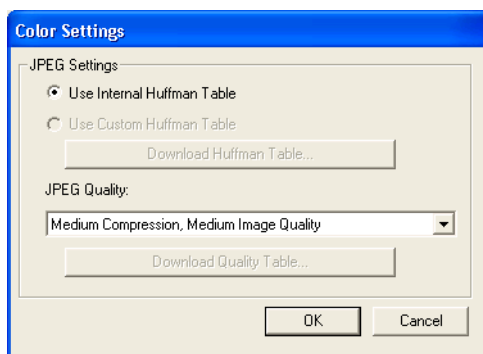
[Endorser...] button

This button displays [Endorser Configuration] dialog. This button is enabled when Endorser Option (separately sold) is installed. Refer to the documentation provided with the Endorser Option.



[JPEG...] button

Opens the JPEG Settings dialog box. Used for setting the compression rate of JPEG transfer, etc.

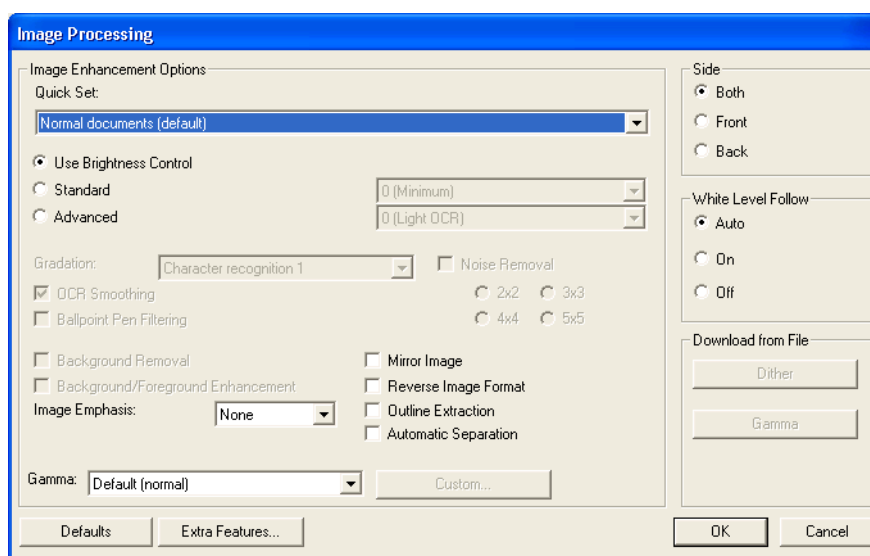


[About...] button

This button displays the version information.

● Settings on the [Image Processing] window

You can configure optional functions on this window.



Gamma

Specifies Gamma correction. Available correction patterns are: "Normal", "Soft", "Sharp".

Image Enhancement Options

You can set the binary image processing. These options are available only when "Black and White" is selected in the "Mode".

Quick Set

You can select a preset pattern for image enhancement. By selecting the one from the list, you can quickly set the details of the image enhancement processing. Available patterns are as follows:

Normal documents (default)	This item is suitable for scanning the documents like the ones used in offices.
Background/Foreground Enhancement	This option makes image contours soft by disabling the Outline Extraction.
NCR forms with background removed	This option removes background of scanned images and smoothes outline on the images.
Magazines, Brochures, etc.	This option is suitable for scanning documents which have texts and photos (e.g. magazines, brochures).
Use Brightness Control	Performs simple binary processing on the images. When this option is selected, you can manually adjust the threshold (Brightness) with the slider control on the Configuration Window.
Standard	Performs simple binary processing. You can select the brightness from minimum (0) to maximum (6).
Advanced	Performs automatic binary processing. For OCR, select an option from 0 to 4. For images select 5 or 6.

Image Emphasis

This option specifies the sharpness of outline extraction. Available settings are as follows.

Low, Mid, High	Emphasizes contour of images.
Smooth	Smoothes jaggy images.

Mirror Image

This option reverses right and left in images.

Reverse Image Format

This option reverses black and white colors in images.

Outline Extraction

This option extracts contours of images.

Automatic Separation

When this option is selected, photos are automatically distinguished from lines (characters) at scanning and dither patterns are applied to the photos. This option is suitable for scanning documents which have both characters and photos.

[Side]

The settings of this configuration window are applied to the selected document side (Both, Front, Back).

White Level Follow

This option is used to adjust the density of the white background of documents and correct variations in the background color by compensating the pixels of scanned images individually.

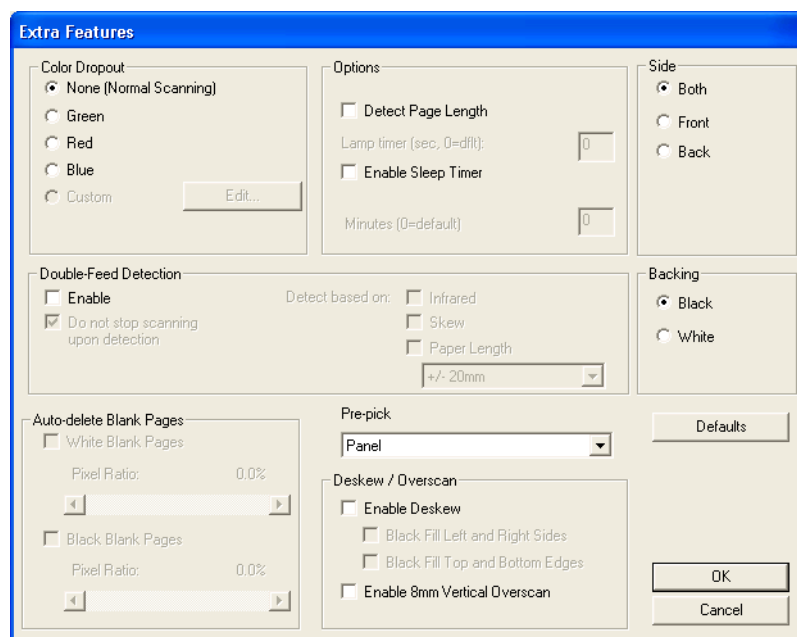
- | | |
|------|--|
| Auto | This option optimize the settings based on the specified "Mode". |
| On | This option scans documents using background follow-up (for line drawings). |
| Off | This option scans documents using the standard basic white background (for photographs). |

[Extra Features] button

This button opens [Extra Features] button. You can configure advanced functions on this window.

● Settings on the [Extra Features] window

You can configure advanced features on this window.



Dropout Color

This option excludes a selected color (green, red, or blue) from scanned images. For example, if the document contains black text in a red frame and when the red color is selected, the scanner reads only the text and eliminates (drop out) the red frame.

Detect Page Length

Scans the edge (bottom) of the documents and outputs data adjusted to the document length. When any page shorter than specified "Paper Size" is included, the output size is adjusted to the detected short size.

Enable Sleep Timer

This option specifies waiting time for turning off the lamps. The lamps will be turned off when no operation is performed on the scanner for a certain period of time defined with this option.

Double Feed Detection

Detects Double-feeds (phenomena that two or more sheets are accidentally fed). You can set conditions for detecting Double-feeds so that the scanner will stop its operation and display error messages. Double feeds are scanned by the differences in document lengths or thicknesses.

Skew

With this option, you can set the scanner so that it will stop its operation and display error messages when any skewed document is detected.

Pre-pick

With this option, you can enable or disable Pre-picking. Pre-picking is an operation that feeds documents into the ADF (to the scanning position) before starting actual scanning operation.

Overscan

This option specifies the overscan function. This function makes the scanned images larger than the original documents by adding margins.

[Side]

The settings of this configuration window are applied to the selected document side (Both, Front, Back).

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 driver or the FUJITSU ISIS scanner driver is updated, the screens and operations noted in this chapter may change. In that case, please refer to the User's Guide provided with the update.

For scanning with the VRS, a software provided with the scanner, refer to the VRS user's manuals available in the VRS installation CD.

2.1 Scanning Documents with different widths	2-2
---	------------

2.2 Saving Scanned Images in PDF Format.....	2-3
---	------------

2.3 Selecting a Color to drop out	2-9
--	------------

2.4 Skipping blank Pages	2-11
---------------------------------------	-------------

2.5 Detecting Double-Feeds (Multi-Feeds)	2-13
---	-------------

2.6 Correcting skewed Documents	2-15
--	-------------

2.1 Scanning Documents with different widths

When you scan a batch of documents with different widths, 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 each document stack to scan.**

For the explanation on how to scan the documents, please refer to the section "1.9 Scanning Documents" on page 1-23.

2.2 Saving Scanned Images in PDF Format

If you would like to save scanned images in PDF format, you must first install Adobe® Acrobat® 7.0 or later on your PC.

Adobe® Acrobat® 7.0 can be installed from the Adobe® Acrobat® CD-ROM provided.

There are 2 ways for saving scanned images in PDF format.

(1) Using ScandAll 21

This method is recommended for color or grayscale scanning and when smaller PDF file size is required.

The benefits are:

Reduced PDF data size

Simplified method for creating PDF files with no troublesome operations

(2) Using Adobe Acrobat 7.0

This method is recommended for finishing the scan operation faster and/or for black and white scanning.

The benefits are:

Quick Creation of PDF file with original scan resolution

Flexible creation of PDF files by changing the PDF compression rates

Notes for using Adobe Acrobat



- Acrobat's default settings overrides the previous settings for "Resolution", "Scan Type" and "Image Mode".
- The following functions cannot be used:
 - "256 Color" or "8 Color"
 - "Rotation Degree" selection when "End of Page Detection" is selected
 - Long Page Scanning
- When scanning a paper document and converting the image to PDF using Acrobat, unexpected images may be output when:
 1. Setting "Edge Shadow Removal" in Acrobat, and setting "Digital Endorser" or "Black Background" options in the TWAIN driver at the same time. Letter strings embedded in the image or the background may be missed.
Solution 1: Set "Edge shadow removal" to "OFF" or set any option other than "Adaptive" for "Color/Grayscale" and/or "Monochrome" under "Compression" by selecting [File] - [Create PDF] - [From Scanner...] - [Image Settings...] in Acrobat.
Solution 2: Adjust the scanning density in the TWAIN driver.
 2. Setting "Adaptive" for "Color/Grayscale" and/or "Monochrome" under "Compression" in Acrobat and scanning in a resolution lower than the resolution recommended for Acrobat.
Solution: Set OPTION to something other than "Adaptive" under "Compression."
 3. Scanning a document longer than the double letter (11x17) or A3 size, when setting "Overscan" in the TWAIN driver, the scan may fail.
Solution: When scanning a double letter (11x17) or A3 size of document, do not set "Overscan" in TWAIN driver.

As for detailed usage and information of Acrobat, refer to "Create a PDF file from a scanned document" in Acrobat Help.

■Using ScandAll 21

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

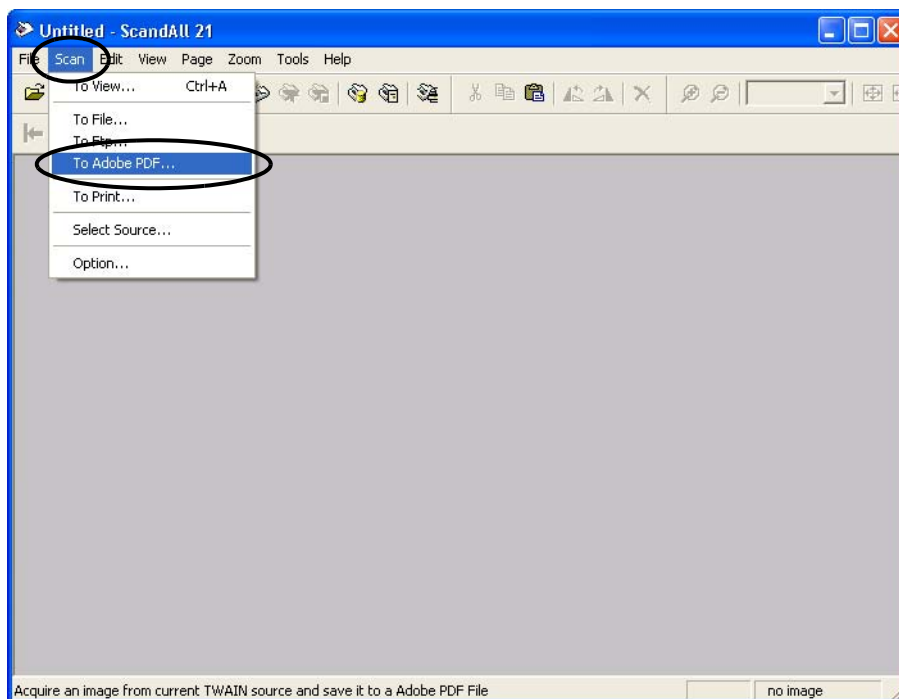
1. Load the documents on the hopper.

2. Start up ScandAll 21.

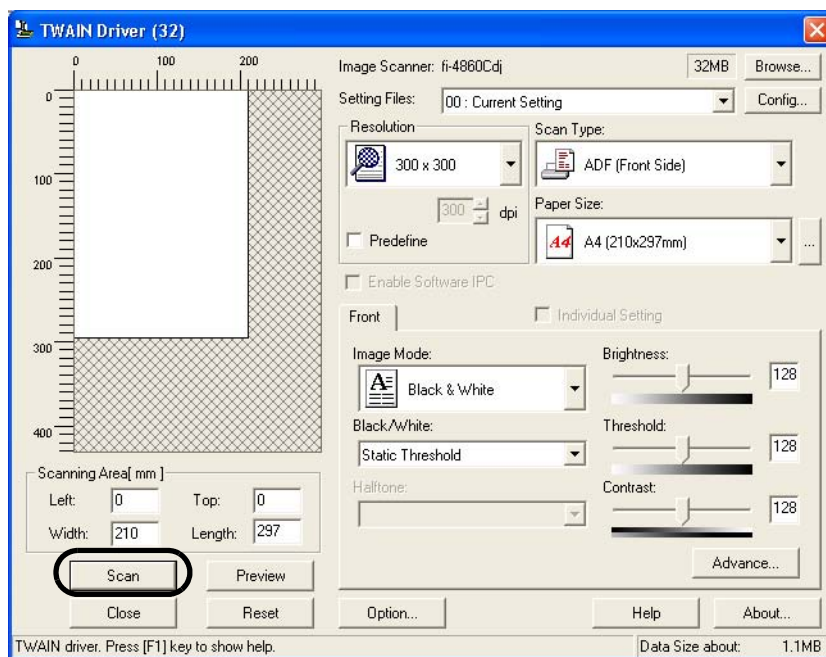
Select [Program]-[Scanner Utility for Microsoft Windows]-[ScandAll21] from the [Start] menu. This will start up the application.

3. From the menu bar select [Scan] and then [To Adobe PDF] from the pull down menu.

[TWAIN Driver] dialog is displayed.

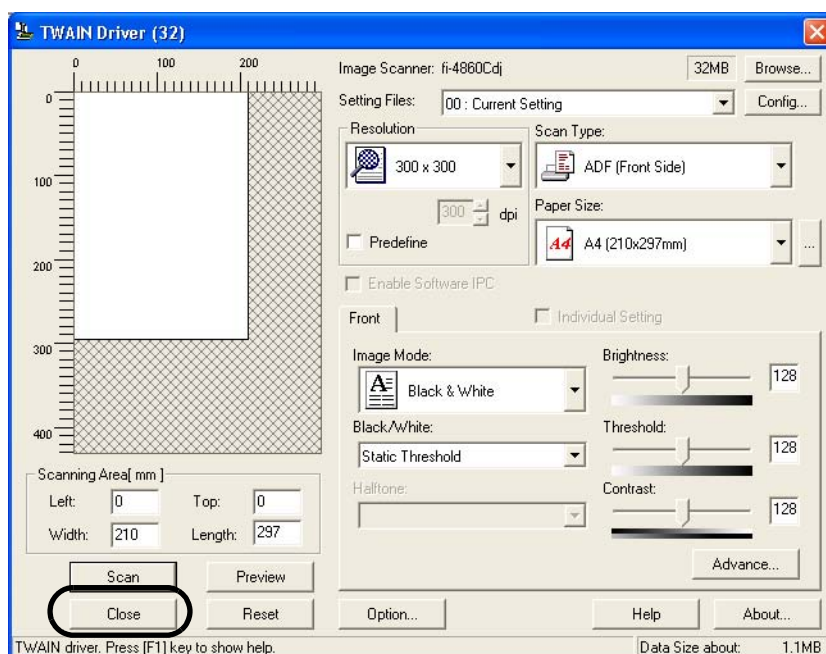


4. Select the scan resolution, document size and other scanning conditions, and then click the [Scan] button.



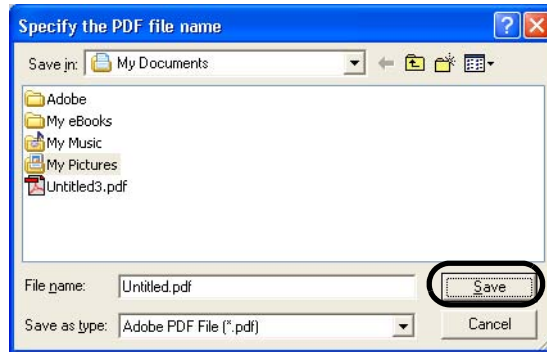
5. To end scanning, click the [Close] button.

The window for saving the image appears.



6. Save the scanned image by selecting file name and path.

For details, refer to ScandAll 21 Help.



■Using Adobe Acrobat

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

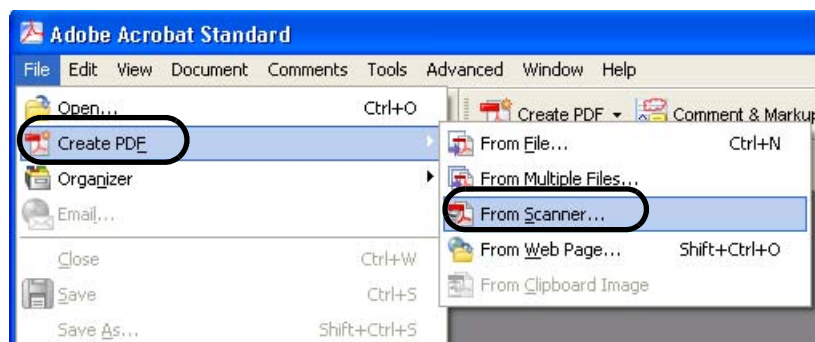
1. Load the documents on the hopper.

2. Start up Adobe Acrobat.

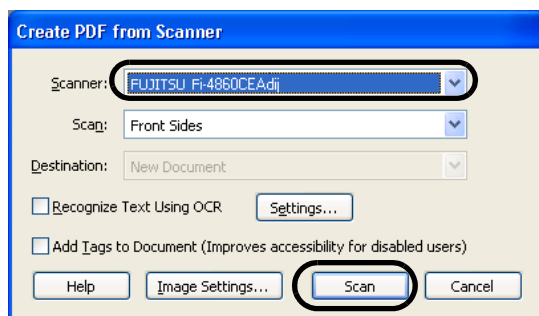
Select [Programs] - [Adobe Acrobat] from the [Start] menu. This starts up Adobe Acrobat.

3. From the [File] menu, select [Create PDF] - [From Scanner].

[Create PDF from Scanner] dialog box is displayed.



4. Select [FUJITSU fi-4860CEAdj] at [Scanner] and click [Scan] button.



[TWAIN driver] dialog box is displayed.

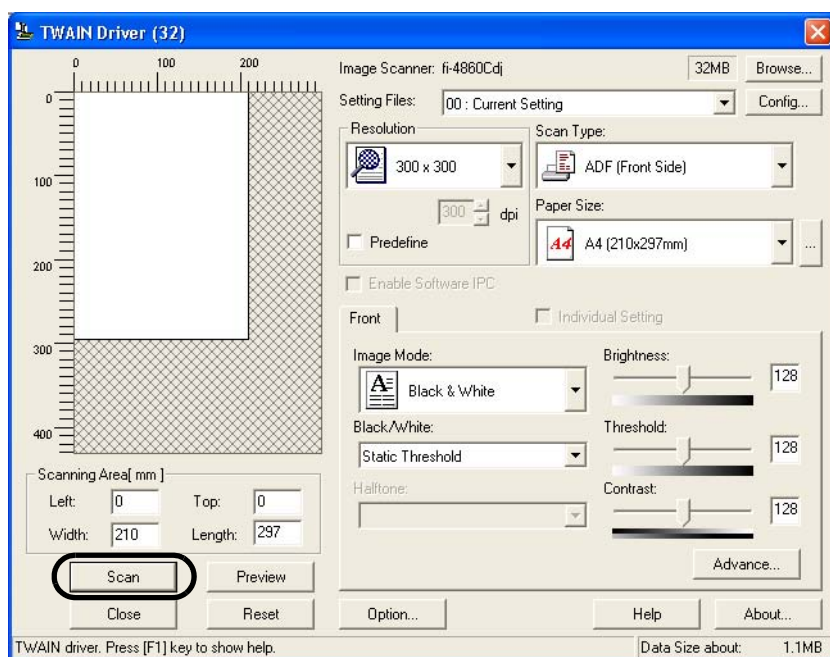


Scanning with default settings may yield unexpected results. If that is the case, change the settings as follows:

- Uncheck "Recognize Text Using OCR"
- Click "Image Settings" and change the following:

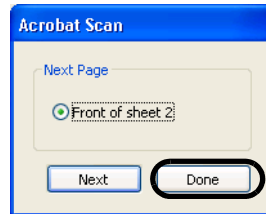
Color/Grayscale	:None
Monochrome	:JBIG2 or CCITT Group 4
Background Removal	:Off
Halo Removal	:Off

5. Select the scan resolution, document size etc., and click the [Scan] button.

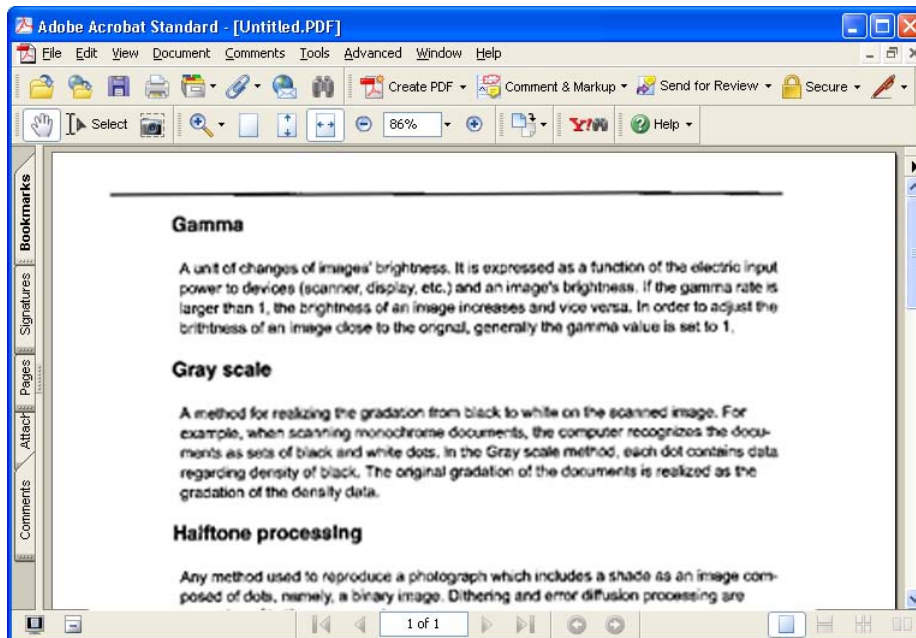


The scanning will be performed.

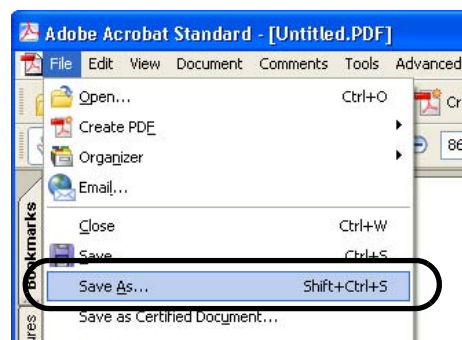
6. When scanning is finished, click the [Done] button.



The scanned image is displayed.



7. Select [Save as] or [Save] from [File] menu to save the scanned image.



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

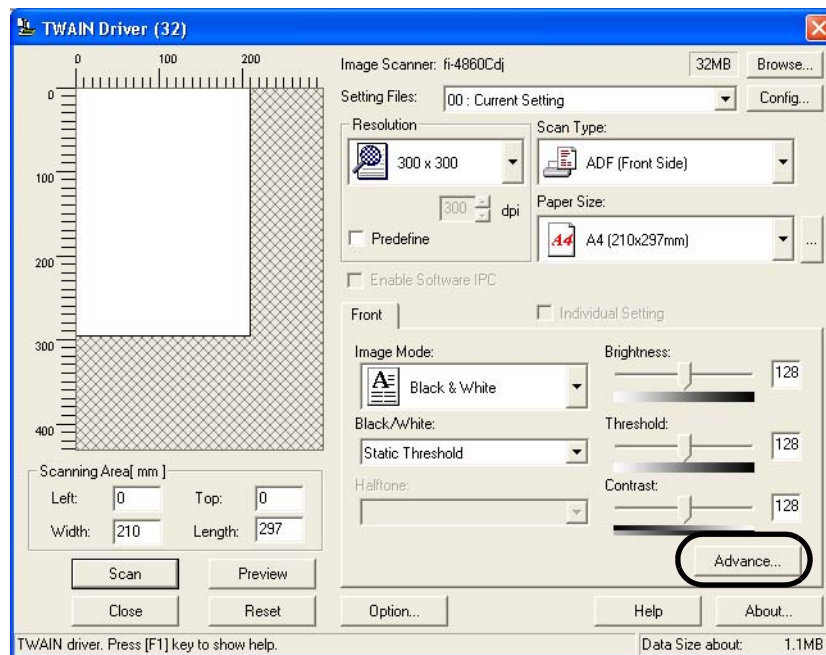
2.3 Selecting a Color to drop out

A selected color (red, green or blue) can be removed (dropped out) from the scanned image data. For example, if the document contains black text in green frames, you can set the scanner to get only the text and eliminate the green frames.

To drop out a color, change the setting in the driver setting dialog box.

The following shows examples for changing the setting of [TWAIN Driver] dialog box to drop out a color.

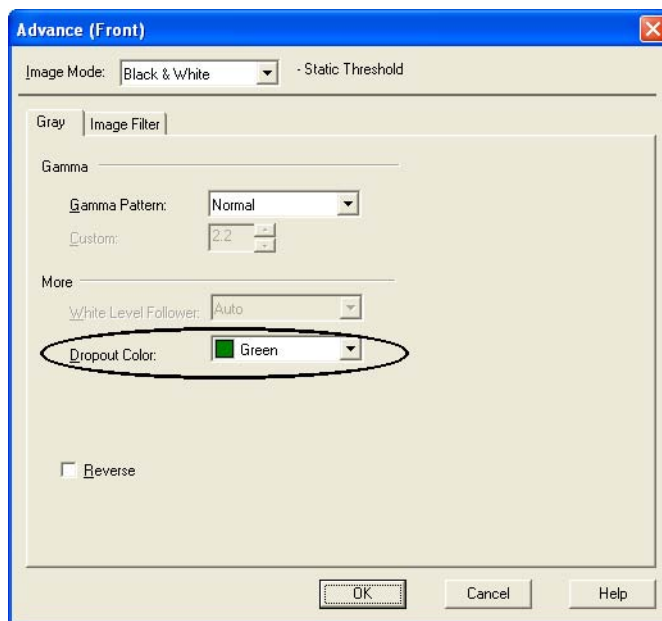
1. Click [Advance] button in the [TWAIN Driver] dialog box.



The [Advance] dialog box appears.

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

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



3. Click [OK] button.

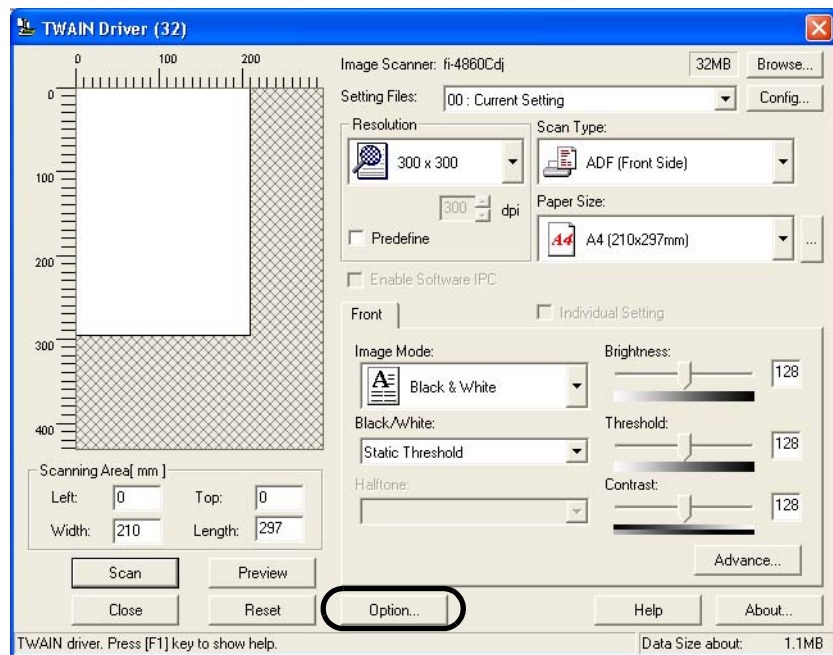
[TWAIN Driver] dialog box will be redisplayed.

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

2.4 Skipping blank Pages

The following shows examples for changing settings in the [TWAIN Driver] dialogbox to skip blank pages at scanning documents.

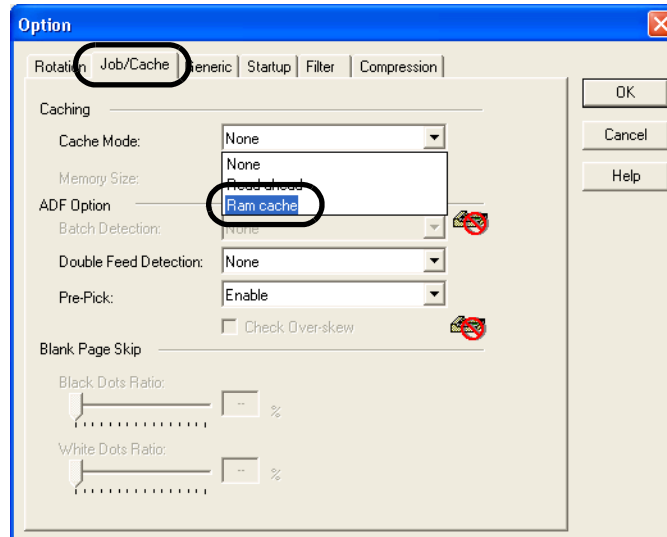
1. Click the [Option ...] button in the [TWAIN Driver] dialogbox.



⇒The [Option] dialogbox appears.

2. Click the [Job/Cache] tab

3. Select [Ram Cache] from the [Cache Mode] menu under [Caching].



4. By using the slider control under [Blank Page Skip], specify the [Black Dots Ratio] or [White Dots Ratio] (ratio of black or white parts on the documents) for judging if the scanned document is recognized as a blank page by the scanner.

The [TWAIN Driver] dialogbox will be redisplayed. Then, perform the scanning operation on the dialogbox.

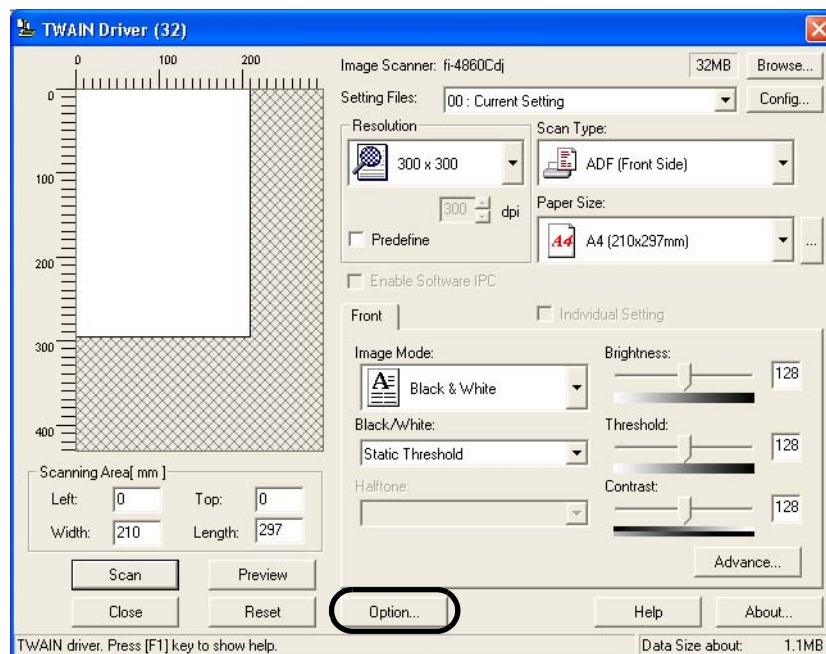
2.5 Detecting Double-Feeds (Multi-Feeds)

"Double-feed" (also known as "Multi-feed") is an error that occurs when two or more sheets are accidentally fed into the ADF at the same time. You can set the scanner to display an error message when it detects a double-feed.

To set conditions for the double-feed detection, change the settings in the driver setting dialog box. The following shows examples for changing the settings in the [TWAIN Driver] dialog box.

The following shows the procedure for changing the settings in the dialogbox.

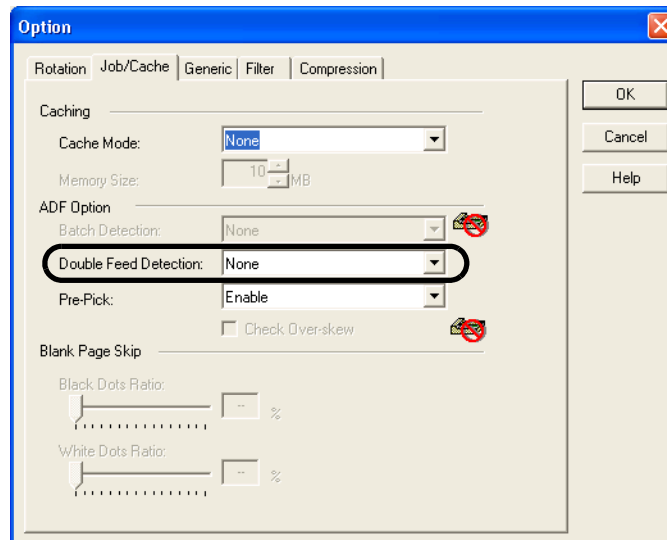
1. Click the [Option...] button in the [TWAIN Driver] dialogbox.



⇒The [Option] dialogbox appears.

2. Click the [Job/Cache] tab.

3. Select the detection conditions from [Double Feed Detection] (or [Multifeed Detection]) under [ADF Option].



The following are the detection conditions

None	Double-feed detection is not performed
Check overlapping	The scanner monitors for the overlapping of documents. It detects a double-feed by differences in document thickness when two or more document sheets are fed overlapped.
Check length	The scanner monitors the length of documents. It detects a double-feed by differences in the document length when two or more document sheets are fed overlapping.
Check overlapping and length	The scanner monitors both document overlapping and length to detect double-feeds.

Furthermore, refer to "APPENDIX 2 DOUBLE-FEED (MULTI-FEED) DETECTION CONDITIONS" on page AP-2 for detailed information about the document for double-feed detection.

4. Click the [OK] button.

The display returns to the [TWAIN Driver] dialogbox. Then, perform the scanning operation on the dialogbox.

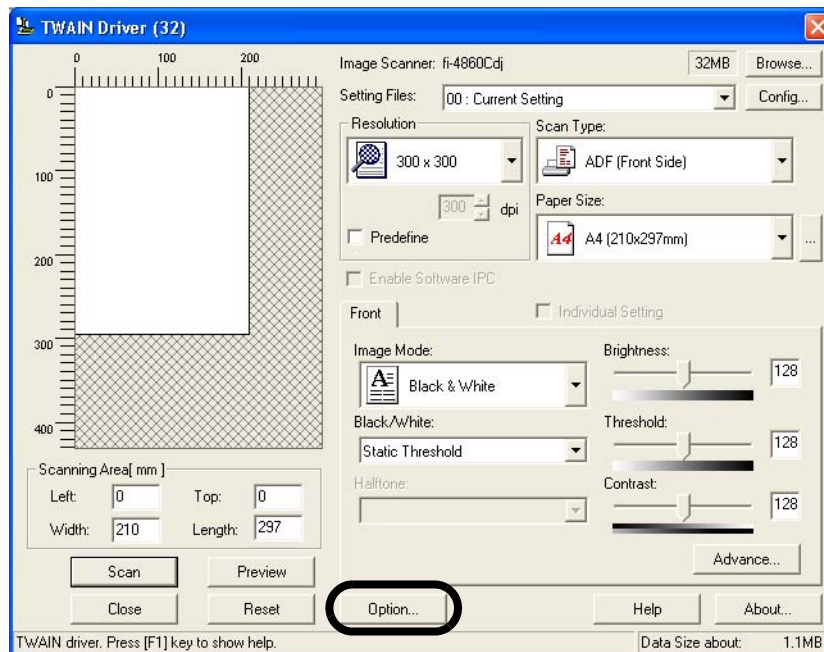
2.6 Correcting skewed Documents

You can set the scanner so that skew of documents is detected and corrected automatically when skewed documents are fed into the ADF.

The following shows examples for changing the setting in the [TWAIN Driver] dialogbox to enable this function.

The following shows the procedure for changing the setting in the dialogbox.

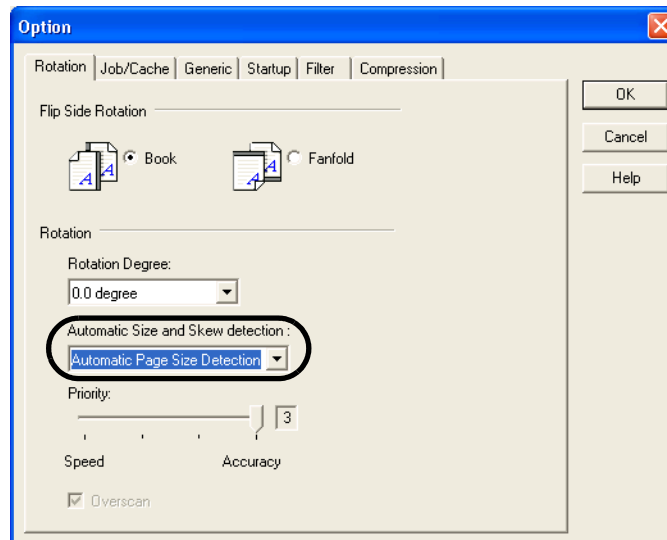
1. Click the [Option...] button in the [TWAIN Driver] dialogbox.



⇒ The dialogbox appears.

2. Click the [Rotation] tab.

3. Select the [Automatic Page Size Detection] from the [Automatic Size and Skew Detection] menu.



4. Click the [OK] button.

The display returns to the scanning operation [TWAIN Driver] dialogbox.
Then, perform the scanning operation on the dialogbox.



When using either of the following documents, the automatic page size detection may not function correctly.

Paper of weight less than 13.9 lb (52 g/m²).

Non rectangular documents.

Documents with black borders.

3 DAILY CARE

This chapter describes how to clean the scanner.

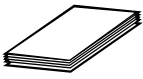


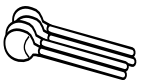


When you clean the scanner, turn off the power, and unplug the power cable from the outlet.

3.1	Cleaning Materials and Areas Requiring Cleaning	3-2
3.2	Cleaning the Pad	3-5
3.3	Cleaning the Rollers.....	3-8
3.4	Cleaning the Transport Path.....	3-22
3.5	Cleaning the Discharge Brush	3-24
3.6	Cleaning the Glass Surface	3-29
3.7	Cleaning the Sensors.....	3-35
3.8	Cleaning the Lamps	3-41

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, 100ml/bottle Moisten cloth with this fluid and wipe the scan- ner to clean. (* 1)
Cotton swab 	Commercially avail- able one	
Lint-free dry cloth	Commercially avail- able one(* 2)	

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

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

■ Locations requiring Cleaning and Cleaning Cycle

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

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



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



The scanner must be cleaned more frequently if you scan any of the following types of sheets:

- Documents of coated paper
 - Documents that are almost completely covered with printed text or graphics
 - Chemically treated documents such as carbonless paper
 - Documents containing a large amount of calcium carbonate
 - Documents filled in with pencil
-



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-486PRRE 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

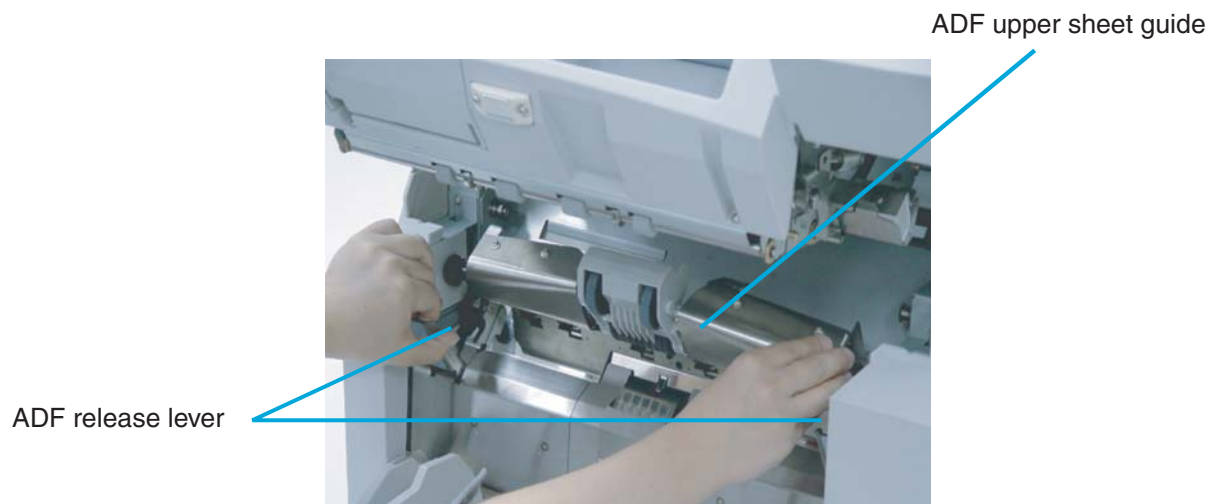
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



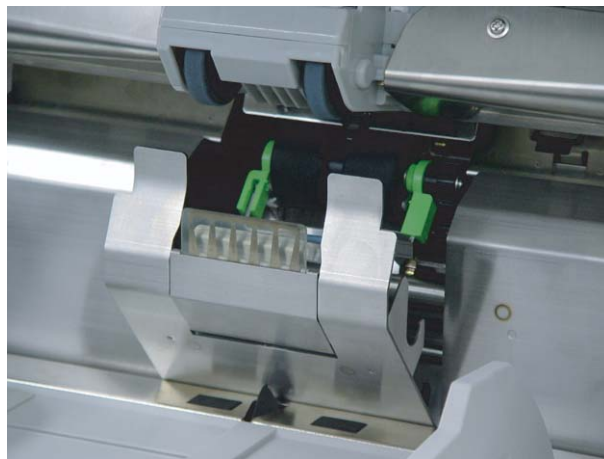
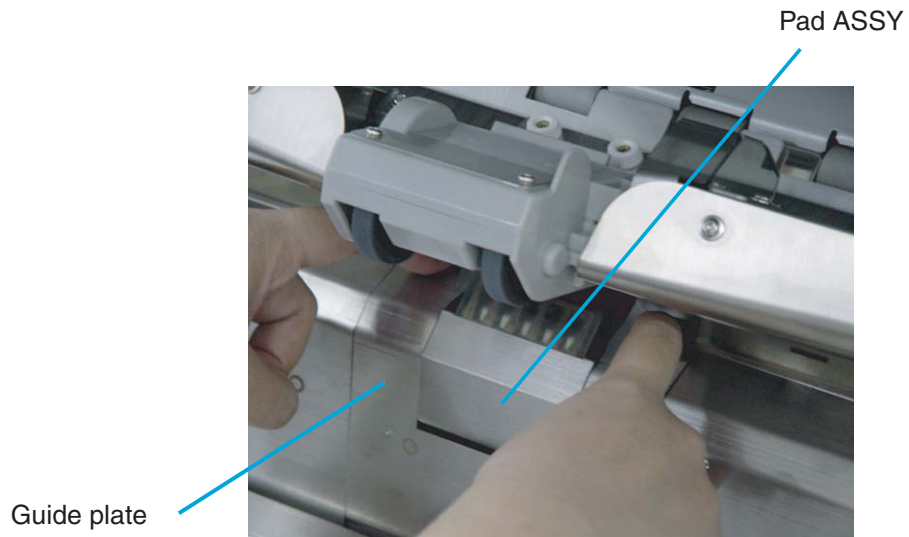
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



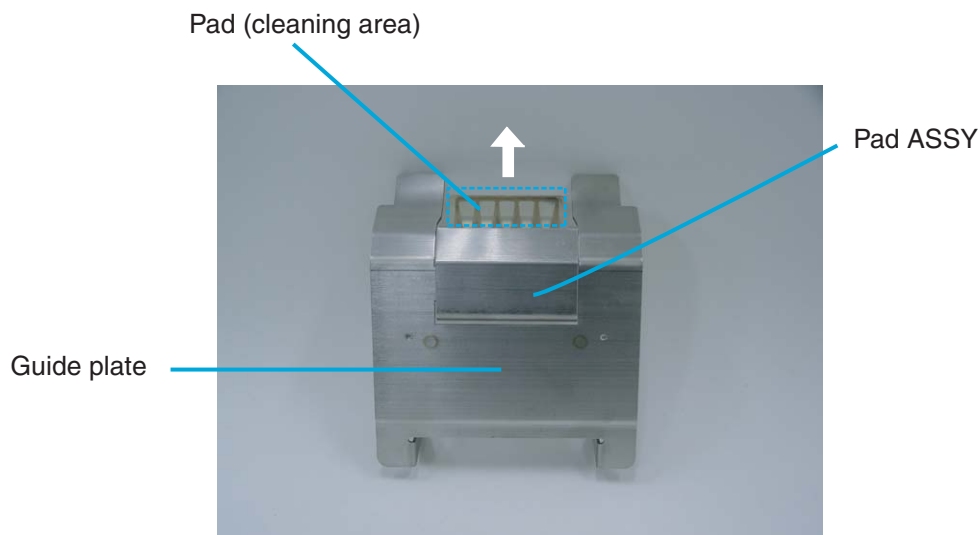
2. Pull the ADF release lever toward you and lift up the ADF upper sheet guide.



3. 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. **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 rotate 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, then lower the unit carefully and push the unit to close it completely.**

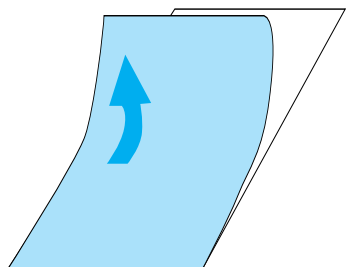
3.3 Cleaning the Rollers


■ Cleaning the rollers with the cleaning sheet

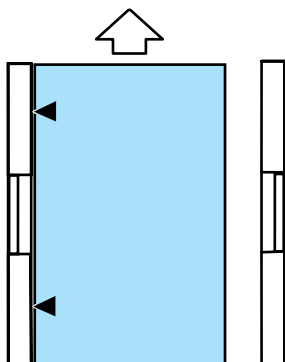
1. Set the Side guide for B4 size width.
2. Set the scanner in Test mode: For the details of the procedure, refer to the section "7.5 Test Mode Details" on page 7-72.
3. Press  (Next button) to show the following screen.

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

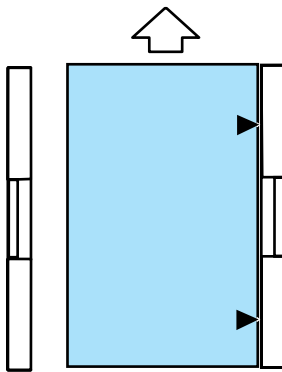
4. Remove the protective paper from the cleaning sheet.



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

Repeat steps 6 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 the lever on the right front of the Upper transport and then raise it.

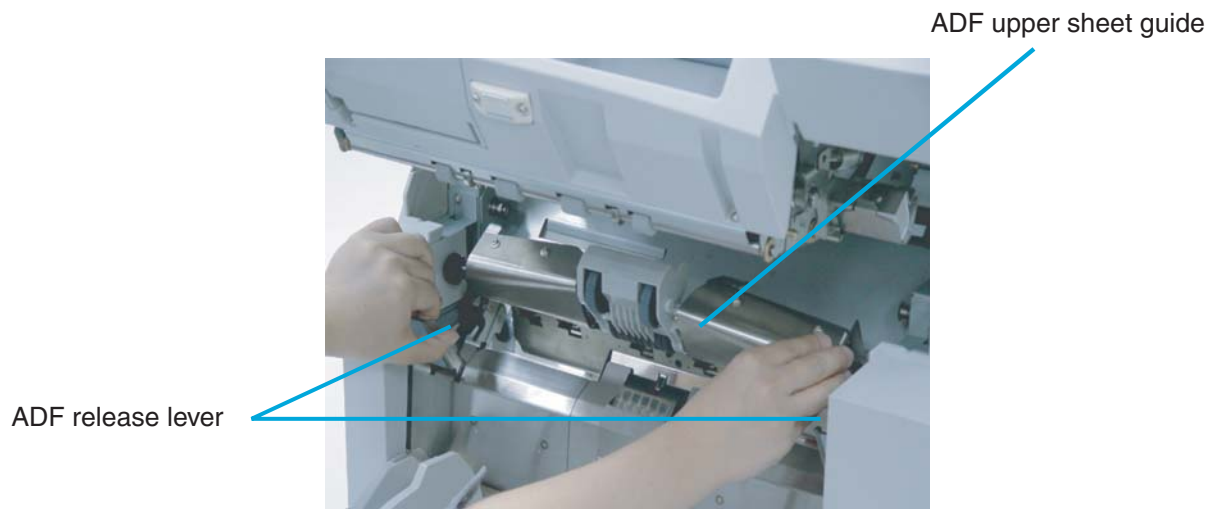


CAUTION

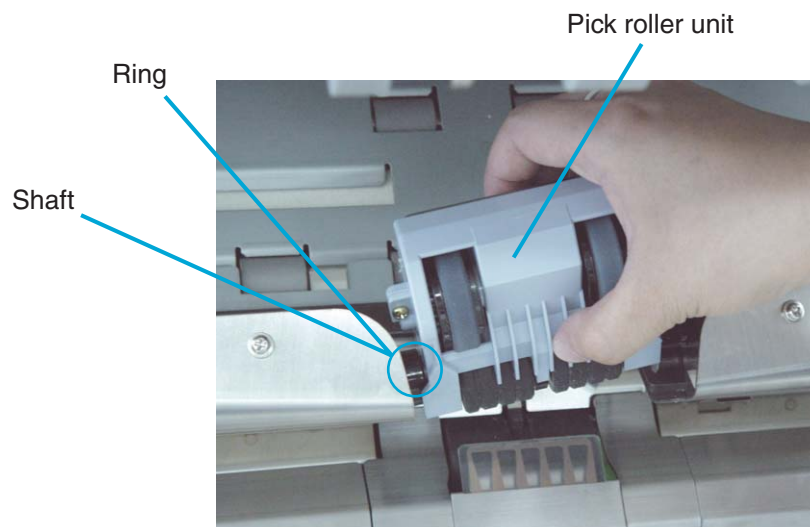
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



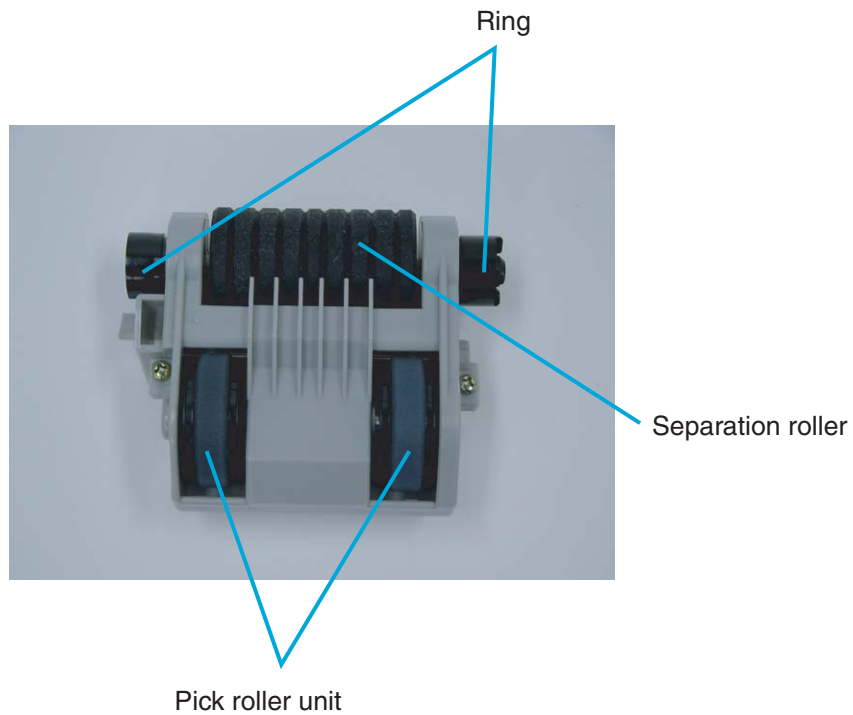
2. While pulling the ADF lever toward you, lift up the ADF upper sheet guide.



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 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ Cleaning the Brake roller unit

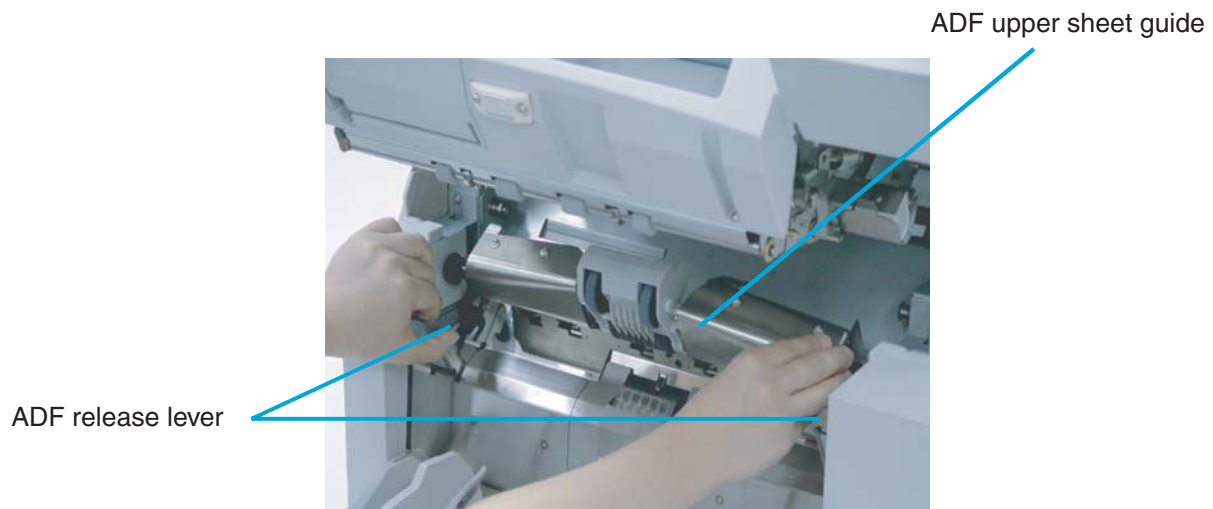
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



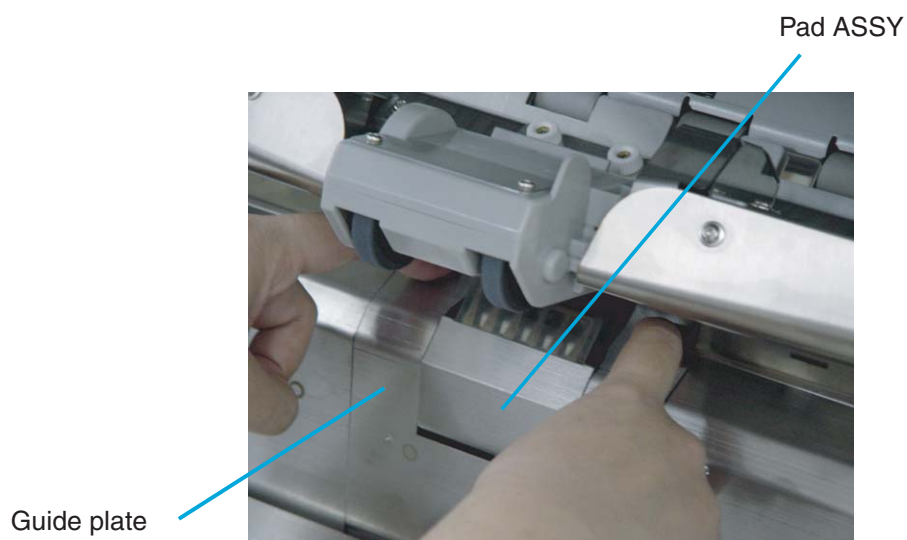
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



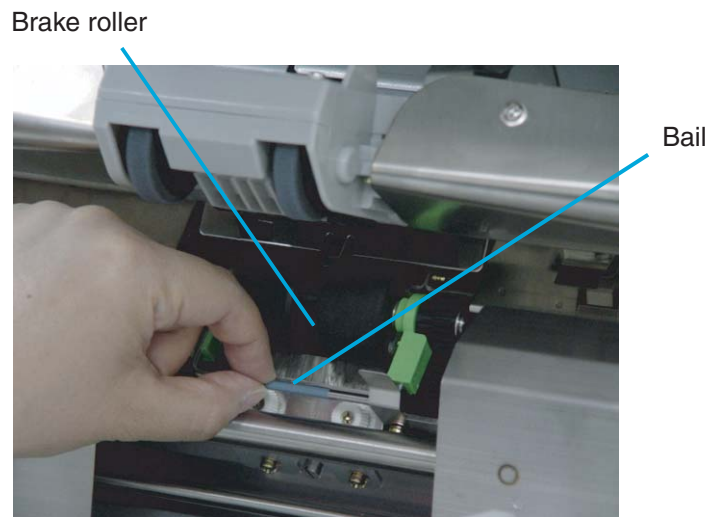
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



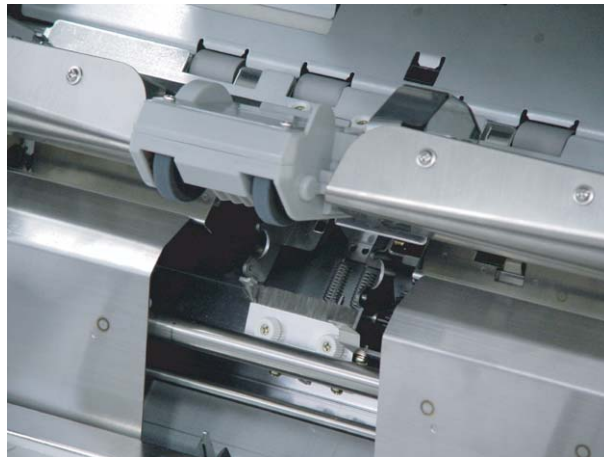
3. Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then pull the plate toward you to remove it.



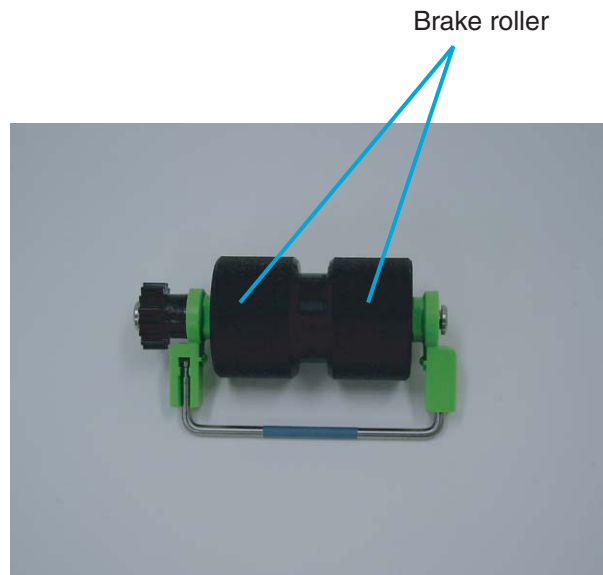
4. Turn the bail of the Brake roller upward and release the lock.



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 the 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ Cleaning the Feed rollers

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



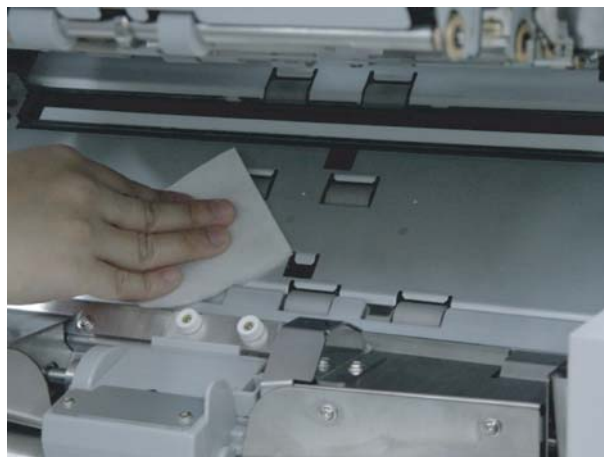
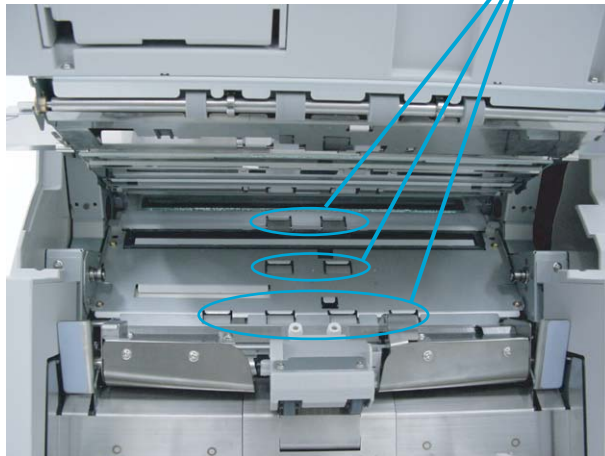
CAUTION

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



2. Wipe the metal 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.

Feed rollers (in 12 locations)



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

3. Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ Cleaning the Pinch rollers

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

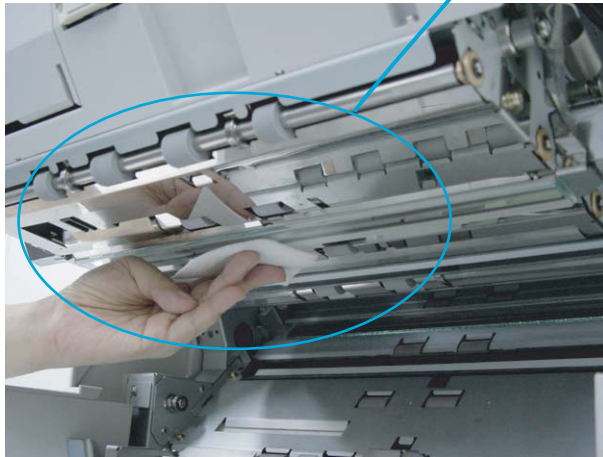


Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



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

Pinch roller (in 12 locations)



3. Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.

3.4 Cleaning the Transport Path

■ Cleaning the Transport path

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



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



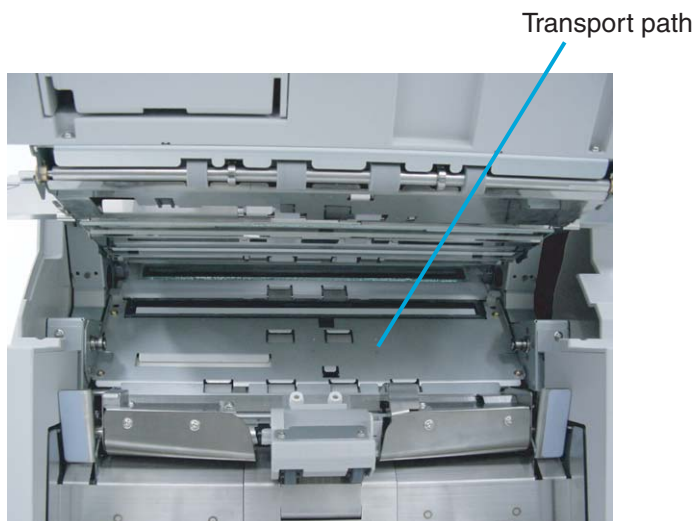
2. Wipe and clean the whole transport path using a cloth moistened with cleaner F1.



Vacuum the transport path if there are paper dust in the path.
Do not use aerosol sprays 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.

3.5 Cleaning the Discharge Brush

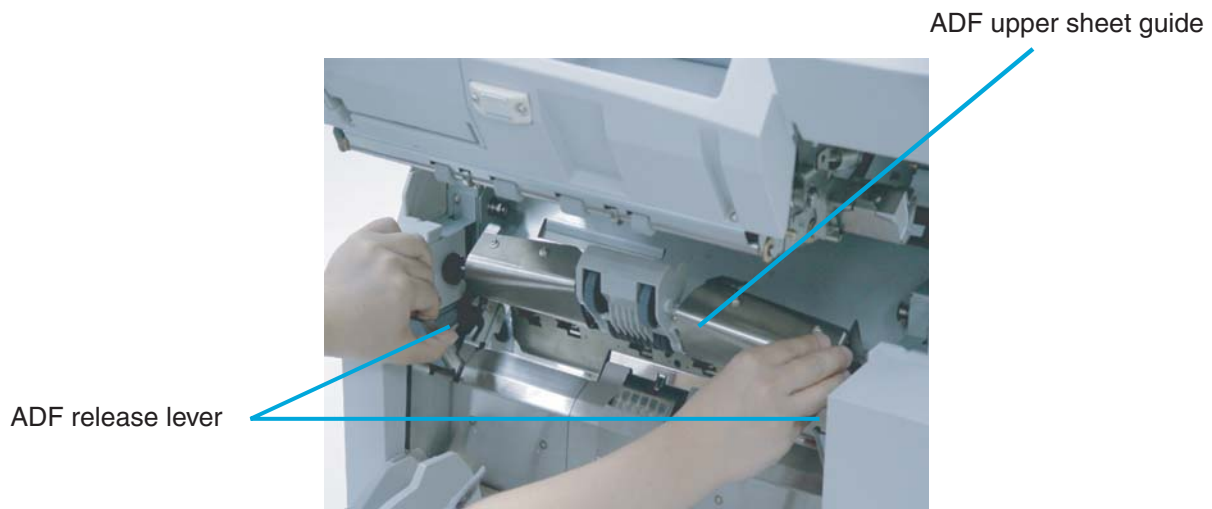
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



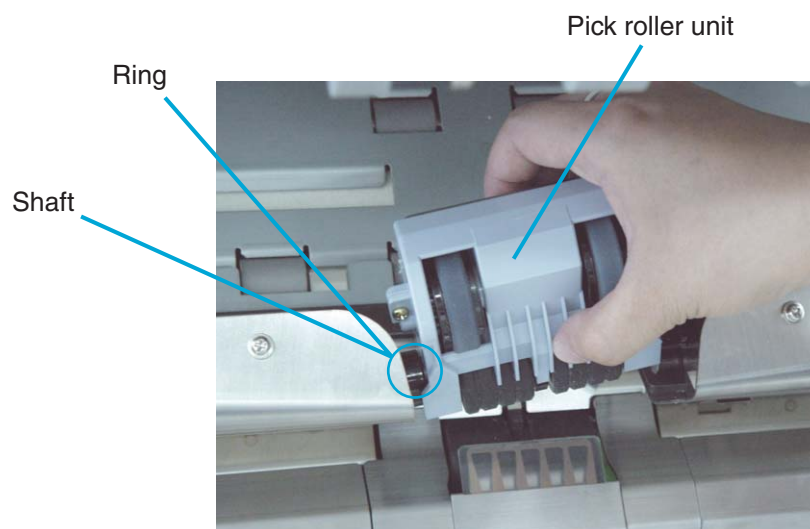
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



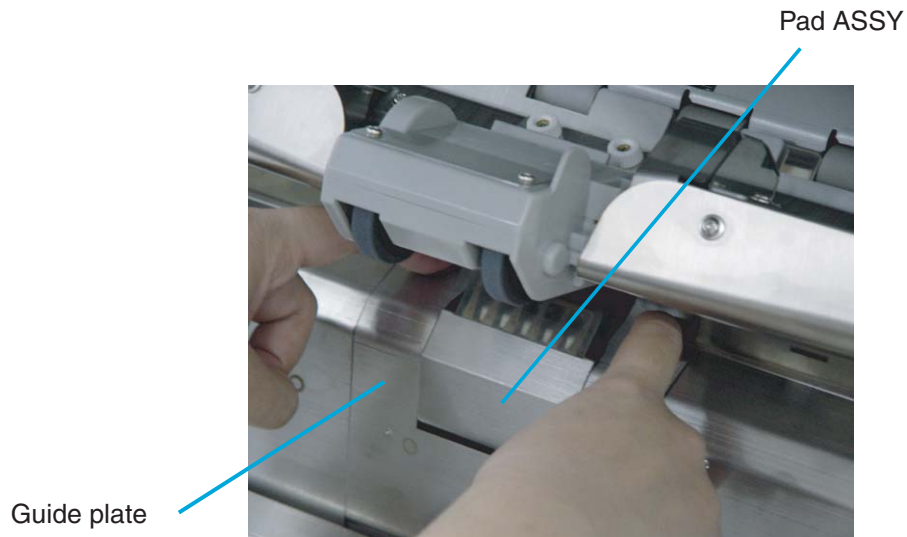
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



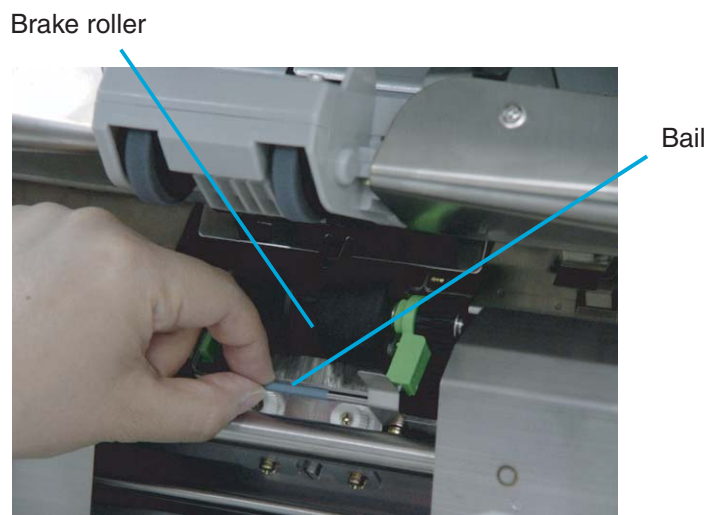
3. Slide the Pick roller unit to the left to disengage the clutch ring from the shaft.



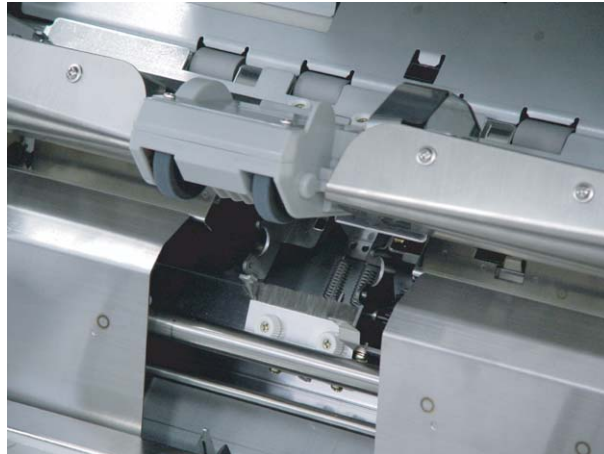
4. **Pressing down on the upper part of the Guide plate with your fingers at the two positions shown and then rotate the plate toward you to remove it.**



5. **Release the lock and then hold and rotate the bail of the Pick roller unit upward to release the lock.**

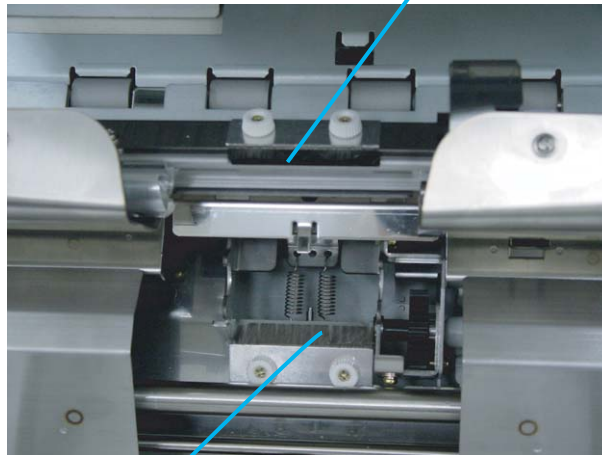


6. Pull the Brake roller unit toward you to remove it.



7. Using a dry cloth, 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)

8. 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.

-
- 9. 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.**
 - 10. Lower the ADF upper sheet guide slowly.**
 - 11. Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

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 down before touching.



Do not allow F1 cleaner to contact hot lamps.

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



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

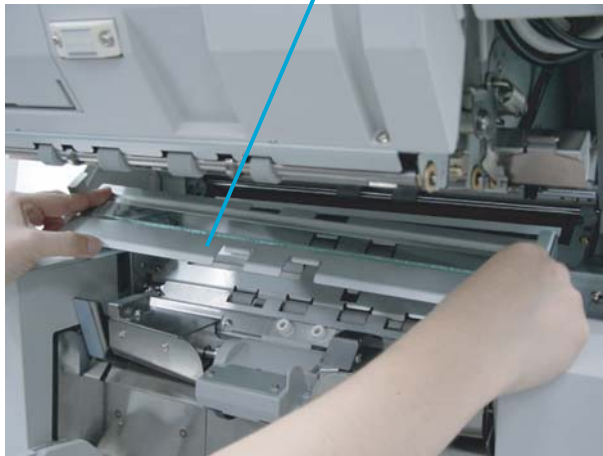


2. Use your index fingers to lift both ends of the removable sheet guide.

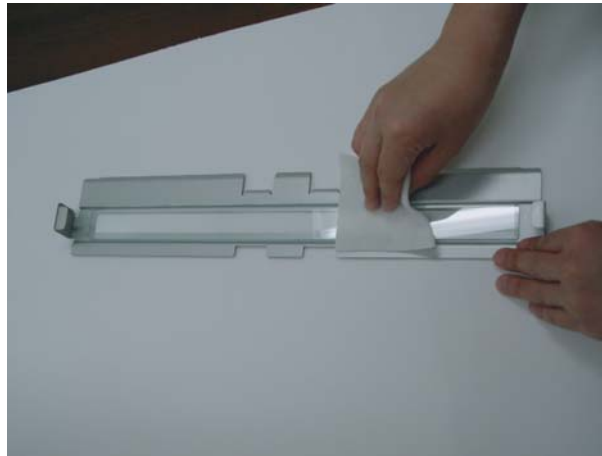


3. Lift the right side first.
4. Shift the sheet guide leftward while lifting it up to remove.

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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ Cleaning the Glass Sheet Guide



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



Do not allow F1 cleaner to contact hot lamps.

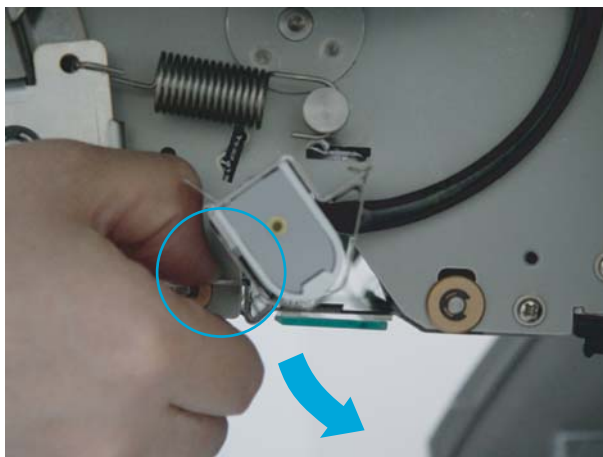
- 1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.**



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

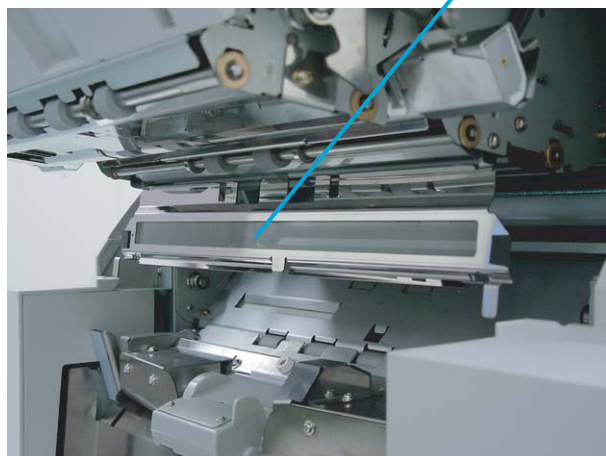


2. Push down on the Glass sheet guide tab to open the Glass sheet guide.

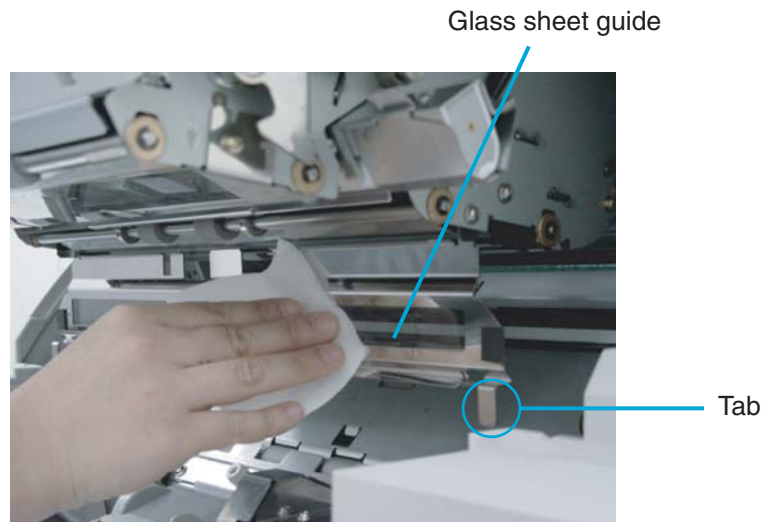


This picture is side View.

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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

3.7 Cleaning the Sensors

■ Cleaning the document width detection sensors (6 positions)

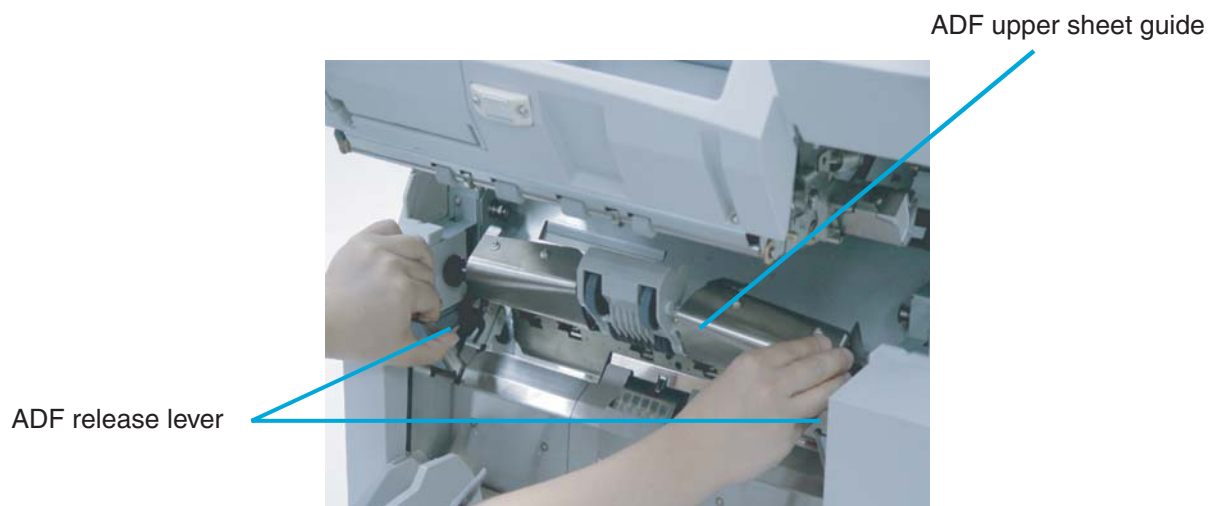
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



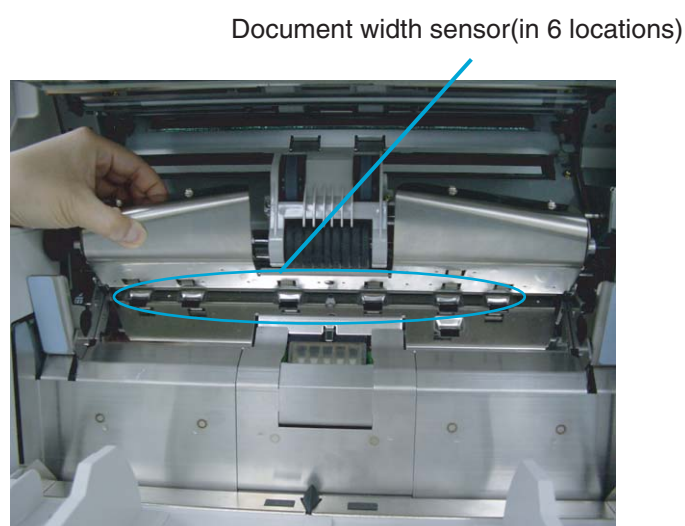
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



- 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

■ Cleaning the SF0 sensor and SF1 sensor.

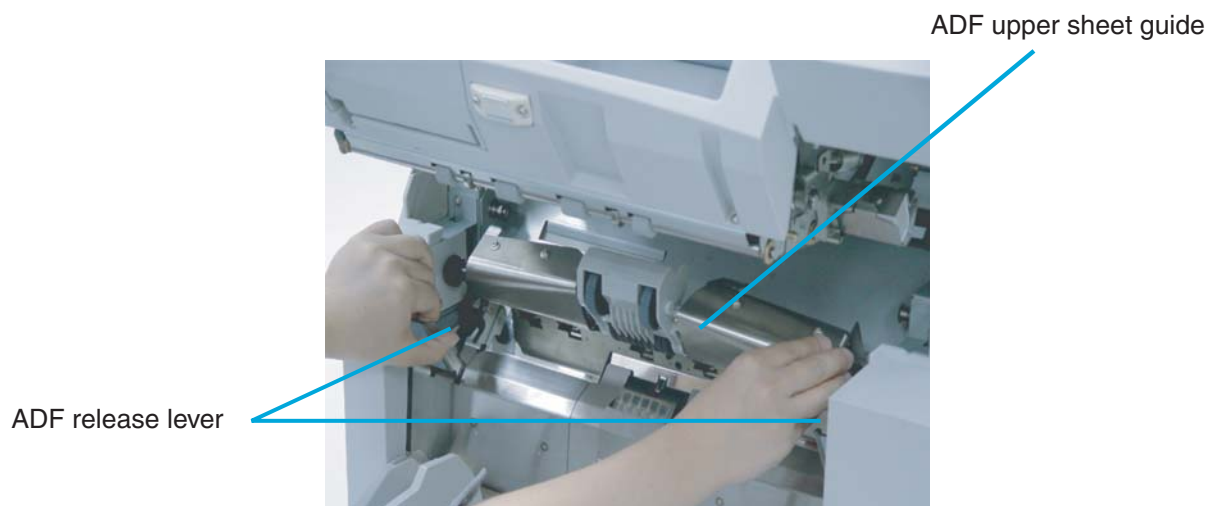
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



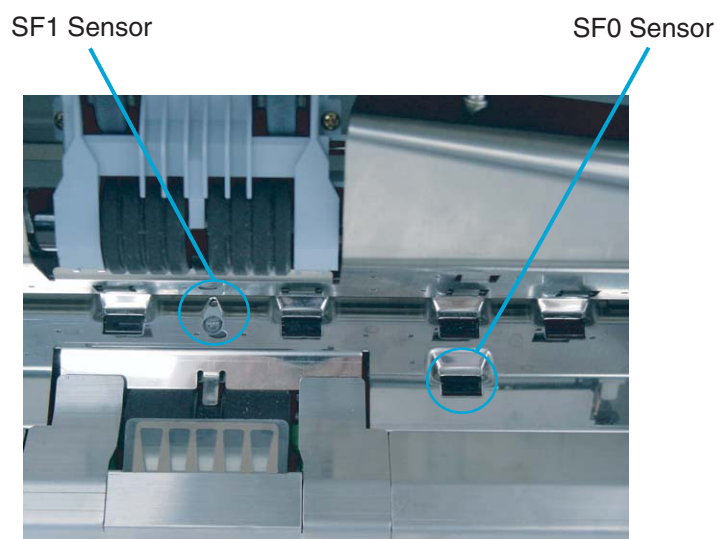
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



- 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

■ Cleaning the SF1.5 sensor and SF2 sensor

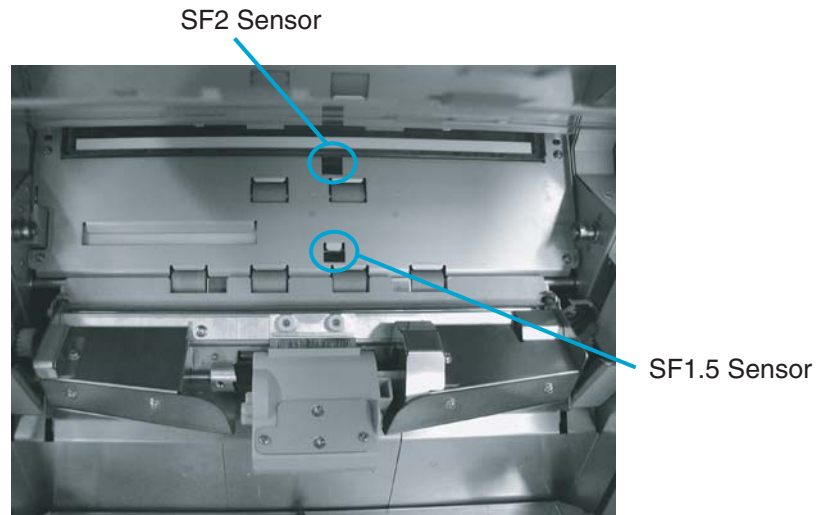
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower it 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

3.8 Cleaning the Lamps



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



Never replace the Lamp without turning off the power.



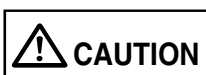
Do not allow F1 cleaner to contact hot lamps.

3

DAILY CARE

■ Front-side lamp

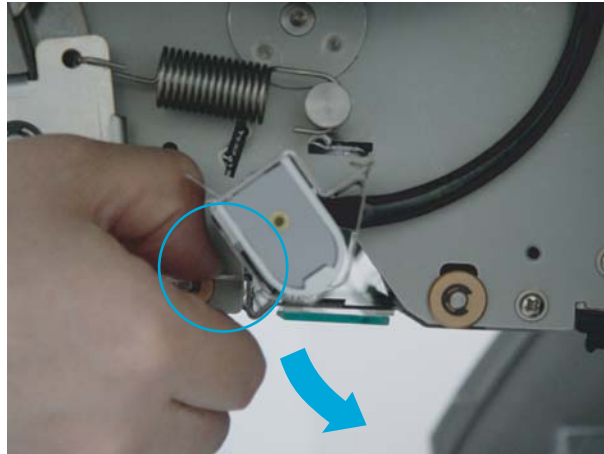
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



Raise the Upper transport unit fully, then lower it 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.

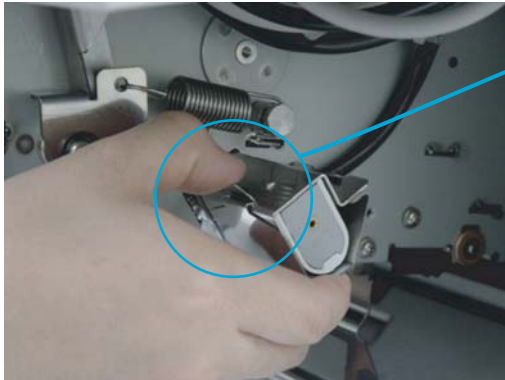


This picture is side View.

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.

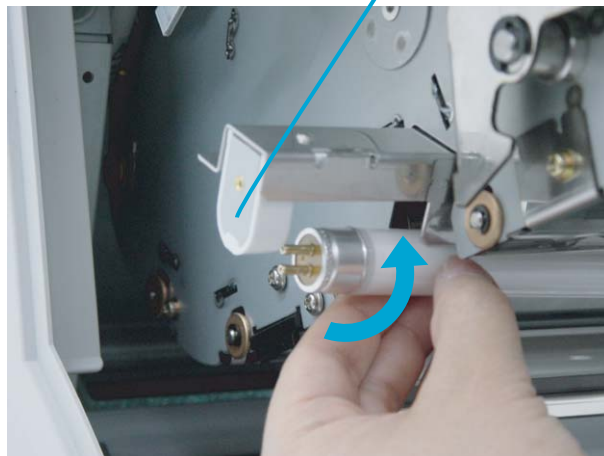


Tab

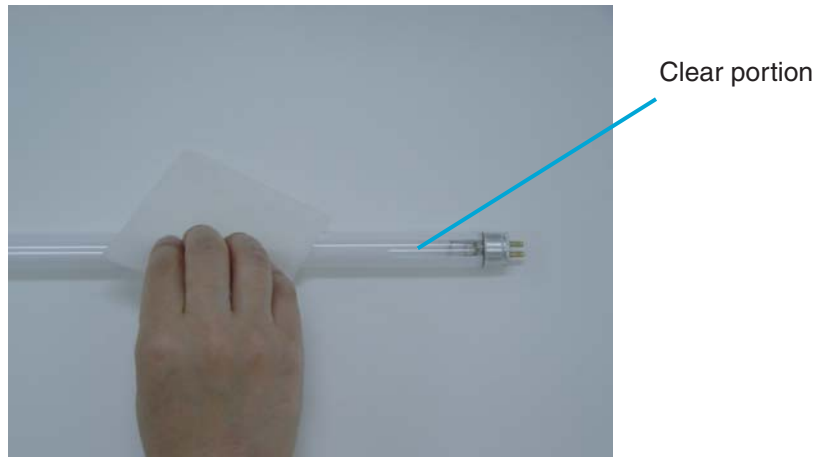


4. Rotate the Lamp a half turn so that the terminals on each end align with the slot on the Lamp socket. Then remove the Lamp from the socket.

Lamp socket



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

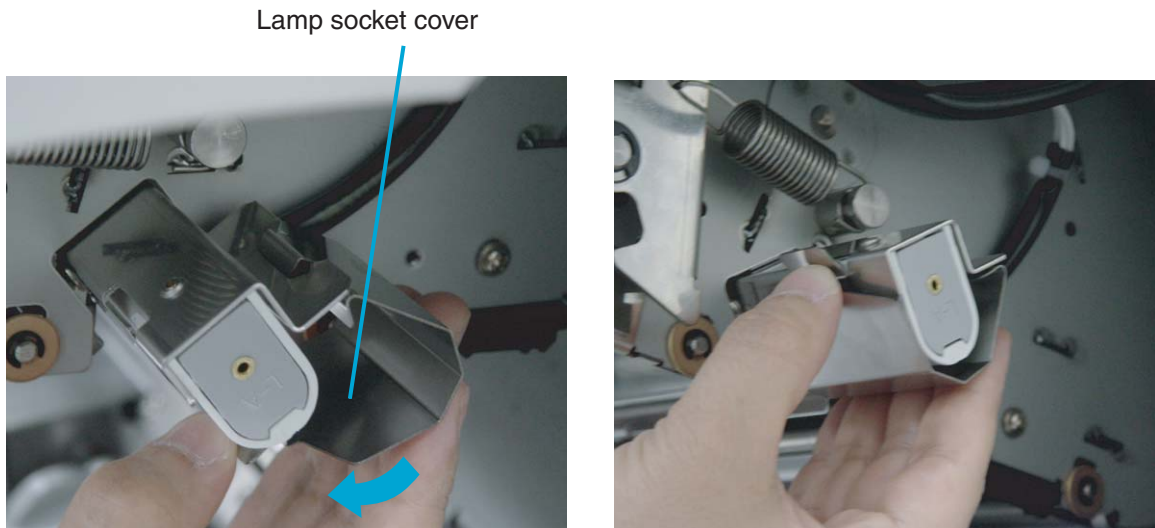


6. **Attach the front-side Lamp in the reverse order of its removal. Make sure that the clear portion of the Lamp faces down.**



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

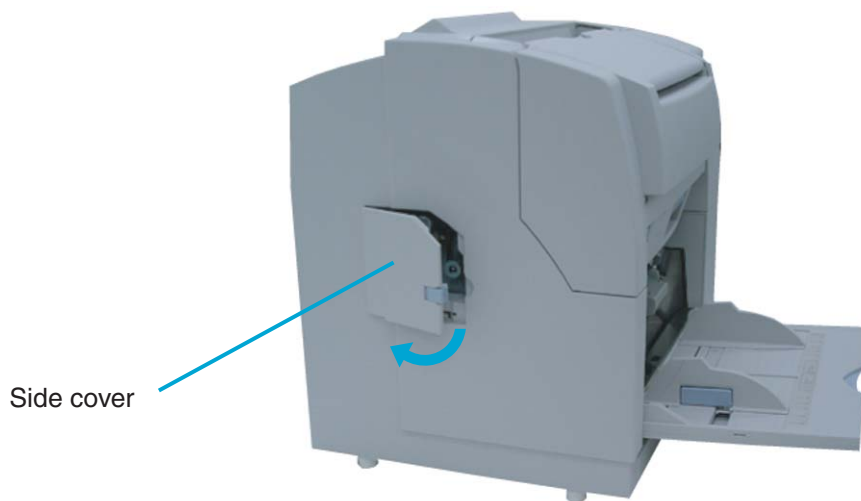
7. **Attach the Lamp socket cover in the reverse order of its removal. Engage the socket cover hook to the Lamp frame then rotate forward as shown below, to attach the covers.**



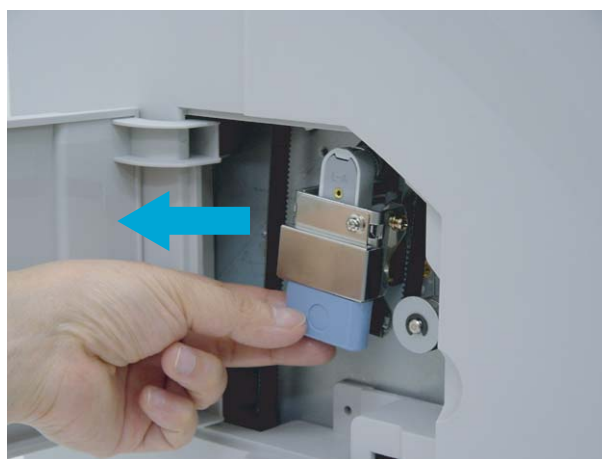
8. **Close the Glass sheet guide. Make sure that the guide is fixed firmly.**
9. **Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.**

■ Back-side lamp

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

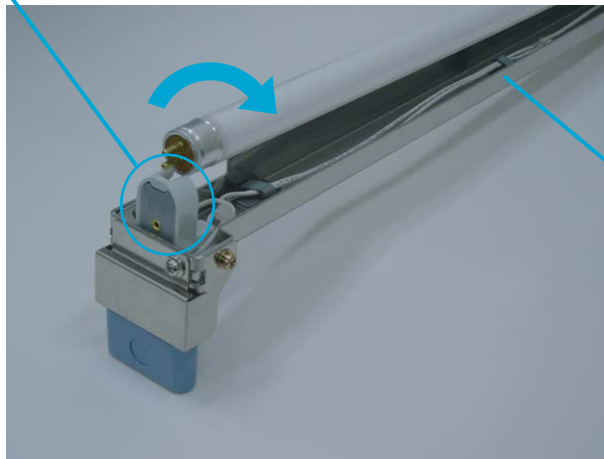


2. Hold the handle (blue part) and pull the Back-side lamp unit out of the scanner.



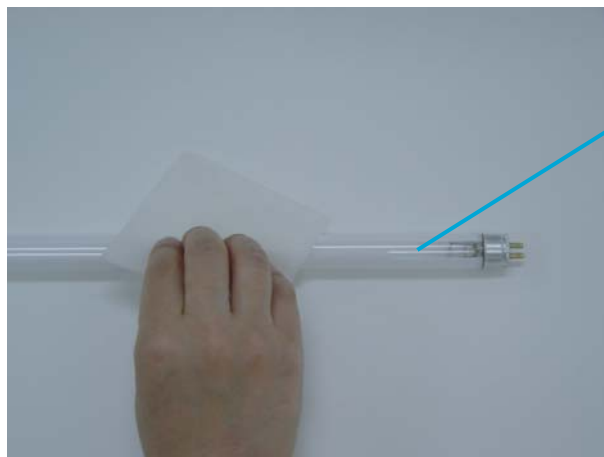
3. Rotate the Lamp a half turn so that the terminals on each end align with the slot on the Lamp socket and remove the Lamp from the unit.

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.....	4-2
4.2 How to check the Abrasion Counter.....	4-3
4.3 Replacing the Pad ASSY.....	4-4
4.4 Replacing the Pick Roller Unit	4-9
4.5 Replacing the Brake Roller Unit.....	4-12
4.6 Replacing the Front-side Lamp.....	4-15
4.7 Replacing the Back-side Lamp	4-20

4.1 Consumables and Replacement Cycle

The following table lists the Part No. and the standard replacement cycle of the consumables. It is recommended that you stock extra consumables before the ones in the scanner reach the end of Their service 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 4,000,000 characters

The replacement cycle is based on the printing on Letter/A4 woodfree paper or wood containing paper documents (21lb [80 g/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.

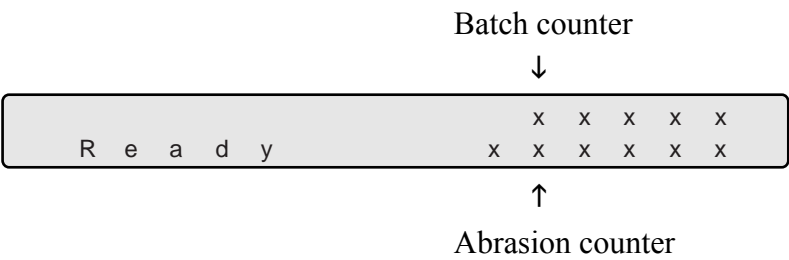


Use the correct Print cartridge. The Scanner may be damaged if the wrong Print cartridge is installed.

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 the "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

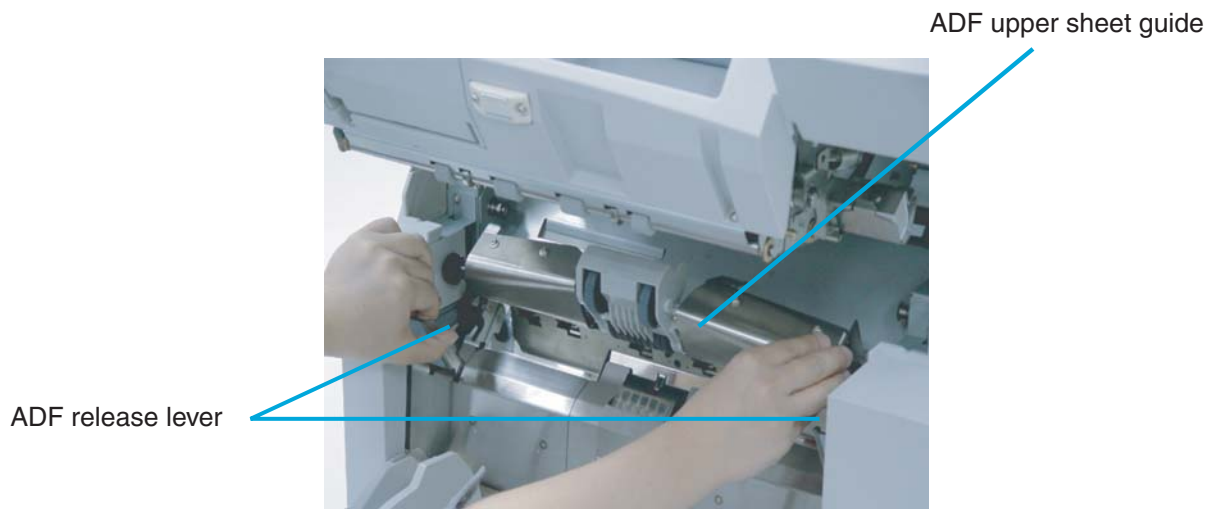
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



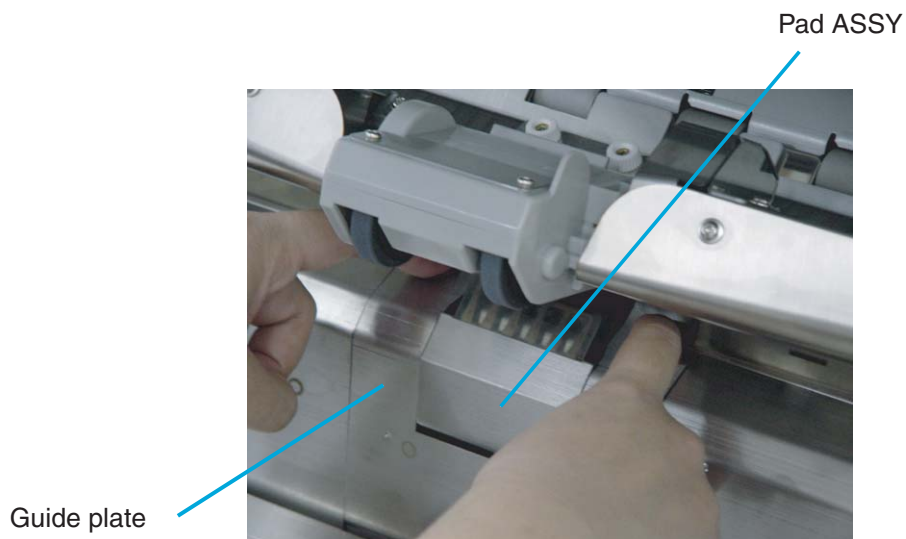
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.

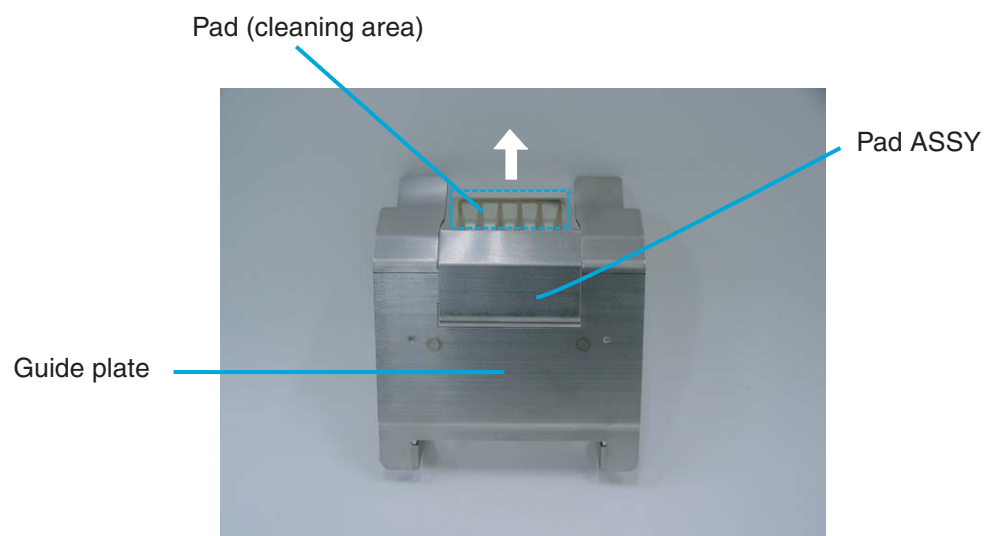
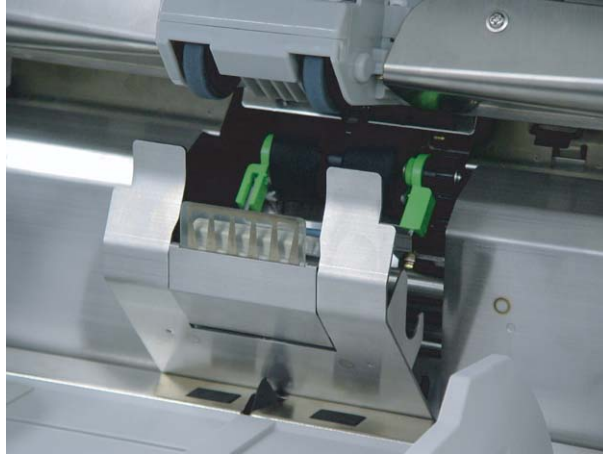


2. Pull the ADF release lever toward you and lift up the ADF sheet guide.

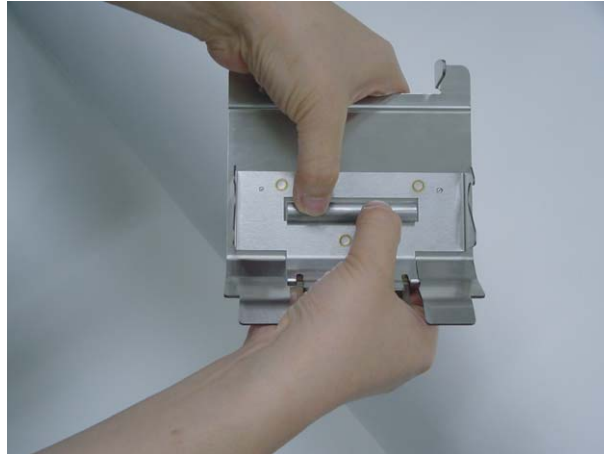


3. Press down on the upper part of the Guide plate with your fingers at the two positions shown and then rotate the plate toward you to remove it.

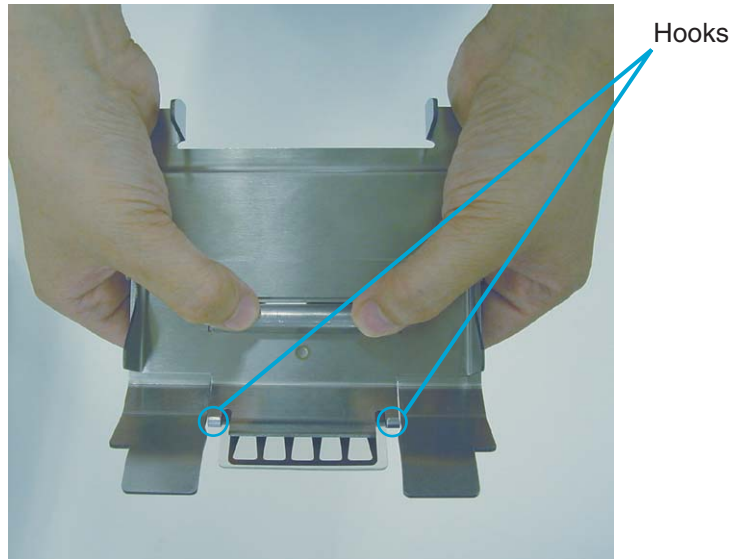




4. Remove the Pad ASSY from the Guide plate by pushing the removal metal scroll down and then release hooks.



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 occur.

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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**
9. **Clear the Pad counter.**
Please refer to the section “7.3 Setup Mode Details”, “ 9. Abrasion counter (Abrasion CNT) reset” on page 7-33.

4.4 Replacing the Pick Roller Unit

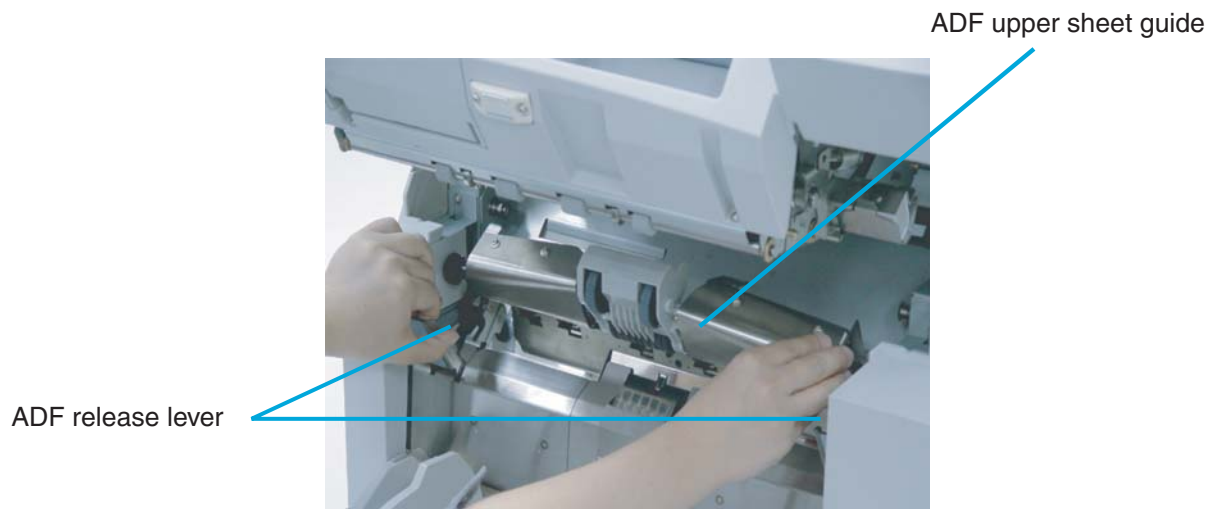
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



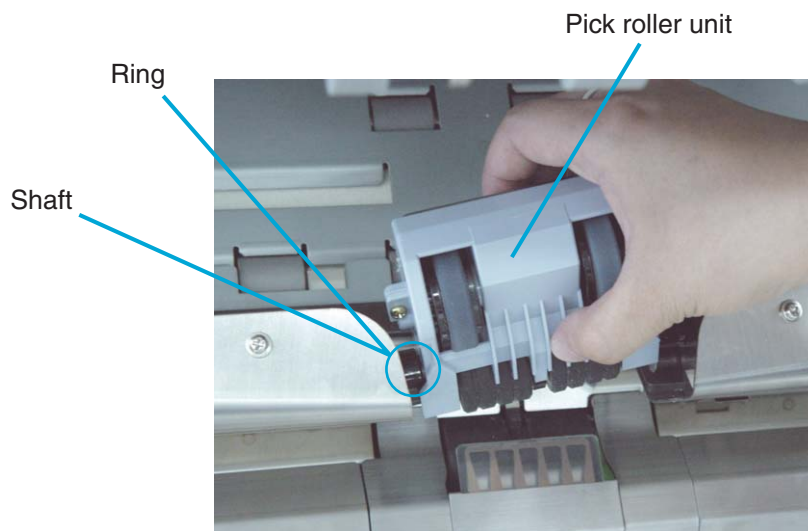
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**
7. **Clear the Pick roller counter.**

Please refer to the section “7.3 Setup Mode Details”, “ 9. Abrasion counter (Abrasion CNT) reset ” on page 7-33.

4.5 Replacing the Brake Roller Unit

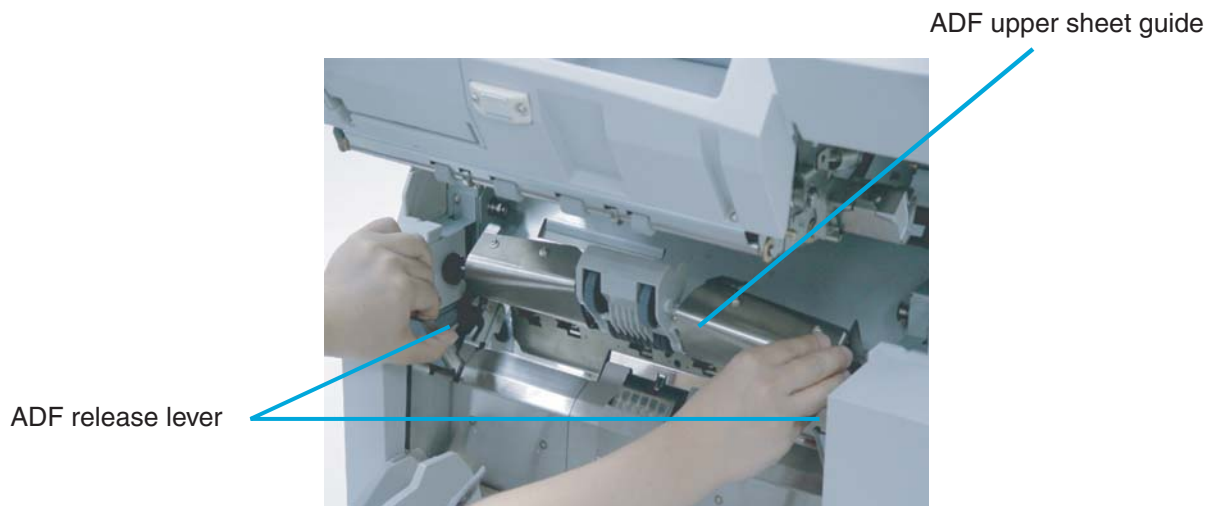
1. Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.



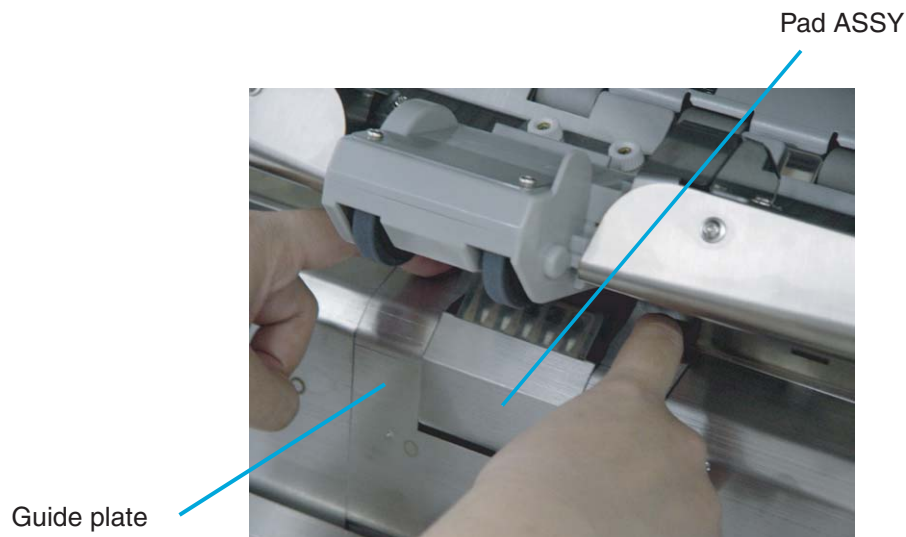
Raise the Upper transport unit fully, then lower it to engage lock before you put your hands inside of the scanner.



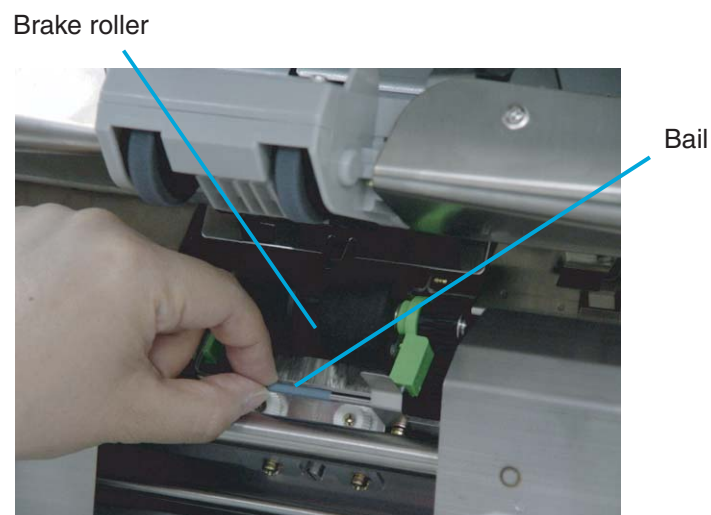
2. Pull the ADF release lever toward you and lift up the ADF sheet guide.



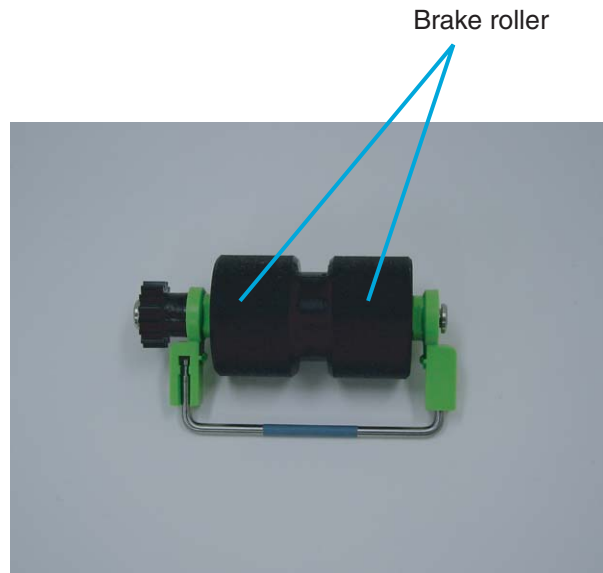
3. Press down on the upper part of the Guide plate with your fingers at the two positions shown and rotate the plate toward you to remove it.



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 the 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 to release the safety lock, then lower the unit carefully and push the unit to close it completely.**
10. **Clear the Brake roller counter.**

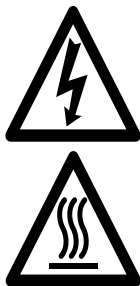
Please refer to the section “7.3 Setup Mode Details”, “ 9. Abrasion counter (Abrasion CNT) reset ” on page 7-33.

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.



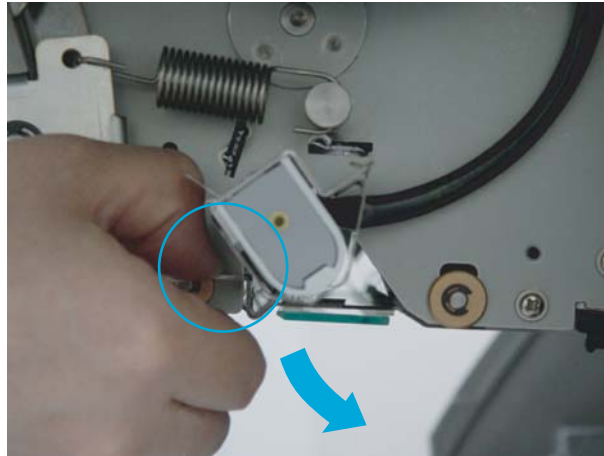
1. **Remove documents from the stacker. Pull up the lever on the right front of the Upper transport and then raise it.**



Raise the Upper transport unit fully, then lower it 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.

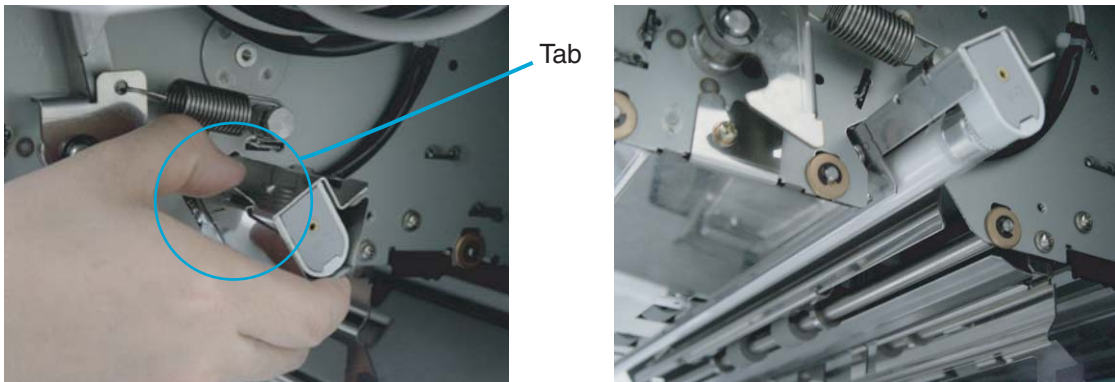


This picture is side View.

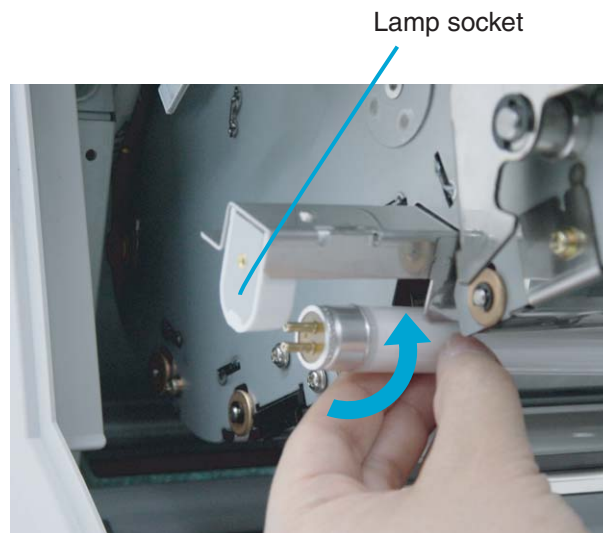
Glass sheet guide



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.

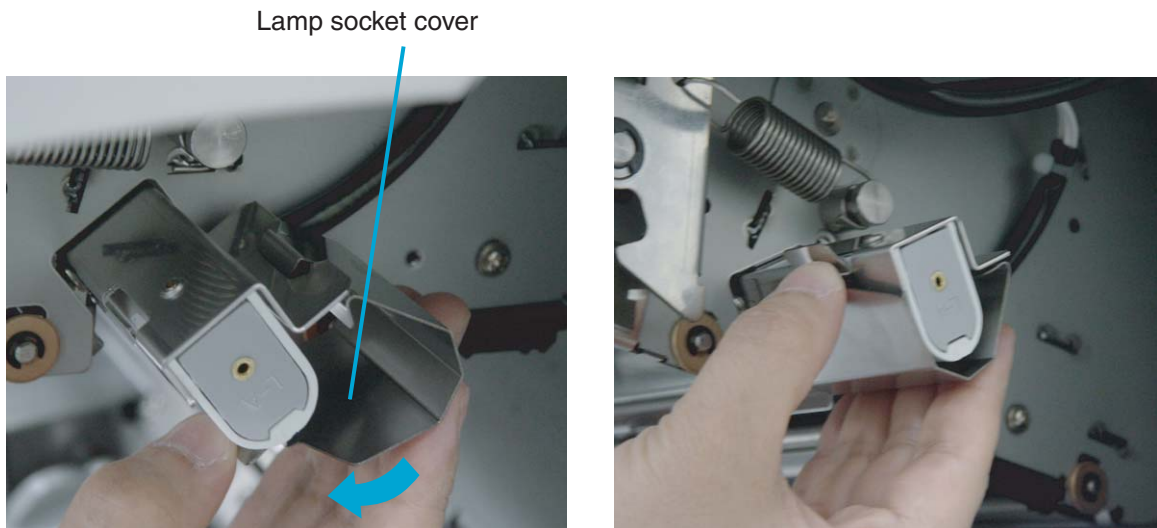


5. **Install a new Lamp in the reverse order of the removal. Make sure that the clear portion of the Lamp faces down.**



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 unit slowly, then push the unit to close it completely.**
9. **Clear the Front-side lamp counter.**
Please refer to the section "7.3 Setup Mode Details", " 9. Abrasion counter (Abrasion CNT) reset " on page 7-33.



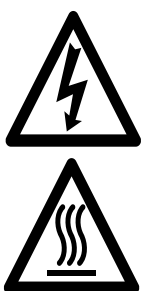
You can check the cumulative lamp-on time from the Operator panel Test mode.

For the details, refer to the section "7.5 Test Mode Details " " 3. Display the cumulative lamp-on time " on page 7-81.

4.7 Replacing the Back-side Lamp

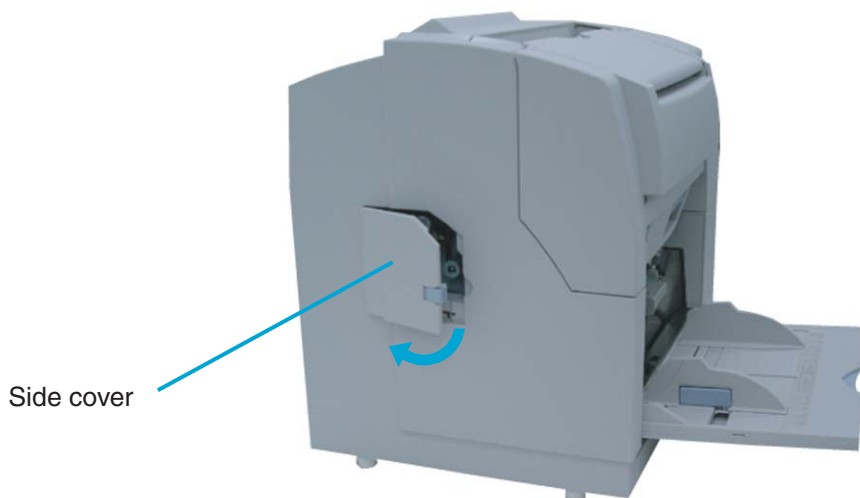


Never replace the Lamp without turning off the power.

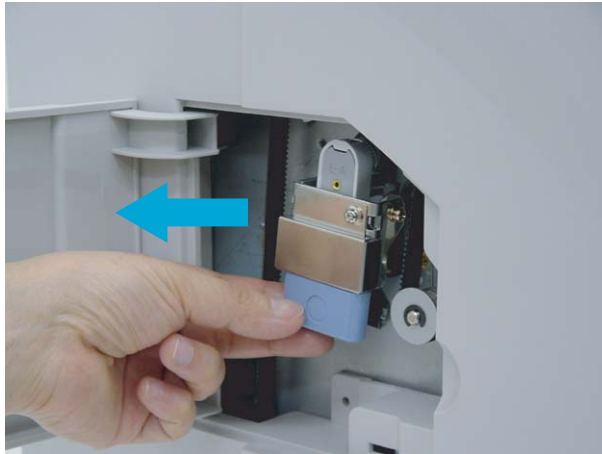


Wait 5 minutes after turning off the power before touching the Lamp.

-
1. Pull and open the side cover.

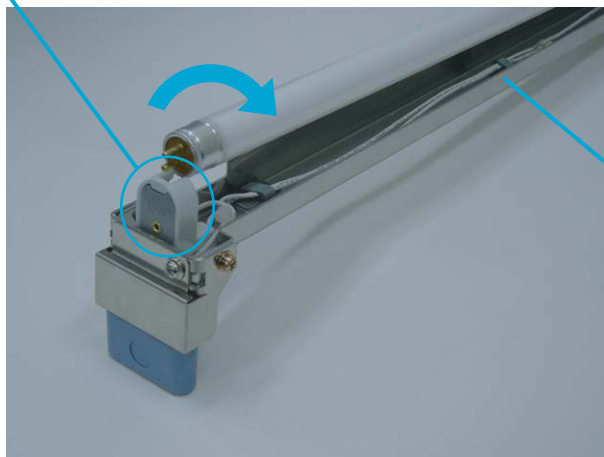


2. Hold the handle (blue part) and pull out the Back-side lamp unit.



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.

Lamp socket



Backside lamp 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 (Abrasion CNT) reset ” on page 7-33.



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" on page 7-81.

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.

5.1 Clearing Document Jams5-2

5.2 Troubleshooting5-8

5.3 Before Contacting a Service Provider5-29

5.4 Labels on the Scanner5-31

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 may be hot during the operation. Take care not to get burned.
-

■ Removing jams from the hopper or the transport path

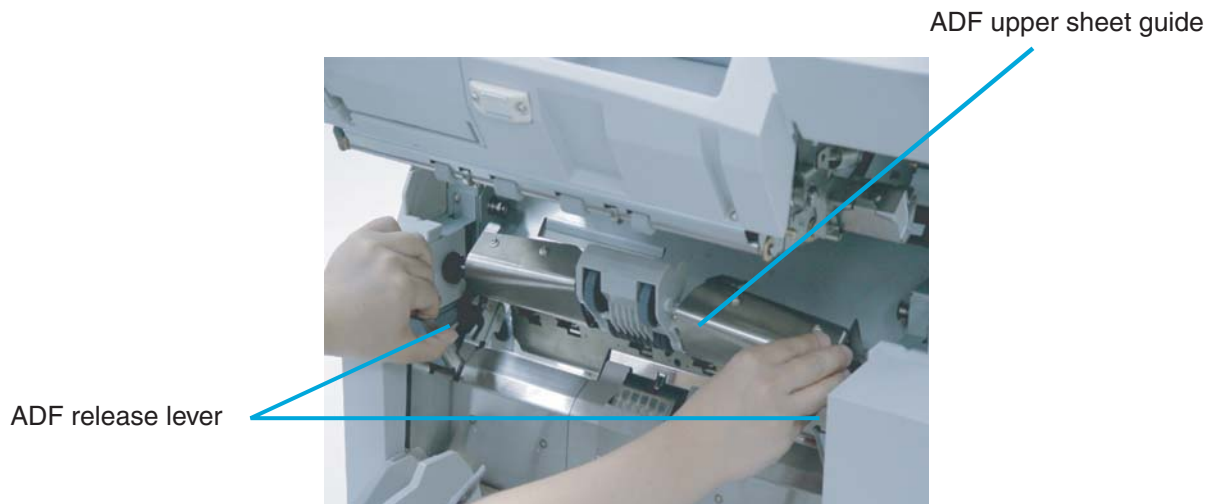
1. **Remove the documents on the stacker. Pull up the lever on the right front of the Upper transport and then raise it.**



Raise the Upper transport unit fully, then lower it 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. Remove the jammed document.

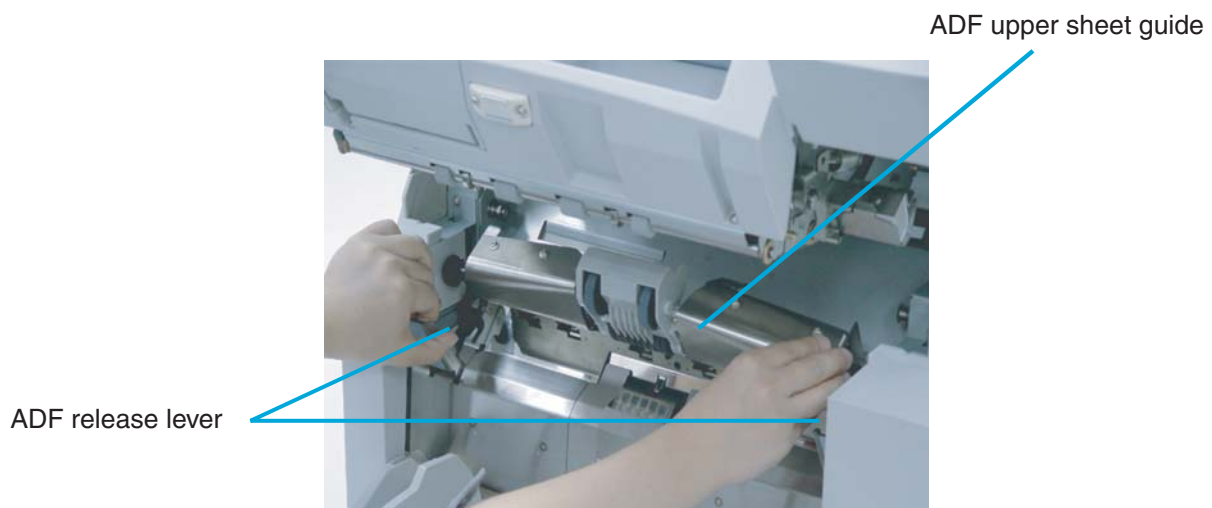


- Staples and paper clips etc. can cause document jams.
- Make sure you check the document and the document transport path for obstructions before you start scanning again.
- Remove staples and paper clips from the documents before you start scanning.

4. Lower the ADF upper sheet guide carefully.
5. Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ Removing jams from the eject mechanism.

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



2. Pull out the jammed document to the stacker.
3. Lift the Upper transport unit to release the safety lock, then lower the unit carefully and push the unit to close it completely.

■ 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 Basic Operations of the Operator Panel", "Using the setup and the test modes" on page1-10.

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: Medium |
| (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	Medium strong		
Medium	Medium	Medium (Factory default setting)		
Medium Thin	Medium Thin	Medium Weak		
Thin	Thin	Weak		

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.

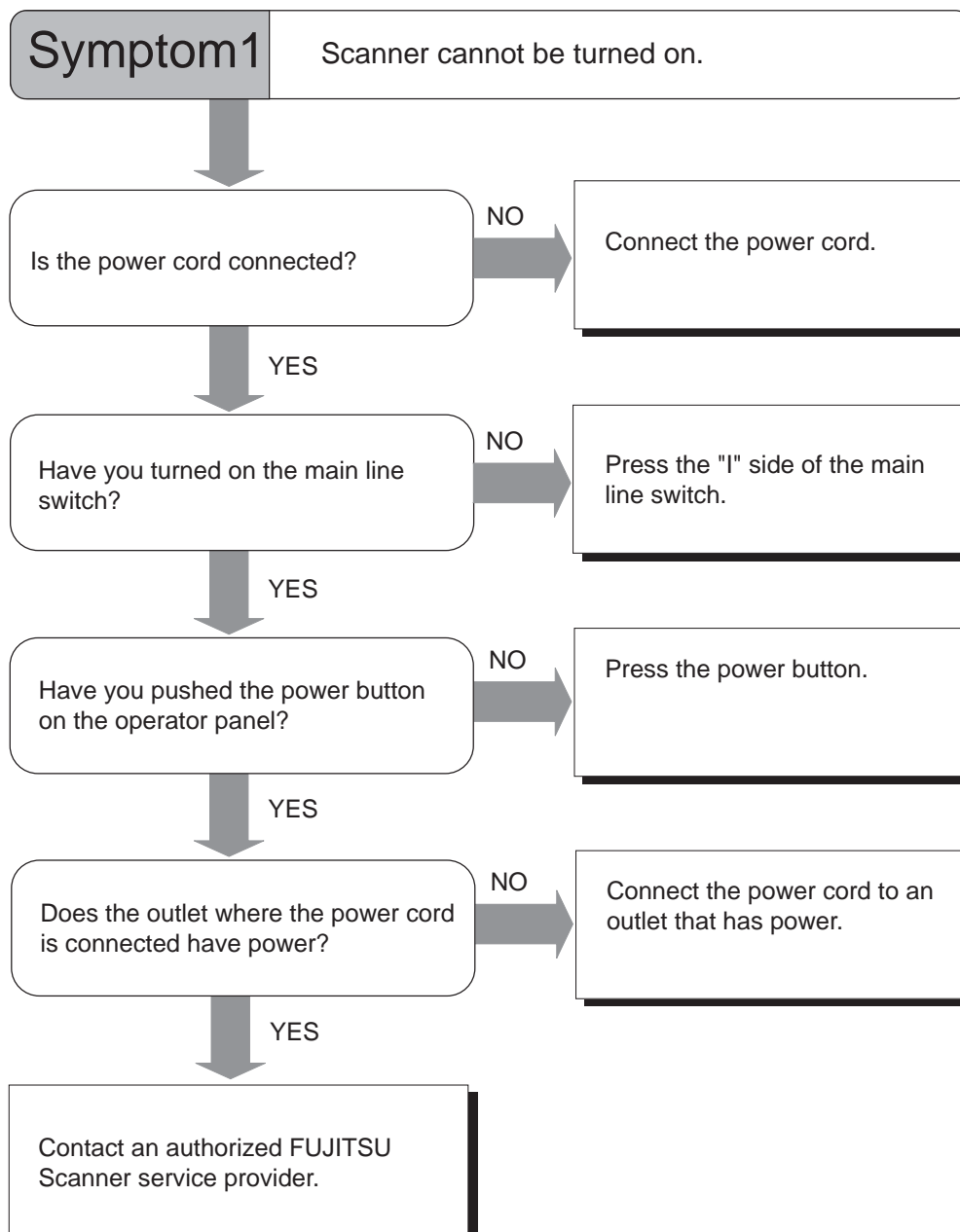
Pick speed	Mis-pick occurs frequently
Fast (Factory default)	↓ Decrease pick speed
Mid	
Slow	

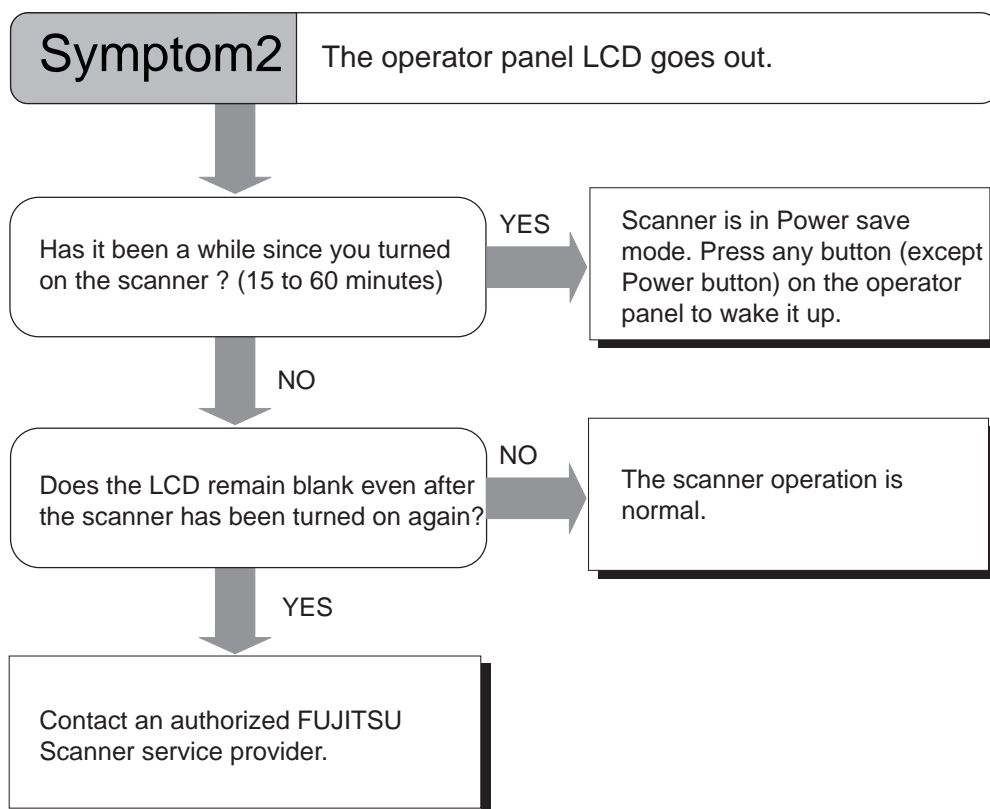


When you set pick speed at "Mid" or "Slow", scanning speed is reduced.

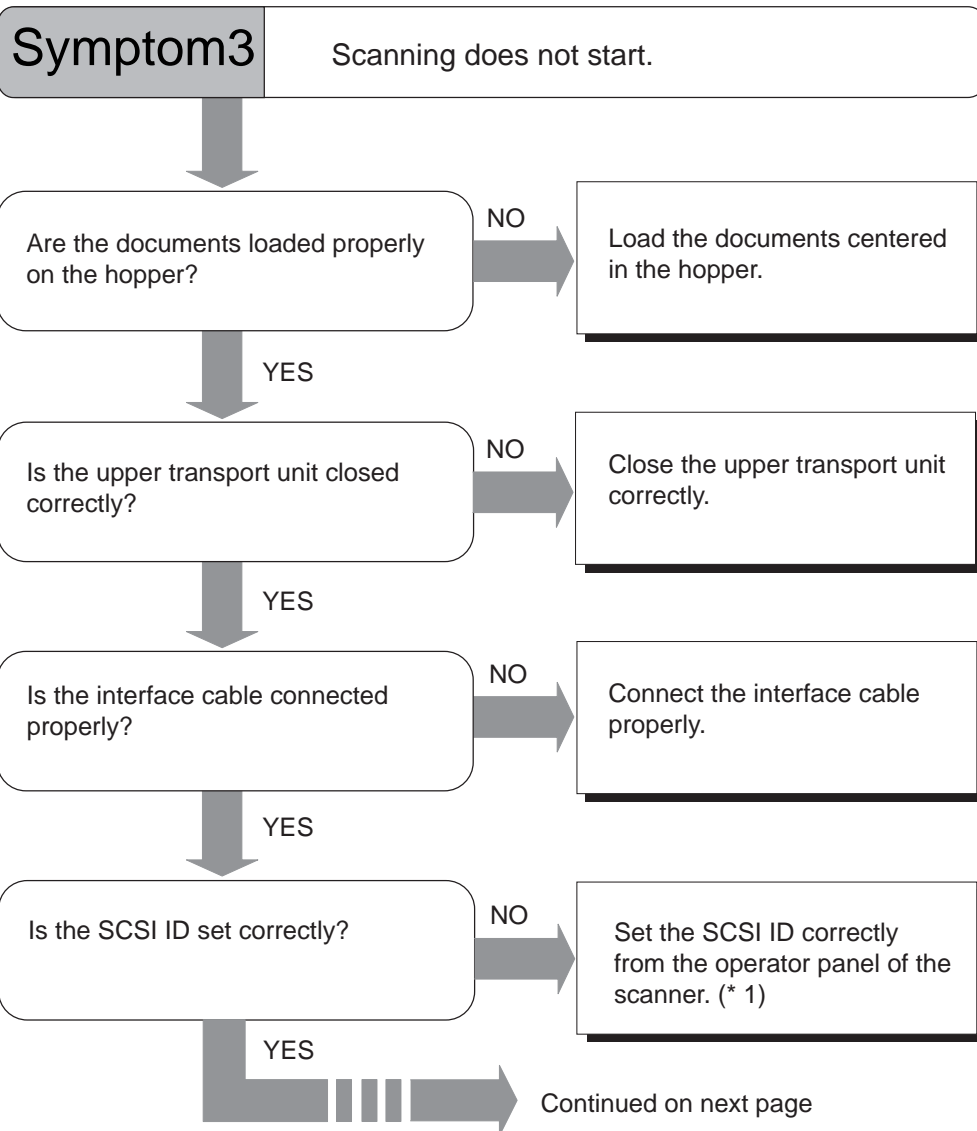
5.2 Troubleshooting

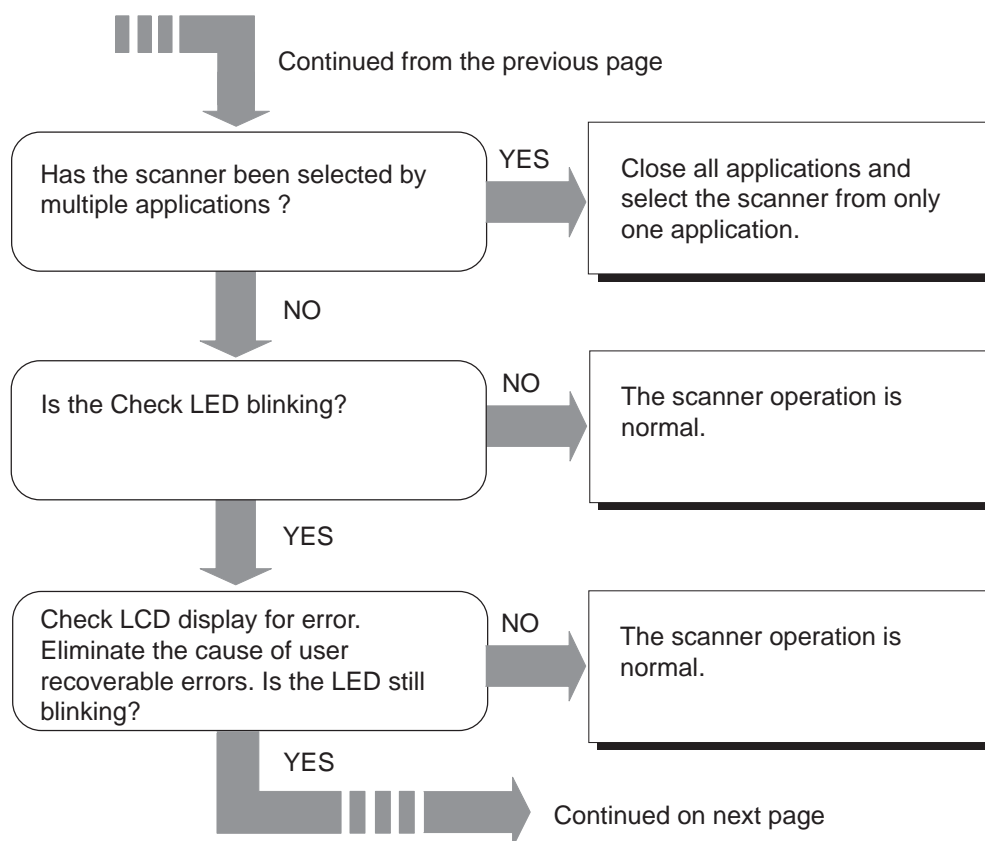
This section describes common troubles during usage and how to remedy the troubles. Before you ask for repair service, check the following flowchart to determine the trouble. If you can not resolve the trouble after following the flowcharts, please check the items in section "5.3 Before Contacting a Service Provider" on page 5-29, and then contact an authorized FUJITSU Scanner service provider.

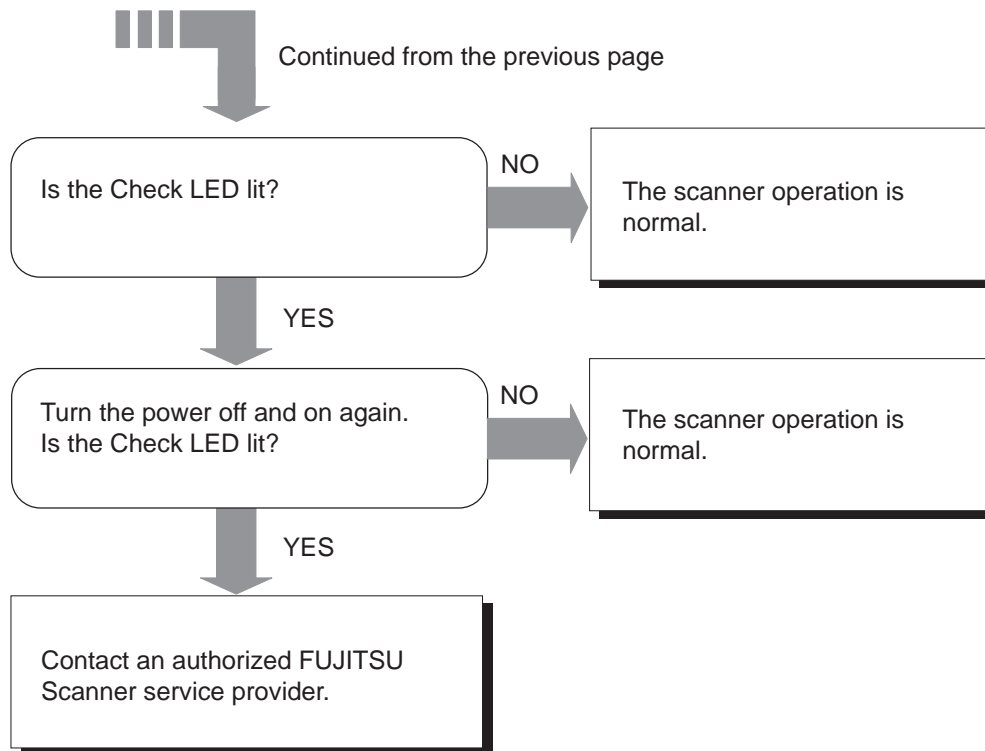




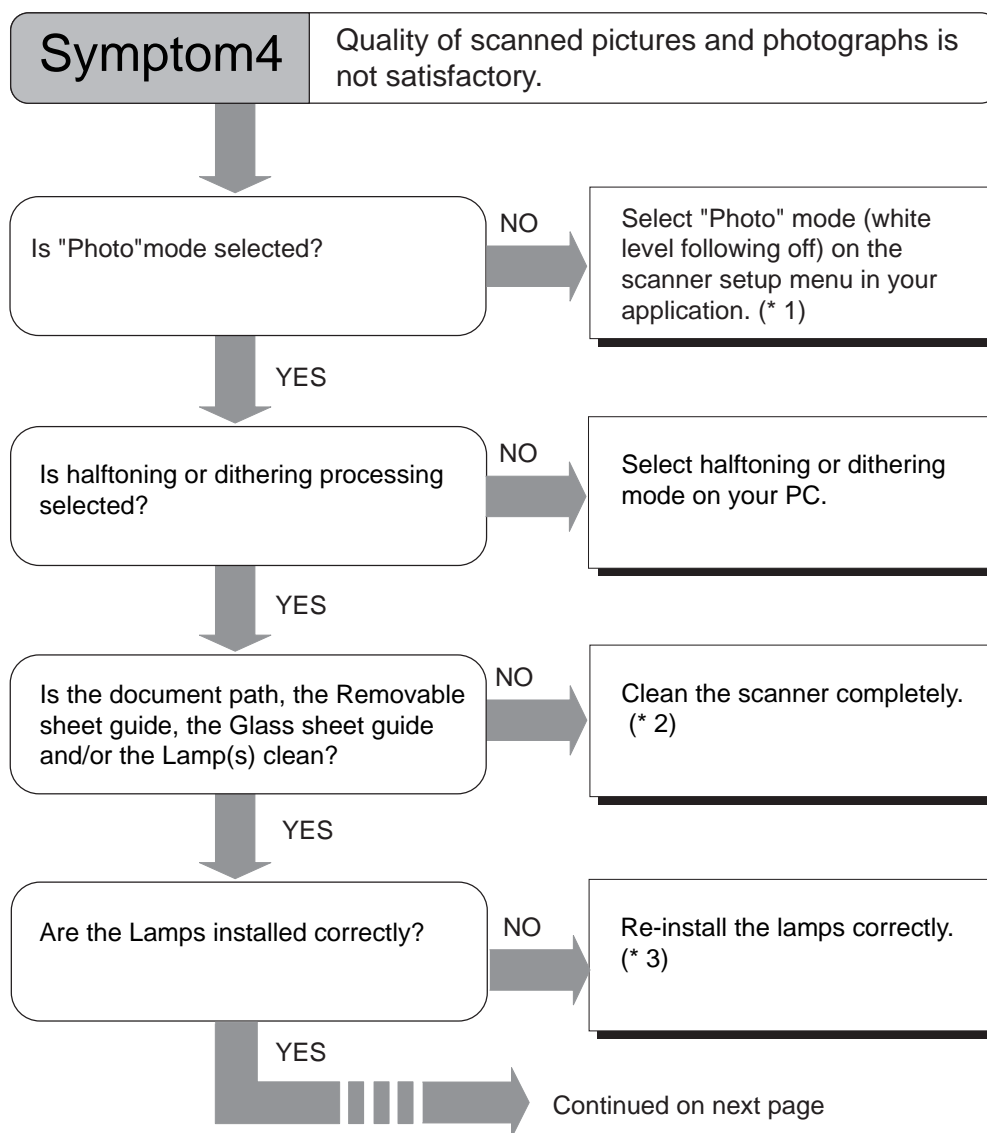
(*) Press any button except Power button. The Power button will not work to wake up the scanner. Pressing the power button more than 2 seconds will turn off the power.







(* 1) For the details on how to set SCSI ID, refer to the section “7.3 Setup Mode Details”, “19. Setting SCSI ID” on page 7-48.

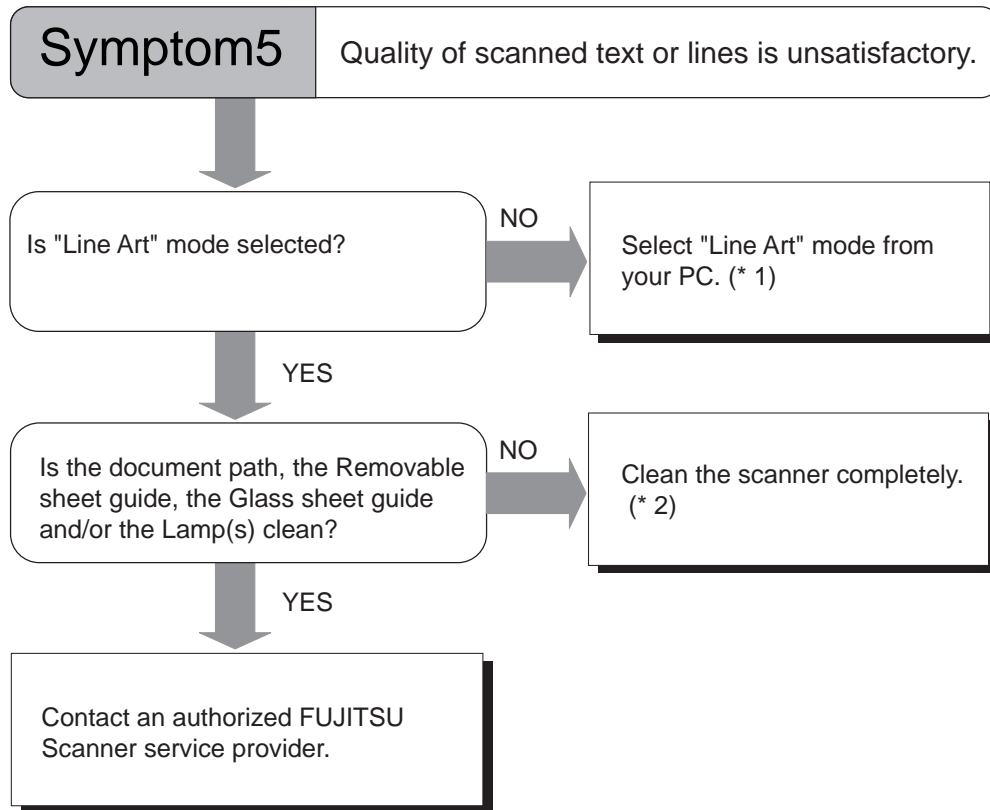




Continued from the previous page

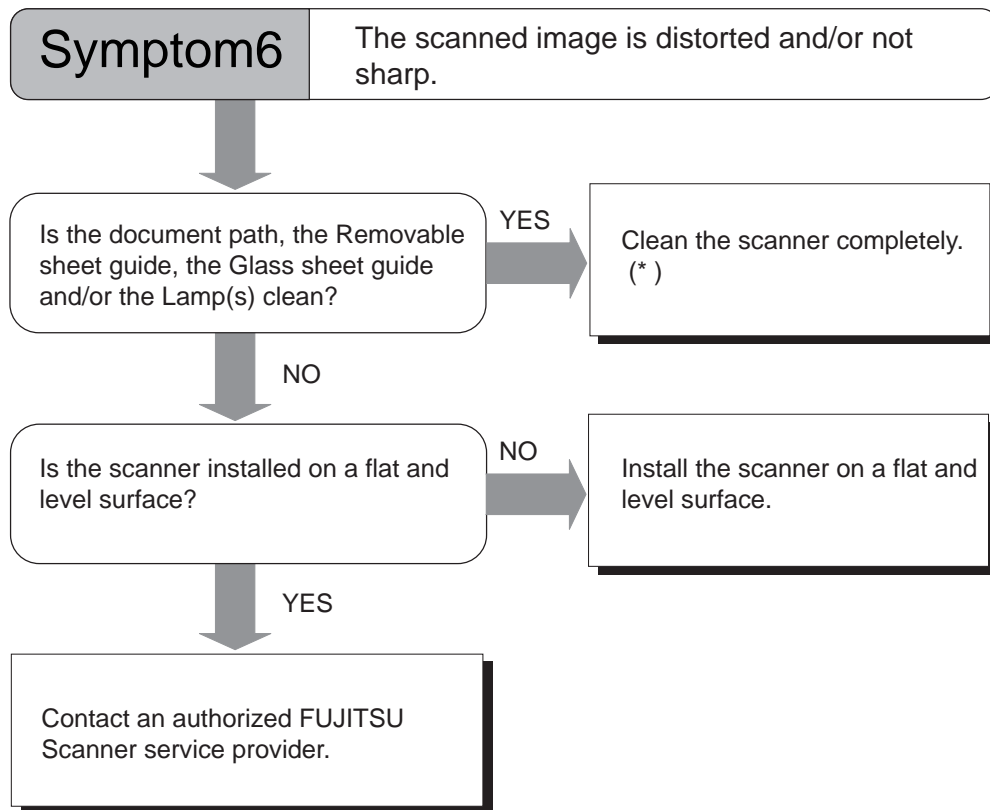
Contact an authorized FUJITSU
Scanner service provider.

- (* 1) If Binary mode is used, the scanned image of a 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 scanner driver setting dialog, 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 "3 DAILY CARE" on page 3-1.
- (* 3) For the details on how to replace Lamps, refer to "4 REPLACEMENT OF CONSUMABLES" on page 4-1.

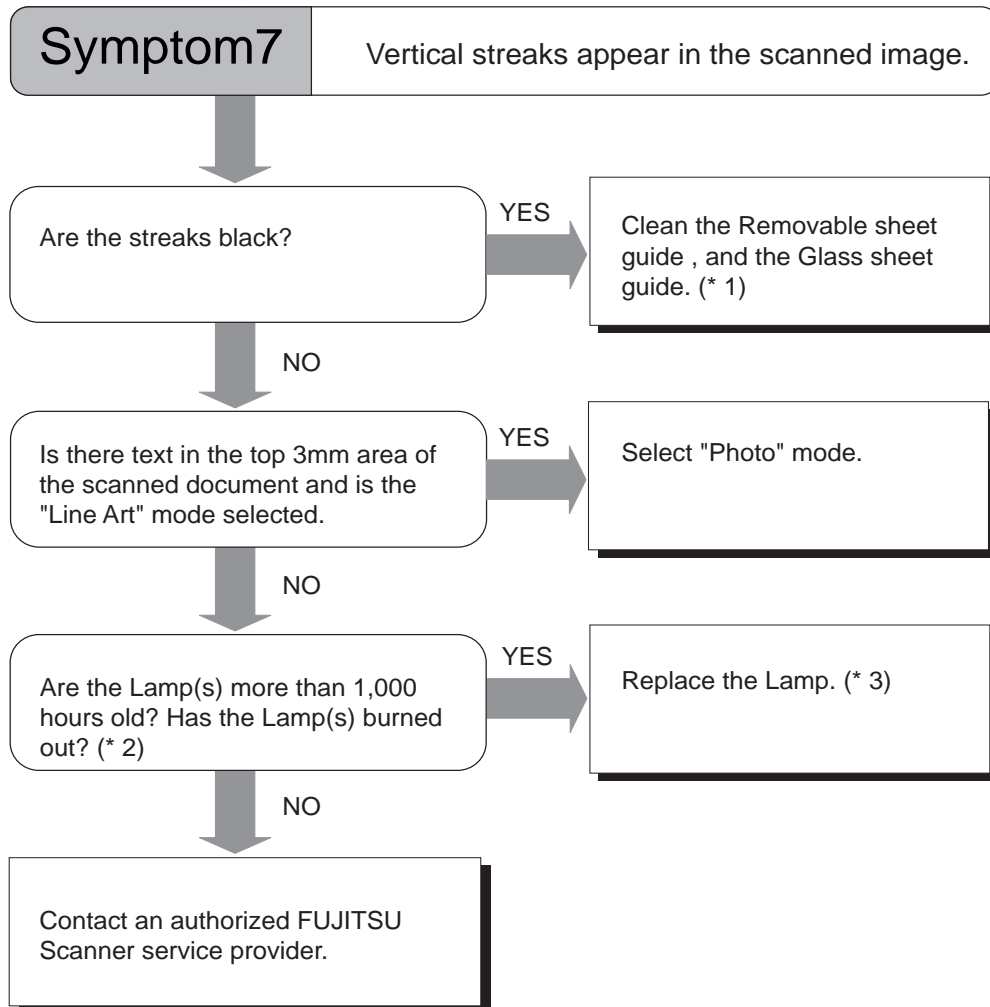


(* 1) If halftone mode is used, the scanned image of text or line art may not be good. Depending on the applications used, the method to specify "Line Art" mode and the name of the mode can be different. If the application allows you to change the setting from scanner driver setting dialog, specify [Black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

(* 2) For the details of cleaning, refer to "3 DAILY CARE" on page 3-1.



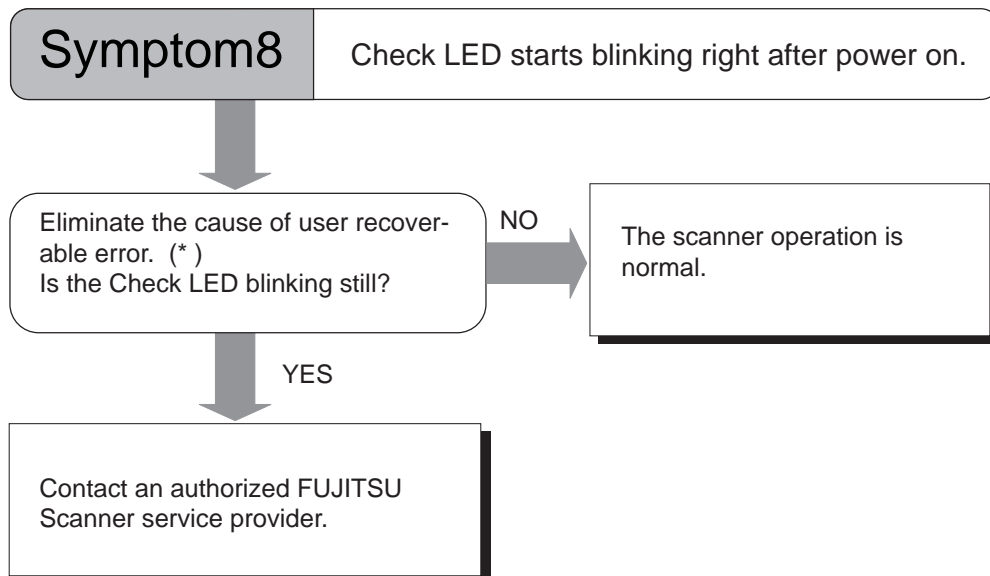
(*) For the details of cleaning, refer to "3 DAILY CARE" on page 3-1.



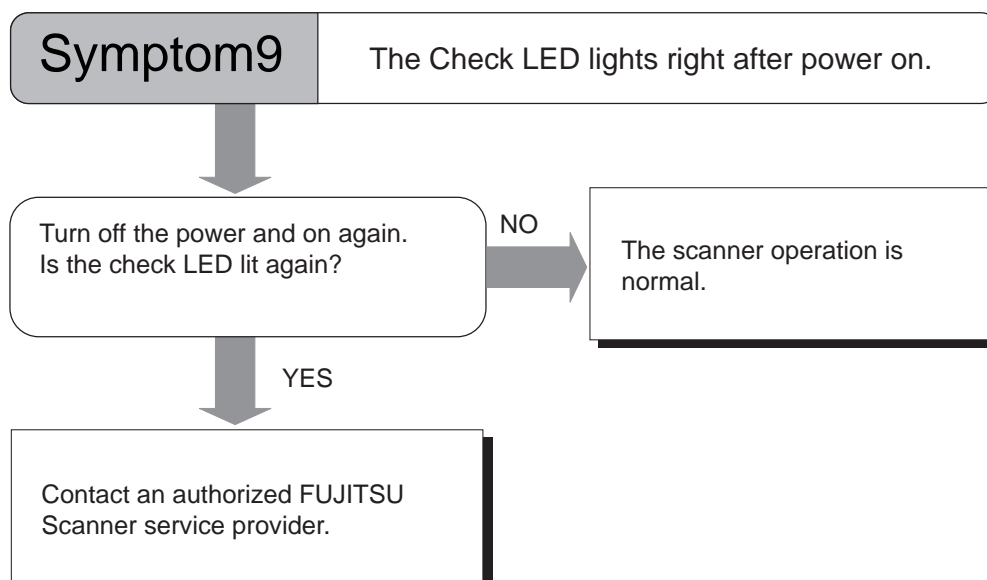
(* 1) For the cleaning of the removable sheet guide, and the glass sheet guide, please refer to "3 DAILY CARE" on page 3-1.

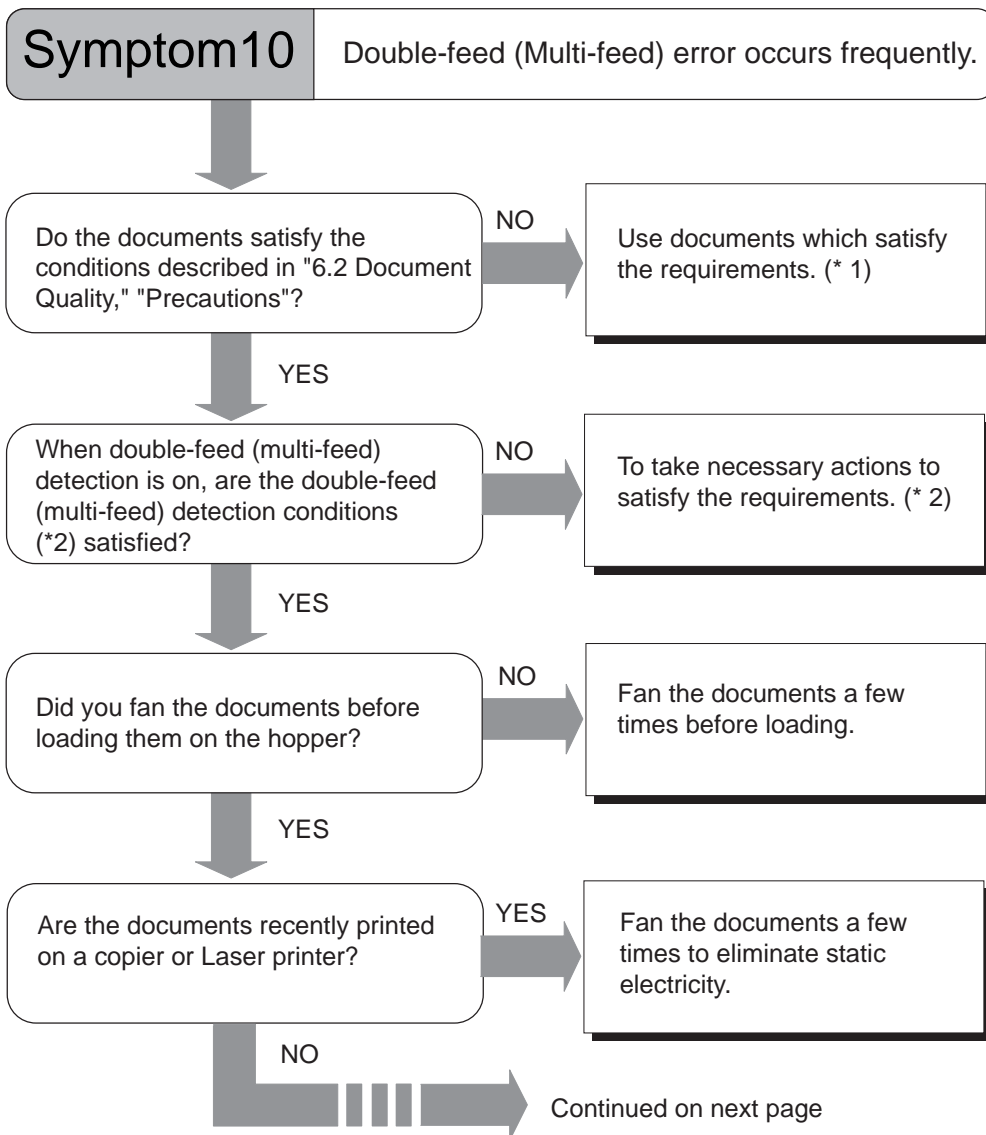
(* 2) For the details on how to check the lamp-on time, please refer to the section "7.5 Test Mode Details", "3. Display the cumulative lamp-on time" on page 7-81.

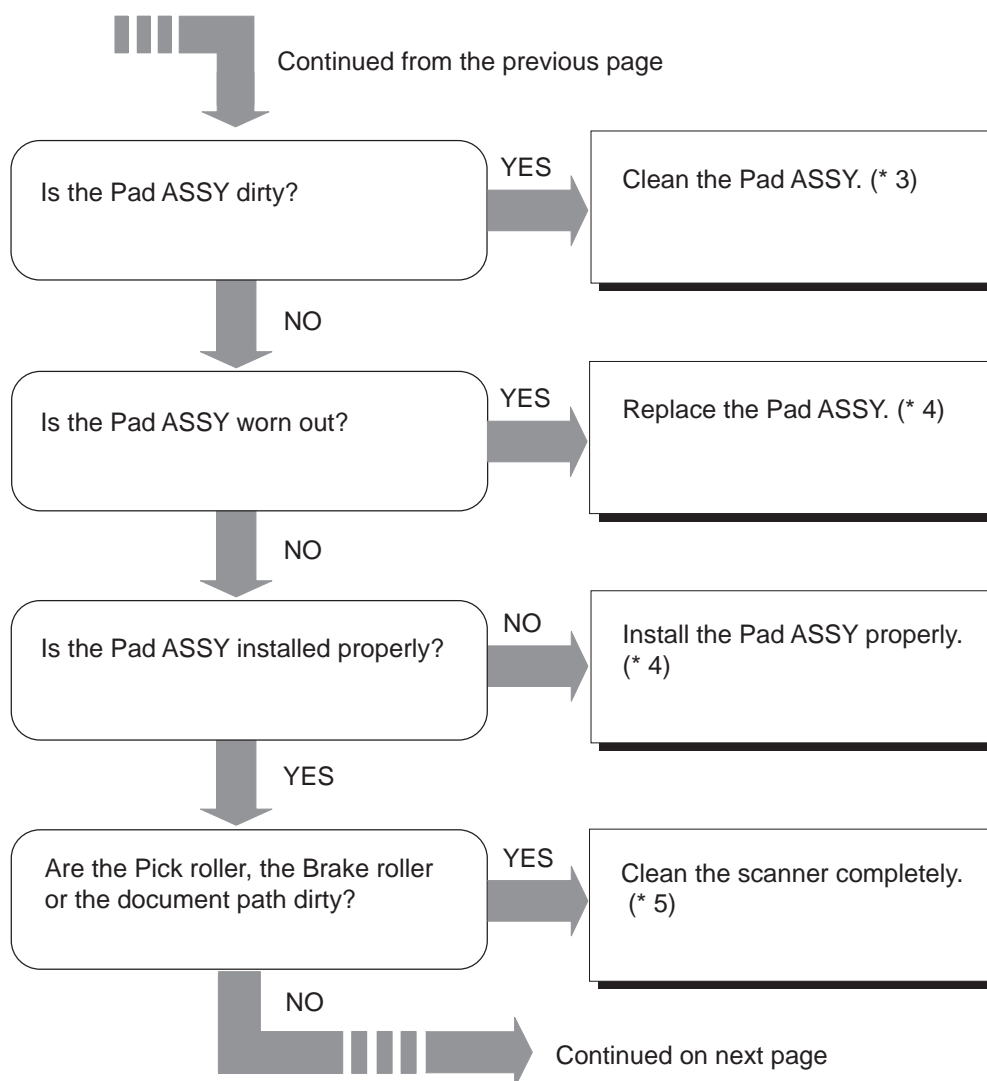
(* 3) For the details on how to replace Lamps, refer to "4 REPLACEMENT OF CONSUMABLES".

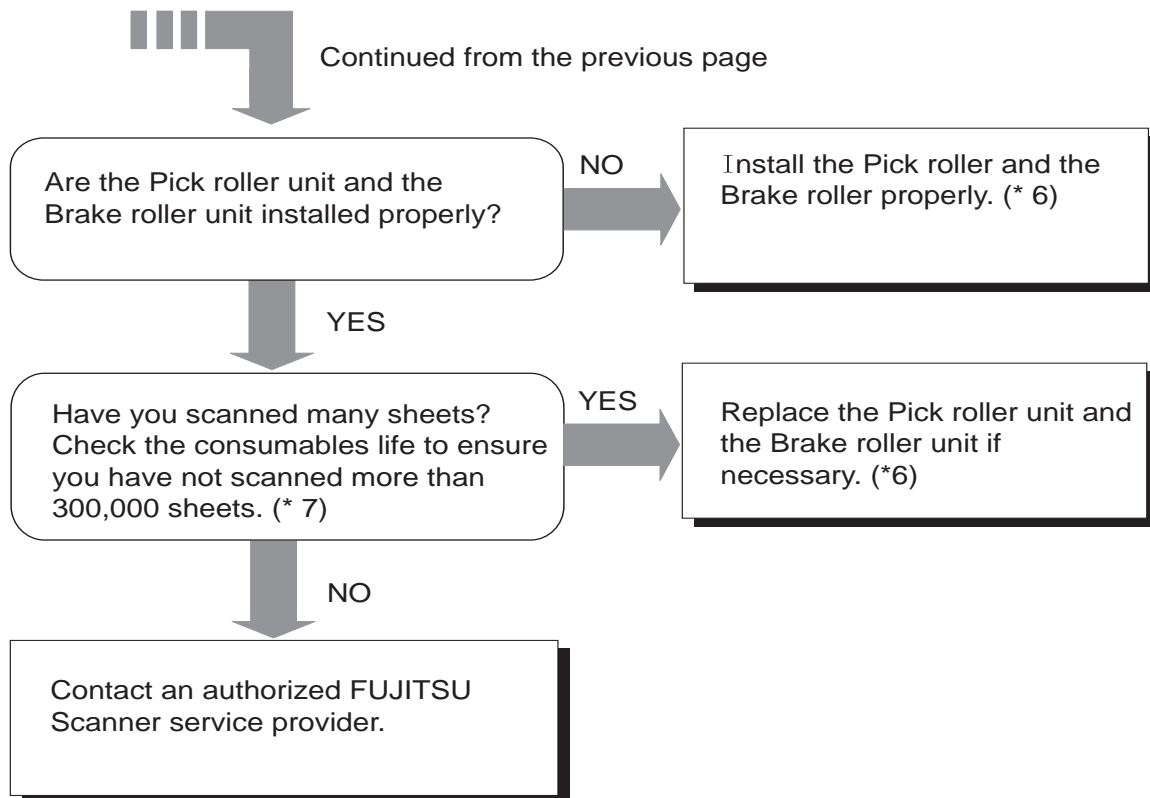


(*) For the message display contents and the error recovery method, refer to "APPENDIX 3 MESSAGES ON THE OPERATOR PANEL", "Error message (Temporary error)" on page AP-9.

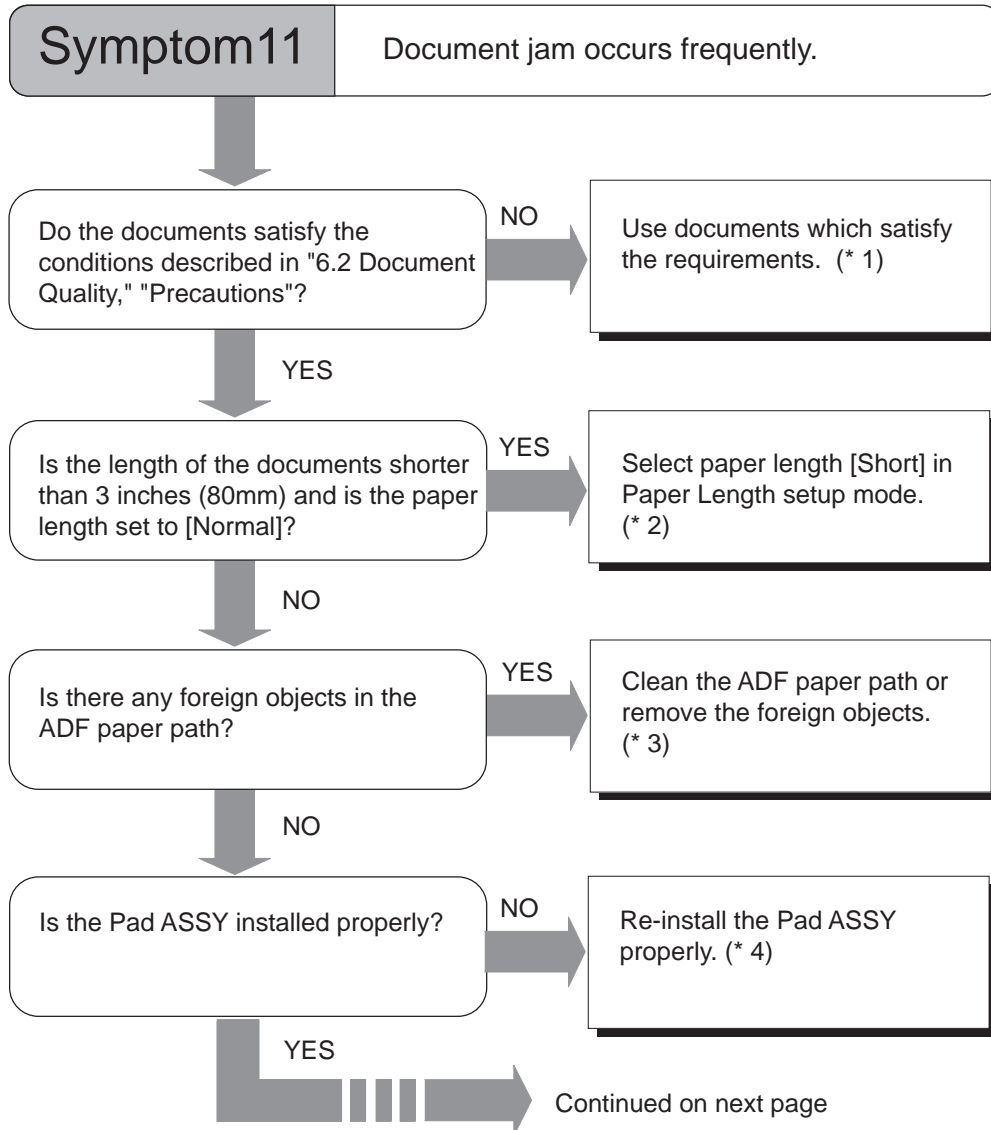


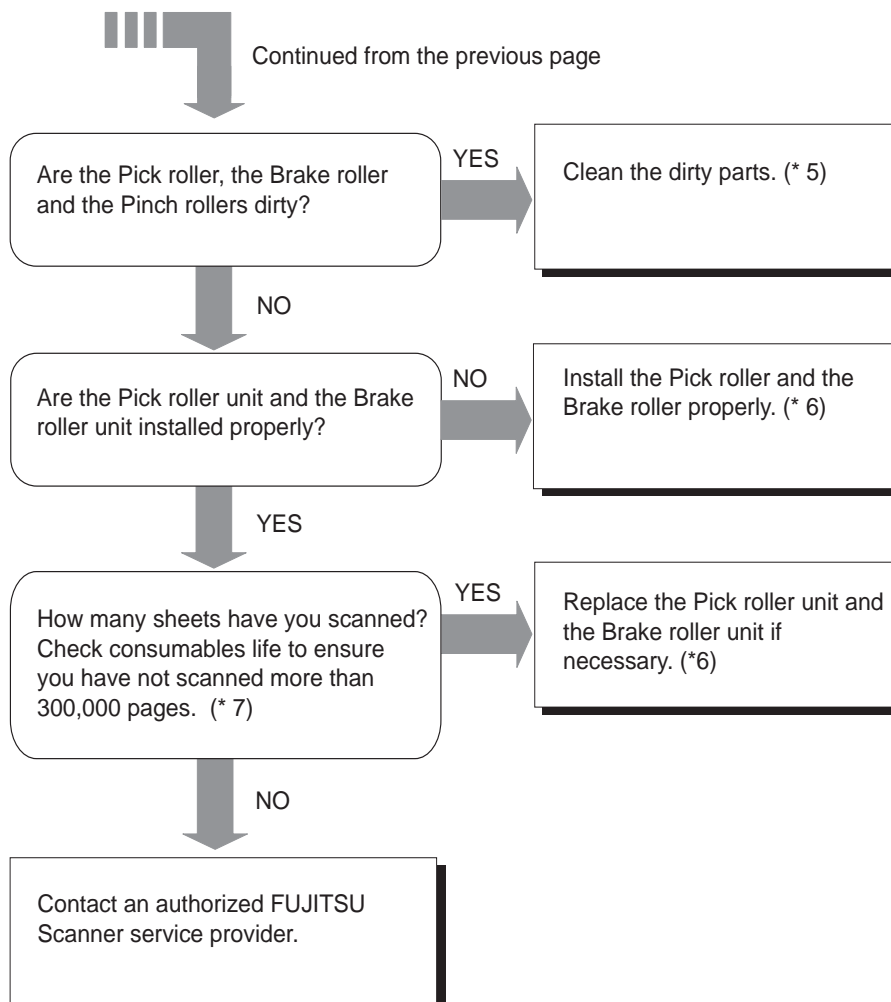




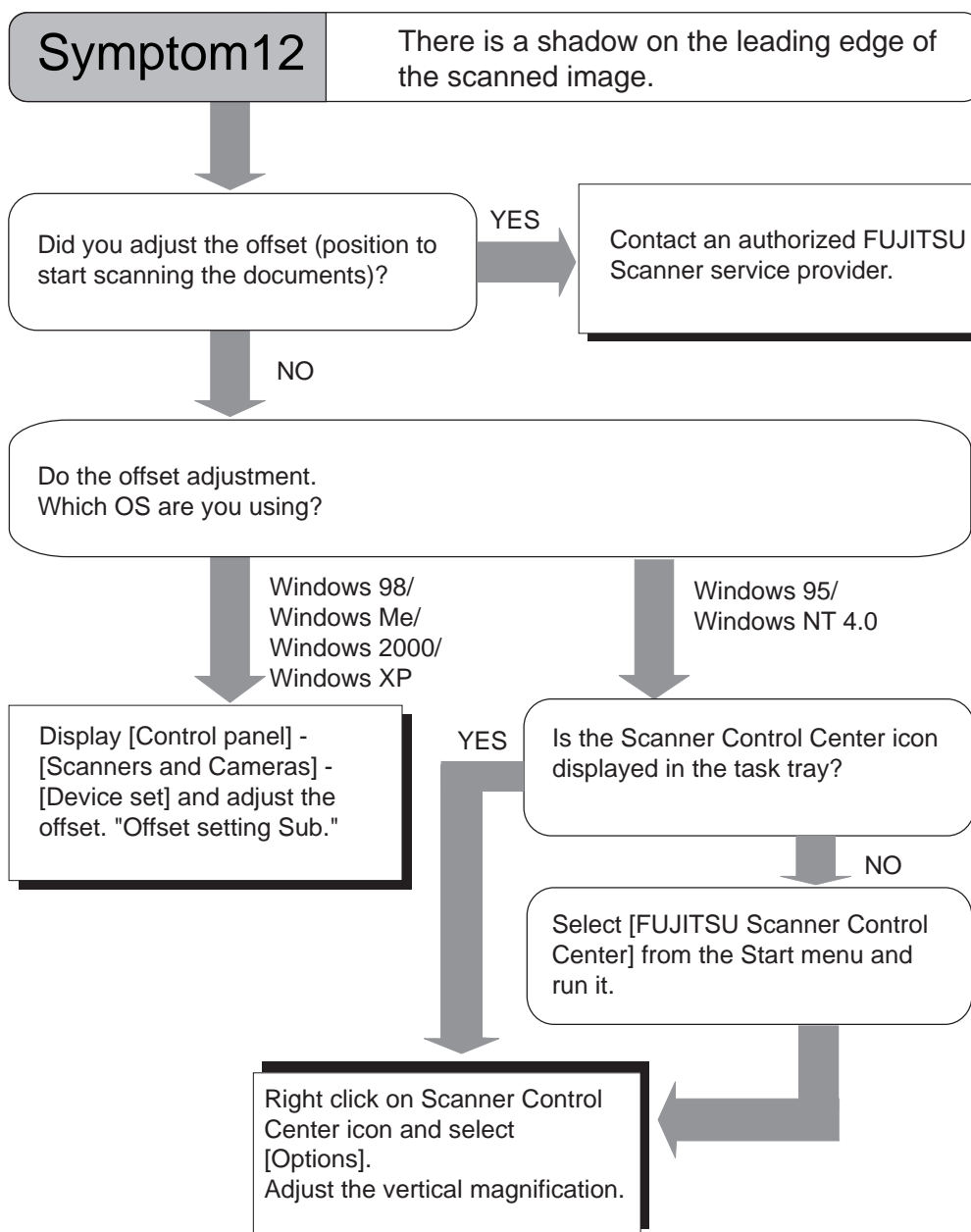


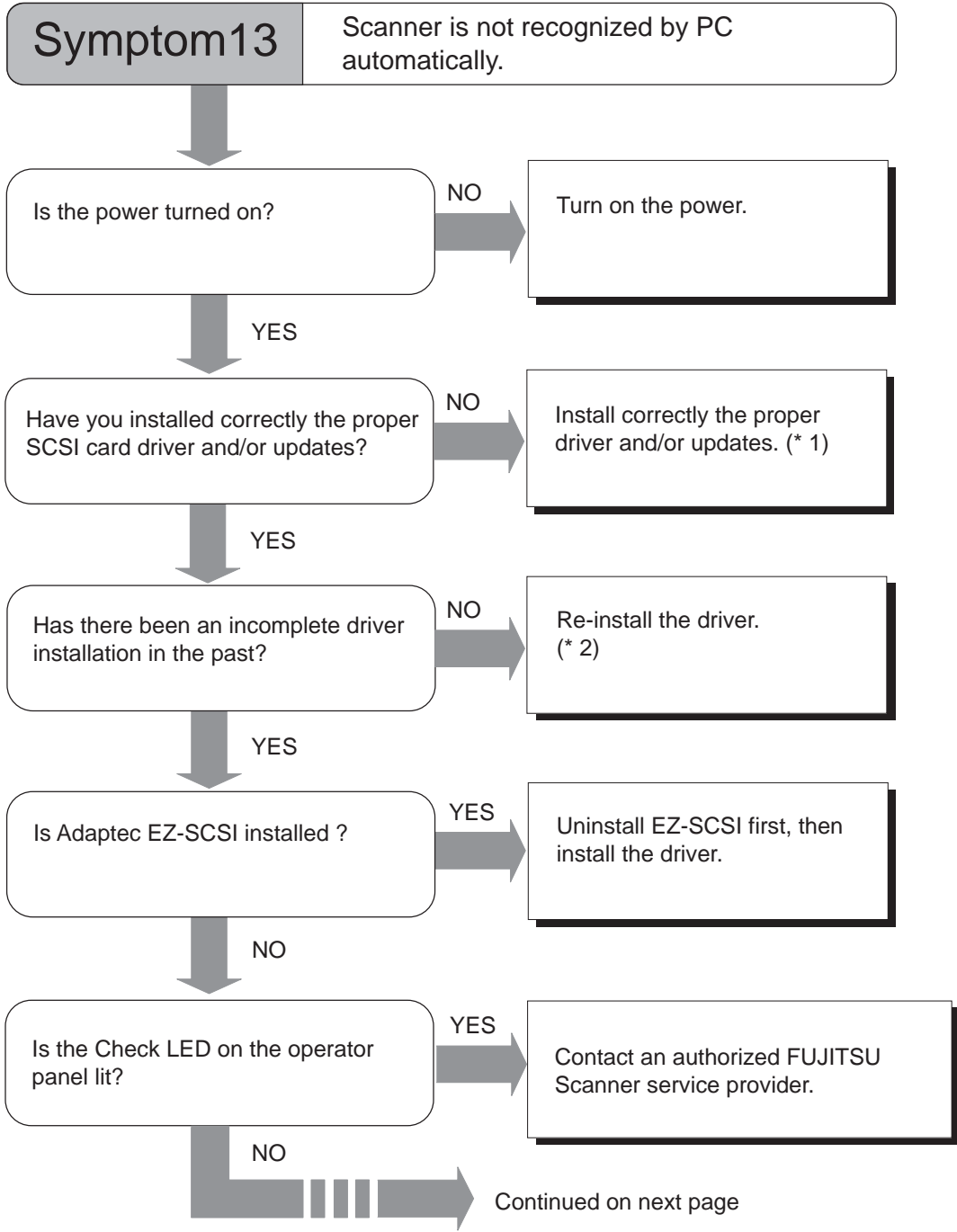
- (* 1) For the details on required conditions, refer to the section "6.2 Document Quality" on page 6-3.
- (* 2) For the double-feed detection conditions, refer to "APPENDIX 2 DOUBLE-FEED (MULTI-FEED) DETECTION CONDITIONS" on page AP-2.
- (* 3), (* 5) For the details on how to clean scanner, refer to "Chapter 3 DAILY CARE" on page 3-1.
- (* 4) For the details on how to replace Pas ASSY, refer to "4 REPLACEMENT OF CONSUMABLES" on page 4-1.
- (* 6) For the details on how to replace and install Pick roller unit and Brake roller unit, refer to "4 REPLACEMENT OF CONSUMABLES" on page 4-1.
- (* 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" on page 7-33.

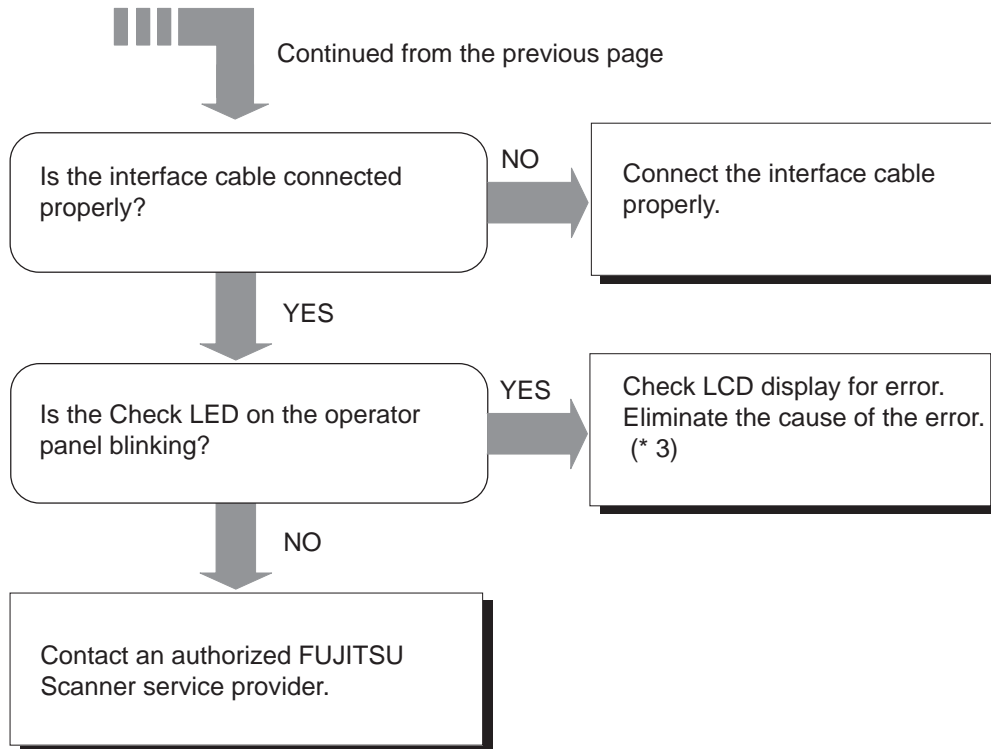




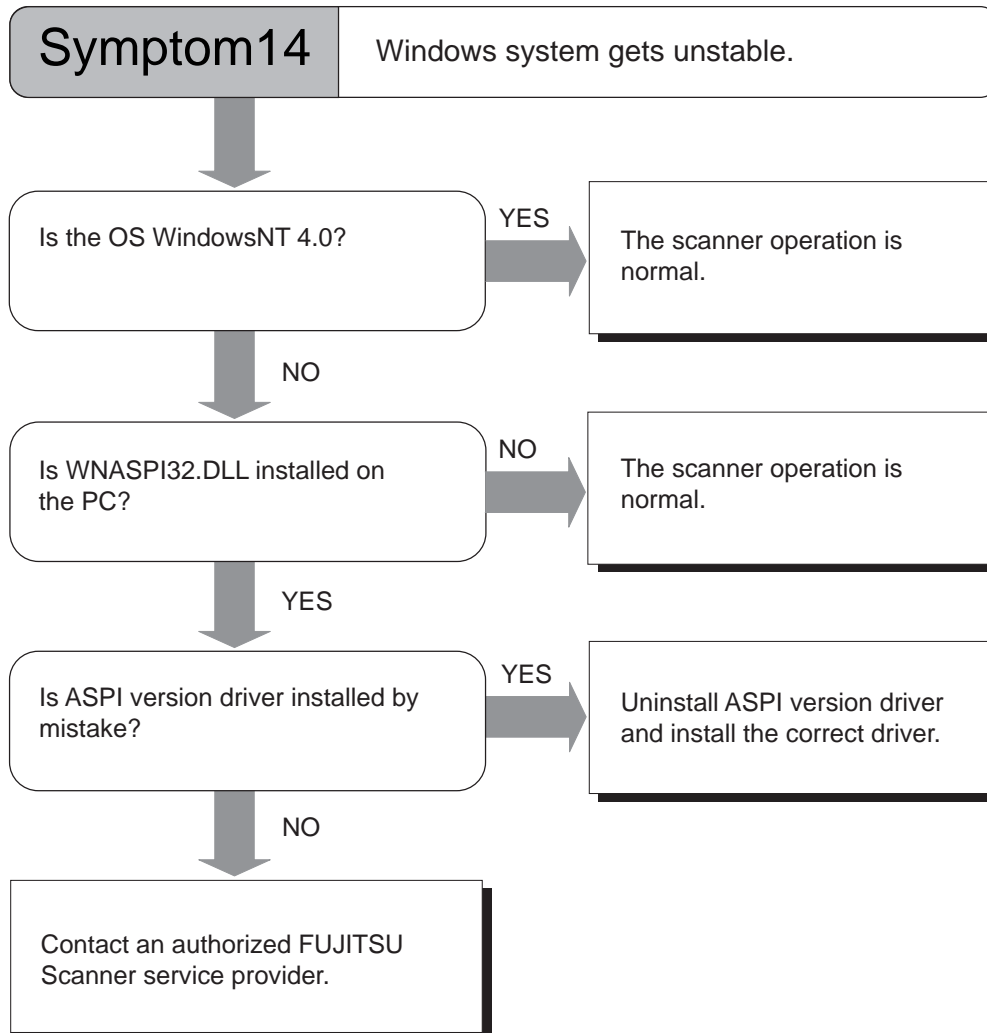
- (* 1) For the details on required conditions, refer to the section "6.2 Document Quality" on page 6-3.
- (* 2) For the details on how to set up the Paper Length, refer to "7.3 Setup Mode Details", "10. Setting Short document scan mode (Paper Length setup)" on page 7-36.
- (* 3) For the details on how to clean ADF, refer to "Chapter 3 DAILY CARE" on page 3-1.
- (* 4) For the details on how to replace Pas ASSY, refer to "4 REPLACEMENT OF CONSUMABLES" on page 4-1.
- (* 5) For the details on scanner cleaning, refer to "Chapter 3 DAILY CARE" on page 3-1.
- (* 6) For the replacement and re-installation of Pick roller unit and Brake roller unit, please refer to "4 REPLACEMENT OF CONSUMABLES" on page 4-1.
- (* 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" on page 7-33.







- (* 1) For the details on how to install the SCSI card driver and updates, refer to section 2.2 in the “fi-4860C2 Installation Guide”.
- (* 2) For the details on how to install FUJITSU TWAIN, refer to “FUJITSU TWAIN32 Scanner Driver (Scanner Utility for Microsoft Windows) User’s Guide,” “3. Installation.” The User’s Guide is included in the FUJITSU TWAIN CD-ROM.
- (* 3) For the details of error messages, refer to “APPENDIX 3 MESSAGES ON THE OPERATOR PANEL” on page AP-5.



(*) For the details on how to install FUJITSU TWAIN, refer to “FUJITSU TWAIN32 Scanner Driver (Scanner Utility for Microsoft Windows) User’s Guide”, “3. Installation.” The User’s Guide is included in the FUJITSU TWAIN 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-4860C2
Serial Number	(example) 000001
Manufacturing date	(example) 2006-05 (May 2006)
Date of purchase	(example) October, 2006
Symptom	
Frequency of trouble	

For the confirmation of manufacturing information, refer to ""5.4 Labels on the Scanner" on page 5-31.

■ 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 2003
Last consumable replacement date	(example) November 15, 2003
Operator panel status at trouble	(example) Paper Jam2

■ Imaging quality trouble

Items to check	Findings
Type and version of scanner driver	(example) FUJITSU TWAIN 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)?	

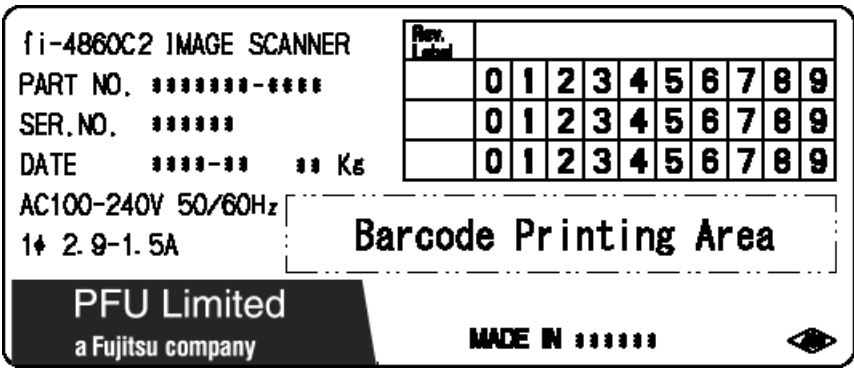
5.4 Labels on the Scanner

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.



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



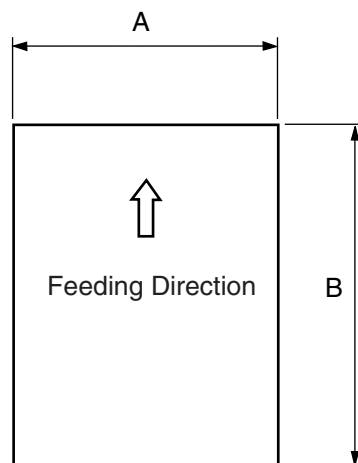
6 ADF DOCUMENT SPECIFICATIONS

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

6.1 Document Size.....	6-2
6.2 Document Quality.....	6-3
6.3 Hole-punching Prohibited Areas.....	6-6
6.4 Print Prohibited Area.....	6-7
6.5 Background Color Areas	6-8
6.6 Job Separation Sheet.....	6-9
6.7 Hopper Capacity	6-10

6.1 Document Size

The following shows the supported document sizes.



Maximum		Minimum	
A	B	A	B
297 mm	432 mm	74 mm	74 mm
11.7 in.	17 in.	2.9 in.	2.9 in.

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 documents of a paper type other than the above, perform a test-scanning with a few sheets of the same type before executing the actual task in order to check whether or not the documents can be scanned.

■ Document thickness

Paper thickness is expressed by "paper weight." The following shows the paper weights that can be used on this scanner:

52 g/m² to 127 g/m² or 14 lb to 34 lb (when fi-486TRK option is not installed)

■ Precautions

The following documents may not be scanned successfully.

- Document of non-uniform thickness (e.g. envelopes)
- Wrinkled or curled documents (Refer to HINT on the next page)
- Folded or torn documents
- Tracing paper
- Coated paper
- Carbon paper
- Carbonless paper
- Photosensitive paper
- Perforated or punched documents
- Documents that are not square or rectangular
- Very thin documents

Do not use the following documents:

- Paper-clipped or stapled documents
- Documents on which the ink is still wet
- Documents smaller than A7 or larger than A3
- Documents other than paper such as fabric, metal foil, or transparencies



- When scanning semi-transparent documents, set the density to light to avoid a bleed through.
 - To prevent the rollers from becoming dirty, avoid scanning documents containing large areas written or filled in pencil. If scanning of such documents is inevitable, clean the rollers more frequently.
-



- Carbonless paper contains chemical substances that may damage the Pad ASSY or rollers (e.g. Pick roller) when documents are fed. Pay attention to the following:

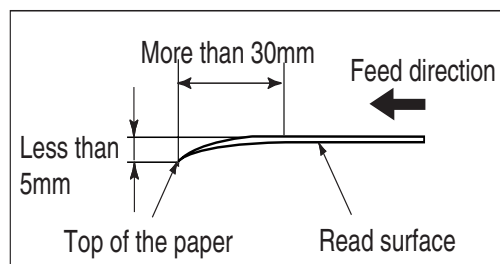
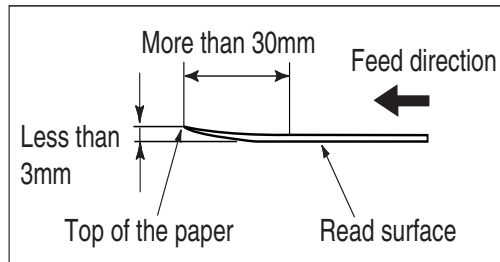
Cleaning If pick errors occur frequently, clean the Pad ASSY and the Pick roller. For details on cleaning the Pad ASSY and the Pick roller, refer to "Chapter 3 Daily Care" on page 3-1.

Replacing parts: The service life of the Pad ASSY and Pick roller may be shortened compared to the case of scanning wood containing paper documents.

- When scanning wood containing paper, the service life of the Pad ASSY and the Pick roller may be shortened compared to the case of scanning woodfree paper.



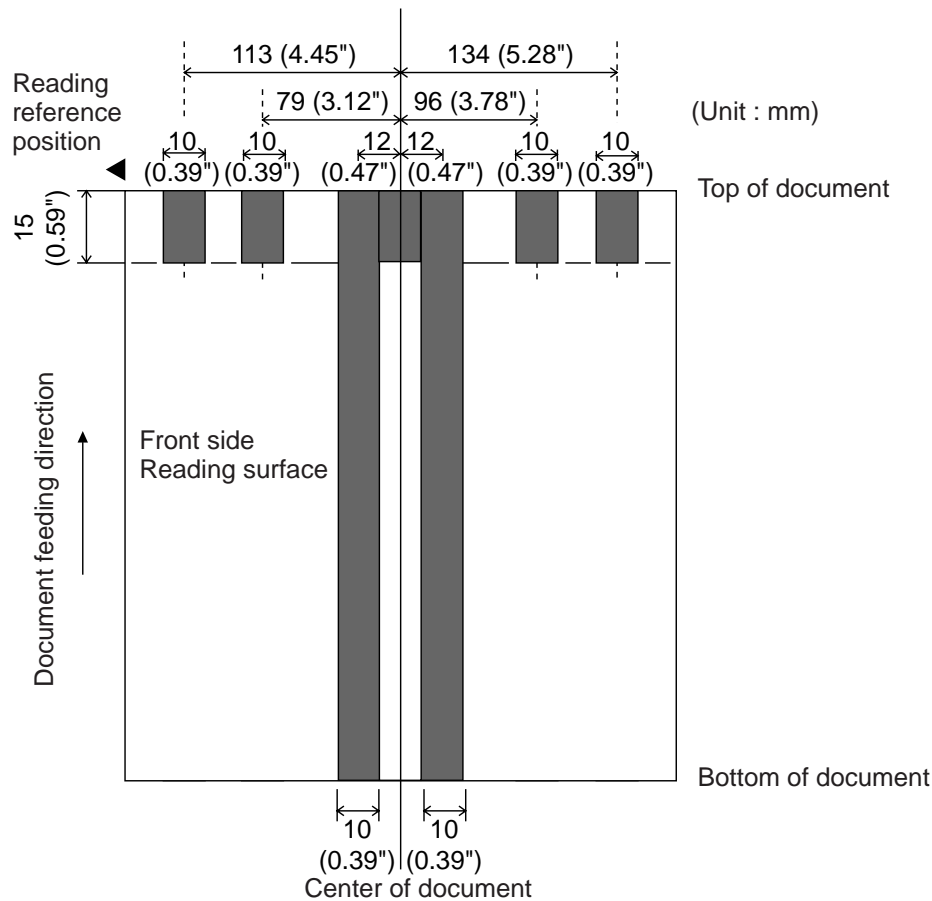
When using the ADF, the leading edge of all document sheets must be evenly aligned. Make sure that curling at the leading edge is within the following tolerances:



6.3 Hole-punching Prohibited Areas

Punched holes in the shaded areas may cause errors.

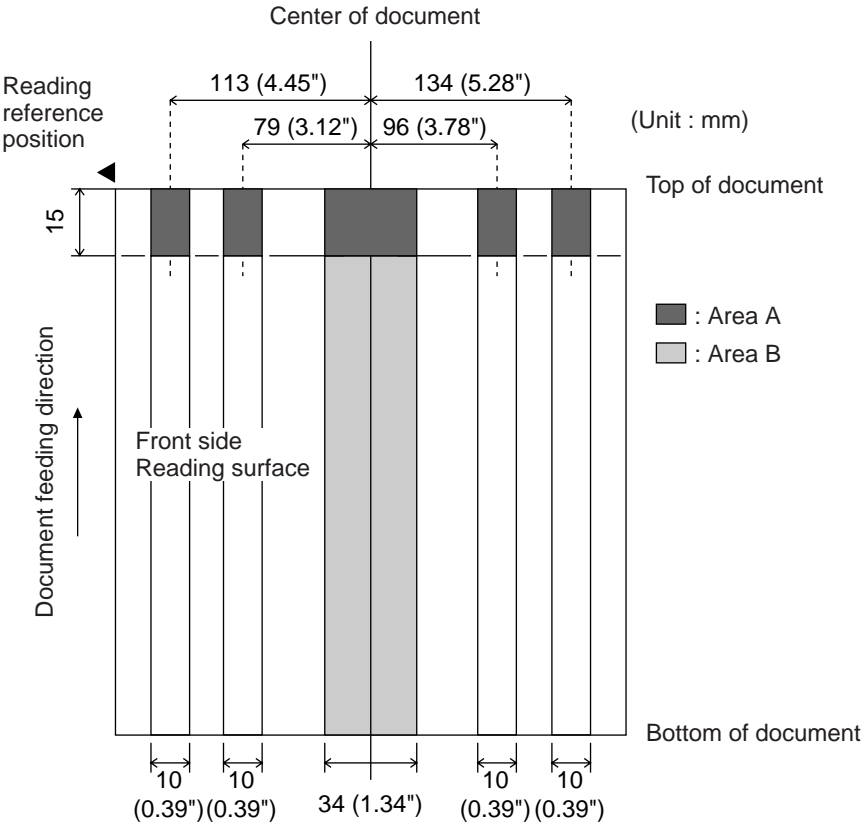
For job separation sheet requirements, please refer to the section "6.6 Job Separation Sheet" on page 6-9.



6.4 Print Prohibited Area

If there is printing in area A, the document size may be mis-detected. If there is printing in area B of a document, it may cause double-feed errors. The following figure shows print prohibited areas on a document. If double-feed detection is to be enabled, it is recommended that you avoid printing in these areas. These restrictions must be considered when designing forms and documents.

For the details of double-feed detection, please refer to "APPENDIX 2 DOUBLE-FEED (MULTI-FEED) DETECTION CONDITIONS" on page AP-2.

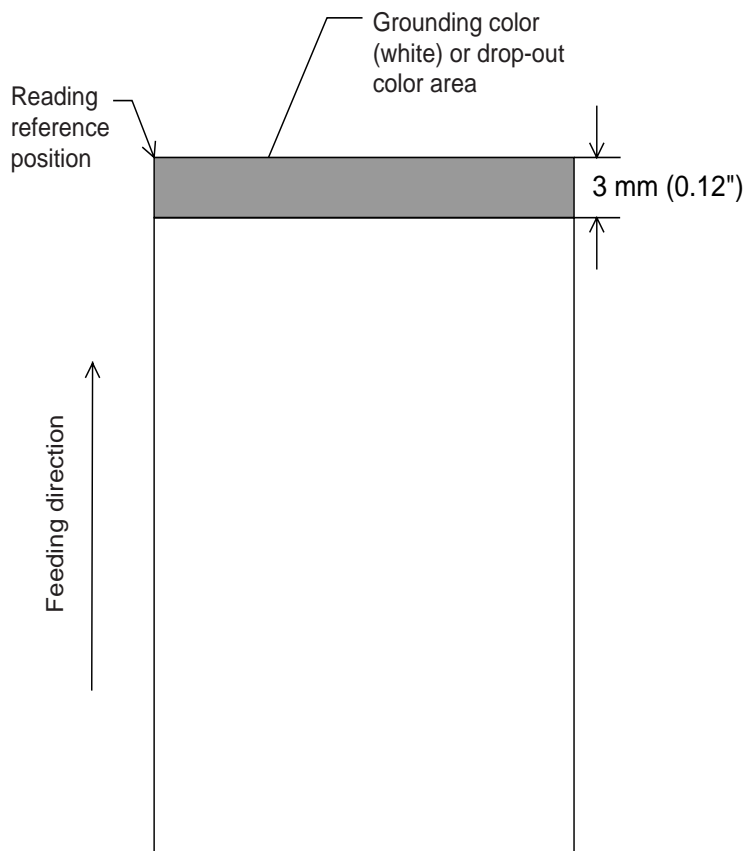


6.5 Background Color Areas

Paper white detection is performed in the shaded area as shown in the Figure below. The top 3mm on both sides of a document, should have no printing in this area.

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

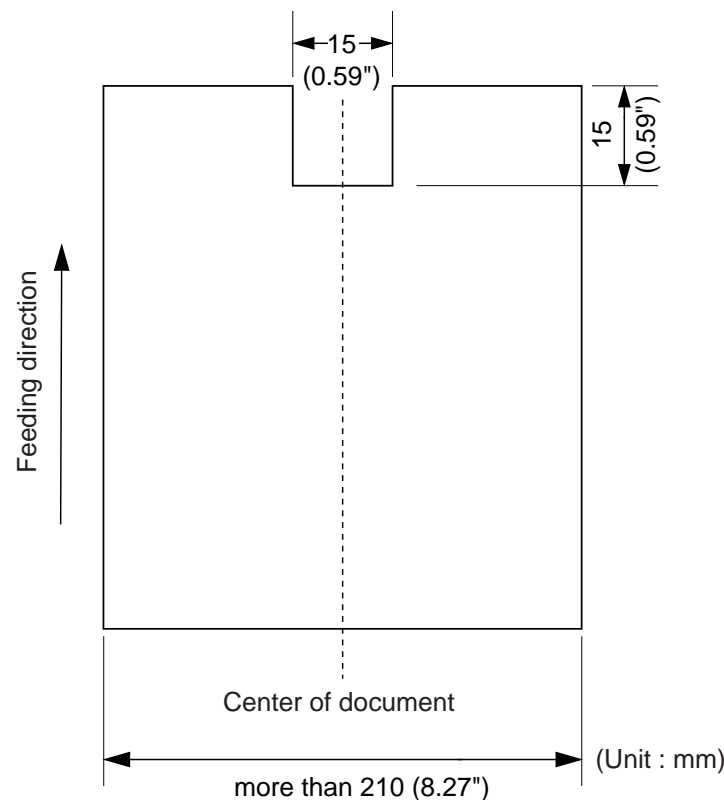
For the details on dropout color, please refer to "APPENDIX 1 DROP-OUT COLOR" on page AP-1.



6.6 Job Separation Sheet

1. Shape

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

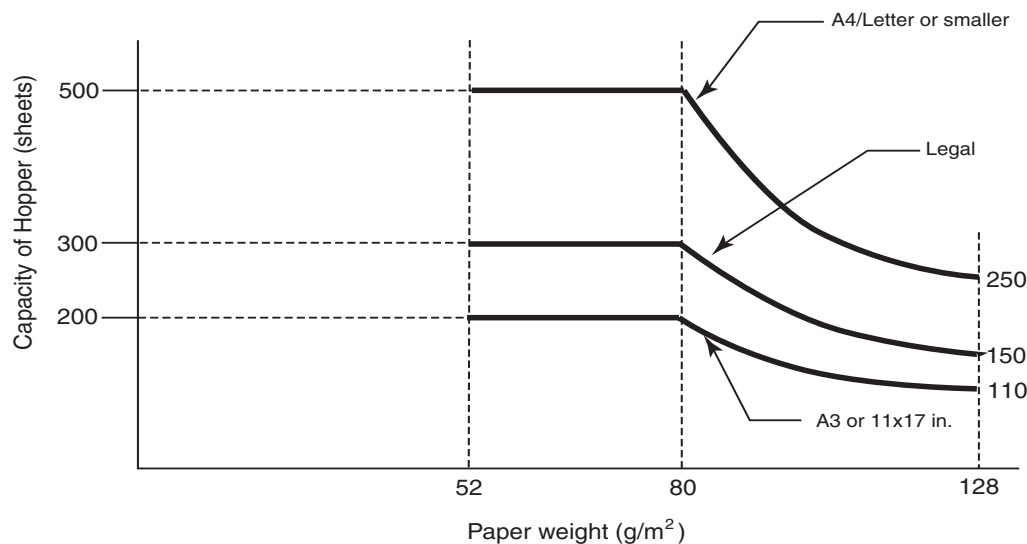


2. Document Specifications

Document width must be Letter (8.5 inch)/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 OPERATOR PANEL MENUS

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

7.1 Setup Mode	7-2
-----------------------------	------------

7.2 Setup mode functions.....	7-9
--------------------------------------	------------

7.3 Setup Mode Details	7-16
-------------------------------------	-------------

7.4 Test Mode Overview	7-67
-------------------------------------	-------------

7.5 Test Mode Details	7-72
------------------------------------	-------------

7.1 Setup Mode

■ Outline

There are two types of setup mode: Online setup mode and Offline setup mode.

From “Ready“ status, you can enter Online setup mode and you can enter offline setup mode from offline status.

According to the selected mode, available functions are different.


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 Online 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.
	- Saves the change and then displays the next menu item - Moves to the lower level menu item Referred to as Enter button in this manual.
	Moves to the upper level menu item without saving the change Referred to as Exit button in this manual.

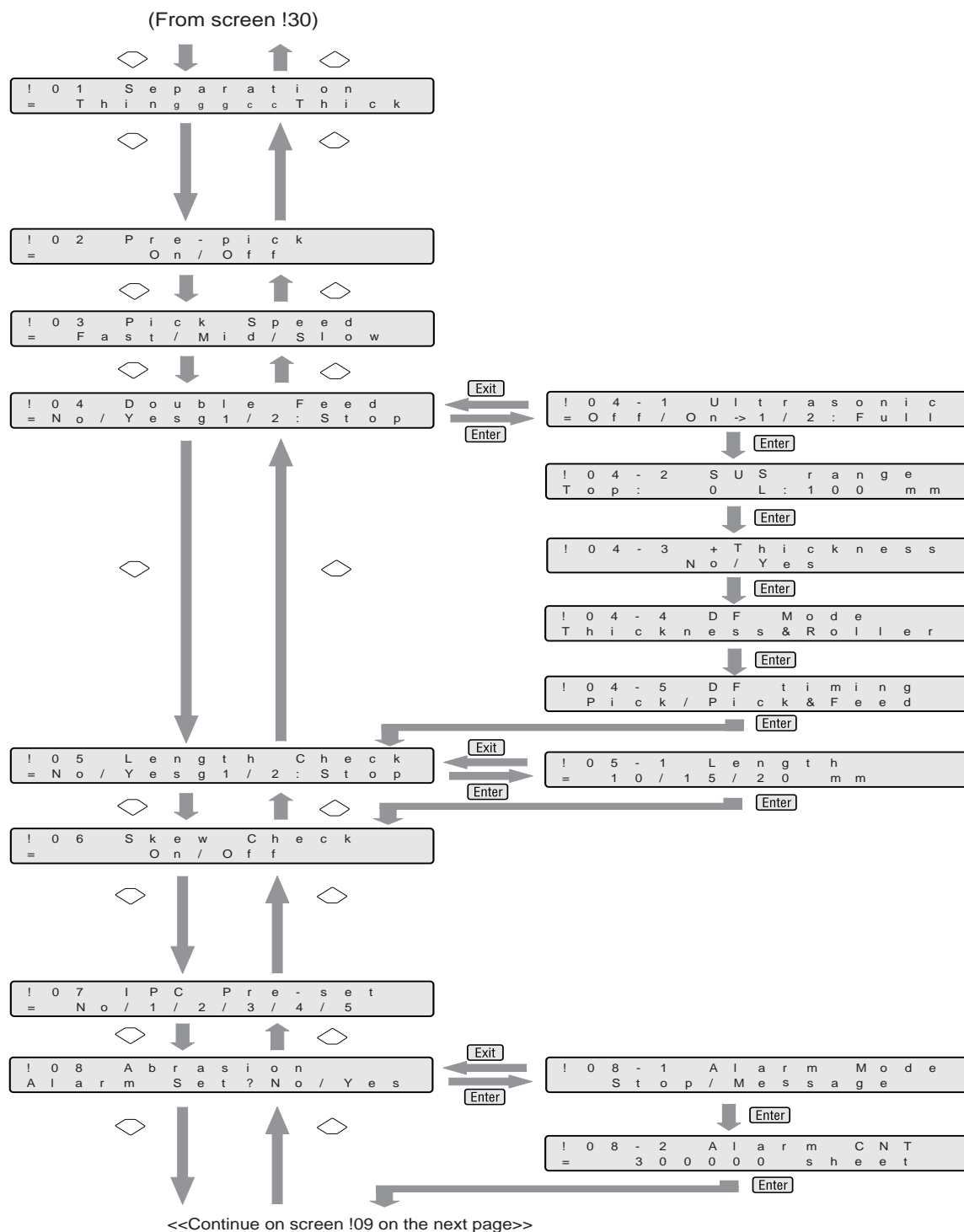
■ Transitions of screens in setup mode

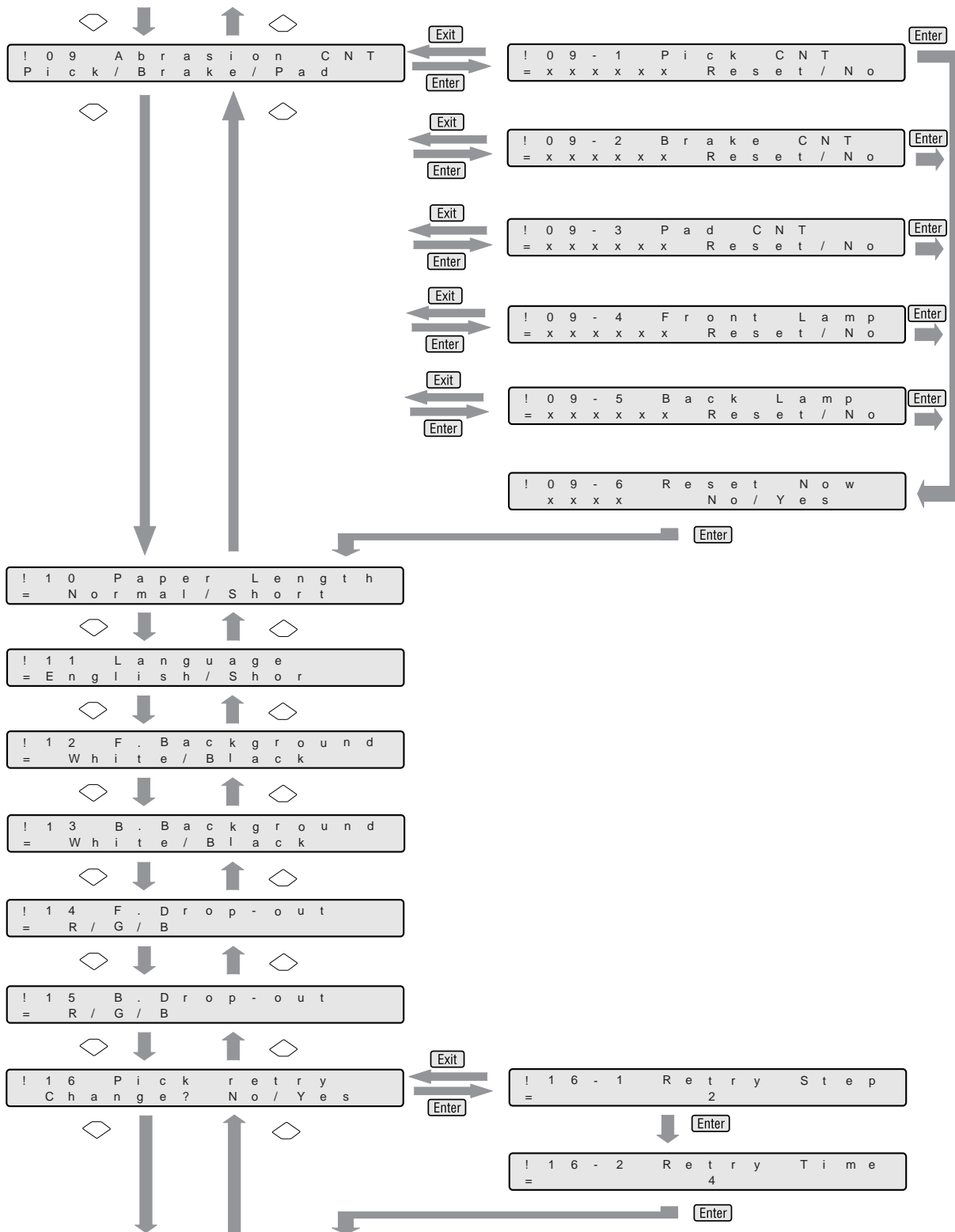
Refer to the next page LCD screen transitions chart for setup mode.

The flow chart in the following pages show transition of the LCD screen.

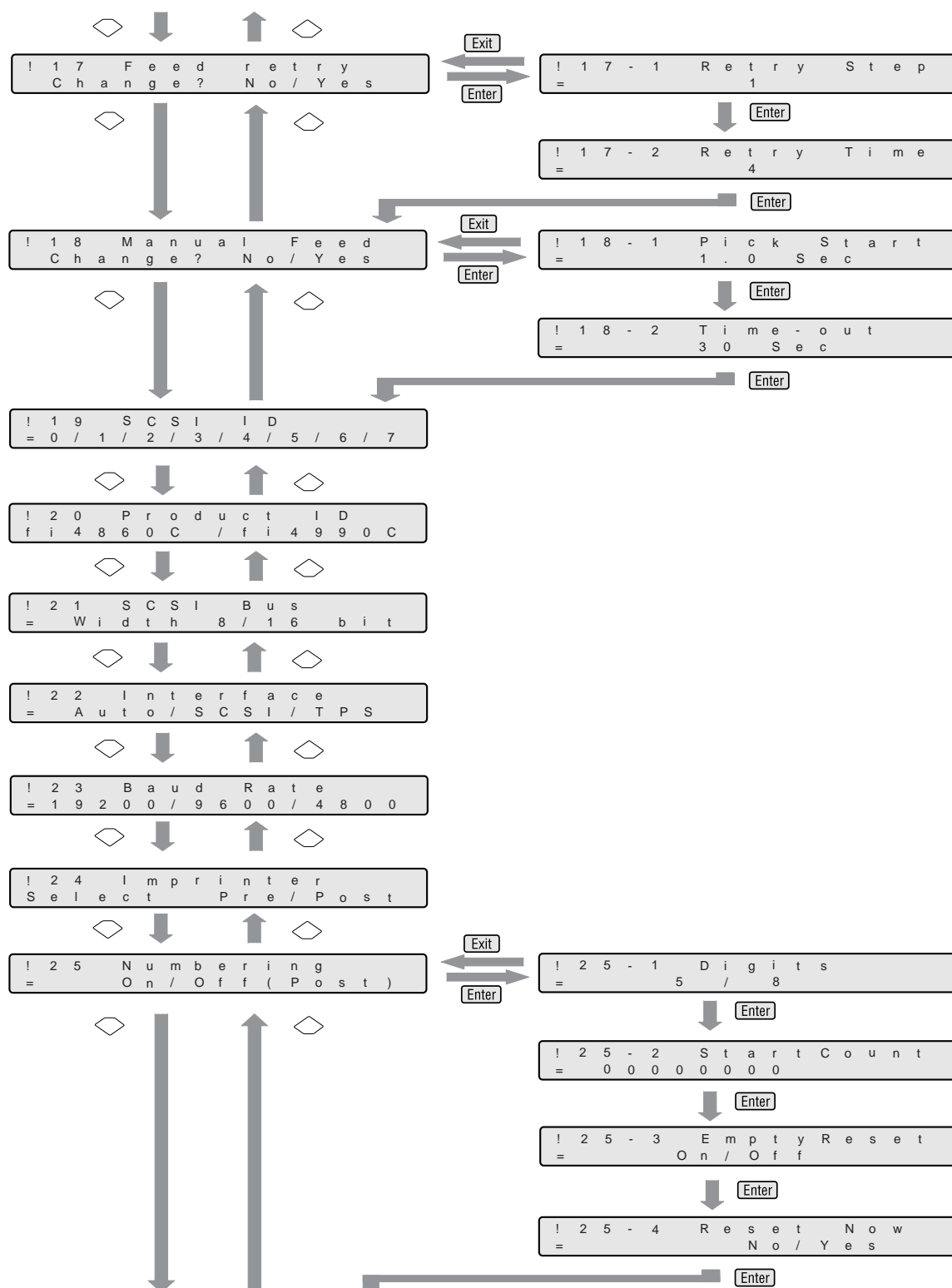
Some of the details are not expressed in the chart.

For the details, please refer to the descriptions in "7.2 Setup mode functions" on page 7-9.

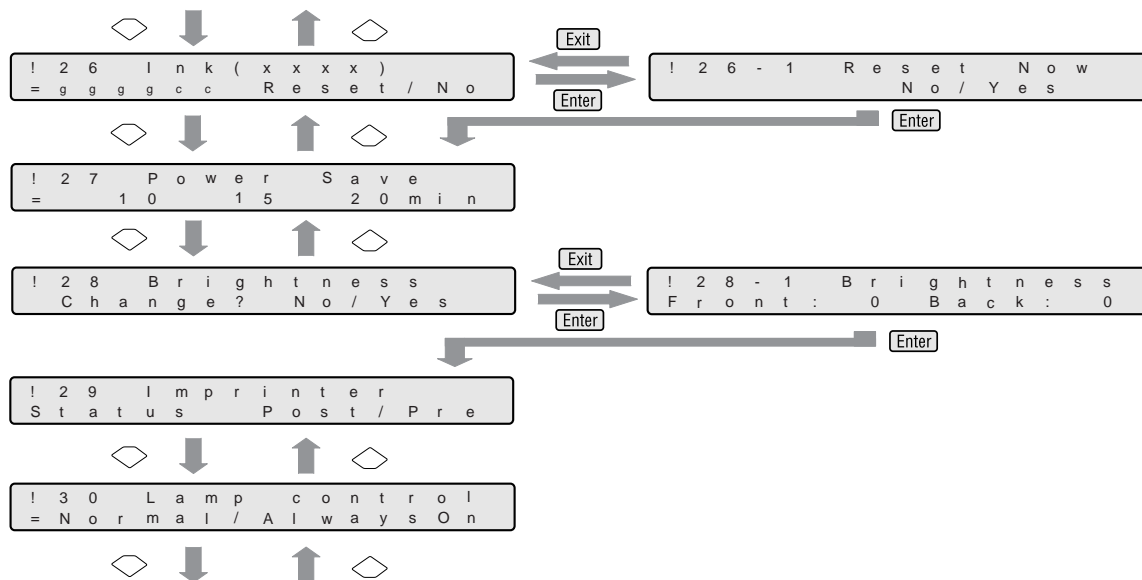




<<Continue on screen !17 on the next page>>



<<Continue on screen !26 on the next page>>



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



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

Screen 24 appears only when both the fi-486PRFR (Pre-imprinter) and the fi-486PRRE (Post-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 32 items in setup mode as shown in the following.

LCD display	Descriptions	Selectable parameters	Default	Mode		Remarks
				On-line	Off-line	
Double Feed (Multi-feed)	Specifies the double-feed (Multi-feed) detection mode based on: 1: Document overlapping / thickness 2: Document overlapping / thickness+ Brake roller rotation amount	No/Yes 1: Overlapping / Thickness 2: Overlapping / Thickness+ Brake roller	Yes	Available	Available	Settings via the PC have 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 in.) (Tolerance)	No	Available	Available	Settings via the PC have 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 execution of read command on PC to document insertion.	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	Specifies if skew detection is enabled.	On/Off	Off	Available	Available	Settings via the PC have the priority.
Separation	Specifies the Brake roller force appropriate for the document thickness	Thick ■ ■ ■ ■ ■ Medium Thick ■ ■ ■ ■ □ Medium ■ ■ ■ □ □ Medium Thin ■ ■ □ □ □ Thin ■ □ □ □ □	Medium	Available	Available	-
Paper Length	Set when scanning the document equal or shorter than length 80mm (3.15").	Normal / Short	Normal	Available	Available	-
F.Background (Front)	Specifies the background color (Black or White) for scanning.	White / Black	White	Available	Available	Settings via the PC have the priority.
B.Background (Back)	Specifies the background color (Black or White) for scanning.	White / Black	White	Available	Available	Settings via the PC have 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. (increases scanner throughput)	On / Off	On	Available	Available	Settings via the PC have 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 Step : 2	Available	Available	-
		Retry Time : 1 - 7	Retry Time : 4			
Feed retry	Specify the Feed motor rotation time (Retry Step) and number of retries (Retry Time).	Retry Step : 1 - 7	Retry Step : 1	Available	Available	-
		Retry Time : 1 - 7	Retry Time : 4			
F.Drop-out	Specifies the front page dropout color for a monochrome scan.	R G B	G	Available	Available	Settings via the PC have 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	Settings via the PC have 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 / M4099D / M3099G	fi4860C	Not Available	Available	New setting valid after power cycle.
SCSI Bus	Specifies the 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 an 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 (Pre-imprinter) and fi-486PRRE (Post-imprinter) are installed, specifies which one to setup.	Pre / Post	-	Available	Available	-
Numbering	When either fi-486PRFR (Pre-imprinter) and fi-486PRRE (Post-imprinter) is installed, set the numbering parameters.	Numbering : On / Off	Numbering : Off	Available	Available	Settings via the PC have the priority.
		Digits : 5 / 8	Digits : 5			
		Initial No.: 5digit:0-99999 8digit: 0-16777215	Initial No.: 00000			
		Reset at hopper empty: On/Off	Reset at hopper empty: On			
Ink	Shows the remaining ink. Reset remaining ink amount 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	
Lamp control	Specifies whether or not to keep the lamp turned on.	Normal/ AlwaysON	Normal	Available	Available	
Auto crop W.	Specifies whether to round up or down the image's width when scanning in black & white mode and the width of the detected paper size is not a integer number .	Round up/ Round down	-	Available	Available	
Cropping (B)	Adjusts the offset (starting position) for the automatic size detection of the back side image.	Horizontal: -4 to +4 Vertical: -4 to +4	For both, horizontal and vertical: 0 (zero)	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>.



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



The blinking item is the one selected.

- ▶ (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** (Enter button) to confirm the setting.
Press **Exit** (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.

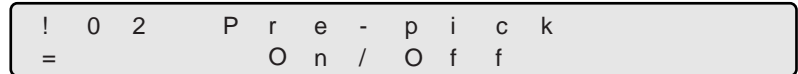
- Double-feed
- Mis-pick
- Paper Jam1



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	Average (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>



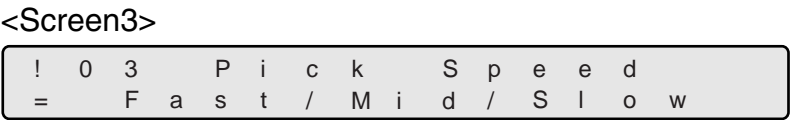
- 2) At <Screen2>, to enable Pre-pick, press  (Left arrow button) and select [On].
To disable Pre-pick, press  (Right arrow button) and select [Off].

- 3) Press  (Enter button) to confirm the setting.

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>.



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


HINT



The blinking item is the one selected.

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


HINT



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	

HINT



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

4. Setting Double-feed detection (document overlapping/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 can be enabled or disabled. (A Double-feed is checked by the difference in the amount of ultrasonic waves and/or the light penetrating through the paper.) In this screen, you can enable or disable the Double-feed detection and set the detection mode and select error processing.

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

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

(1) [No] is blinking:

Document overlapping and thickness are not checked.

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

Document overlapping and thickness are checked.

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

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



Document overlapping and thickness are checked.

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

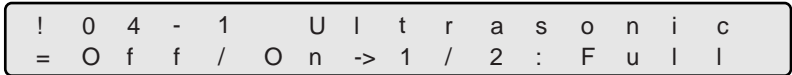
To disable the Double-feed detection, select [No] and press **Enter** (Enter button).





The blinking item is the one selected.

3) At <Screen 4-1> you can enable or disable the Double-feed detection or configure the detection modes by pressing  (Right arrow button) or  (Left arrow button).



<Screen4-1>



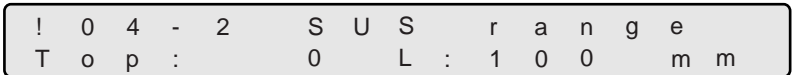
By pressing , the selection moves from (1) to (3).

By pressing , the selection moves from (3) to (1).




- | | |
|--------------------------------------|---|
| (1) [Off] is blinking: | Document overlapping is not checked. |
| (2) [On] and [1] are blinking: | Document overlapping is checked for the range set at step 4). This mode is used for preventing mis-detection when scanning documents that are pasted photos, etc. |
| (3) [On] and [2: Full] are blinking: | Document overlapping is checked for the whole area of the documents.(Default setting) |

4) At <Screen 4-2> you can set the detection range for Double-feed by checking document overlapping. Press  (Left arrow button) or  (Right arrow button) to set the start and end positions for the detection.

<Screen 4-2>



- | | |
|------------------------|--|
| (1) [Top] is blinking: | The start position for the detection is set. |
| (2) [L] is blinking: | The detection is range set. |

Press  (Next button) or  (Previous button) to increase/decrease the value of the selected item. To enable the settings, press  (Enter button).

The available ranges of detection are as follows:

Top: 0 (default), 50, 100, 150, 200 (Unit : mm)

L: 100 (default), 150, 200 (Unit : mm)

- 5) Besides the Double-feed detection by checking paper overlapping (the amount of ultrasonic waves), you can enable or disable the detection by checking paper thickness (the amount of light) at <Screen 4-3>. Press ◀ (Left arrow button) or ▶ (Right arrow button) to enable or disable the detection by checking paper thickness.

<Screen 4-3>

!	0	4	-	3		+	T	h	i	c	k	n	e	s	s
						N	o	/	Y	e	s				

(1) [Yes] is blinking:

The Double-feed detection by checking paper thickness is executed.

(2) [No] is blinking:

The Double-feed detection by checking paper thickness is not executed.

Press (Enter button) to enable the setting.

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

<Screen4-4>

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

- 7) At <Screen4-4>, 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 [Thickness] and [Thickness & Roller] alternately.

<Screen4-4>



!	0	4	-	4		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.
- (3) [+] is blinking: Also the double-feed detection by checking paper overlapping is executed.

By pressing  (Enter button), LCD display changes to <Screen4-5>.

<Screen4-5>

!	0	4	-	5		D	F		t	i	m	i	n	g
P	i	c	k	/		P	i	c	k	&	F	e	e	d

- 8) At <Screen4-5>, 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.

- 9) Press  (Enter button) to confirm the setting.

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



Double-feed detection accuracy increases when all the overlapping, thickness and length of documents are checked.



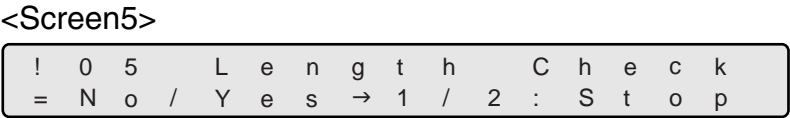
When a double-feed is detected and the scanning operation is stopped, the last documents in the hopper or the one ahead of it might have been double fed.



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

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

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



- 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 lapped sheets that are fed together. In this screen, you can specify if the amount of 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 (Enter button).






The blinking item is the one selected.


3) In case of (2) or (3), by pressing  (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.

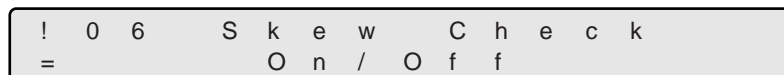
5) Press  (Enter button) to confirm the setting.

Press  (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** (Enter button).

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

Press **Exit** (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** (Enter button) to confirm the setting.

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



When scanning in Binary mode (Line art), document type and a 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 Darkness	Normal ↑	1: Normal Background and normal darkness text	3: Dark back-ground and normal darkness text		
	Light	2: Mid darkness background and light text	4: Red back-ground and light text	5: Green back-ground 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.



The following table shows validity of each scan parameter when using IPC pre-set in Offline mode.

● 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	Gamma 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 button) to confirm the selection. <Screen8-1> appears on LCD.


If Consumables replacement message setup change is not required, select [No] and press  (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 button), <Screen8-2> appears on the LCD.

<Screen8-2>

!	0	8	-	2	A	I	a	r	m	C	N	T	
=			3	0	0	0	0	0	s	h	e	e	t

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 button) to confirm the setting.

Press  (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 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 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** (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** (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 you are sure to reset, select [YES] and press **Enter** (Enter button).
To cancel Reset, select [No] and press **Enter** (Enter button).
Press **Exit** (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 the LCD display <Screen10> .

<Screen10>

!	1	0	P	a	p	e	r	L	e	n	g	t	h
=	N	o	r	m	a	l	/	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 button) to confirm the setting.

Press  (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>

!	1	1		L	a	n	g	u	a	g	e	
=	E	n	g	l	i	s	h	/	カ	タ	カ	ナ

- 2) Press ◀ (Left arrow button) or ▶ (Right arrow button) and select the language for LCD display.
- 3) Press **Enter** (Enter button) to confirm the setting.
Press **Exit** (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 confirm the setting.
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 confirm the setting.

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 confirm the setting.



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 button) to confirm the setting.



Press  (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's 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** (Enter button) to confirm the setting.
- Press **Exit** (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** (Enter button) to confirm the setting.

Press **Exit** (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 , the wait time becomes shorter.

By pressing , 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 confirm the setting.

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 button) to confirm the setting.

Press  (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	/	1	6	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 confirm the setting.

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	2		I	n	t	e	r	f	a	c	e		
=		A	u	t	o	/	S	C	S	I	/	T	P	S


- 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 , selection moves from (3) to (1).

By pressing , selection moves from (1) to (3).

- 3) Press  (Enter button) to confirm the setting.

Press  (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).





Baud rate at 9600 bps is recommended.

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

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

24. Selection of Imprinter

In this scanner, you can install the Pre- and Post-imprinters (optional accessories). However, you cannot use both imprinters simultaneously. The following procedure describes how to select the imprinter you want to use.

- 1) Press  (Next button) or  (Previous button), and display the <Screen24> on the LCD panel.

<Screen24>

! 2 4 l m p r i n t e r
S e l e c t P r e / P o s t

- 2) At <Screen24>, press (Left arrow button) or (Right arrow button) and select the imprinter you want to use.



The blinking item is the one selected.

When “Pre” is blinking: the Pre-imprinter (fi-486PRFR) is selected

When “Post” is blinking: the Post-imprinter (fi-486PRRE) is selected.

- 3) Press **Enter** (Enter button) to confirm the setting. Then configure the priority setting. The <Screen24-1> is displayed.

If “Pre” is selected at <Screen24>:

<Screen24-1>

! 2 4 - 1 P r i o r i t y
= I / F / P a n e l : P r e

If “Post” is selected at <Screen24>:

<Screen24-1>


! 2 4 - 1 P r i o r i t y
= I / F / P a n e l : P o s t


The imprinter selection can be specified from the interface or the operator panel. The priority setting is to decide which setting the scanner must follow; the setting done on the interface or the operator panel

4) At <Screen24-1>, press ◀ (Left arrow button) or ▶ (right arrow button), and select the setting you want to give priority.

Pressing ◀ (Left arrow button): “I/F” blinks and the scanner forcibly follows the settings done on the interface.

Pressing ▶ (Right arrow button): “Panel: Pre” or “Panel: Post” blinks and the scanner forcibly follows the settings done on the operator panel.



Press  (Enter button) to confirm the setting.

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



This screen is displayed only when both imprinters (fi-486PRFR and fi-486PRRE) are installed.

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	(	x	x	x



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 (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	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 (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** (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** (Enter button) and then <Screen 25-4> is displayed.

<Screen25-4>

!	2	5	-	4	R	e	s	e	t	N	o	w
=					N	o	/	Y	e	s		

- 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** (Enter button).

- 7) Press **Enter** (Enter button) to confirm the setting.

Press **Exit** (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 not possible, 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 r e p a r e n e w l 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 l 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** (Enter button). <Screen26-1> is displayed.

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

<Screen26-1>

!	2	6	-	1	R	e	s	e	t	N	o	w
					N	o	/	Y	e	s		

- 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** (Enter button).

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



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

<Screen26>

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



- 5) Press **Exit** (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
=				0	n	/	0	f	f				



- 2) At <Screen27>, press  (Left arrow button) or  (Right arrow button) and select [On] to use power save mode.

Next, press  (Enter button). Then the LCD display shows <Screen27-1>.

If power save mode is not required, press  (Right arrow button) and select [Off]. Then, press  (Enter button).

<Screen27-1>

!	2	7	-	1		T	i	m	e					
=				1	0		1	5		2	0	m	i	n

- 3) At <Screen27-1>, 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.




- 4) Press  (Enter button) and enable to use power save mode. Finally, press  (Exit button) and the LCD display goes back to [Ready] screen.

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].
To increase the brightness, press  (Next button). Each time the button is pressed the brightness value increases by 1.
To decrease the brightness, press  (Previous button). Each time the button is pressed, the brightness decreased by 1.
- 4) Press  (Enter button) to confirm the setting.
Press  (Exit button), and the LCD display goes back to [Ready] screen.

29. Confirming Imprinter installation

- 1) Press ◀ (Next button) or ▶ (Previous button) and let LCD display <Screen29>.

<Screen29>



!	2	9		I	m	p	r	i	n	t	e	r		
S	t	a	t	u	s		P	o	s	t	/	P	r	e

[XXXX/XXXX], imprinter installation status is displayed as follows.

- | | |
|---|------------|
| (1) Only fi-486PRFR is installed: | [Pre] |
| (2) Only fi-486PRRE is installed: | [Post] |
| (3) Both fi-486PRFR and fi-486PRRE are installed: | [Post/Pre] |



- 2) By pressing Exit (Exit button), LCD display goes back to “Ready”.

30. Setting Lamp Control

- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen30>.

<Screen30>

!	3	0	L	a	m	p	c	o	n	t	r	o	l	
N	o	r	m	a	l	/	A	l	w	a	y	s	O	n


- 2) At <Screen30>, press  (Left arrow button) to select [Normal] or press  (Right arrow button) to select [AlwaysOn].

(1) [Normal] is blinking:

[Normal] mode is selected.

(2) [AlwaysOn] is blinking:



[AlwaysOn] mode is selected. The lamp is kept turned on.

Press  (Enter button) to determine the setting.

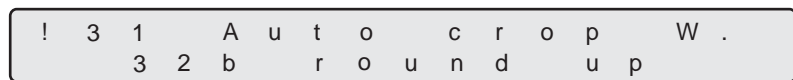
- 3) By pressing  (Exit button), LCD display goes back to "Ready".





31. Setting Auto crop width

When the scanner is set to scan in the Black & White mode and to detect a paper size automatically, the width of the detected paper may not be the integer number. You can round the number including fractions up or down.



- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen31>.

<Screen31>




- 2) At <Screen31>, press  (Left arrow button) or  (Right arrow button) to select [round up] or [round down] .
Select "Round Up" if you want to prevent the output image from chipping, and select "Round Down" if you want to delete unnecessary details.
- 3) Press  (Enter button) to determine the settings done.
By pressing  (Exit button), LCD display goes back to "Ready".


32. Setting the offset (starting position) for automatic size detection of the back side image

- 1) Press  (Next button) or  (Previous button) and let LCD display <Screen32>.

<Screen32>



!	3	2		C	r	o	p	p	i	n	g	(	B)
				C	h	a	n	g	e	?		N	o	/
												Y	e	s


- 2) At <Screen32>, to adjust the offset (starting position) for automatic size detection of the back side image, press  (Right arrow button) and select [Yes].


Press  (Enter button) to determine the selection. <Screen32-1> is displayed.


<Screen32-1>

!	3	2	-	1		H	o	r	i	z	o	n	t	a	l
=						+	0		(	+	L	e	f	t)

- 3) At <Screen32-1>, press  (Left arrow button) or  (Right arrow button) to adjust the horizontal starting position.

Pressing  (Right arrow button): The setting value increases from -4 to +4 (x 0.5mm).

Pressing  (Left arrow button): The setting value decreases from +4 to -4 (x 0.5mm).

Press  (Enter button) to determine the settings done. <Screen32-2> is displayed.

<Screen32-2>

!	3	2	-	2		V	e	r	t	i	c	a	l
=						+	0		(	+	u	p)

4) At <Screen32-2>, press ◀ (Left arrow button) or ▶ (Right arrow button) to adjust the vertical starting position.

Pressing ▶ (Right arrow button): The setting value increases from -4 to +4 (x 0.5mm).

Pressing ◀ (Left arrow button): The setting value decreases from +4 to -4 (x 0.5mm).

5) Press **Enter** (Enter button) to determine the settings done.

By pressing **Exit** (Exit button), LCD display goes back to “Ready”.

7.4 Test Mode Overview

■ Outline

Scanner operation can be checked in the 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.

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

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







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

To end the test mode, turn off the power.



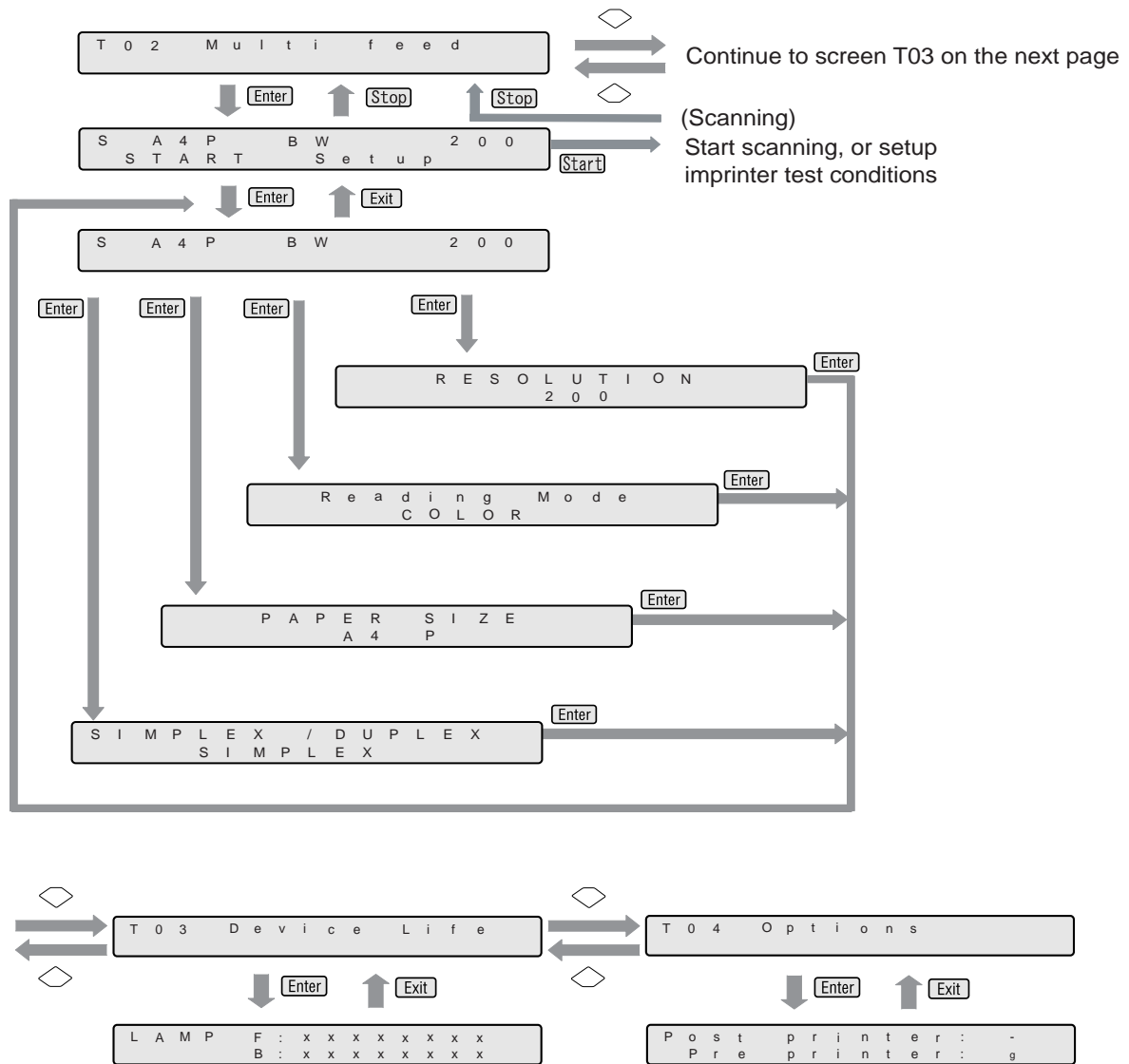
The blinking item is the one selected.

■ 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 item 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.

For the details, please refer to the descriptions in “**Contents of test mode setting**” on page 7-71.





■ 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 test mode

Without connecting to a PC, the scanner's whole mechanism's operation can be checked.

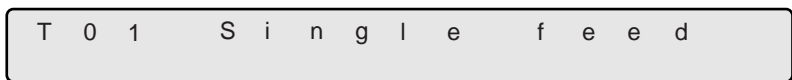
Only one sheet is fed with this test.

Scan parameters can be changed for scan test.

Imprinter test print can be performed at the same time.

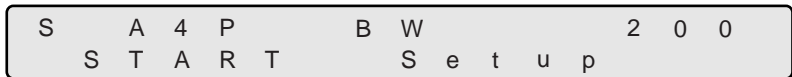
- 1) Place the documents to scan on the hopper.
- 2) Press ◀ (Next button) or ▶ (Previous button) and let the LCD show <Screen50>.

<Screen50>



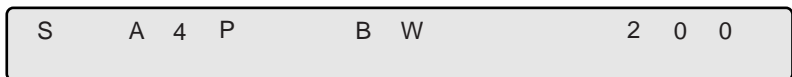
- 3) At <Screen50>, press **Enter** (Enter button) or **Start** (Start button). Then <Screen50-1> is displayed.

<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.

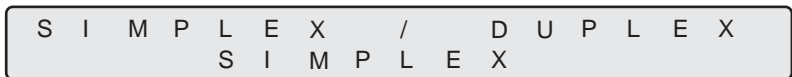
<Screen50-2>



- 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>



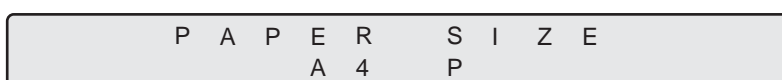
At this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select simplex or duplex.

Press **Enter** (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** (Enter button). Then the LCD display shows <Screen50-2.2>.


<Screen50-2.2>



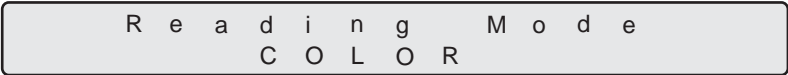
At this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select the document size and the orientation. Following parameters can be specified.



A4 portrait	A4P
B4 portrait	B4P
Legal portrait	LGP
11 x 17 in. 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 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>

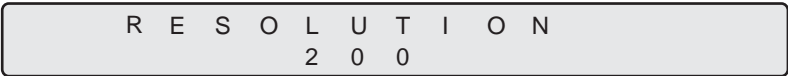




In this screen, press  (Left arrow button) or  (Right arrow button) and select the scan mode: binary (BW) or color (COLOR).

Press  (Enter 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 button). Then the LCD display shows <Screen50-2.4>.


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

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

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

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

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

<Screen50-3>

	P	r	i	n	t										
=	O	f	f	/	O	n	:	P	r	e	/	P	o	s	t

- 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.



To quit the test, press **[Stop]** (Stop button).
LCD display goes back to <Screen50>.

2. Multi feed test mode

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** (Enter button) or **Start** (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** (Enter button) or **Start** (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>

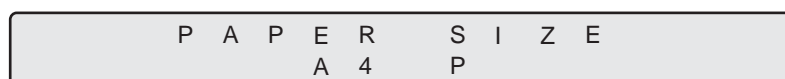




At this screen, press  (Left arrow button) or  (Right arrow button) and select simplex or duplex.

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 button). Then the LCD display shows <Screen51-2.2>.

<Screen51-2.2>



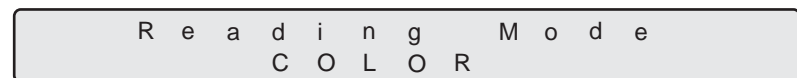
At this screen, press  (Left arrow button) or  (Right arrow button) and select the document size and the orientation. Following parameters can be specified.

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 <Screen51-2> is redisplayed.

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

<Screen51-2.3>

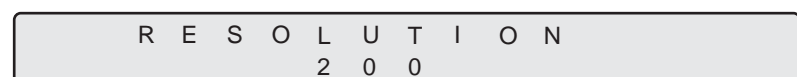


In this screen, press ◀ (Left arrow button) or ▶ (Right arrow button) and select the scan mode: binary (BW) or color (COLOR).

Press (Enter 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 button). Then the LCD display shows <Screen51-2.4>.

<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:	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 setting imprinter test conditions.

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

<Screen51-3>

P r i n t															
=	O	f	f	/	O	n	:	P	r	e	/	P	o	s	t

- 6) At this screen, 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.



To quit the test, 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>

T	0	3	D	e	v	i	c	e	L	i	f	e
---	---	---	---	---	---	---	---	---	---	---	---	---

- 2) At <Screen53>, press  (Start button) or  (Enter button). Then <Screen53-1> is displayed.



<Screen53-1>

L	A	M	P	F	:	x	x	x	x	x	x	x	x
				B	:	x	x	x	x	x	x	x	x

[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.

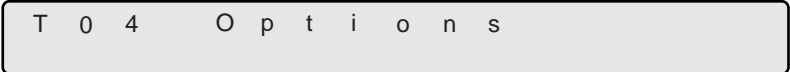
- 3) Press  (Stop button) or  (Exit button). Then <Screen53> is redisplayed.

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>



T O 4 O p t i o n s



- 2) At <Screen54>, press  (Enter button) or  (Start button). <Screen54-1> is displayed.

<Screen54-1>



P o s t p r i n t e r : -
P r e p r i n t e r : ■

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-4860C2.

8.1 Options	8-2
--------------------------	------------

8.2 fi-486PRFR (Pre-imprinter)	8-3
---	------------

8.3 fi-486PRRE (Post-imprinter)	8-4
--	------------

8.4 fi-486TRK (Thinner paper Roller Kit)	8-5
---	------------

8.1 Options

The following lists options available for the scanner.

Name	Part No.	Description
fi-486PRFR	PA03296-D207	Prints information on the front of a document prior to scan. Installed before the scanner optics. Imprinted data is captured during scan.
fi-486PRRE	PA03296-D201	Prints information on the back of a document after scan. Installed after the scanner optics. Imprinted data is not captured during scan.
fi-486TRK	PA03296-D780	A consumable kit for scanning thin papers.

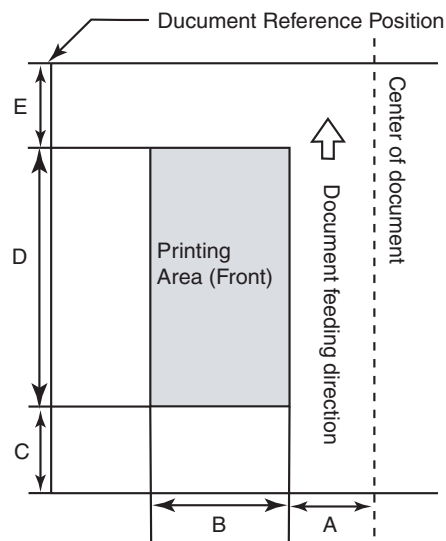
For the details please contact FUJITSU scanner dealer where you purchased the scanner or FUJITSU group company responsible for your country.



The both imprinters can be installed on the scanner at the same time.
However, only one of them can print at a time.
Depending on the application, appropriate imprinter should be specified.

8.2 fi-486PRFR (Pre-imprinter)

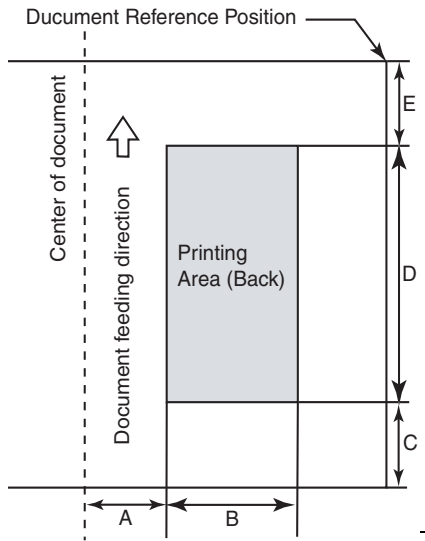
The fi-486PRFR is installed at the front side of the document path, inside of the scanner. It prints prior to scanning. The fi-486PRFR (Pre-imprinter) Specifications are described below.

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 2.91 mm (0.11 inch) x Width 2.82 mm (0.11 inch)
Character pitch	Approximately 3.53 mm (8 characters/inch)
Printing area	<p>Printable area is shown as below.</p> <p>A: 40 mm (1.7 inch) or more B: 99 mm (3.9 inch) or less C: 5 mm (0.2 inch) or more D: 140.5 mm (5.5 inch) or less (Max. 40 column) E: 5 mm (0.2 inch) or more</p>  <p>The diagram illustrates the printing area (front) within a document path. A horizontal line at the top is labeled 'Document Reference Position'. A vertical dashed line on the right is labeled 'Center of document'. An upward arrow indicates 'Document feeding direction'. The 'Printing Area (Front)' is a shaded rectangle. Dimension E is the vertical distance from the reference position to the top of the printing area. Dimension D is the total vertical height of the printing area. Dimension C is the vertical distance from the bottom of the printing area to the bottom edge of the diagram. Dimension B is the horizontal distance from the left edge to the right edge of the printing area. Dimension A is the horizontal distance from the right edge of the printing area to the center of the document.</p>
Consumables	Print Cartridge

As for the operations and functions of fi-486PRFR (Pre-imprinter), refer to the fi-486PRFR Operator's Guide attached to fi-486PRFR.

8.3 fi-486PRRE (Post-imprinter)

The fi-486PRRE is installed at the rear side of the document path, inside of the scanner. It prints after the scanning. The fi-486PRRE (Post-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 2.91 mm (0.11 inch) x Width 2.82 mm (0.11 inch)
Character pitch	Approximately 3.53 mm (8 characters/inch)
Printing area	<p>Printable area is shown as below.</p> <p>A: 43 mm (1.7 inch) or more B: 100.5 mm (3.9 inch) or less C: 5 mm (0.2 inch) or more D: 140.5 mm (5.5 inch) or less (Max. 40 column) E : 5 mm (0.2 inch) or more</p> 
Consumables	Print Cartridge

As for the operations and functions of fi-486PRRE (Post-imprinter), refer to the fi-486PRRE Operator's Guide attached to fi-486PRRE.

8.4 fi-486TRK (Thinner paper Roller Kit)

fi-486TRK provides smooth paper feeding when reading documents smaller than Letter/A4 size and thinner than the standard thickness (31 g/m² to 52 g/m² or 12.4 lbs to 14 lbs). It is also effective for scanning documents with paper dust. Refer to the section "6.2 Document Quality (on page 6-3)" for the document thickness.

For details on attaching fi-486TRK, refer to the sections "4.3 Replacing the Pad ASSY (on page 4-4)", "4.4 Replacing the Pick Roller Unit (on page 4-9)" and "4.5 Replacing the Brake Roller Unit (on page 4-12)".

fi-486TRK contains the following parts.

Descriptions	Standard replacement cycle
Pick Roller Unit (Rubber foam)	300,000 sheets or 1 year
Brake Roller(Rubber foam)	300,000 sheets or 1 year
Pad ASSY	300,000 sheets or 1 year



When using fi-486TRK, documents of coated paper (e.g. photos, magazines, etc.) may not be fed into the ADF successfully. For scanning such documents, the standard pick roller unit and the brake roler unit are recommended.

9 SCANNER SPECIFICATIONS

This chapter describes the Scanner Specifications.

9.1 Basic Product Specifications	9-2
9.2 Installation Specifications	9-3
9.3 Dimensions	9-5

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 x 2	Front/Back
4	Scanning area	Minimum	74 mm x 74 mm, 2.9 in. x 2.9 in.	-
		Maximum	A3 or 11x17 in.	-
5	Document thickness		52 g/m ² to 127 g/m ² or 14 lb to 34 lb	(* 1)
6	Scanning speed (A4 Portrait/Letter 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 80 g/m ² , or Letter 20 lb
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 (High Density DB68)
13	Other functions		JPEG compression	-

(* 1) For details, refer to “Chapter 6 ADF DOCUMENT SPECIFICATIONS” on page 6-1.

(* 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.

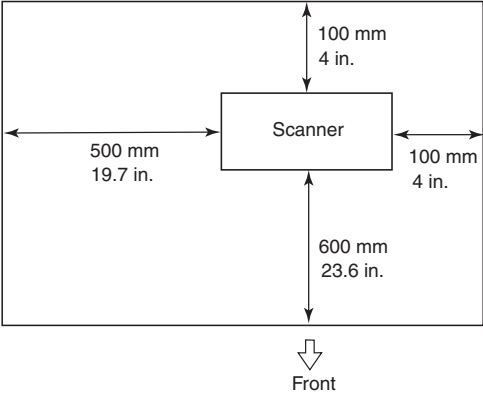
(* 3)With JPEG enabled

(* 4) The maximum capacity varies depending on the document thickness. Refer to “Chapter 6 ADF DOCUMENT SPECIFICATIONS” on page 6-1.

(* 5) A3 and 11 x17in document sizes are not supported at color 400dpi.

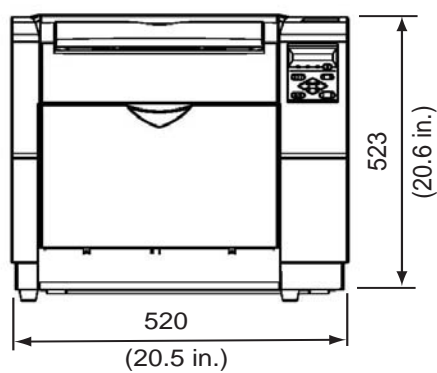
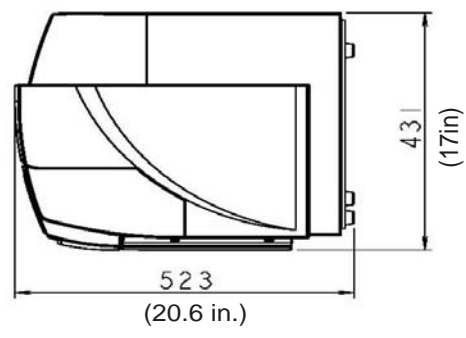
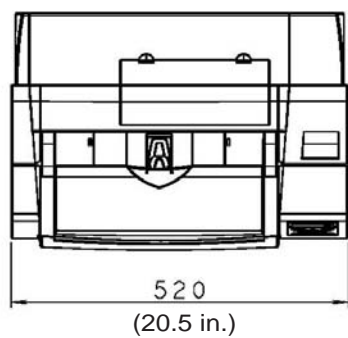
(* 6) Avoid connecting other SCSI devices to the same bus.
It can reduce the scanner throughput.

9.2 Installation Specifications

Item		Specification		
Dimensions (With hopper and stacker retracted)		Depth	Width	Height
		431 mm, 17 in.	520 mm, 20.5 in.	523 mm, 20.6 in.
Space requirements				
Weight (kg)		45 kg, 99 lb		
Input power	Voltage	AC100 - 240 V±10 %		
	Phase	Single-phase		
	Frequency	50/60 Hz +2/-4 %		
Power consumption		200 W or less		

Item		Specification	
Ambient condition	Device status	Operating	Not operating
	Temperature	15 -- 35 degrees Celsius 59 -- 95 degrees Fahrenheit	-20 -- +60 degrees Celsius -4 -- +140 degrees Fahrenheit
	Humidity	20 - 80 %	8 - 95 %
Heat capacity		172 kcal or less	
Shipping Weight (kg)		50 kg, 110 lb	

9.3 Dimensions



unit: mm

APPENDIX 1 DROP-OUT COLOR

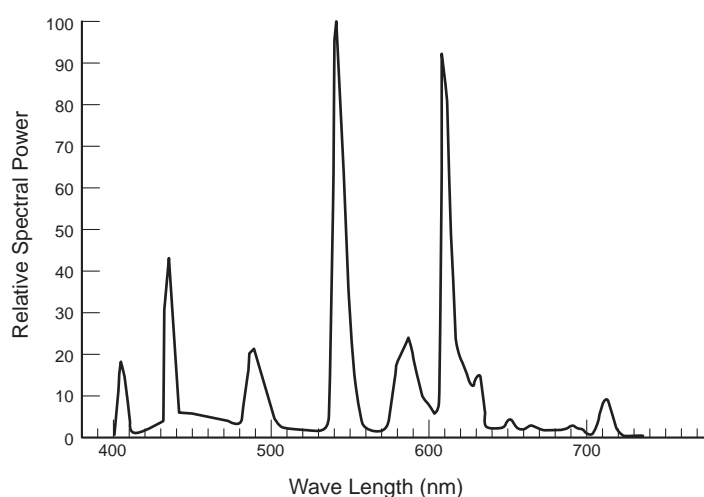
A drop-out color is a color that can be eliminated from what the scanner sees.

To check the background color of document for drop-out, use the method and follow the standards given below.

■ Print density measurement

The measurement must be made in one of the following ways:

- A fluorescent light source.
- Macbeth PCS meter PCM II is used, which requires a filter.



■ Drop-out color standard

In the spectrum of the fluorescent lamp the PCS value must satisfy the following standards:

- Maximum Density: 0.14 or less
- Average Density: 0.1 or less

APPENDIX 2 DOUBLE-FEED (MULTI-FEED) DETECTION CONDITIONS

There are three double-feed (a.k.a. multi 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. (When fi-486TRK is not installed.)

■ Detection by Document Overlapping

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Punched holes are not allowed within 35mm (1.4 inch) of the vertical center line of the document.

■ Detection by Document Thickness

Sheets of the same thickness shall be set in the ADF at a time.

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm or 1 x 0.4 inch) at the leading edge of the document.
- Punched holes are not allowed within 35mm (1.4 inch) 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 or 1 x 0.4 inch) at the leading edge of the document.
- Punched holes are not allowed within 35mm (1.4 inch) 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 Overlapping and Thickness

Sheets of the same thickness shall be set in the ADF at a time.

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm or 1 x 0.4 inch) at the leading edge of the document.

- Punched holes are not allowed within 35mm (1.4 inch) 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 Overlapping and Length**

Sheets of the same thickness and length shall be set in the ADF at a time.

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Document length deviation: 1% or less
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm or 1 x 0.4 inch) at the leading edge of the document.
- Punched holes are not allowed within 35mm (1.4 inch) 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.

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Document length deviation: 1% or less
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm or 1 x 0.4 inch) at the leading edge of the document.
- Punched holes are not allowed within 35mm (1.4 inch) 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 Overlapping, Thickness and Length**

Sheets of the same thickness and length shall be set in the ADF at a time.

- Paper weight: 52 g/m² - 127 g/m² or 14 lbs to 34 lbs
- Document length deviation: 1% or less
- Printed area: 12% or less
- No black printed areas are allowed at the center area (26 x 10mm or 1 x 0.4 inch) at the leading edge of the document.
- Punched holes are not allowed within 35mm (1.4 inch) 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.



When the overlapping check is specified, the paper sheets which contact closely each other, such as electro-statically charged paper, can result in the miss-detection of double-feed.

APPENDIX 3 MESSAGES ON THE OPERATOR PANEL

■ Messages of Scanner Operation Status

<Not Ready status>
(Initializing)

□ changes to ■ with progress of time, and when all become ■, it move to the following check states.



<Not Ready status>
(Ejecting document)

E j e c t i n g p a p e r
W a r m i n g - u p N o w ! !

<Not Ready status>
(Checking sensor)

C h e c k i n g s e n s o r
W a r m i n g - u p N o w ! !

<Not Ready status>
(Resetting the hopper)

R e s e t t i n g h o p p e r
W a r m i n g - u p N o w ! !

<Not Ready status>
(Waiting to initialize interface board)

W a i t i n g I F R e a d y

Low ink alarms
<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	r	e	p	a	r	e		n	e	w		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 the Low power mode.



The scanner wakes 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 (multi feed) has been detected (by overlapping check).

If a double-feed detection state is canceled on "Ready" screen after scanning, the upper row of this message disappears.

S	U	S		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 (multi-feed) has been detected (check in overlapping).

Press the [Stop] button, and the double-feed detection state is canceled.

The upper row of this message, [Double Feedxxxxx] blinks.

S	U	S		D	.	f	e	e	d		x	x	x	x	x
				R	e	a	d	y			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.

<Double feed (multi-feed) error>
(Scanning)

The following message is displayed while the scanner is scanning continuously in the state where double-feed (multi-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 (multi feed) has been detected (by thickness check).

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	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 :Check LED blinking)

Check LED blinks when the following errors occur except <Hopper empty> and <Mis-pick>.

<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 continued, when you place documents on the hopper for re-scanning.

To clear this message, press the **[Stop]** button.

P	a	p	e	r					x	x	x	x	x
					E	m	p	t	y				



Check LED does not blink at Hopper empty error.

(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



"xxxx" shows the number of Batch counter value.

<Paper Jam>

The following message displayed if a document is jammed in the ADF.

Refer to "5.1 Clearing Document Jams" on page 5-2 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", depending on paper jam status.

<ADF cover open> The following message is displayed if the ADF cover is not closed completely.
Close the ADF cover completely, to enable 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.

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

<Mis-pick> The following message is displayed, when a document is not sent from the hopper to the ADF.

M i s - p i c k



Check LED does not blink at Mis-pick error.

<Pick overrun> The following message is displayed, when a document is sent from the hopper to the ADF and it goes into too far 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.

l 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.
(When the documents are on the hopper.)

H o p p e r o v e r l o a d

<Pick 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 set>

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

<Brake roller not
set>

The following message is displayed, when scanning while the Brake roller unit is not set correctly.

B r a k e r o l l e r
n o t s e t

<Separation roller > The following message is displayed, when the Separation roller rotates while 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, when the Abrasion counter value exceeds the setting value to display an consumables replacement message.
------------------------	--

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 (Pre-imprinter) or to fi-486PRRE (Post-imprinter).
---------------------------	--

P r e
N o l n k C a r t r i d g e

Post
N o l n k C a r t r i d g e

■ Alarm message (Hardware error :Check LED illuminated)

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 a distributor or an nearest imaging service and support center for help.

<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 occurs 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 blows 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 blows out.

F	u	s	e	a	l	a	r	m			
B	a	c	k	s	i	d	e	l	a	m	p

<Background fuse alarm>
(Front side)

The following message is displayed, when the fuse for changing the Background of front side blows 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 fuse alarm>
(Back side)

The following message is displayed, when the fuse for changing the Background of back side blows 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 fuse error>
(Front side)

The following message is displayed, when the Background of front side cannot 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 fuse error>
(Back side)

The following message is displayed, when the Background of back side cannot 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 overrun>

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 (SUS, 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 (SUS, 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 the 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 displayed 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 (Pre-imprinter) or the fi-486PRRE (Post-imprinter).

```
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 timeout)

```
C o m m a n d   E r r o r 5
```


INDEX

A

- ADF release lever 3-5
- ADF upper sheet guide 3-5
- Adobe Acrobat 2-3

B

- Back-side lamp 3-3, 3-46, 4-20
- Basic Operations
 - Clearing errors 1-6
 - Inserting documents 1-21
 - Lifting/lowering hopper 1-7
 - Loading documents 1-18
 - Operator Panel 1-6
 - Power off 1-4
 - Power on 1-2
 - Scanning documents 1-23
 - Setting the Hopper 1-14
 - Setting the Stacker 1-15
 - Setup mode 1-10
 - Test mode 1-10
 - Waking, Power Save 1-5
- Basic Scanner Operations 1-1
- Batch counter 4-3
- Brake roller 3-3, 3-14
- Brake roller unit 4-12

C

- Cleaner F1 3-2
- Cleaner F2 3-2, 3-19
- Cleaning
 - Brake roller 3-14
 - Cleaning sheet 3-8
 - Discharge brush 3-24
 - Document width sensor 3-35
 - Feed roller 3-18
 - Glass sheet guide 3-32
 - Glass surface 3-29
 - Lamps 3-41
 - Pad 3-5, 3-7
 - Pick Roller 3-10

- Pinch roller 3-20
- Removable sheet guide 3-29
- Sensors 3-35
- Separation roller 3-10
- SF0 sensor 3-37
- SF1 sensor 3-37
- SF1.5 sensor 3-39
- SF2 sensor 3-39
- Transport path 3-22

- Cleaning materials 3-2
- Cleaning sheet 3-2, 3-8
- Configuration Window of FUJITSU ISIS Scanner Driver 1-38
- Consumables 4-2
 - Abrasion counters 1-9, 4-3
 - Part No. 4-2
 - Replacement cycle 4-2
 - Replacement message 1-9
- Correcting the skewed Documents 2-15
- Cumulative lamp-on time 4-19

D

- Daily Care 3-1
- Detecting Double-Feeds 2-13
- Dimensions 9-3, 9-5
- Discharge brush 3-3, 3-24
- Document
 - Document quality 6-3
 - Document size 6-2
 - Document thickness 6-3
 - Document type 6-3
 - Grounding color area 6-8
 - Hole-punching, area 6-6
 - Hopper capacity 6-10
 - Job separation sheet 6-9
 - Precautions 6-4
 - Print Prohibited Area 6-7
- Document jams 5-2
- Document separation, adjustment 5-5
- Document width sensor 3-3, 3-35
- Dropout color 2-9

E

Errors 1-6

F

Feed roller..... 3-3, 3-18
fi-486PRFR 8-2, 8-3
fi-486PRRE 8-2, 8-4, 8-5
Front-side lamp..... 3-3, 3-41, 4-15
FUJITSU ISIS Scanner Driver..... 1-34
FUJITSU TWAIN32 Scanner
Driver 1-27

G

Glass sheet guide 3-3, 3-32
Glass surface..... 3-29
Guide plate 1-22, 3-6

H

Hopper 1-7, 1-14, 1-18, 1-21
Hopper extension 1-20
How to use the Scanner Driver ... 1-27

I

Installation Specifications
Ambient condition 9-4
Dimensions 9-3
Input power 9-3
Power consumption 9-3
Space requirements..... 9-3
Weight 9-3
Isopropyl alcohol..... 3-2

L

Labels on the scanner 5-31
Lamp
Lamp socket..... 3-43, 3-47
Lamp socket cover..... 3-43
LCD..... 1-9
Lifting or lowering the hopper 1-7

M

Magnet catch 1-21
Manual Feed Mode 1-21

O

Offline setup mode..... 7-2
Online setup mode..... 7-2
Operator panel 1-6, 4-3

P

Pad 3-3, 3-5
Pad ASSY 4-4
PDF 2-3
Pick roller 1-21, 3-3, 3-10
Pick roller unit 4-9
Pinch roller 3-3, 3-20
Power button..... 1-3
Power off..... 1-4
Power on 1-2
Power Save Mode 1-5

R

Removable sheet guide 3-3, 3-29
Replacing
Back-side lamp..... 4-20
Brake roller unit 4-12
Front-side lamp 4-15
Pad ASSY..... 4-4
Pick roller unit..... 4-9

S

ScandAll 21 1-23, 1-26
Scanner Specifications 9-1
Scanning documents 1-23
Different-size 2-2
Dropout..... 2-9
PDF..... 2-3
Sensors 3-35
Separation roller..... 3-3, 3-10

Service provider	5-29
Setting Window for FUJITSU TWAIN32	
Scanner Driver	1-31
Setup mode.....	1-10, 7-2
Details.....	7-16
Function of buttons.....	7-4
Outline	7-2
Transitions, screens	7-4
SF0 sensor.....	3-3, 3-37
SF1 sensor.....	3-3, 3-37
SF1.5 sensor.....	3-3, 3-39
SF2 sensor.....	3-3, 3-39
Side cover	3-46
Side guides	1-19, 1-22
Skipping blank Pages	2-11
Specifications	9-2
ADF capacity	9-2
Document thickness	9-2
Grayscale level.....	9-2
Image sensor.....	9-2
Interface.....	9-2
Light source	9-2
Optical resolution.....	9-2
Other functions	9-2
Output mode.....	9-2
Output resolution	9-2
Scanner Type	9-2
Scanning area	9-2
Scanning speed.....	9-2
Stacker	1-15, 1-16
Stacker Extension	1-17
Stopper.....	1-17

T

Test mode	1-10, 7-67
Button functions.....	7-68
Contents, setting	7-71
Details.....	7-72
Transition, screens	7-69
Transport path.....	3-3, 3-22
TWAIN Driver.....	1-25

fi-4860C2 Image Scanner Operator's Guide

P3PC-1692-01ENZO

Date published: May, 2006

PFU LIMITED

- Copying of the contents of this manual in whole or in part and copying of the scanner application is forbidden under the copyright law.
- The contents of this manual are subject to change without notice.
- PFU LIMITED assumes no liability for incidental or consequential damages arising from the use of this manual, and any claims by a third party.