Canon

Microfilm Scanner 800

INSTRUCTIONS

ENGLISH

Be sure to read this instructions before you use the equipment.
Keep this instructions on hand for reference to ensure optimum performance

FCC REGULATIONS (For 120V models)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Do not make any changes or modifications to the equipment unless otherwise specified in the manual. If such changes or modifications should be made, you could be required to stop operation of the equipment.

RADIO INTERFERENCE REGULATIONS (For 120V models)

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the Interference-causing equipment standard entitled "Digital Apparatus", ICES-003 of the Industry Canada.

RÈGLEMENT SUR LE BROUILLAGE RADIOÉLECTRIQUE (For 120V models)

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe A prescrites dans la norme sur le matériel brouilleur: "Appareils Numériques", NMB-003 édictée par l'Industrie Canada.

Für EMNG

Dieses Produkt ist zum Gebrauch im Wohnbereich, Geschäfts-und Gewerbebereich sowie in Kleinbetrieben vorgesehen.

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Introduction

Thank you for purchasing this Canon Microfilm Scanner 800.
The Microfilm Scanner 800 is a desktop universal microfilm scanner that features a large A3-format screen. Images projected on the screen can be output directly to a dedicated printer connected to the scanner or downloaded as image data onto a computer connected to the scanner. Optional carriers provide support for a wide variety of film types, including roll film, microfiche and aperture cards. Read the instructions in this manual carefully to ensure that you make the best possible use of your scanner, and keep this manual handy for future reference.

Conventions Used in These Instructions

The symbols and icons used in this manual are described below. Take the time to read and understand this information before reading the rest of the manual.

(→ 12)
A number preceded by an arrow and enclosed in parentheses indicates the number of the page on which you will find more information about the preceding statement or paragraph.

WARNING

Warnings are provided for your safety and contain extremely important information. Failure to observe the instructions provided in a warning could result in death or serious injury to yourself or your co-workers.

CAUTION

Caution notices are also provided for your safety and contain important information. Failure to observe the instructions provided in a caution notice could result in serious injury to yourself or your co-workers or damage to the equipment.

IMPORTANT

These important notes contain important information on procedures that must be followed or actions that must be avoided. Failure to observe a request could result in damage to the equipment or a malfunction.

Notes

Notes provide additional tips or advice that can save you time and effort in using the scanner.

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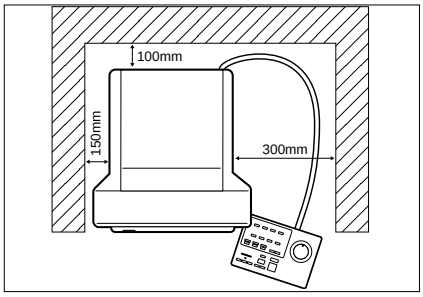
Before You Begin...

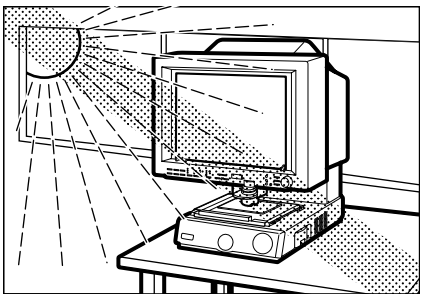
⚠ Safety Notes

To ensure safe operation, read the following precautions and recommendations before you choose a location and set up the scanner.

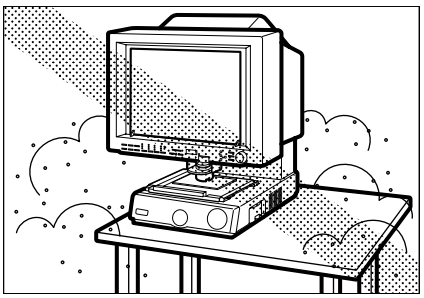
Choosing a Safe Location



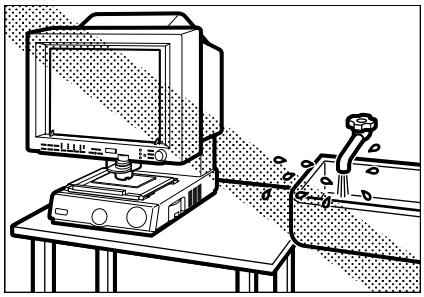
❏ To ensure adequate space for operation, maintenance and ventilation, ensure that there is ample space around the scanner on all sides.



❏ Avoid locations exposed to direct sunlight.
When direct sunlight is unavoidable, use curtains to protect the scanner.

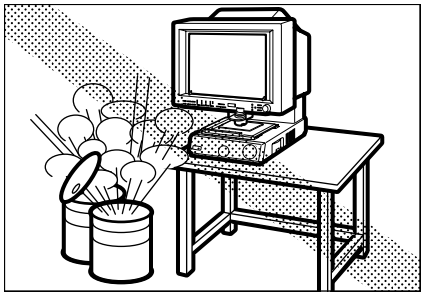


❏ Avoid dusty locations.
Dust can adversely affect internal scanner components.

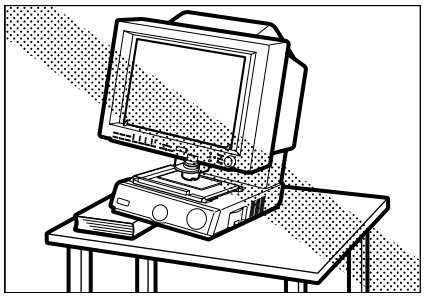


❏ Avoid locations close to taps, water heaters or humidifiers where the scanner would be exposed to high temperatures or moisture.

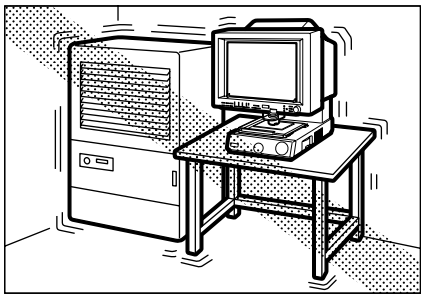
❏ Avoid locations affected by fumes from ammonia, acetone or other volatile chemicals. Never use any kind of volatile or flammable spray or aerosol near the scanner.



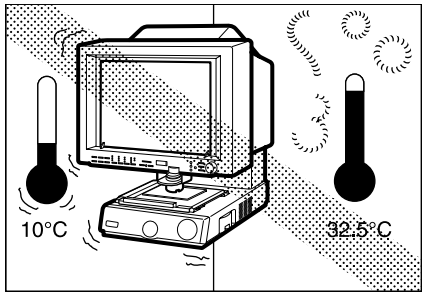
❏ Never set up the scanner in locations where flammable substances such as alcohol, paint thinners or other organic solvents are present.



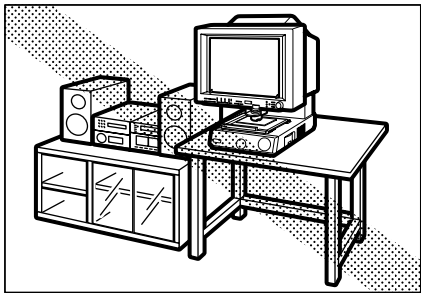
❏ Always set up the scanner on flat and stable surface that can support the weight of the scanner (47 kg).



❏ Choose a location that is free of excessive vibration.

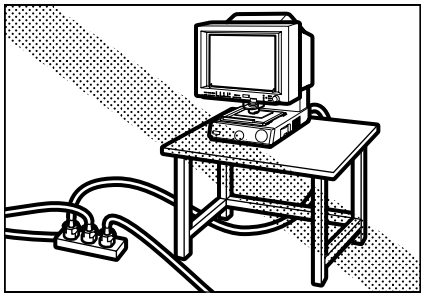


❏ Avoid locations that are subject to extreme or sudden changes in temperature.
Condensation formed inside the scanner can adversely affect print quality. The temperature and humidity ranges for optimum scanner operation are as follows:
Temperature: 10°C to 32.5°C (50°F to 90.5°F)
Humidity: 10% to 85% RH (condensation free)

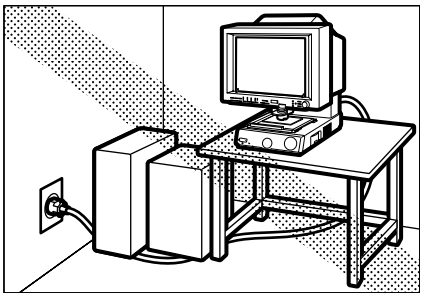


❏ Do not set up the scanner close to equipment that can generate strong magnetic fields, such as speakers, radios or televisions.

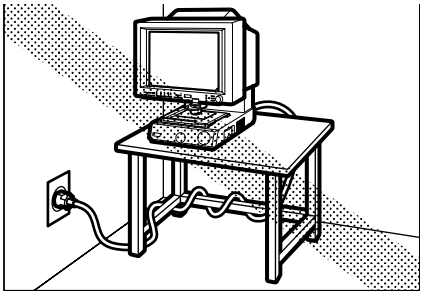
Power Supply



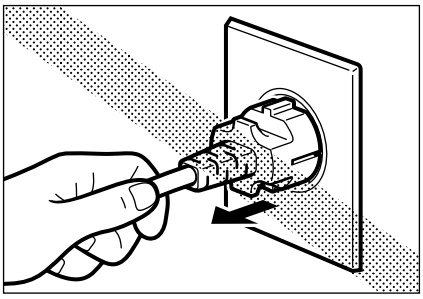
❏ Power should always be supplied from a rated power outlet.



❏ Do not place objects on the power cord and position the cord so that it will not be stepped on by people working around the scanner.



❏ Do not bundle the power cord or wrap it around objects such as table or chair legs.



❏ Do not attempt to unplug the scanner by pulling on the power cord. Grasp the plug itself firmly to remove it.
To ensure safe operation, always ground the scanner. Note that the scanner should never be grounded by connecting the ground lead to a gas or water pipe.
If you are unsure of any aspects of the power supply, consult your authorized Canon dealer or your power supplier.

⚠ Important Warnings

⚠ WARNING

- **Always observe these warnings when using the scanner. Failure to follow these warnings could result in injury due to fire or electric shock.**
- **Do not set up the scanner in a location close to flammable solvents such as alcohol and paint thinners.**
- **Do not cut, damage or modify the power cord, do not pull or bend the power cord excessively, and do not place heavy objects on the power cord.**
- **Never plug in or unplug the power cord with wet hands.**
- **Do not place objects on top of the scanner as such objects could fall and cause injury. Do not plug the scanner into a multi-socket adapter.**
- **Do not knot or bundle the power cord, and ensure that the plug is pushed fully into the power outlet.**
- **Use only the power cord supplied with the scanner.**
- **Do not attempt to disassemble or modify the scanner. There are no user-serviceable parts inside the scanner.**
- **Do not use flammable sprays or aerosols near the scanner.**
- **Switch the scanner off and unplug the power cord before cleaning the scanner.**
- **To clean the unit, use a cloth lightly dampened with water or a mild detergent.**
- **If the scanner emits an unusual noise, odor, smoke or sparks, or if the scanner will not function when switched on, immediately switch the scanner off, unplug the power cord and contact an authorized Canon dealer or service center.**
- **Before you move the scanner even a short distance, switch the scanner off and unplug the power cord.**

CAUTIONS

- **Do not set up the scanner on sloping, wobbly or otherwise unstable surfaces or in locations affected by excessive vibration. The scanner could cause injury if it falls over or slides off the surface.**
- **Do not block the ventilation slots as this could result in a fire due to the build up of heat inside the scanner.**
- **Do not place vessels containing liquids (cups, vases, etc.) or small metal objects (paper clips, staples, necklaces, etc.) on top of the scanner. Liquids or metal objects falling into the scanner could cause an electric shock or fire. If any liquids or metal objects fall into the scanner, immediately switch the scanner off, unplug the power cord and contact an authorized Canon dealer or service center.**
- **Do not set up the scanner in dusty or humid locations as this could result in an electric shock or fire.**
- **Do not place heavy objects on top of the scanner as such objects could fall and cause injury.**
- **Use only a power supply having the rated voltage. The use of other voltages could result in a fire or electric shock.**
- **Always unplug the power cord by grasping the plug itself. Pulling on the power cord can damage the cord so that the core wires are exposed or snapped and could cause a fire or electric shock.**
- **Do not use an extension power cord as this could cause a fire or electric shock.**
- **Keep the area around the power outlet free of obstacles to ensure that the scanner can be unplugged quickly in the event of an emergency.**
- **Take care not to tip water or flammable solvents such as alcohol, thinners or benzene into the scanner as this could result in a fire or electric shock.**
- **If the scanner will be left unused for a lengthy period, always unplug the scanner as a safety measure.**
- **Avoid touching internal scanner components when you perform routine cleaning or maintenance such as changing the lamp. Some internal components generate high temperatures or high voltages. To avoid injury such as burns or electric shocks, take care also that metal objects such as necklaces or bracelets do not come into contact with internal scanner components.**
- **To avoid injury when you are moving the scanner, take care not to put your hands on the metal protrusions on the underside of the scanner unit.**

Features

The Canon Microfilm Scanner 800 features the following:

- ❏ Large-format screen, small footprint
  Despite providing a large A3-size screen, this compact universal microfilm scanner is small enough to fit on a desktop.

- ❏ Automatic film selection
  The scanner's automatic film polarity detection function saves you the trouble of switching the polarity when you are scanning both negative and positive film.

- ❏ Support for different film formats
  With its wide range of optional roll carriers, fiche carriers and Auto Carriers, this scanner can handle a wide variety of film formats, including microfiche, aperture cards and roll film.

- ❏ Automated and motorized operation
  Simple keystrokes can be used to control editing functions such as screen image adjustment and border removal as well as other scanner functions.

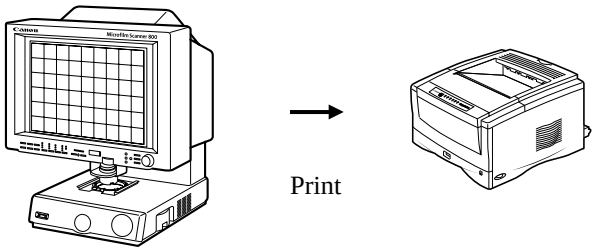
- ❏ Different operation modes to suit your circumstances
  The MS800 scanner has 2 operation modes: "ReaderPrinter mode", in which the image on the screen is sent directly to a dedicated printer, and "Scanner mode", in which the scanner is connected to a personal computer and the scanned image data is downloaded to the computer. You can select whichever mode best suits your needs. The operation mode is set by the service technician at installation. See "Operation Modes" on P.10 for more information.

Operation Modes

The MS800 scanner has 2 operation modes: “Reader/Printer mode”, in which the image on the screen is sent directly to a dedicated printer, and “Scanner mode”, in which the scanner is connected to a personal computer and the scanned image data is downloaded to the computer to be printed on a printer connected to the computer. The connected devices and operation procedures for the two modes differ. Select the mode that best matches your system setup.
The operation mode is set by the service technician at installation. Contact your authorized Canon service representative for details.

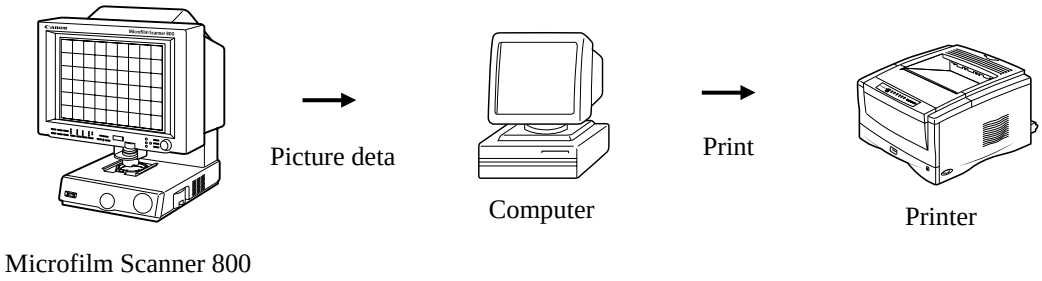
❑ Reader/Printer mode

This configuration consists of the Microfilm Scanner 800 with a FilePrint 400 printer. Screen images are sent directly to the FilePrint 400 using the control panel on the Microfilm Scanner 800. To switch from this mode to Scanner mode, contact your Canon service technician.



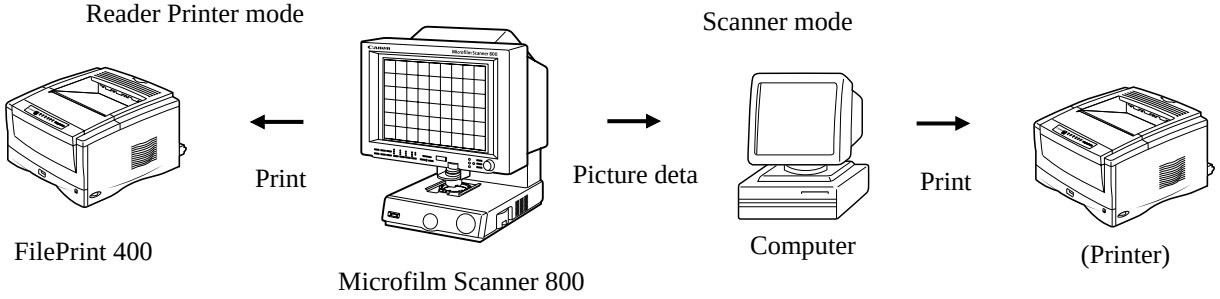
❑ Scanner mode

This configuration consists of the Microfilm Scanner 800 with a computer and printer. Application software is used to download screen images to the computer connected to the Microfilm Scanner 800 as image data. The downloaded image data can then be sent to the printer connected to the computer. To switch from this mode to ReaderPrinter mode, contact your Canon service technician.



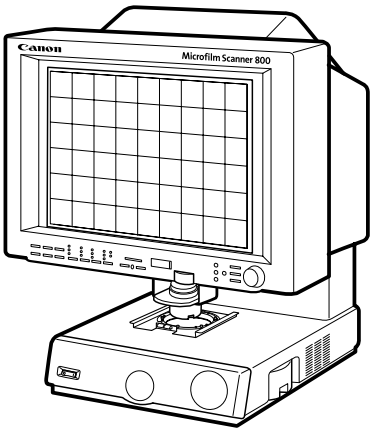
❑ Reader/Printer/Scanner mode (factory default):

Select this mode when you want to use both Reader/Printer mode and Scanner mode. You switch between the two modes by assigning a switching function to one of the function keys. This mode also allows you to use the MS 800 as a scanner in Reader/Printer mode and scan images from your computer. However, you should switch to Scanner when you want to scan from the computer since some scanner keys cannot be used in Reader/Printer mode.

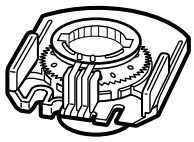


Checking the Box Contents

The Microfilm Scanner 800 package contains the items listed below. If any of these items is missing, contact your Canon service outlet for assistance.



Microfilm Scanner 800

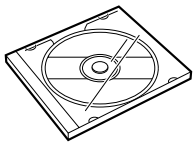


Lens holder

Microfilm Scanner 800 Instructions

Scanning Utility 800 Instructions

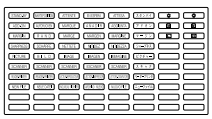
ISIS/TWAIN Driver Instructions



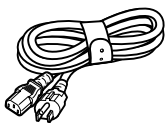
Setup CD-ROM

Software Licence Agreement

Warranty Card
(USA and Canada only)



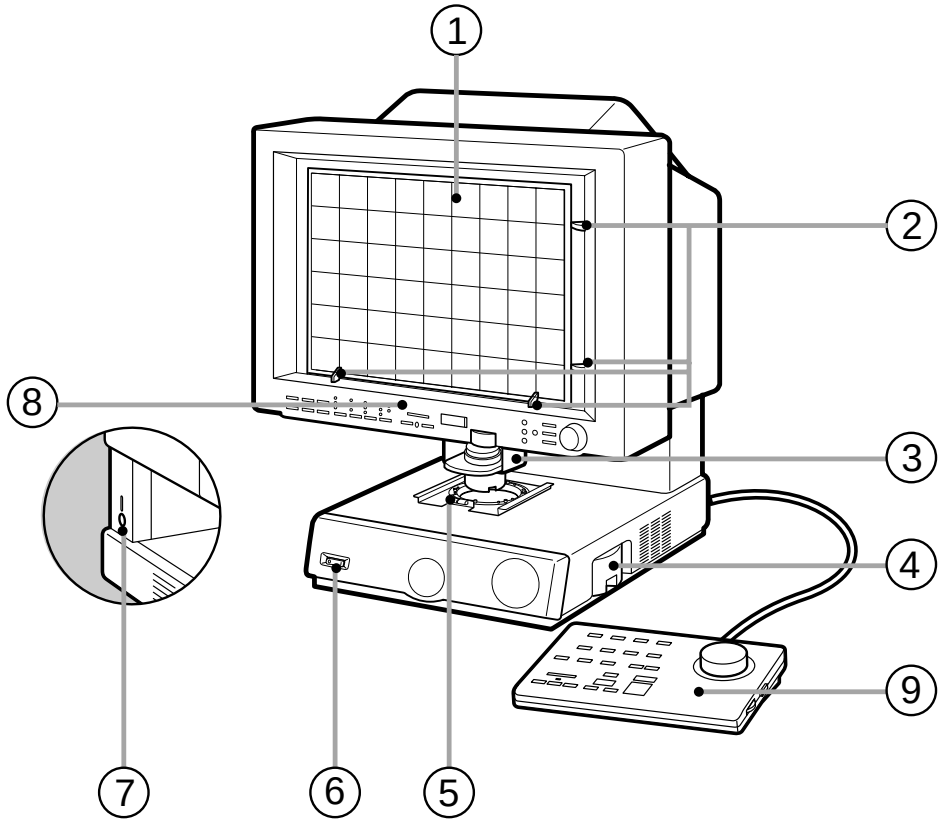
Function key labels



Power cord

Important Components and Their Functions

Take a few moments to familiarize yourself with the names and functions of the main components of the scanner, as described below.



① Screen
Shows enlarged projections of the images on the microfilm.

② Framing Kit (optional)
When a specified area is to be scanned, use this cursor to set the size of the scanned area.

③ Lens holder
Holds the lens.

④ Lamp unit
Holds the lamp that illuminates the image. Remove this unit to change the lamp.

⑤ Carrier pad
Holds the film carrier.

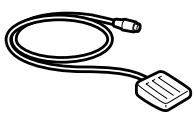
⑥ Power switch
Switches the scanner on and off.

⑦ DIN connector
Use this socket to connect a motorized carrier (optional).

⑧ Operation panel
Use these buttons to specify the image adjustment and operation mode settings.

⑨ Operation keyboard (optional)
Provides easy access to all the operation panel controls.

⑩ Foot switch (optional)
An underfoot switch that provides the same function as the Start key on the operation panel.



Optional Products

In addition to the accessories provided in the product package, a number of optional accessories that are required for using the scanner, such as carriers and lenses, are also sold, as well as other optional accessories that can be purchased as needed. Contact your nearest authorized Canon Dealer for details.

Carriers (→ 13 “Preparing the Carrier”)

Carriers can be used for all types of film, including cartridge film, microfiche, jacket film and aperture cards. Because the scanner does not come with a carrier, purchase the carrier best suited to your needs.

Installation Kit (→ 13 “Preparing the Carrier”)

Some carriers require the Installation Kit. Contact your nearest authorized Canon service outlet for details.

Lenses (→ 14 “Lenses”)

One fixed-focus lens and four zoom lenses are provided for the MS 800. Because the scanner does not come with a lens, purchase the lenses best suited to your needs.

Framing Kit (→ 25 “Trimming/Border settings”)

This unit allows you to select a part of the image projected onto the scanner screen (trimming). This Framing Kit is required in order to use the Trimming function provided in the scanner.

Operation Keyboard (→ 16 “Using the Operation Panel Keys”)

This keyboard provides a handy way to access the functions provided on the operation panel.

Foot Switch

This is an underfoot switch that provides the same function as the Start key on the operation panel.

128MB Additional Memory

To scan in grayscale mode from the application software additional memory must be installed in the scanner. Contact your nearest authorized Canon Dealer for details.

FilePrint 400 (→ P.15 “Preparing the Printer”)

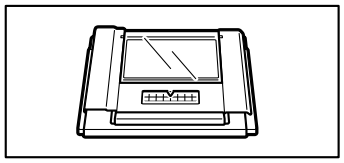
A dedicated printer for the Microfilm Scanner 800 when it is used in Reader Printer mode.

Preparing the Carrier

The list below shows all the optional film carriers that can be installed on the Canon Microfilm Scanner 800. For more details about these optional carriers, consult your Canon dealer or authorized Canon service outlet. For information on carrier installation and operation, refer to the instructions provided with the carrier.

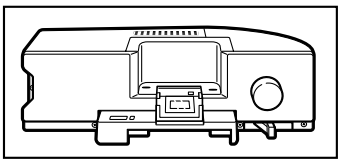
Note

The Auto Carrier 100C, 100M and 100R and the FS Controller I and Roll/Fiche Carrier 200 require the optional installation kit.



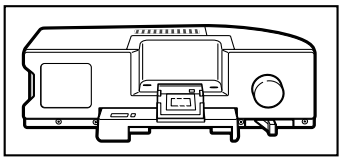
Fiche Carrier 190R II

A film carrier for viewing microfiche (up to 105 x 190 mm), jackets and aperture cards.



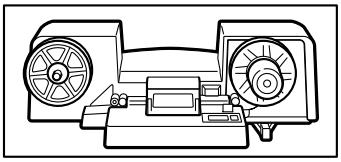
Auto Carrier 100C (AC100C)

A motorized automatic carrier for 16 mm cartridge film (ANSI, ANSI ENCLOSED *1, Kodak Ektamate or 3M) that features high-speed automatic loading and rapid film feeding and display.



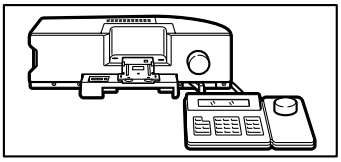
Auto Carrier 100M (AC100M)

A motorized automatic carrier for 3M cartridges or TUSCAN M-type *2 cartridges that features high-speed automatic loading and rapid film feeding and display.



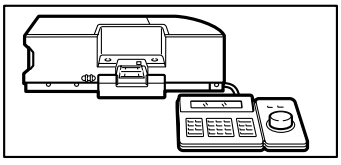
Auto Carrier 100R (AC100R)

A motorized automatic carrier for 16 or 35 mm film wound on standard open reels.



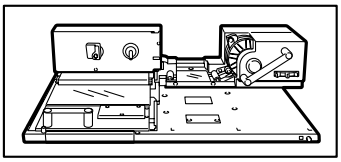
FS Controller I

A motorized automatic carrier for 16 mm cartridge film (ANSI, Kodak Ektamate or 3M). This carrier is required for reading film marked with blips for image search and retrieval.



FS Controller III

A motorized automatic carrier for the latest 16 mm cartridge film (ANSI, Kodak Ektamate or 3M). This carrier is required for reading film marked with blips for image search and retrieval.



Roll/Fiche Carrier 200

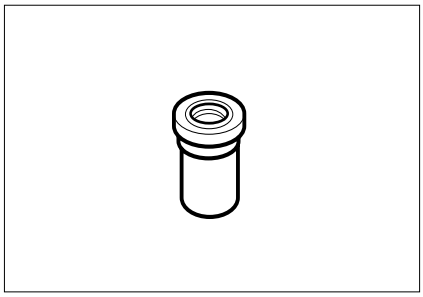
This carrier is required for reading 16 or 35 mm standard open reel film, 16 mm cartridge film (ANSI, Kodak Ektamate or 3M), microfiche (up to 105 x 190 mm), jackets or aperture cards.

*1 ANSI ENCLOSED cartridges are as stipulated in ANSI MS-15.

*2 TUSCAN M-type refers to TUSCAN cartridges with a 3M-type core.

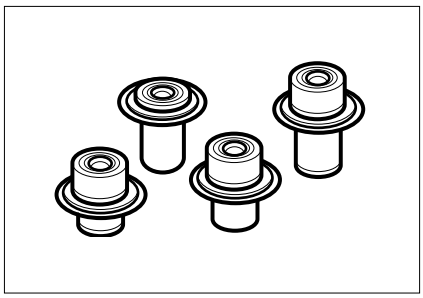
Lenses

The types of lenses that can be used with this scanner are described below.



Fixed-focus Lenses

GZ X57 (57x)

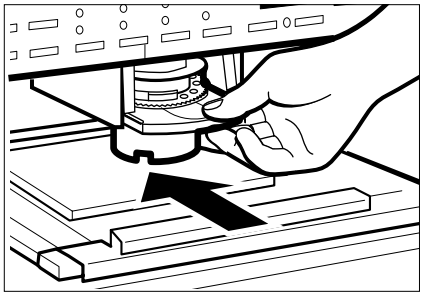


Zoom Lenses

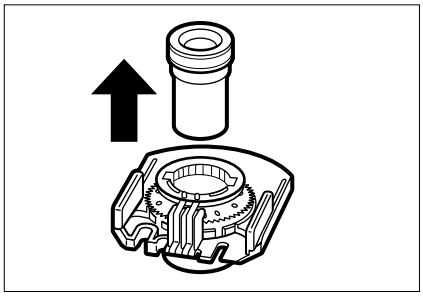
GZ X7-X7.5 (7x to 7.5x)
GZ X9-X16 (9x to 16x)
GZ X14-X30 (14x to 30x)
GZ X20-X50 (20x to 50x)

Fitting and Replacing Lenses

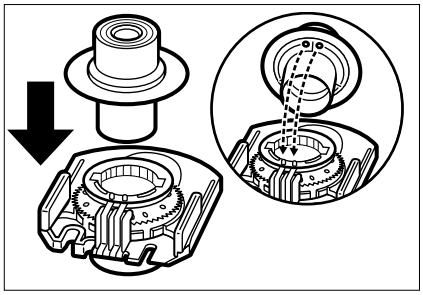
Use the procedure below to fit or change the lens.



1 Grasp the lens holder firmly and slide it out of the lens holder bracket.



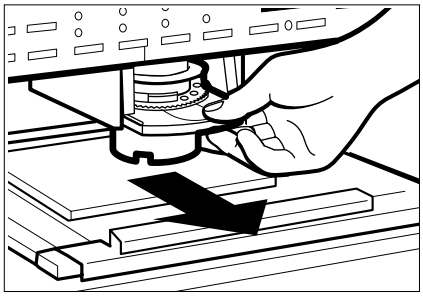
2 If a lens is already fitted in the holder, use one hand to support the base of the lens holder, taking care to ensure that the lens does not fall out.



4 Slowly set the lens in the lens holder.

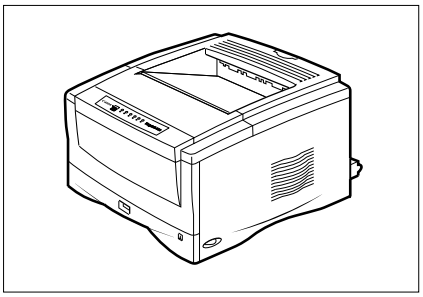
IMPORTANT

When you are fitting a zoom lens, check that the 2 marks on the rim of the lens are matched with the contacts on the lens holder. These contacts must be aligned snugly for the scanner to correctly recognize the zoom lens type. Take care also not to touch the contacts with your fingers.



5 Slide the lens holder back into the main unit, taking care not to drop the lens.
Push the holder slowly into the bracket until you hear it click into place.

Preparing the Printer



Canon FilePrint 400

To use the Microfilm Scanner 800 in ReaderPrinter mode, a Canon FilePrint 400 printer (sold separately) is required. Contact an authorized Canon retailer or service technician for details.

NOTE

Refer to the FilePrint 400 Instructions for information on setting up the printer.

Connecting to a Computer

To use the Microfilm Scanner 800 in Scanner mode, you will need the following equipment in addition to the accessories provided with the scanner:

- Computer
- SCSI card
- SCSI cable

IMPORTANT

No SCSI cable is supplied with the scanner. To connect the scanner to a computer, obtain a SCSI cable with the correct connectors for the scanner and the SCSI card installed in the computer. The SCSI connector on the scanner is a half-pitch 50-pin connector (pin-type).

Connecting the Computer

Connection of the SCSI cable to the main unit and the specification of the SCSI ID and other settings should be done by the supervising service personnel. To change the SCSI ID or any other connection settings, contact the service person.

Note

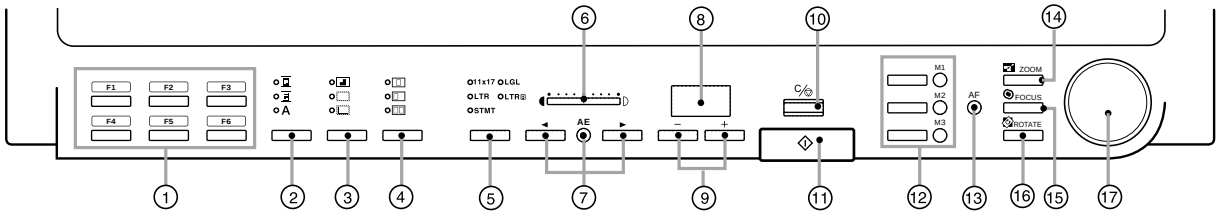
At shipment, the SCSI ID for the scanner is set to 2 and the terminator setting is OFF.

Device Drivers

If the computer is running the Windows 95/98, a screen requesting installation of the scanner driver (“New Hardware” or “Device Driver Wizard”) will appear the first time you switch the computer on after connecting the scanner to the computer. In the “New Hardware” screen, choose “Select from list” and click “OK”. In the next screen, select “Other devices” and click “OK”.
In the “Device Driver Wizard” screen, click “Next” and then click “Completed” in the next screen.

Using the Operation Panel Keys

Operation Panel



① Function keys

Settings such as printing or scanning parameters and operation modes can be stored in a function key and the stored operation mode recalled instantly simply by pressing the function key. Settings are stored in a function key using the application software or by programming the function key (➜ P.29).

② Negative/Positive key

Selects one of three modes: Positive prints from negative film, positive prints from positive film, or automatic film polarity detection.

③ Trimming/Border key

When scanning or printing, use this key to trim part of the image or to remove the black border around the image.

④ Scanning Position key

Used to specify whether the reference position for scanning or printing is the center of the screen or the left edge. This key is also used to specify scanning of 2 consecutive pages.

⑤ Paper Select/Scan Size key

In Reader Printer mode, this key selects the paper size used for printing. In Scanner mode, this key selects the scan size.

⑥ Brightness indicator

Shows the brightness adjustment set using the Brightness keys or the setting for adjustments such as the margin size or sharpness.

⑦ Brightness adjustment keys

The ◀ and ▶ keys are used to manually adjust the brightness of the printed or scanned image. The AE key specifies automatic adjustment.

⑧ Error/User Mode display

Displays an error message (user call or service call) or the selected user mode. This display also shows the number of copies in ReaderPrinter mode.

⑨ User Mode keys

Selects the user mode and can be used to set the number of copies in ReaderPrinter mode.

⑩ Clear/Stop key

Used to stop scanning or printing and to change the user mode setting.

⑪ Start key

In Reader Printer mode, the Start key starts printing. In Scanner mode, this key starts a scan in Semi-Auto mode.

⑫ Preset Zoom keys

These keys are used to store the magnification settings for zoom or fixed-focus lenses and to automatically adjust the scanner to the stored magnification.

⑬ AF (Auto Focus) key — Used to automatically focus the image.

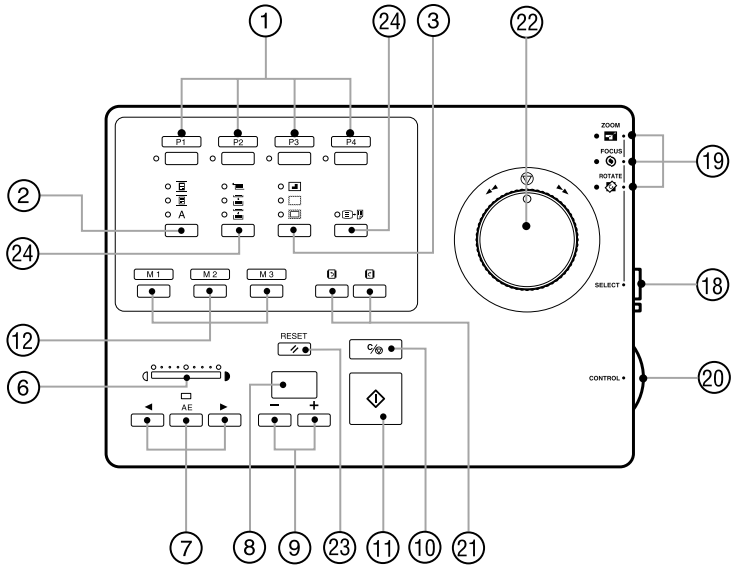
⑭ ZOOM (enlarge/reduce) key — Used to enlarge or reduce the size of the image projected on the screen. Press the ZOOM key and then use the control knob to enlarge and reduce the image on the screen.

⑮ FOCUS key — Adjusts the focus of the image projected on the screen. Press the FOCUS button and then turn the control knob until the image on the screen is in focus.

⑯ ROTATE key — Rotates the image projected on the screen. Press the ROTATE key and then turn the control knob. The image rotates to match the rotation of the control knob.

⑰ Control knob — Turn this knob to adjust the image after the ZOOM, FOCUS or ROTATE key has been pressed.

Operation Keyboard (optional)



⑱ Image adjust selection key — Selects the image adjustment mode (zoom, focus or rotate).

⑲ Image adjust mode indicators — These indicators show the image adjustment mode selected using key ⑱.

⑳ Image adjust control dial — After selecting the image adjustment mode, turn this dial to adjust the image.

㉑ Rotate key — Rotates the image 90° clockwise or counterclockwise.

㉒ Film control knob — When a motorized carrier is installed, this knob feeds through the film. Turn the knob to the right to advance the film and to the left to rewind the film. (Note that this knob cannot be used with the FS Controller I or III.)

㉓ RESET key — Restores the default settings for each setting mode.

㉔ Paper Select key — Selects the paper cassette or multipurpose tray in ReaderPrinter mode.

㉕ Disabled key — Not used by the MS800.

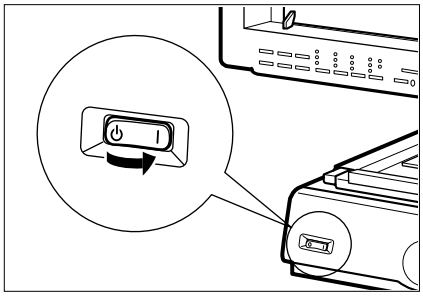
Using the Scanner

Switching On

Use the procedure below to switch the scanner on.

IMPORTANT

If an FS Controller III is installed on the scanner, switch the FS Controller III on first.

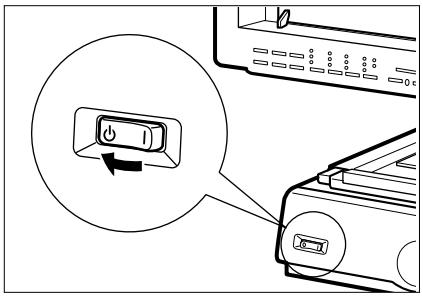


1. Press the "|" side of the power switch to turn on the main unit. When the main unit is switched on, the Start key glows red and the scanner switches.
   (In ReaderPrinter mode: Green. In Scanner mode: Red)
2. Switch on the computer and printer.

IMPORTANT

Switch on any SCSI devices connected to the computer before you switch on the computer.

Switching Off



1. Switch off the computer and printer.
2. Press the "o" side of the power switch to switch the scanner off.

IMPORTANT

If the scanner will not be used for a lengthy period, unplug the power cord as a safety measure.

Loading the Film

Because film loading methods differ for each carrier, refer to the instructions provided with the carrier for information on how to load the film.

Adjusting the Image

The instructions below describe how to adjust the image projected onto the scanner screen.

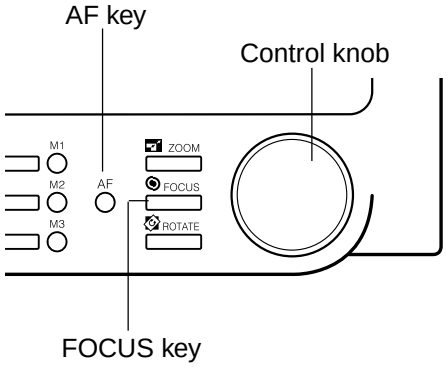
Note

The image can be adjusted using the operation panel below the screen or the optional operation keyboard.

Focusing the Image

The image projected on the screen can be focused either automatically (Auto Focus) or manually.

Auto Focus



1 Check that the AF key on the operation panel is lit.

- Auto Focus does not function when the AF key is unlit.

2 Press the AF key.

- If you press the AF key when it is lit, the image sensor moves to automatically adjust the focus before returning to its original position.
- The AF key flashes during auto focusing.

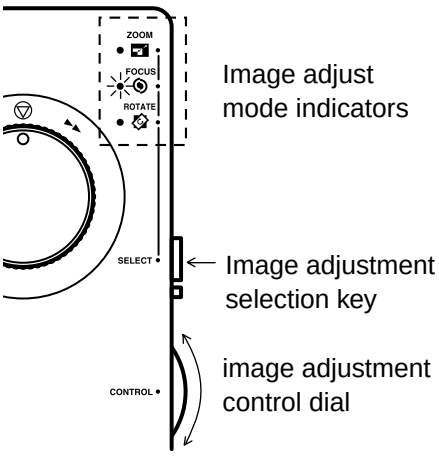
Note

AF operates more easily when the image projected on the screen is rotated slightly so that it appears skewed.
AF operates more successfully when the image projected on the screen is rotated slightly so that it appears skewed.

IMPORTANT

AF may not operate normally for some images. In this event, focus the image manually or retry auto focusing.

Manual Focus



(Operation keyboard)

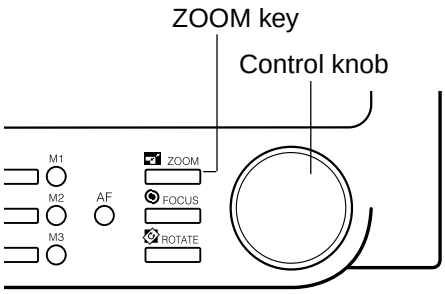
1 Press the FOCUS key.

2 Turn the image adjustment control knob left or right to focus the image.

Note

To adjust the focus using the operation keyboard, press the image adjustment selection key to select the mode (the ZOOM, FOCUS or ROTATE mode indicator lights) and then use the image adjustment control dial to adjust the image.

Enlarging and Reducing the Image



1. Press the ZOOM key.
2. Turn the image adjustment control knob to enlarge or reduce the image. Turn the knob to the left to enlarge the image and to the right to reduce it.

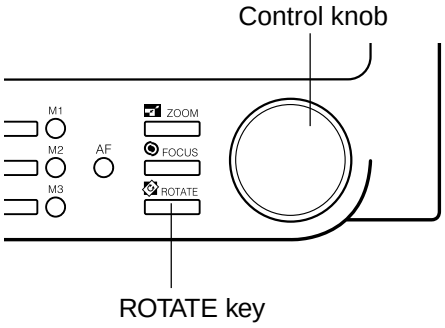
- If you are using the optional operation keyboard, press the image adjustment selection key until the ZOOM indicator lights and then turn the image adjustment control dial left or right to enlarge or reduce the image. Turn the dial to the left to enlarge the image and to the right to reduce it.

Note

Zoom ratios can be stored in the preset zoom keys so that images can subsequently be enlarged or reduced by the stored ratio at a single touch. (➜ P.28 “Storing a Zoom Setting”)

Rotating the Image

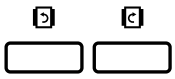
● Rotation by any angle



1. Press the ROTATE key.
2. Turn the image adjustment control knob to rotate the image. Turn the knob to the left to rotate the image to the left and to the right to rotate it to the right.

- If you are using the optional operation keyboard, press the image adjustment selection key until the ROTATE indicator lights and then turn the image adjustment control dial left or right. Turn the dial to the left to rotate the image to the left and to the right to rotate it to the right.

● 90° Rotation



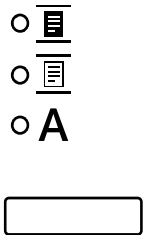
When you are using the optional operation keyboard, the image can be rotated left or right in 90° steps simply by pressing the image rotation keys. Press the key to rotate the image 90° to the left and the key to rotate it 90° to the right.

Note

The 90° rotation function can also be assigned to one of the function keys on the operation panel. (➜ 27 “Function Keys”)

Printing or Scanning the Image

In Reader Printer mode, the image projected on the scanner screen can be printed directly to a FilePrint 400 printer connected to the scanner. In Scanner mode, the image can be downloaded as image data to a computer connected to the scanner and then printed on a printer connected to the computer.
The actual scan settings and the procedure for the scanning mode differ depending on your application program. For this reason, the descriptions given here cover only the scanning modes that can be set from the scanner's operation panel.
Refer to the user manuals for your application software for information on the scan settings and the procedure for downloading the image.



Selecting the Polarity

This setting selects the film polarity (positive or negative). Press the Negative/Positive key on the operation panel or the optional operation keyboard to select the film polarity.

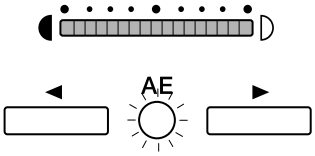
( ) Negative	Positive output from negative film
( ) Positive	Positive output from positive film
(A) Auto	The scanner automatically detects the film type and generates positive output. When the Auto setting is selected, the Negative or Positive indicator blinks during scanning to indicate the film type.

Notes

- If the black-white ratio in the screen is almost even, if the image border is small, or if you have used trimming to select an area at the edge of the image, the scanner may be unable to automatically detect the film type. In this event, select the film polarity manually.
- If you select Positive, border removal (➜ P.27) and automatic skew correction (➜ P.30) are disabled.

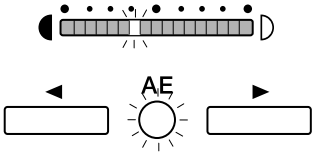
Brightness Adjustment

Use the procedures described here to adjust the image brightness during scanning or printing. The brightness can be adjusted either automatically (AE) or manually.



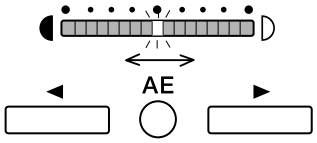
● Automatic adjustment

Press the AE key on the operation panel or the operation keyboard (sold separately). The AE key lights and the image brightness is adjusted automatically during scanning.



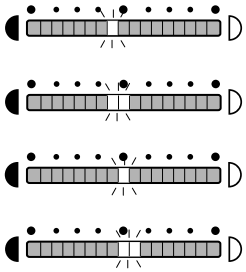
Note

When automatic adjustment is selected, you can make fine adjustments to the brightness through 17 levels by pressing the brightness adjustment keys (◀ and ▶).
Moving the indicator to the right brightens the image by fine increments, and moving it to the left darkens the image by fine increments.



● Manual adjustment

When the AE key is lit, you can use the brightness adjustment keys (◀ and ▶) to adjust the brightness of the scanned image. Moving the indicator to the right brightens the scanned image and moving it to the left darkens the scanned image.

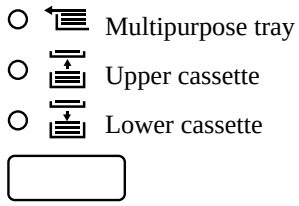


Note

In manual adjustment, the brightness can be adjusted through 33 levels, as shown in the figure at left.

Selecting the Paper for Printing

Use the procedures described here to select the paper size in the paper cassette or multipurpose tray when you are using the scanner in ReaderPrinter mode. To select the paper size for a paper cassette, use the Paper Select key on the optional operation keyboard or the Scan Size key on the operation panel.



● Selecting the paper feed cassette

- On the optional operation keyboard, press the Paper Select key and select the paper cassette.
- On the operation panel, press the Scan Size key and select the paper loaded in the printer.

NOTE

If same paper size is loaded in the paper cassette and the multipurpose tray, refer to the printer display panel to determine whether the paper cassette or multipurpose tray will be used.

● Selecting paper for the multipurpose tray

1 Hold down the Scan Size key or the Paper Select key on the optional operation keyboard for 5 seconds to switch to paper size setting mode for the multipurpose tray.

2 Use the plus (+) and minus (-) keys to set the paper size for the multipurpose tray.

Display	Paper Size		
(120V model)		(220 – 240V model)	
14	Legal	A3	A3
11	Letter	A4	A4
11r	Letter-R	Ar	A4R
17	Ledger		
55	Statement		

3 Press the Scan Size key or the Paper Select key on the optional operation keyboard to set the paper size for the multipurpose tray.

IMPORTANT

Always check that the paper size displayed for the paper cassette and the multipurpose tray paper setting match the paper actually loaded. If the loaded paper does not match the setting, an "L8" error will be displayed. However, if "STMT" is selected, no error is displayed since the STMT paper size is not supported.

(120V model)

○11x17 ○LGL

○LTR ○LTRR

○STMT

(220 – 240V model)

○A3 ○B4

○A4 ○B5

○A4R

Selecting the Scan Size

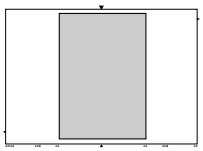
If image size detection is set to ON in the application program in Scanner mode, select the scan size.
Press the Scan Size key on the operation panel and set the scan size.

Note

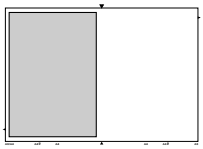
If image size detection is set to OFF in the application software or trimming/border removal is selected, the Scan Size selection function light switches off and the function is disabled.

Setting the Scanning Position

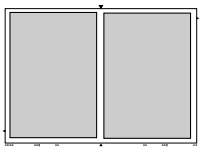
If an image is too big, you can select a specific area to be scanned by pressing the Scanning Position key. The indicator for the currently selected mode lights when the key is pressed and the setting changes each time the key is pressed. Press the key until the desired mode lights.



(▯) The central area of the screen is scanned.



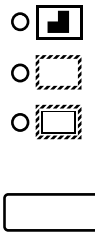
(▯) The left side of the screen is scanned.

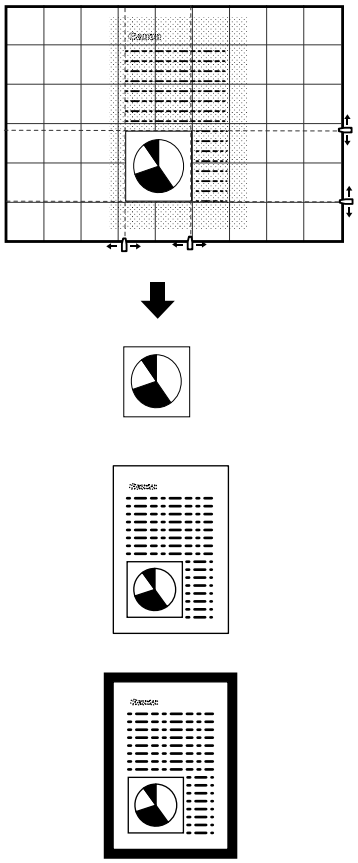


(▯▯) The left and right sides of the screen are scanned as 2 consecutive images. Because the left side is scanned first, it is not necessary to reverse the sequence of printed pages.

Note

If trimming is selected in Scanner mode, the center (▯) and left edge (▯) reference positions cannot be selected.





Trimming/Border settings

When an image on negative film is scanned and projected onto the scanner screen, the area outside the image appears as a black border around the image. The Automatic Border Removal function can be used to remove this black border around the scanned image.
Trimming allows you to restrict scanning to a specified area of the image. Border removal allows you either to remove all the black border around the image or to leave a narrow black margin around the image. However, if "Positive" ( ) is selected as the film polarity (➜P.23), the border removal function does not operate.

● Trimming

Press the Border key on the operation panel until the ( ) indicator lights and then scan the image. To specify the area to be trimmed, move the tabs along the bottom edge and right side of the screen so that they are aligned with the lines on the screen.

IMPORTANT

Adjust or change the trimming area before scanning begins or while scanning is paused.

● Removing the entire border

Press the Border key on the operation panel until the ( ) indicator lights and then scan the image.

● Leaving a margin around the image

Press the Trimming/Border key on the scanner's front panel to switch on the ( ) lamp and scan the image. The size of the margin is set either from the application software or by storing the setting in a function key (➜ P.31).

Notes

- Border removal may not operate correctly for images with ill-defined borders.
- This function cannot be used when any part of the image is outside the specified range.
- If multiple images are displayed on the screen at the same time, the wrong image may be scanned.
- This function can only operate if there is a clear area of at least 5 mm around the image.

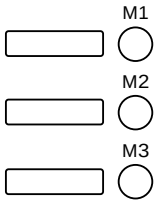
Special Features

This part of the manual describes the many convenient scanner features and settings that can enable you to use the scanner more effectively.

Storing the Lens Magnification

You can use the preset zoom keys (M1, M2 and M3) on the operation panel to store the zoom settings used on zoom lenses and then recall a stored zoom setting with a single touch.

Storing a Zoom Setting



1. Adjust the zoom to the required setting on the screen.
2. Hold down the preset zoom key to be used to store the setting for 2 seconds.
3. The zoom lens operates and the preset zoom key blinks.
4. The zoom key stops blinking and remains lit to indicate that storage of the zoom setting is completed.
5. In normal operation, pressing a lit preset zoom key automatically enlarges or reduces the image to the stored lens magnification.

Note

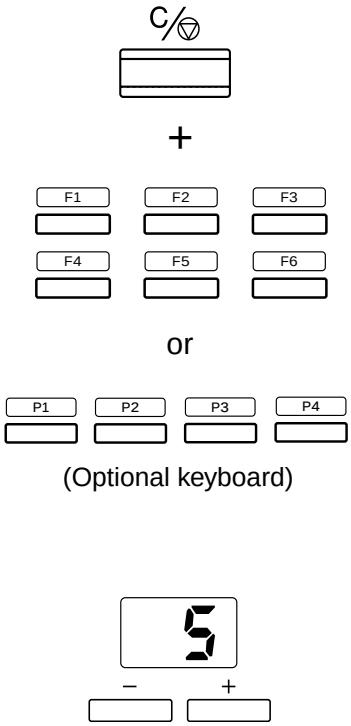
Preset zoom settings can be stored separately for 4 types of zoom lens. When a zoom lens for which a zoom setting has been stored is fitted, the corresponding preset zoom key lights.
Zoom settings can be stored in the preset zoom keys on the optional operation keyboard as well as in the zoom keys on the operation panel, making a total of 6 preset zoom keys. However, because there are no indicator lamps in the preset zoom keys on the operation keyboard, you should make a note of the key numbers and the stored settings if you store zoom settings in these preset zoom keys.
If preset zoom key registration fails, “L6” appears on the Error/User Mode display (➜ P.45). If this occurs, press the Clear key to clear the error display and retry the preset zoom key registration.

Function Keys

The function keys (F1 to F6) on the operation panel can be used to store frequently used functions, allowing the preset function to be recalled at a single touch. The function keys (F1 to F6) can store up to 6 function settings. (If the optional operation keyboard is used, an additional 4 settings can be stored.) The nineteen types of settings that can be stored are described below.

Programming Function Keys

Use the procedure below to store a function in a function key.



1 Hold down the Clear key and the function key you want to program for 2 seconds.

- The number of the function to be stored appears on the display.

Display	Function	Use the function keys
1	All setting Assignment	
2	New File	F1
3	Lighten Screen	F4
4	Darken Screen	F5
5	Standby mode	F6
6	Rotate Right	F3
7	Rotate Left	F2
8	Skew Correction	
9	Addon	
10	margin Scanning	P1
11	Adjust Margin	
12	Adjust Sharpness	P3
13	Picture Mode	P4
14	Overlay Scanning	
15	600DPI	
16	Background erase	P2
17	Auto centering	
18	Scanner	F1
19	Printer	F4

- See the following pages for descriptions of the functions.
- At shipment, P1 and P4 are assigned to the optional operation keyboard.

2 Use the selector keys (the plus and minus keys) to select the function assigned to the function key.

3 Press the function key to store the function.

Note

Function keys can also be programmed from the application software. Refer to the manuals supplied with the application for details.

Functions that Can Be Assigned to the Function Keys

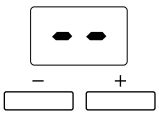
The functions described below can be assigned to a function key.

- **Assign all settings**
  This function stores the operation panel status and all the scan settings.

- **New file**
  After you have pressed this key, the scanned image is saved into another file (folder). For the details, see the Users' Manual for your application.

- **Raise screen brightness**
  This function raises the screen brightness.

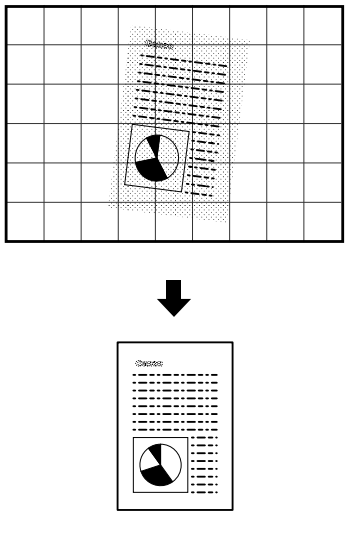
- **Lower screen brightness**
  This function lowers the screen brightness.



- **Standby (default setting: F6)**
  Sets the equipment to Standby state. Projection on the screen will be turned off, and standby display will appear. You can release the standby state by pressing the key again or by operating other key.

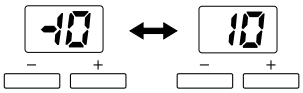
- **Rotate 90° right (default setting: F2)**
  This function rotates the screen image 90° to the right.

- **Rotate 90° left (default setting: F3)**
  This function rotates the screen image 90° to the left.



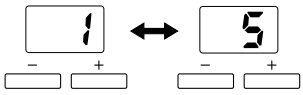
- **Automatic skew correction**
  This function corrects a skewed image during scanning so that it is scanned straight. However, if "for Positive film" ( ) is selected as the film polarity (➜P.23), the Auto Deskew Image function does not operate.

- **Add on (default setting: P1)**
  Pressing this key imprints the add on specified on the scanner (➜ P.33) or specified in the application on the scanned image. Refer to the user manual supplied with the your application software for information on the application add on settings.



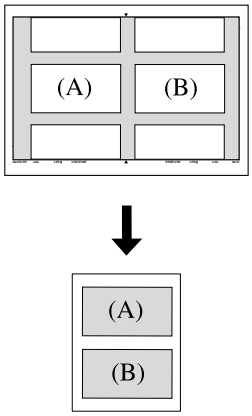
● **Import margins**
This function selects whether the margins are adjusted during scanning.

● **Adjust margins (default setting: P3)**
This function adjusts the margin size when margins are scanned during scanning. When you press this key, the display shows the margin size. The margin can be adjusted to a value between –10 mm and 10 mm either side of 0.

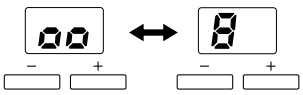


● **Adjust sharpness (default setting: P4)**
This function selects the sharpness (edge enhancement) during scanning. When you press this key, the display shows the sharpness setting. The sharpness can be set to 5 levels between 1 and 5.

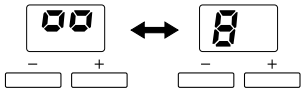
● **Photo mode (default setting: F5)**
This key switches the mode to picture mode. When this key is pressed, the key lights and the scanning mode changes to “Monochrome Photo”.



● **Import overlay**
When you press this key, the 2 images in the A and B positions on duplex film are output one above the other as a single image during scanning.



(Positions image B on top)



(Positions image B on the bottom)

When you store this function and hold down the function key for 2 seconds, the position setting display for the 2 images is shown and the programmed function key and setting display blink.
Use the (+) and (-) keys to change the setting and the programmed function key to confirm the selected setting.

● **600 DPI**
This switches the scanning resolution between 600 and 300 dpi. When you press this key, or when the resolution is set to 600 dpi from the application program, the key lights up. Conversely, when this key is pressed again and the key lamp switches off, the resolution in the application software is set to 300 dpi.

• Background Erase (default setting: P2)

Pressing this key automatically erases speckling in the background of text, line drawings, etc. However, this function is disabled in Scanner mode when the selected scanning mode is “Grayscale” or “Monochrome Photo”.

• Auto Centering

In Reader Printer mode, this function prints the scanned image in the center of the selected paper.

• Scanner mode (default setting: F1)

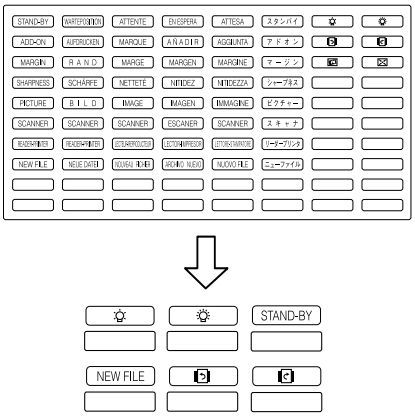
Pressing this key switches operation to Scanner mode.

• ReaderPrinter mode (default setting: F4)

Pressing this key switches operation to ReaderPrinter mode.

NOTE

In Scanner mode, the functions assigned to function keys can also include detailed settings specified by the application program. Refer to the user manuals for the application software for details.



(Function Keys)

Function Key Labels

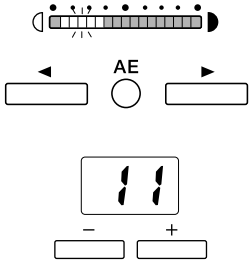
Stick the enclosed function key labels above the programmed function keys.

"Add on" Setting

In ReaderPrinter mode, the Add on setting can be used to specify a time, date or caption to be imprinted on the image to be printed. Use the function key to select whether the add on is imprinted on the image actually printed. (➜ P.29 "Function Keys")
In Scanner mode, the Add on setting is specified from the application software.

Setting the Add On

Use the procedure below to specify whether a preset caption (➜ P.35 "Setting a Caption") or date (➜ P.36 "Setting the Date and Time") is to be imprinted on the image and to set the location of the add on and the format of the date or time.



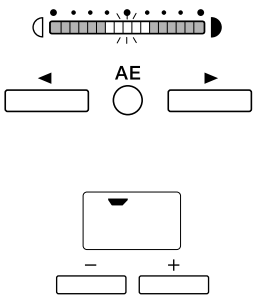
1 Hold down the function key to which the Add on function is assigned for 2 seconds to switch to Add on setting mode.
The number of copies indicator shows the Add on setting.

NOTE

The left digit in the number of copies indicator shows whether the date/time is imprinted (1) or not imprinted (0), while the right digit gives the same information for the caption.

2 Use the minus (-) key to specify the date/time setting and the plus (+) key to specify the caption setting.

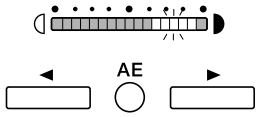
Display	Add on
11	Date/time and caption
10	Date/time only
01	Caption only
00	No add on

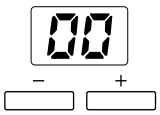


3 Press the Brightness adjustment key (▶) to switch to Add on position setting mode. The copies indicator then becomes the Add on position indicator.

4 Use the plus (+) and minus (-) keys to set the position of the add on.

Display	Add On Position
	Top-left corner of the page
	Top center of the page
	Top-right corner of the page
	Bottom-left corner of the page
	Bottom center of the page
	Bottom right of the page





5 Press the Brightness adjustment key (◗) to switch to "Date/time format" setting mode. The copies indicator then becomes the date/time format indicator.

6 Use the plus (+) and minus (-) keys to set the date/time format.

Display	Date/time Format	Add On Example
00	Year/Month/Day	2000/03/10
01	Year/Month/Day Hour:Minute	2000/03/10 11:30
02	Month/Day/Year	3/10/2000
03	Month/Day/Year Hour:Minute	3/10/2000 11:30
04	Day/Month/Year	10/3/2000
05	Day/Month/Year Hour:Minute	10/3/2000 11:30
06	Year Month Day	Mar 10 2000
06	Year Month Day Hour:Minute	Mar 10 2000 11:30
08	Day of the week Month Day Year	Fri Mar 10 2000
09	Day of the week Month Day Year Hour:Minute	Fri Mar 10 2000 11:30

7 When you have finished the settings, press the function key to which the Add on function is assigned to complete the setting procedure.

Setting the Caption

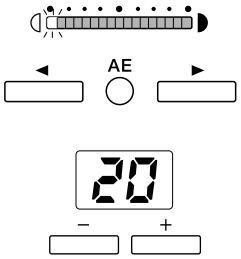
This function adds a pre-registered caption to the printed image. Registered captions can include up to 33 characters (including spaces) selected from the character code table shown below.

Code	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
Character		!	"	#	$	%	&	'	(	)	*	+	,	–	.	/
Code	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
Character	0	1	2	3	4	5	6	7	8	9	:	;	<	=	>	?
Code	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
Character	@	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Code	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
Character	`	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Code	5B	5C	5D	5E	5F	7B	7C	7D	7E							
Character	[	\	]	^	_	{	¦	}	~							

Code 20 inserts a space.

Code	50	51	52	53	54	55	56	57	58	59	5A					
Character	P	Q	R	S	T	U	V	W	X	Y	Z					
Code	70	71	72	73	74	75	76	77	78	79	7A					
Character	p	q	r	s	t	u	v	w	x	y	z					

■ Setting the Caption



1 Hold down the function key to which the Add on function is assigned for 2 seconds. The function key and the Brightness indicator start blinking.

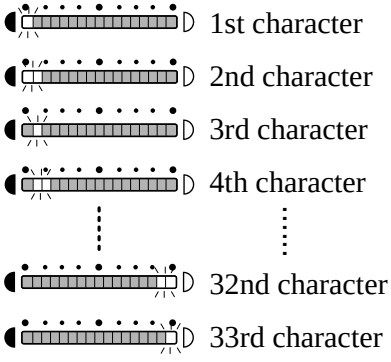
2 Hold down the AE key for 2 seconds.
The copies indicator now becomes the caption display and the scanner switches to caption input mode.

3 Check that the lamp at the left end of the brightness indicator is blinking and then press the plus (+) or minus (-) key to set the character code for the first character, as shown in the character code table.

4 Press the brightness adjustment key (◗) to indicate the next character then use the plus (+) and minus (-) keys to select the character.

5 Repeat the same procedure to register the rest of the caption.

6 When you have finished registering the caption, press the Reset key. The caption is then registered.

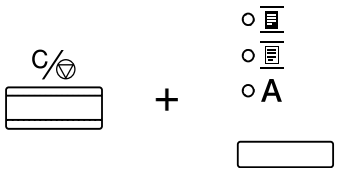


NOTE

The position of the lamp in the Brightness indicator shows which character in the caption is being set.
To clear the contents of the caption, press the Reset key while you are in caption input mode. This clears all the specified text.

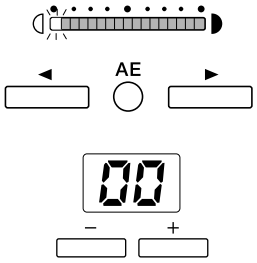
Setting the Date and Time

When the date and time are added to the scanned image in Reader Printer mode, the date and time added are those set internally on the scanner by this function. This section describes how to set and check the date and time.



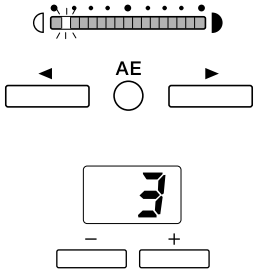
● Setting the Date and Time

1 Hold down the Clear key and the Negative/Positive key for 2 seconds. The year figure blinks on the display and you can start setting the date and time.



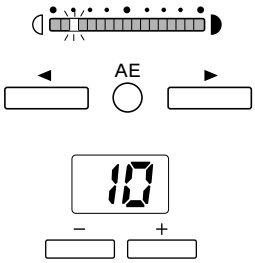
2 Check that the lamp at the left end of the brightness indicator is blinking and then press the plus (+) or minus (-) key to set the year.

Display	Setting
51 ~ 99	1951 to 1999
00 ~ 50	2000 to 2050



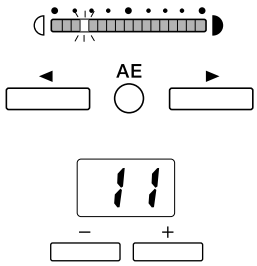
3 Press the brightness adjustment key (▶) to display the month and then use the plus (+) and minus (-) keys to set the month.

Display	Setting
1 ~ 12	January to December



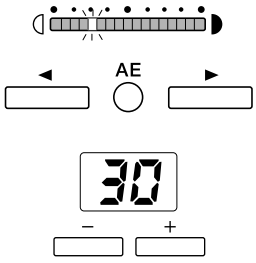
4 Press the brightness adjustment key (▶) to display the day and then use the plus (+) and minus (-) keys to set the day.

Display	Setting
1 ~ 31	1st to 31st



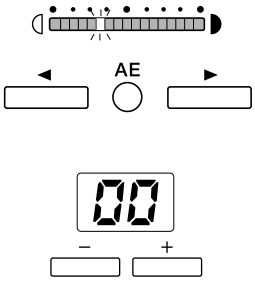
5 Press the brightness adjustment key (▶) to display the time (24-hour format) and then use the plus (+) and minus (-) keys to set the hour.

Display	Setting
0 ~ 23	00 to 23



6 Press the brightness adjustment key (◗) to display the minutes and then use the plus (+) and minus (-) keys to set the minutes.

Display	Setting
00 ~ 59	0 to 60 minutes

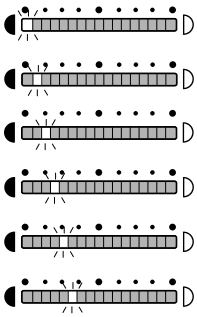


7 Press the brightness adjustment key (◗) to display the seconds and then use the plus (+) and minus (-) keys to set the seconds.

Display	Setting
00 ~ 59	0 to 60 seconds

8 When you have finished all the date and time settings, press the Start key to complete the setting procedure.

● Checking the Date and Time



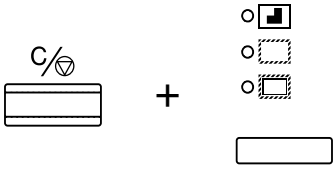
1 When you press the Clear key and the Negative/Positive key, the display changes to show the date and time in the following sequence: Year ➜ Month ➜ Day ➜ Hour ➜ Minutes ➜ Seconds.

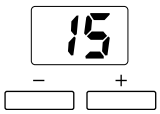
NOTE

The position of the brightness indicator lamp identifies the date/time setting. If the scanner is set to Scanner mode, the date and time set internally in the scanner is reset to match the settings in the connected computer.

Setting the Auto Clear Time

The function specifies the time after which the scanner switches to Standby mode when it is left unused.





1 Hold down the Clear key and the Trimming/Border key for 2 seconds.

2 Use the plus (+) and minus (-) keys to select the Auto Clear time.

3 Press the Start key to confirm the setting.

NOTE

The available settings for the Auto Clear time are 0, 3, 15, 30, 60, or 90 minutes. Selecting 0 disables the Auto Clear function. The available settings for the Auto Clear time are 0, 3, 15, 30, 60, or 90 minutes. Selecting 0 disables the Auto Clear function. To cancel Standby mode, press the key again or press any other key.

Maintenance and Troubleshooting

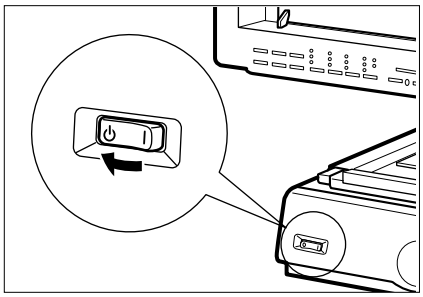
This part of the manual describes how to replace the scanner lamp, clean the scanner and deal with errors. Regular scanner maintenance is essential to ensure optimum performance and a long service life from your scanner.

Replacing the Lamp

The lamp projects the image onto the scanner screen, and the procedure for replacing the lamp is described below, along with some precautions to be observed when handling the lamp unit. If the lamp burns out, use the procedure below to replace it.
When the lamp burns out, “LP” appears on the Error/User Mode display.

CAUTION

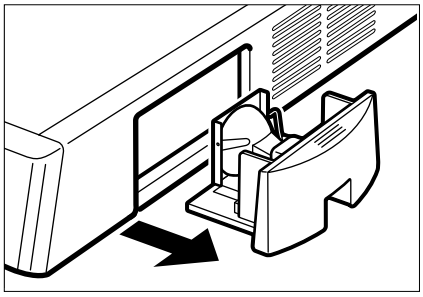
Immediately after the lamp burns out, the lamp and the metal components of the lamp unit are very hot. To avoid being burned, allow the lamp ample time to cool down before touching it. The lamp will cool down more quickly if you leave the scanner switched on for some minutes with “LP” displayed. After checking that the lamp and the metal components have cooled down, proceed with lamp replacement.



1 When the lamp burns out, leave the scanner switched on for several minutes until the lamp has cooled down.

Note

After waiting at least 5 minutes, check that the lamp has cooled down and then switch the scanner off.



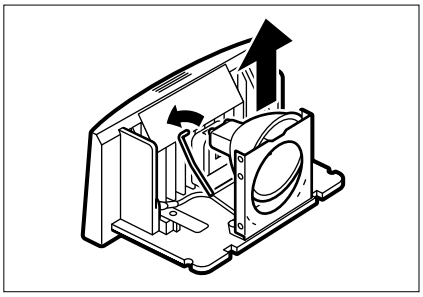
2 Firmly grip the lamp unit on the right side of the main unit and slowly pull the lamp unit out.

Note

When you remove the lamp unit, “L5” appears in the Error/User mode display.

CAUTION

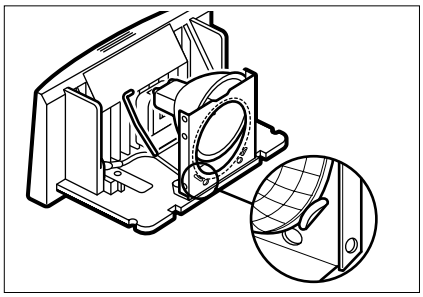
To avoid injury, do not touch the interior of the main unit after you have removed the lamp unit.



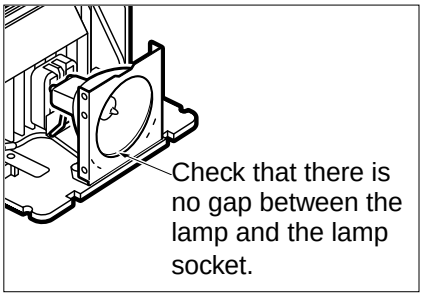
3 Pull up the lever on the side of the lamp and remove the burned out lamp.

CAUTION

Immediately after the lamp burns out, the lamp and the metal components of the lamp unit are very hot. Never handle the lamp or lamp unit while they are still hot. handle the lamp or lamp unit while they are still hot.

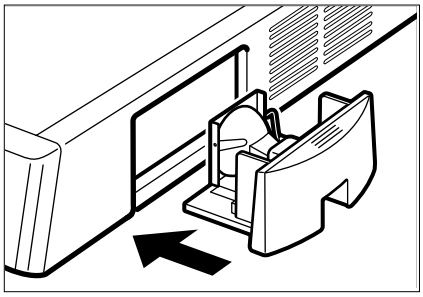


4 Fit the new lamp so that the manufacturer's mark is facing upwards and check that the lamp is fully inserted into the socket so that there is no gap between the lamp and the lamp socket.



IMPORTANT

- *Use only Canon-specified lamps as replacements.*
- *Take care not to touch the bulb in the new lamp. Soiling or fingermarks on the bulb can adversely affect image quality and shorten the service life of the bulb.*
- *Always check that there is no gap between the lamp and the lamp socket. Any gap between the lamp and the lamp socket will result in damage to the lamp holder.*

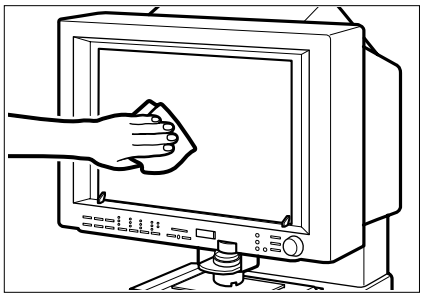


5 Push the lamp unit firmly back into place in the main unit and check that "--" is shown on the Error/User Mode display.

Routine Cleaning

Use the routine cleaning procedures described below to keep the scanner components clean and ensure optimum performance.

Cleaning the Screen and Main Unit

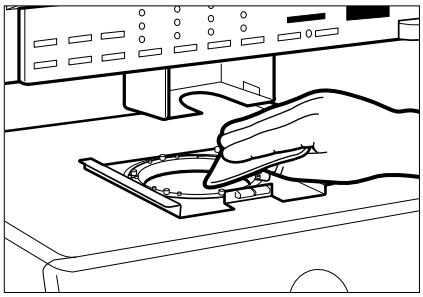


Use a cloth slightly dampened with water or mild detergent to clean any soiling off the scanner screen and casing. Then wipe the scanner with a clean dry cloth.

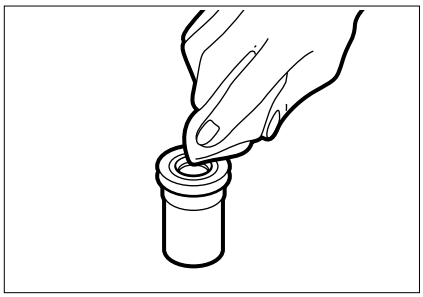
IMPORTANT

To avoid damaging the casing of the main unit, never clean the unit with an organic solvent such as thinners.

Cleaning the Lens



1. Switch off the scanner and remove the carrier and lens unit.
2. Gently wipe off the field lens with a clean soft cloth.

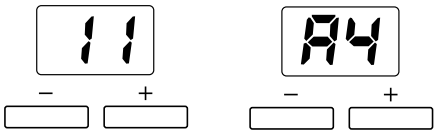


3. Carefully remove the lens from the lens unit and wipe the upper and lower surfaces of the lens with a clean dry cloth.

Cleaning Mode

When the toner cartridge in the FilePrint 400 has been replaced, the FilePrint 400 fuser roller must be cleaned. This section describes the Cleaning mode used for fuser roller cleaning. Refer to the FilePrint 400 Instructions for more information on working with the FilePrint 400.

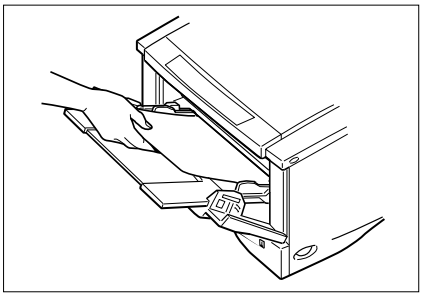
(120V model) (220 – 240V model)



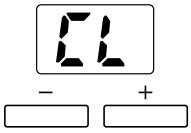
Cleaning the Fuser Roller

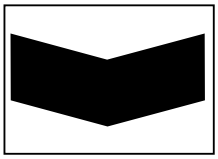
1 Hold down the AE key for 5 seconds to switch to Cleaning mode. “11” or“A4” appears on the copies display.

2 Open the multipurpose tray on the FilePrint 400 and load a sheet of A4 paper.



3 Press the Start key. A cleaning sheet is printed and the copies display changes to “CL”.



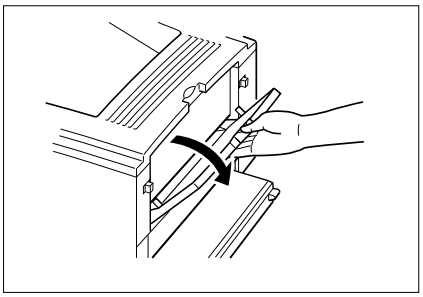


(Cleaning sheet)

IMPORTANT

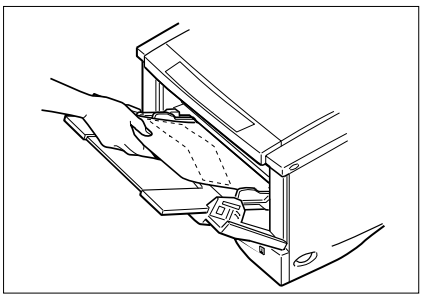
To cancel Cleaning mode, press the Clear key before you press the Start key. You cannot cancel Cleaning mode once you have printed the cleaning sheet. You must complete the fuser cleaning procedure.

4 Switch the FilePrint 400 to face-up paper eject.



5 Load the cleaning sheet in the multipurpose tray with the printed side down and the arrow marking facing towards the printer.

6 Press the Start key to begin fuser cleaning.



IMPORTANT

Fuser cleaning takes about 2 minutes. Do not touch the printer during this period as no other printer operations can be performed.

7 Once cleaning has finished, the copies display reverts to its normal status.

Troubleshooting

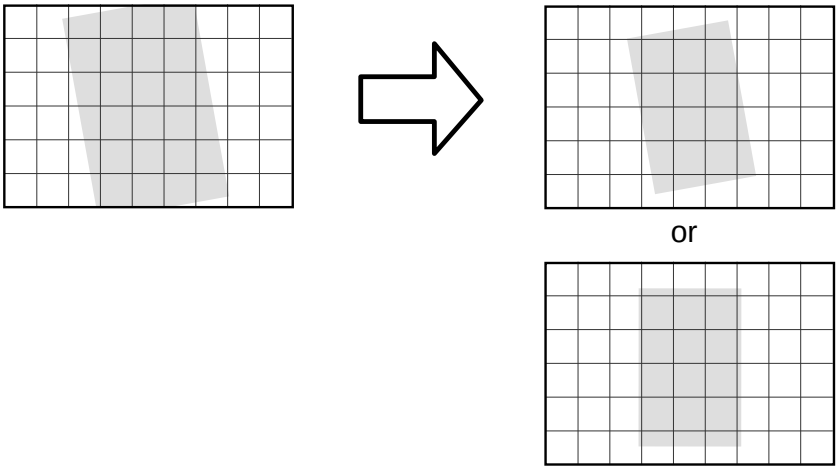
If the scanner is not operating normally or not giving satisfactory results, refer to this table to identify the cause and find the solution.

Problem	Solution	Reference Page
The screen stays dark after I switch the scanner on.	• Check that the lamp unit is properly fitted into the main unit. • Check whether the lamp has burned out. When the lamp is burned out, “LP” appears on the Error/User Mode display. If the lamp has burned out, fit a new lamp.	39
The screen brightness is uneven or the screen is too dark.	• Check that the lens is clean. • Check that the lens is fitted correctly. • Check that the lamp and the lamp unit are properly fitted.	41 39
The image is out of focus.	• Use the image adjustment control dial in FOCUS mode to adjust the focus. • Check that the carrier is installed correctly. Refer to the instructions supplied with the carrier for details. • Check that the lens and the lamp are both clean.	21 41
The image is skewed.	• Use the image adjustment control dial in ROTATE mode to straighten the image. • Check that the carrier is installed correctly. Refer to the instructions supplied with the carrier for details.	22
Nothing happens when I press the Start key.	• If the Start key is lit red, the scanner is still warming up. Wait until the Start key turns green before pressing it. • If an error code is shown on the display, see “User Call Errors” or “Service Call Errors”. • In Scanner mode, the application software setting is not “Semi Auto”. Check the application software setting.	- -
Border removal and automatic skew correction do not work correctly.	• If the image projected on the screen is similar to the images shown on the next page, the Border Removal function (P.27) and Automatic Skew Correction function (P.30) will not work correctly. Adjust the image shown on the screen.	

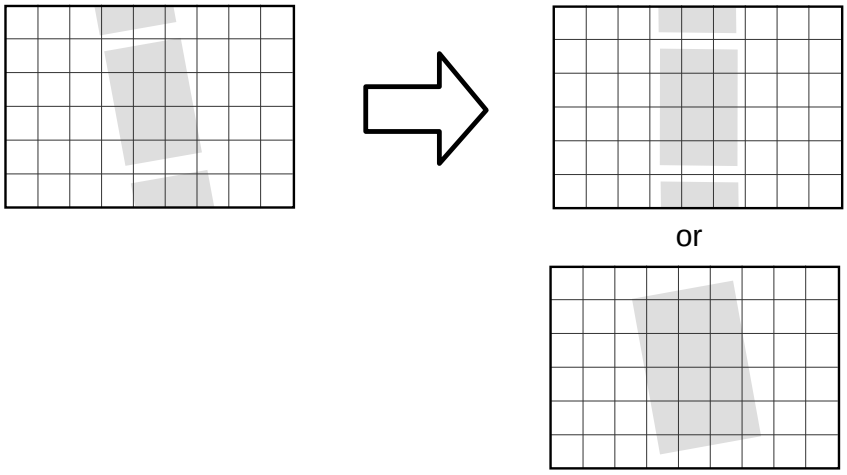
Automatic Border Removal and Skew Correction

If the image projected on the screen resembles one of the images shown in the figure below, the Border Removal function (P.25) and Automatic Skew Correction function (P.28) cannot recognize the image and will not process the image correctly. For these functions to operate successfully, the screen image must be adjusted.

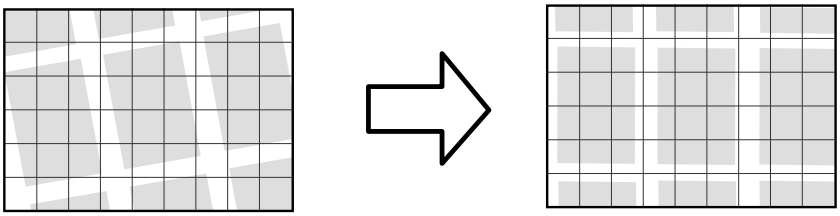
- One corner of a skewed image is off the screen
  ➜ Reduce or rotate the image so that the entire image is displayed within the screen.



- The image is skewed and part of the preceding and following images appear on the screen
  ➜ Manually adjust the image angle or adjust the image so that the preceding and following images do not appear.



- The image is skewed so that there is insufficient blank margin around the image.
  ➜ Manually adjust the image angle so that there is sufficient blank margin around all sides of the image.



User Call Errors

If there is a problem with the scanner, an error number indicating the specific problem appears on the Error/User Mode display. This section gives details of the user call errors and describes how to deal with them.

Error No.	Meaning	Solution	Reference Page
LP	The lamp installed in the scanner has burned out.	Install a new lamp unit	39
L1	No paper in the printer	Refer to the User's Guide for the printer and load paper into the printer.	–
L2	Printer is low on toner or no toner is loaded.	Refer to the User's Guide for the printer and install a new toner cartridge in the printer.	–
L4	Printer cover open.	Close the printer cover.	–
L5	The lamp unit is not correctly installed in the scanner.	Install the lamp unit correctly.	39
L6	Zoom key storage failed.	Press the Clear key to cancel the error and retry zoom key storage.	28
L8	The paper size displayed for the cassette or set for the multipurpose tray does not match the paper actually loaded.	Load the correct paper size in the paper cassette or multipurpose tray so that the paper size matches the paper cassette or multipurpose tray setting.	25
L9	• Scanner initializing immedi ately after startup. • Printer not switched on. • Printer not connected.	Wait until the error disappears. Switch the printer on. Connect the printer or switch to Scanner mode.	–
P0	Paper from a paper jam is still stuck in the printer.	Refer to the owner's manual for the printer and remove the jammed paper.	–
P1	A paper jam has occurred on the printer. One sheet of paper is jammed.	Refer to the owner's manual for the printer and remove the jammed paper.	–
P2	A paper jam has occurred on the printer. Two sheets of paper are jammed.	Refer to the owner's manual for the printer and remove the jammed paper.	–
P3	A paper jam has occurred on the printer.	Three sheets of paper are jammed. Refer to the owner's manual for the printer and remove the jammed paper.	–

Note

The "L1", L2", "L4", "L8", "L9" and "PX" user call errors are only displayed when the scanner is in ReaderPrinter mode.

Service Call Errors

The scanner automatically performs self-diagnostic testing each time it is switched on. If this testing reveals a problem or if a problem arises during scanner operation, the scanner shows a service call error on the display. A service call error is indicated by an error code consisting of an “E” followed by three digits (“Ennn” where “n” indicates a number). This code is displayed in 2 parts as “En” followed by “nn”. (Eg. “E123” is displayed as “E1” followed by “23”.)

When a service call error occurs, proceed as follows:

1 Immediately switch off the scanner and wait several minutes.

2 Switch the scanner on again and check the scanner status.

Note

When a service call error occurs, it is sometimes possible to resolve the problem simply by switching the scanner off for a while and then switching it on again.

● When you cannot clear a service call error

Make a note of the error code and the nature of the problem. Then switch off the scanner and any peripheral units such as the carrier, unplug the power cord and contact an authorized Canon service technician.

Specifications

Main Unit

Type	Desktop digital microfilm scanner
Screen	300 x 435 mm transparent
Scanning method	300-dpi digital scanning
Film polarity	Negative, Positive, Negative/Positive Auto Select
Lens magnification	7x to 7.5x, 9x to 16x, 14x to 30x, 20x to 50x, 53x, 57x
Light source	Halogen lamp with mirror (20V, 150W)

Film

Formats	Microfiche, jacket, aperture card, 16/35mm roll
Types	Silver or diazo (blue or blue-black)
Base density	0.6 to 1.4 (negative film) 0.3 or less (positive film)
AE response	0.8 to 1.2 (negative film) 0.2 or less (positive film)

Image Adjustment Functions

Focus	Auto, Manual
Zoom	Preset zoom key, manual
Rotation	Manual Automatic rotation in 90° steps (using optional operation keyboard)

Scanning

Scan size	(ReaderPrinter mode)	(120V) Legal, Letter, Letter-R, Ledger and Statement (220–240V) A3, A4 , A4-R, B4 and B5
	(Scanner mode)	(120V) Legal, Letter, Letter-R, Ledger, Statement and application specified sizes (220–240V) A3, A4, A4-R, B4, B5 and application specified sizes
Scanning mode	(Reader Printer mode)	Black and White, Black and White-Picture *Selectable using function keys
	(Scanner mode)	Black and White, Black and White-ED, Black and White-Picture, Grayscale
Brightness adjustment	AE, manual	
Scanning options	Automatic border removal, trimming	
Other	Zoom memory, user modes	

General

Power supply	120V AC, 60 Hz, 4.5A 220-240V AC, 50/60Hz, 2A
Operation environment	Temperature: 10°C to 32.5°C (50°F to 90.5°F) Humidity: 10% to 80% RH (no condensation)
Dimensions	612mm x 760mm x 600mm (H x W x D)
Weight	Approx. 47 kg

Options

Fixed-focus lenses	GZ X57
Zoom lenses	GZ X7-X7.5, GZ X9-X16, GZ X14-X30, GZ X20-X50
Carriers	FC 190RII, AC 100C, AC 100R, AC 100M, FS Controller I, III, Roll/Fiche Carrier 200
Installation Kit L	For AC 100C, AC 100R, AC 100M, FS Controller I, Roll/Fiche Carrier 200
Operation keyboard	
128-MB additional memory	This additional memory must be installed to scan in grayscale mode.
Foot switch	
Framing Kit	

All specifications subject to change without notice.

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